

ANNUAL REPORT









EnviTec MAGAZINE 14/15

Annual Magazine of EnviTec Biogas

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+++ News from our company +++ Interviews, statements and opinions +++ Projects, technologies, regions

Annual Magazine of EnviTec Biogas

Plant Construction:

Konnichiwa Japan

With the first construction project in Japan, EnviTec Biogas, together with RENAGEN Inc. is setting new standards for the biogas market, not only in an entire region but also in the field of energy generation using waste material.

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Editorial

The yearly magazine of EnviTec Biogas informs customers, employees and investors about its current activities.

Dear Readers,



2014 was a challenging year for us and for the entire biogas sector. Owing to the new Renewable Energies Act (EEG) that came into force in August, the initial supporters have lost a few feathers. This shows us that we must improve further to continue to hold our ground despite the harsh winds that are blowing. Being a biogas all-rounder, however, we have maintained our position in all four business divisions thanks to our sustainable company concept, dedicated employees and you – our customers.

Therefore, we feel that we are well-armed for the next year and will point the way to the future in the biogas market with the support of our own plant, plant construction in foreign countries and a wide portfolio of services and direct

marketing. At present, we are profiting from the high demand from foreign countries for "made in Germany" biogas plant technology. In addition to China, we could tap another important market in Asia: Japan. Therefore, we have dedicated the cover story of our magazine to the island country. And because EnviTec's global presence is ever increasing, we would love to share with you our experiences in foreign countries. With our section "Five Questions to...", we provide you with insights into our work on site and show you glimpses of China, Japan, North America, Italy, France and England.

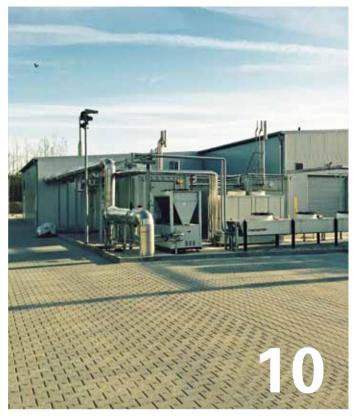
In our domestic market Germany our service business and electricity marketing are convincing factors. Using the innovative concept EnviTec Stromkontor, we are further developing our electricity marketing field and treading the paths that are unique for the entire sector. Our new marketing model offers operators an option to sell their electricity locally. Thus, they will not only become power suppliers to their neighbours, but also the pioneers of the energy revolution – similar to the plant operator Hennig Seele from Frille.

Being a fully integrated biogas solutions provider, we must also demonstrate our technological vision. For us, this means identifying and using trends, developing the portfolio further and making ourselves more independent of the German market and the narrow boundaries of the Renewable Energies Act (EEG).

In this context, I would like to mention a keyword: the so-called "Biobased economy" – this means the production of recyclable material from biomass with the objective of generating new revenue streams. We focus on finding out new applications, methods and reconnaissance, and tapping new markets – always with the objective of making EnviTec Biogas even stronger. So look out for more future developments!

On this note, we hope for an exciting new financial year and hope you enjoy reading this fourth issue of our magazine. Of course we are happy to receive your constructive criticism as well as potential articles for the next issue!

Jörg Fischer, CFO EnviTec Biogas AG



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Publisher: EnviTec Biogas AG Chief Editor: Katrin Selzer, EnviTec Biogas AG Concept and design: Kreutzmann Unternehmenskommunikation, Hamburg

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Good to know ...

ACCORING TO THE OIL COMPANY BP, RENEWABLE ENERGIES WILL INCREASE BY 136% FROM TODAY UNTIL 2035 AND THE-REBY BE THE FASTEST GROWING ENERGY SOURCE IN EUROPE (FOLLOWED BY NATU-RAL GAS WITH A GROWTH OF 15%).

of green energy could be produced in the Philippines from animal excrement alone. In all, more than 12 million pigs and 177 million chickens plus waste material were provided on site as input for the still-young biogas sector.

UP TO 20 CENT PER KILOWATT HOUR IS THE COST OF ELECTRICITY IN THE PHILIPPINES. THUS, THE ISLAND NATION HAS ONE OF THE HIGHEST POWER RATES IN THE WORLD.



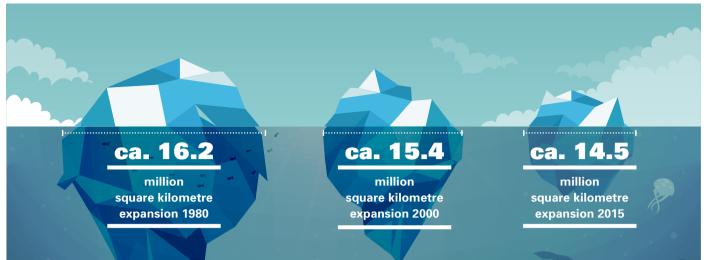
26 billion cubic meters

is the volume of natural gas imports from Russia into the Ukraine. According to calculations by the German Biomass Research Centre (DBFZ – Deutsche Biomasseforschungszentrums), biogas could almost replace all natural gas imports without limiting agricultural food production. According to DBFZ, the Russian Federation, Belarus and the Ukraine rank among the countries with the largest biomass potential for energy production in Europe but hardly utilize this potential.



oil mills make Indonesia one of the most important palm oil producers in the world. The Society for International Cooperation (GIZ) assessed the energy potential from residues of palm oil mills alone at some 10 MW. Waste water from the palm oil production had previously not been used for energy production, and some palm oil mills have now installed biogas plants to ferment the energy-rich waste water and generate green energy.





1.1 million square kilometres

of Arctic ice disappeared between 1981 and 2010, when comparing the average expanse of winter ice between those years. Since 1979, satellites have been observing the Arctic sea ice from space. Now there is another new negative record to report. Last winter, the ice grew as little as never before. This comes from measurements by the "National Snow and Ice Data Center" (NSIDC) in the USA. According to them, the ice pack in the Arctic region attained a maximum expanse of only 14.54 million square kilometres, which lies considerably below the long term average. The previous minimal value was recorded in the year 2011.

14 terrawatt hours According to information from

Federal Ministry for Economic Affairs and Energy (BMWi), approximately 14 terawatt hours of the thermal energy consumed in Germany in 2014 had been obtained from biogas and biomethane. This roughly corresponds to the thermal energy consumption of approximately 1.2 million households.



Power shortages during this year's solar eclipse? Not with power from bi-

ogas plants! In Germany, around 2,200 biogas plants with a power output of

roughly 1,200 megawatts (MW) are able to balance power fluctuations and supply more or less power depending on the demand. This flexible operation mode is of elementary importance for a renewable energy transition and has been supported by the federal government for three years.

For the 8th time in a row, EnviTec Biogas refrained from sending

in a row, EnviTec Biogas refrained from sending Christmas presents to customers and business partners. Instead, in 2014 the biogas all-rounder donated 5000 euros to each of the following two charitable projects: 'Centrifugal force – Photo project against childhood cancer' and 'Next generation', a parent group based in Lohne.

New opportunities – wide portfolio

The entire biogas sector in Germany began a new chapter with the conclusion of German Renewable Energies Act (EEG) 2014. In an interview, the management board revealed how EnviTec Biogas will take advantage of the new start and what the opportunities and risks are.



► "The energy revolution on ice": such was the headline of EnviTec Magazine last year. The Renewable Energies Act (EEG) 2014 contained more stumbling blocks than milestones for the biogas sector. The construction of new plants in Germany has been idle since then. Mr von Lehmden, what conclusions does EnviTec draw after almost one year with the new legislation?

Thanks to our committed staff and a very comprehensive portfolio as compared to the competition, we proved our sustainability in spite of a slack period in the German market. Even in the second half of 2014, we achieved a turnaround with profit at all levels and, therefore, look into the future with optimism. As of 31 December, EnviTec had increased revenues by 9.8 percent to 163.4 million euros. Operating earnings before interest and taxes (EBIT) climbed to 6.3 million euros, after 2.4 million euros in the previous year. We have no reason to complain.

Mr Fischer, the federal government has stipulated an expansion corridor of 100 megawatts in the new EEG. How much, do you reckon, will biogas plants increase this year?

The entire sector currently forecasts an expansion of only about 40 megawatts throughout Germany. This means the end for many competitors who have relied purely on the German market. The first campaigners have already struck sail; limits have been set on the innovative and economic power of the sector, which according to us, speaks against climate change policy and against Germany as a location for expansion.

The German market is saturated but there are a large number of countries with attractive framework conditions for biogas production. What opportunities are available to EnviTec abroad Mr Slotman?

Overall very good. In Europe, primarily from our direct neighbours France and England, we are currently registering a very high demand for our EnviThan technology, amongst other things. But the Far East also plays an increasingly important role in our order book. The market opportunities in Asia are also extremely positive since it has a huge requirement for energy. Organic waste, which can be used as energy-generating product, is widely available here.



»THE ENTIRE SECTOR CURRENTLY FORE-CASTS AN EXPANSION OF ONLY ABOUT 40 MEGAWATTS THROUGHOUT GERMANY. THIS MEANS THE END FOR MANY COMPETITORS WHO HAVE RELIED PURELY ON THE GERMAN MARKET.«

"Made in Germany" is considered a seal of high quality throughout the world. According to you, what role does the innovative capacity and technology development of a biogas plant manufacturer play in the purchase decision of a customer? With what strategy does EnviTec assert itself here in the market?

»OUR STRATEGY TO PROVIDE EVERYTHING TO THE CUSTOMER FROM THE STALK TO THE **RADIATOR PAYS OFF.«**



Roel Slotman, CCO

As biogas allrounders, we cover the entire spectrum of plant construction. Our strategy to provide everything to the customer from the stalk to the radiator pays off, primarily

in foreign markets. The long-standing and detailed knowledge of our engineers is already in demand here since 2006. From then to the end of 2014, we have been able to implement 115 biogas plant projects outside Germany in over 11 countries worldwide. This corresponds to a total installed electrical capacity of about 96 MW_{al}.

EnviTec Biogas invested about 1.000.000 euros in research and development in the past fiscal year. What new innovations can we expect from EnviTec in 2015, Mr Tenbrink?

We are working at present on technologies for increasing the gas yield. We are also focussing on research and the possible utilization of alternative substrates. Apart from that, process monitoring

and digestate processing are also some of the areas that we continuously try to optimise. A current topic is the "Biobased economy" - this means the



biomass with the objective of generating new revenue streams. We focus on developing new applications and methods, and tapping new markets.

Jürgen Tenbrink, CTO

»A CURRENT TOPIC IS THE "BIOBASED ECONOMY" – THIS MEANS THE PRODUCTION OF RESOURCES FROM BIOMASS WITH THE OBJECTIVE OF GENERATING NEW **REVENUE STREAMS.«**

As a biogas all-rounder, EnviTec Biogas has a wide portfolio and appears to be optimally prepared for the future. Which services are particularly popular in the inland market and what are you doing, in contrast to the competitors, to become a sustainable partner for customers and business partners, Mr von Lehmden?

In my perspective, a sustainable partnership with customers and business partners is characterised primarily by transparent actions and honest dealings with one another. Clear communication and our distinct service concept helps us with this. We look for customised solutions along with the customer. A curt "it won't work" is out of question for

us. 🔍

WE LOOK FOR CUSTOMISED SOLUTIONS ALONG WITH THE CUSTOMER. A CURT "IT WON'T WORK" IS OUT OF QUESTION FOR US.«





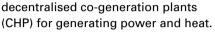
The third in Germany: The gas upgrading plant at Forst has a capacity of 700 Nm³/h.

Smart gas upgrading: EnviThan is cranking up the biomethane market – and not only in Germany



With more than a year and a half on the grid, EnviTec Biogas, with its two gas upgrading plants in Sachsendorf and Köckte, has been drawing a consistently positive balance. 30 gigawatt hours were planned per year with both plants and the feed volumes were even exceeded slightly.

"Absolutely impressive", Jürgen Tenbrink, Chief Technology Officer of EnviTec Biogas, describes the two EnviThan gas upgrading plants in Köckte and Sachsendorf, which were commissioned in September 2013. With a constant calorific power of 10.7 kWh per standard cubic metre, the efficiency in the first three calendar weeks of 2015 in Sachsendorf, Saxony-Anhalt, was even over 100 percent. In addition to Sachsendorf, Köckte is the second location where biomethane is successfully generated on an industrial scale using EnviThan technology. The gas upgrading plant with a capacity of 350 standard cubic metres (Nm3/h), which is maintained by a total of four employees, has been feeding biomethane into the 1-bar line of the Avacon grid since its commissioning. The customer, EnviTec Energy, uses the produced biomethane in



When the upgraded biomethane is directly fed in, the green energy source can be transported for subsequent decentralised use at any location. However, in order to feed the biogas into an existing natural gas grid, it must first be cleaned and, if needed, conditioned by the

grid operator. In Sachsendorf and Köckte, this is done by means of the innovative biogas upgrading technology EnviThan. In order to ensure an environment-friendly process, EnviTec Biogas equips its upgrading plants with membrane modules developed by Evonik Industries. The hollow

> fibre membranes upgrade the raw biogas generated in the biogas plants to a methane content of more than 97 volume percent. The process makes use of the different sizes of gas molecules – since carbon dioxide molecules are smaller than methane molecules, they can migrate through the membrane much more quickly. The methane accumulates on the high-

molecules, they can migrate through the membrane much more quickly. The methane accumulates on the highpressure side of the membrane. "Gas upgrading with membranes requires neither chemicals nor water or other resources, which makes it more

with membranes requires neither chemicals nor water or other resources, which makes it more cost-effective and, above all, more environmentally friendly than other methods," explains Jürgen Tenbrink, graduate engineer.

Meanwhile, the success of the two flagship plants has even got around abroad. "Every week, we have about two groups of visitors who want to know about our gas upgrading on site," says Carsten Steentjes, EnviThan product manager of the sales division, "including visitors from China, Japan, India, Brazil, Italy, England, France, Lithuania and, of course, also from Germany."



 \rightarrow



Horizontal, not vertical. The new generation of space-saving membrane cartridges was installed at Forst.

> and a further developed, space-saving design: "While we are still working with vertical modules in our first two plants, we have introduced the Evonik membranes in Forst as a horizontal cartridge system," says Steentjes. Changing from vertically to horizontally configured membranes meant that all design calculations had to be revised and prepared again. "This move paid off because while further developing the membrane configuration, we placed our focus on service in order to offer our customers the most cost-efficient solution," Steentjes explains. The horizontal configuration of the SEPURAN green modules by Evonik enables the plant manufacturer to install over twice as many modules in only one container. In the meantime, the membranes introduced

Biogas has built another gas upgrading plant in the domestic market of Germany. The plant in

Forst, Brandenburg, has a capacity of 700 Nm3/h

er. In the meantime, the membranes introduced were not only improved in terms of their configuration. With the two pioneer plants in Sachsendorf and Köckte, EnviTec Biogas has further advanced the membrane development in collaboration with Evonik Industries: "The gases can now be separated from each other in a much better and more efficient manner, thanks to the newly developed generation of the SEPURAN[®] green membrane," reports Steentjes.

At present, an EnviThan plant with a capacity of 385 Nm³/h is also under construc-

tion in Altmarkkreis Salzwedel in Saxony-Anhalt. For Bodo Meyer, managing director of the agricultural cooperative BioEnergie Beetzendorf GmbH, this is already the third joint construction project with EnviTec. "With the construction of two biogas plants with a 625 and 837 kW capacity in 2011 and 2014, the gas upgrading by EnviThan perfectly complements our green energy

concept," says Meyer. His plant is expected to feed into the existing low-pressure grid of Avacon AG starting as early as the third quarter of 2015, and then supply a maximum of 36 million kWh of green energy per year. This would make it possible for the plant to supply 1,800 households with gas. However, this is just the beginning as the potential of the green energy talent is immense. When the upgraded biomethane is directly fed in, the green energy source can be transported for subsequent decentralised use at any location. The potentials determined in a study by the Leipzig Institute for Energy and Environment can replace fossil fuel across approx. 500 billion cubic metres. This is equal to the current natural gas consumption in the EU. The political target is to generate an annual volume of 6 billion standard cubic metres of biomethane in Germany for feeding into the natural gas grid by 2020. However, Germany is still far away from this figure, which was defined as early as 2008 in the Gas Grid Access Ordinance. Currently, up to 80% of the natural gas consumed in Germany is still being imported. In this regard, increased utilisation of EnviThan technology may represent a remedy- biomethane can help cover most of the local natural gas consumption from domestic raw materials and organic waste materials.

From Germany to the world: After England and France, EnviTec has now also taken the leap into China with its innovative membrane process.



成功 Chénggōng – this is how the Chinese symbol for success is pronounced. And success is exactly what the gas upgrading technology developed by EnviTec and Evonik has achieved in China as well. In December 2014, a 1,000 Nm³/h biomethane plant was shipped for the Chinese market. "If everything goes as planned, our customer can still bring the plant into service this year," says Roel Slotman, Chief Commercial Officer of the biogas all-rounder. More plants are being planned. Also in Europe, the technology is being exported beyond the borders of Germany. Shortly before the end of the year, the first biogas plant, with a gas upgrading capacity of 300 Nm³/h, was successfully put into operation in the English town of Ipsden near Oxfordshire. Project developer David Bermingham and the project investors at London's Ingenious Renewable Energy Group only gave the go-ahead for the start of construction of the EnviTec biomethane plant with an initial capacity of 300 Nm3/h, along with a 360 kWel combined heat and power plant, in June 2014. "We are very proud to have been able to complete the construction project in such a short period of time in spite of the difficulties caused by the weather conditions," says Bermingham. Since the commissioning of the plant, lcknield Gas Ltd. has been feeding green energy into the existing grid of Southern Gas Networks. But that's not all: Three more EnviThan plants have

The EnviThan plant in Icknield, Great Britain, could be realized within five months in spite of difficult weather conditions.

been under construction since the spring of 2015 in Wormit, Brinklow and Crowle.

The biogas plant is operated using a combination of pig slurry, agricultural by-products and energy crops. It can use up to 10,000 tonnes of pig slurry per year. Great Britain's goal is for 15 percent of its energy to come from renewable energies such as biogas. "With our EnviThan biogas upgrading plant, lcknield Gas Ltd. will be able to deliver an annual energy value of about 30 million kilowatthours (kWh) of biomethane," says Roel Slotman. The delivery pressure of the EnviThan plant is high enough to directly feed gas into the public gas grid. "Additional compression is hence not necessary", adds Slotman. The public gas pipeline is located right next to the plant boundary so that only short gas pipelines had to be laid. ●

France

In France, a contract for an EnviFarm plant with an 85 Nm³/h EnviThan gas upgrading system in Picardy, north of Paris, has just been signed. After construction and commissioning, the plant is supposed to be fed with horse dung, grain dust, beet root pulp and food waste. In the tried-and-tested compact container design, the plant technology consists only of one technical container including mixing, pumping and feeding technology and additional pasteurisation.

China

Minhe – the site at which the first EnviThan plant is built by EnviTec in China. The county of Minhe is located in the east of the Qinghai Province and has a population of approx. 370,000 on an area of 1,780 km². The plant will produce 1,000 Nm³/h of biomethane, with the crude gas coming from the existing biogas plant. The customer, Shandong Minhe Biological SCI-Tech Co, is one of the biggest poultry farmers in the world and publicly put the construction contract out for tender. "Given the numerous international competitors, we are proud that the customer has chosen a 'made by EnviTec Biogas plant'," says Roel Slotman.

Small but powerful!

EnviTec impresses with a new compact plant concept in Italy, Germany and France and thus successfully proves its knowledge in a mini-format as well.

Small, compact and efficient. With these three arguments, EnviTec Biogas is currently scoring in the European market – with Italy leading the way. With the contract for constructing a 99 kW EnviFarm compact plant, the Lower Saxon biogas all-rounder is once again looking to prove its earlier success. The two future operators Antonio and Francesco Bressan from the Upper Italian Gradisca d'Isonzo are using the decree on renewable energy, which came into effect there on 1 January 2013, with the planned plant. The two new EnviTec customers operate a piggery and fodder production plant. "The planned plant is supposed to be operated with 13,000 tons of pig slurry and 900 tons of poultry manure," explains Zeno Marani, Managing Director of EnviTec Biogas Italia srl in charge of sales and marketing.

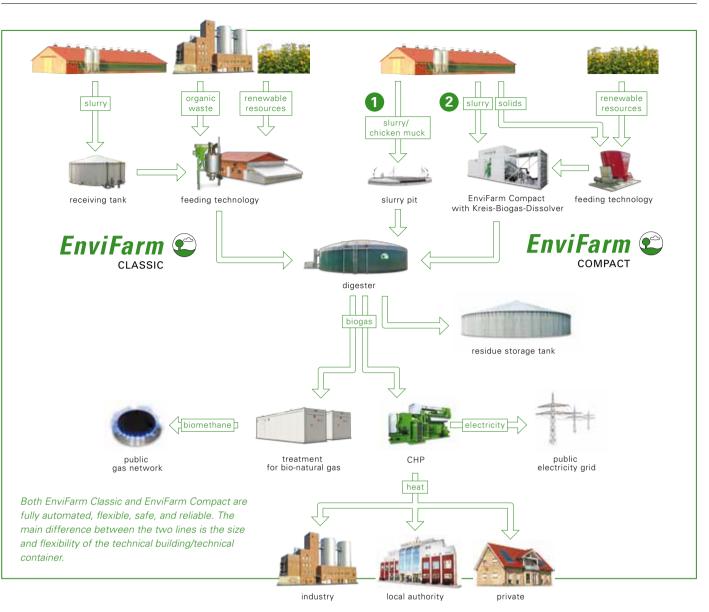
With the reduced maize content in the input material of biogas plants and the increased feedin tariff for small plants, the Italian government has drastically changed the market situation, but EnviTec Biogas continues to impress with reliable intelligent plant construction – "however in the small format of 75 to 450 kW adapted to the situation," continues Marani.

With the EnviTec-specific container design, plants can be installed and put into operation in a very short time. Since its market entry in Italy, the listed company has connected a total of 44 plants with a capacity of 39.48 MW to the grid – another one has been contributing to this success since December 2014: The 99 kW plant of the operator Società Agricola BIANCHINI F.LLI s.s. in Flumignano di Talmassons in the Udine province is a classic example of a compact plant completely integrated into a farm. 4,000 tons of slurry from 80 dairy cows serve as biomass, in which 900 tons of dung from free-range chickens of a farm in the neighbourhood is mixed. The heat generated, in addition to the electricity, covers the on-site



Example of a compact plant: The 99 kW plant operated by Società Agricola BI-ANCHINI F.LLI s.s. in the Province of Udine.





requirement completely in this case.

"In the coming months, we are envisaging the start of construction of additional compact plants," says Roel Slotman, Chief Commercial Officer of EnviTec. EnviTec Biogas is increasingly relying on EnviFarm compact plants in the domestic market of Germany as well. "We have introduced a new concept here for 75 kW plants," says the Chief Commercial Officer. Plant construction in this segment also remained lucrative after the new EEG (Renewable Energy Sources Act) came into force in 2014. "Almost everything has remained the same for small slurry plants according to the new EEG," explains Slotman. The rates of remuneration were adapted only slightly in this case. At present, EnviTec is registering a good demand here; the contracts for two 75 kW plants have already been signed and the start of construction is planned for 2015.

For neighbouring France, the demand for

plant technology in the compact format is also high. Contracts have just been signed with two new customers for two EnviFarm compact plants along with the EnviThan gas upgrading system. The plant in question is a 166 standard cubic metre (Nm³/h) EnviFarm plant in Picardy, to the north of Paris. After construction and commissioning, the plant is supposed to be fed with horse dung, grain dust, sugar beet pulp and food waste. In the tried-and-tested compact container design, the plant technology consists only of one equipment container including mixing, pumping and feeding technology - "and, of course, pasteurisation is essential when processing food waste," adds Sylvain Mesnard, EnviTec Sales Manager for France. It has been designed for 5,000 tons per year.

Another EnviFarm plant is said to be built in the Rhône department near Grenoble. "In this case, also with a gas upgrading system," says Mesnard.



With a planned growth of 1,000 plants up to 2020, France is the most dynamic market in Europe. EnviTec impresses here with its plant technology and especially with the EnviWaste technology and a total of 4.14 MW of installed total output.

"We now have five plants and an installed total output of 4.14 MW in the French Market," says Christian Ernst, managing director of the EnviTec branch in France. Ernst and his colleague Bernhard Meyer zu Rheda are

The market for biogas plants in France is booming.

According to the plans of the French Environment Minister Ségolène Royal, 1,000 new biogas plants are expected to be erected in France in the coming five years. With a package of measures, France especially wants to reduce its high percentage of electricity generated by nuclear power, which is currently 75 per cent, to 50 per cent by 2025. The proportion of renewable energies should increase accordingly. The bar has been set high because the proportion is expected to be increased from a current value of 14.2 per cent to 32 per cent by 2030. The prerequisites for this were fulfilled in 2011 with the introduction of increased feed-in tariffs. Plant operators, who have decided on construction of an EnviTec biogas plant, also profit from them.

on site almost every second week to have discussions with potential customers, or at the EnviTec branch in Plédran, Bretagne, to work with the seven French colleagues residing there.

In addition to the conventional rural biogas plants, which generate electricity through combined heat and power generation, plants that feed biomethane into the gas grid should be increasingly built. "At present, France has only ten plants," says EnviTec Sales Manager for France, Sylvain Mesnard, and "hence we also see good opportunities for our efficient EnviThan gas upgrading system."

Ernst und Mesnard have just signed contracts with two new customers for two EnviFarm compact plants along with the EnviThan gas upgrading system (\rightarrow p.15). In addition, several electricity generation plants equipped with EnviTec technology are currently in the approval phase.

5 questions for → Christian Ernst

In your opinion, what are France's chances of achieving its ambitious goal in the renewable energies sector? We believe that

in order for this to happen it is especially necessary to simplify the approval processes. At present, projects can take between three and five years from development up to the start of construction – not to mention the consequences on the financing of projects. To this end, it is naturally also important that the political framework conditions remain as desired by the current French government.

What other stumbling blocks do you see? There is a standard feed-in tariff; nevertheless, the feed-in tariffs need to be calculated separately for every project owing to the different bonus regulations. In addition, the financing of plants is a complex and, above all, a tedious problem. Owing to less experience in the biogas sector, French banks are extremely reserved when it comes to financing the plants. The requirements with respect to the operator and plant manufacturer are correspondingly high. Moreover, the search for investors as a result of the long approval times proves to be a major challenge.

How is the intercultural cooperation between the French and Germans? The long-standing friendship between France and Germany also shows itself in business relations and in day-to-day cooperation. As such, it would actually be perfect if it weren't for the language barrier. Direct contact with the customer is generally left to our French-speaking colleagues. This is a minor drawback.

What do you appreciate the most about the collaboration with French customers? Their reliability and seriousness. We have a very professional and fair relationship with all our customers and colleagues, which makes the collaboration extremely pleasant.

How do you assess EnviTec's chances in the French market in future? Positive in every respect. France is the largest agrarian country in Europe – it offers enormous potential in the biogas sector. We can certainly score in the EnviWaste sector, but also when it comes to gas upgrading, we see a major opportunity with our EnviThan technology to come out on top against our competitors.

Along with agricultural biogas plants, the fermentation of bio-wastes and industrial wastes is also strongly being promoted in France – perfect

conditions for the EnviWaste technology of the biogas all-rounder. This technology can also score in France because residual materials and by-products accumulate in every production plant, whether in the agricultural or food industry, the cosmetics sector or in animal husbandry. "With EnviWaste, our customers will not only be saved the trouble of disposing of their residual materials, but can also convert them into useful energy," says Christian Ernst.

Fabrice Noël will benefit from the conversion of residual materials into biogas in future. The operator of the 637 kW EnviTec biogas plant that was recently put into operation in the French Meuse, Lothringen region, found out in detail about the technologies used before start of construction. "In addition to reliability and quality, the procedure used for generating biogas was also important to me. In this regard, a visit to the EnviTec plants in Ribeauvillé for Agrivalor Energie and Agri Energie in Normandy particularly impressed me," says Noël. His plant, which has been operated successfully since January, is also equipped with an EnviTec pasteurisation unit, which will be required in future for the use of agricultural wastes and other residual materials. Organic wastes must be pasteurised so that they are free of pathogens. The technology used here, with a total capacity of up to 5,000 tons per year (t/a), supports this process.

In Créhange, in the Lothringen region, the pasteurisation technology (6,300 t/a) used by EnviTec Biogas is also the heart of a new plant project. The 100 percent waste plant "Humus Innovation", which is planned to be operated without any agricultural residues or energy crops, will be commissioned in the second quarter of this year. The 500 kW plant, whose fermentation and pasteurisation systems were built by EnviTec, is situated on the premises of the waste management company Terralys, which also operates the plant. Flotation fats, stomach and intestinal contents, blood and processed and unpacked food waste serve as input materials.

Sustainable energy for Asia

Biogas technology "made in Germany" is booming, especially in the Asian market. Whether in China, Japan, Malaysia, Indonesia or the Philippines – EnviTec is actively exploiting its growth chances there, offering its expertise and manpower where it is needed.

The demand for green energy from biogas is

growing – also in the Asian market. Customers here are impressed with EnviTec's competence and quality and the technologies tailored to their needs. China in particular is increasing its reliance on biogas plant construction. "Although maize is a frequent crop here, only the cob is used. The remainder of the plant is incinerated and ashes are used as fertiliser", reports Hendrik van der Tol, EnviTec Regional Director Asia/ Pacific. "The incineration process contaminates the air, of course, which is already contaminated enough as it is. For this reason, increased emphasis is being placed on using the rest of the plant as input material in biogas plants", adds van der Tol, noting a positive side effect: the fermentation residue can be used as fertiliser for the field.

Japan is also looking for partners experienced in biogas technology. EnviTec is currently profiting both here and in Thailand from its sustainable cooperation with RENAGEN, a leading corporate recycling group.

The Philippines also have a lot of potential to offer to the biogas sector, especially with respect to the decentralised provision of green energy. Its government drafted a climate bill as early as 2009 to push the expansion of regenerative energy sources. "About 30% of energy consumed there is derived from renewable energy sources, though mainly from hydropower", reports Marcello Barbato, EnviTec Sales Manager Asia.



EnviTec also has an ideal foundation for a successful market entry in the Malaysian and Indonesian biogas markets. The main focus of its cooperation with the local partner Aquakimia is in the palm oil industry. "There is a new law in Malaysia regulating the methane capture of its roughly 400 palm oil mills." One solution is to cover the existing lagoons with a gas container and burn the biogas. "But that isn't really efficient", says van der Tol. In addition to biogas technology in combination with CHP engines (Combined Heat and Power), EnviTec also offers with EnviThan an economically and ecologically viable solution. Osaka is one of the major Japanese ports and the arrival point for the first EnviTec biogas plant.

CHINA

Inhabitants

Russia: 0.14 Mrd. USA:

0.31 Mrd.

Europe:

0.7 Mrd.

China[.]

1.36 Mrd.

JAPAN

2

million inhabitants: number ten among the world's most populous countries.

.....

30 Cent

is approx. the converted guaranteed feed-in-tariff for renewables in Japan.

.....

World's largest nuclear power producing countries (until Fukushima)



INDONESIA

46 GW

is the amount of Indonesia's installed electrical power at present.



percent is the annual growth of energy demand in Indonesia.

PHILIPPINES

30%

of the energy demand is covered by renewable energies.

53

15.3 gigawatt of green energy until 2030 is the target of the government.

.....

30,000 to

of rice- and maize straw accrue at the Philippines every year - the best substrate for waste-to-energy plants.

THAILAND

Annual production of electrical power 3 Mrd. renewable 7.8 Mrd. hydropower 130.8 kWh 120 Mrd. thermal 10,000 MW heat 4.900 MW electricity potential of the energy production from biomass and biogas

.....

is the aimed power output from all renewable energies, the chinese government wants to reach until 2017.

.....

production of green electricity (in GW)



MALAYSIA

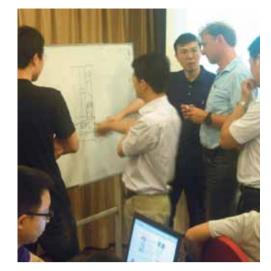
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3.5 4.6%

the energy demand in Malaysia grows every year.

96 million

tons of biomass are available for malaysia. Over 80 of those are residues from the palmoil production.



Biogas in China

China is investing in biogas technology "made in Germany". With the construction of a total of three plants at the moment, EnviTec is profiting from the boom of the Chinese energy market.

Accuracy is required if the goal is to conquer the Asian market.

Andreas Bosse can tell you all about it: "Extremely detailed plans, including an exact definition and the number of screws and nuts - and all of this already in the marketing and offer phase - are indispensable for a successful Chinese-German collaboration". The EnviTec project manager has visited China frequently for about the past two years to present plans or monitor the construction progress. He constantly has the Chinese colleagues Jia Naiyun, Liu Xiaolin and Rui Liu by his side. They previously finalised three contracts with the German marketing colleagues and EnviTec Regional Director for Asia/the Pacific Region, Hendrik van der Tol: "The first signing of the contract with the shipbuilder China Shipbuilding Industry Corporation (CSIC) has meanwhile been concluded in terms of planning," Bosse says. The state-owned enterprise CSIC, with a workforce of 300,000, is investing in an EnviFarm Classic biogas plant with EnviThan gas upgrading



5 questions for → *Andreas Bosse*

How do you communicate with your Chinese colleagues and business partners? One manages very well with English not only in meetings but

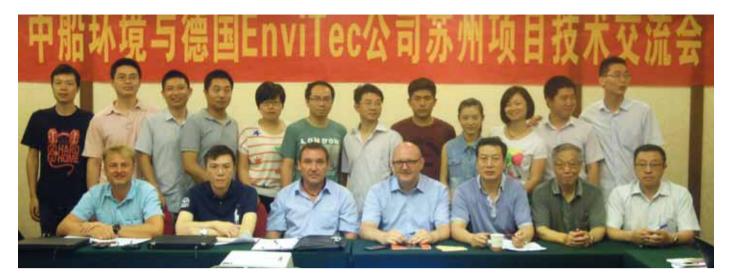
also in the execution of construction work. Since both our local partners and we are not native speakers, we meet each other on equal footing. In case of detailed questions, however, there are always colleagues on site who translate into Chinese.

What distinguishes a German business meeting from a Chinese one? The number of participants in a discussion alone – at least in the case of all first meetings – needs getting used to. 30 people at a table is not uncommon during a planning meeting.

Are there nevertheless more commonalities than expected? Yes, definitely. However, precision and thoroughness are things that we can learn from the Chinese, and also from the Japanese. Here, detailed planning leads to extremely reduced construction periods. However, kick-off meetings for this purpose can by all means last up to three or four days.

What can we learn from China? Thoroughness and a friendly attitude: These two qualities allow us to enjoy our stay all the more. The Chinese are very hospitable and frequent communication is common in China.

How do you assess EnviTec's further chances in the Chinese market? Good, since a type of Renewable Energy Sources Act is currently in the works in China. To this end, German and Chinese ministries, among others, work together and compare notes.



Intensive planning and discussions bear fruit: the first contract signed with China Shipbuilding Industry Corporation (CSIC) has now led to a second order.

in Jiyuan, in the Henan province. The plant will be operated using internally accumulated pig slurry. Start of construction is scheduled for the third quarter of 2015.

"The signing of the contract is a clear indication of the fact that acceptance of and demand for our gas upgrading technology EnviThan is growing in the international market as well," says Roel Slotman, Chief Sales Officer (CSO) at EnviTec. Contrary to in Europe, EnviTec does not carry out the entire construction of the biogas plant on site in Asia. "We are responsible for engineering and delivering the main part of all necessary components, supervising equipment erection and commissioning, and training local operators" explains Oliver Ahlemeyer, the specialist engineer in charge. The 500 standard cubic metre (Nm3/h) plant is constructed in a tried-and-tested container design by the customer under EnviTec's supervision and should feed gas into the available grid by the end of the year. In the meantime, the plant has arrived safe and sound at the construction site. "The marine transport to Asia demands exact parts lists and packing lists, to conform to the requirements of customs," says Bosse. The news of the arrival of the plant has also made the customer happy. The renowned shipbuilder is expanding its portfolio by investing in renewable energy. "With EnviTec Biogas, we are happy to have recruited such a successful and international stakeholder in the field of biogas plant construction, which will set

New Energies in China

China is currently the world's biggest investor in renewable energies and the largest producer of green power. Unlike in most countries, the goal of renewable energies here is not only the reduction of greenhouse gas emissions but also ensuring security of supply. Due to strong economic growth in China, the share of renewable energies in total energy consumption increased from 5.6 to 9.6 percent in the period from 2000 to 2013. For the first time, investments in renewable energies surpassed investments in conventional power plants. By 2017 the installed capacity of green power plants should increase by 48 percent to 550 GW.

the benchmark for possible new gas upgrading projects with high-quality work and high technological standards," says Mr. Jian Hua Wang, General Manager at CSIC.

Both partners agree that it is now important to place efficient and environmentally friendly biogas plant technology on the Chinese market for the long term. Mr. Jian Hua Wang and his team were able to assure themselves of the technical expertise of the biogas all-rounder beforehand during a visit to the EnviThan gas upgrading plants in Sachsendorf and Köckte.

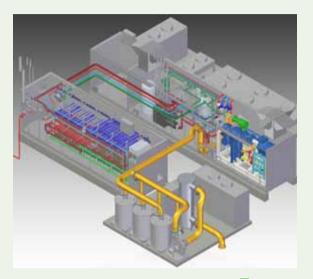
The second conclusion of a contract shows that the co-operation with CSIC is characterised by sustainability. The large-scale enterprise is investing in another biogas plant including a 500 Nm³/h → gas upgrading system. The biogas plant with EnviThan gas upgrading in Suzhou, in the Jiangsu province, should start operating with household waste and sewage sludge by the end of the year. The EnviThan biogas upgrading system is easy to use and robust as well as compact and space-saving. The components for desulphurisation, compression, condensation, filtration and gas separation can be installed in closed containers. Thanks to the modular design, every plant is adapted to the individual performance requirements of the respective operator. "It is precisely this flexibility but also the low construction costs that convinced us to also implement our second planned project with the expertise of EnviTec Biogas," says CSIC General Manager Jian Hua Wang.

Shandong Minhe Biological SCI-TECH Co. LTD also relies on EnviTec's expertise. "In our third EnviThan project in Minhe, China, we successfully prevailed over Chinese and European competitors after being awarded a public tender," says Roel Slotman, who as CSO is responsible for Asia as well. The customer is one of the largest poultry farmers in the world. The raw gas for the 1,000 Nm³/h EnviThan plant, for which the technical planning is complete, comes from the biogas plant which is already available. "We have heralded the construction phase," adds Bosse. If everything goes as per plan, the gas upgrading plant should be commissioned as early as the third quarter of 2015.

In all, the Chinese market offers the best con-

ditions for operating biogas plants. China has roughly 800 million animals, including many pigs, chicken and cattle; manure and slurry are accumulated by keeping these animals. The tremendous biogas potential should now be increasingly used for generating electricity. According to reports by the German Society for International Cooperation, it would be possible to cover almost seven percent of China's energy requirement with the 290 billion cubic metres of biomass produced annually in China. "With the existing three construction contracts, we have managed to take the first important step towards developing the tremendous potential for producing environmentally friendly energy in China," sums up Slotman "and another milestone for EnviTec's internationalisation.

54 tonnes of high tech on the way to China – Impressions of the planning right up to the arrival of the container unit in Penglai.



First, a plan is made: Detailed planning is carried out using 3D-drawing. Apart from the back machine container, 90 plug-in slots have been provided for the membrane modules lying in the rear membrane container.

 \mathbf{V}



In the second step, customised manufacturing already begins. A supplier manufactures the containers including doors and pre-mounted pipe openings as well as a separate, gas-tight control room.





At the beginning of November, the two machine and membrane containers are delivered by lorries and heavy-duty cranes to the EnviTec production location in Saerbeck. The interior fittings can now be started!



Just two weeks after the delivery of the containers, the first construction phase has been completed: the cold water storage unit and heat exchanger are installed inside the machine container.





Who wants to see hard-working workmen? A total of nine technicians assemble the container unit in Saerbeck. Armatures and valves are installed by the technical experts.



They work meticulously on the membrane container in parallel with the completion of the machine container. With the horizontal arrangement of the membrane modules, EnviTec is in a position to install more than double the number of modules in one single container.



It is finished. After a total of 1300 working hours, both containers are ready to be transported to the Chinese customer on the 9th of December 2014. Before loading, both containers must be packed carefully.



Finally, on the 16th of December, the freight is collected from Röhlings Logistics and shipped. 旅行愉快 - Lǚxíng yúkuài – Have a safe trip to China!



Happy faces after commissioning of the first EnviTec plant in Japan.



EnviTec Project Manager Andreas Bosse in front of the plant under construction.

Konnichiwa Japan!

With the first construction project in Japan, EnviTec Biogas, together with RENAGEN Inc., is setting new standards for the biogas market not only in an entire region, but also in the field of energy generation using waste material.

> "こんにちは! Konnichiwa means 'Good day' in Japanese," says Ivan Dubický, EnviTec construction supervisor from the Czech Republic. He should know this, since he has been working in the third largest city in Japan, Osaka, since December 2014. Here, the biogas all-rounder from Lower Saxony is conquering the still young Japanese biogas market with a waste-to-energy pilot project. The 250 kW biogas plant has been feeding into the network since 31st March, exactly in time for the planned date of the first feeding-in. "The fact that we could complete the work in the stipulated time is thanks to the perfect cooperation with our Japanese partner, RENAGEN," explains Dubický.

RENAGEN is part of REMATEC group, a large waste recycling company based in Japan and Southeast Asia. The aim of the company management is to establish RENAGEN, as a leading provider in the biogas market in Japan over the next few years. "As part of REMATEC group, we would like to establish ourselves, to-

gether with the technological expertise of EnviTec Biogas, in Japan's emerging biogas market," declares Daisuke Mishima, CEO of RENAGEN. With the equivalent in euro of 30 cents for twenty years, the Japanese government has now introduced guaranteed feed-in compensations. EnviTec Biogas also hopes to profit from this: "Together with our local partner RENAGEN, we would like to exploit this trend and take on a pioneering role as an ambassador for the all-rounder biogas," says Hendrik van der Tol, EnviTec Regional Director Asia/Pacific.

Van der Tol continues, saying that the project allows the company to also demonstrate to the Japanese market the efficiency of the wasteto-energy technology proven to be successful in Europe.

For the industrial country of Japan, energy generation from waste material marks an important step towards the attainment of the country's climate objectives. With a population of over 127 million, Japan is ranked as the tenth most populous country in the world. Before the Tsunami disaster, the island country ranked third place among the world's major producers of nucleargenerated electricity after the USA and France. Today, none of the former 50 active reactors in Japan delivers electricity. The economic use potential of renewable energy resources in Japan is at least 887 gigawatts estimates the German



The finished plant in Kishiwada district.

Chamber of Industry and Commerce in Japan (DIHKJ). At the time, oil from the Gulf region and coal from Australia were the most important sources of energy besides atomic energy. A vanishingly small 4.7 per cent of Japan's energy was derived from renewable energy sources.

This should now change. With the project 14-074 (official numbering in the Lohne order book), EnviTec, together with RENAGEN, is setting new standards. Following an intensive planning phase with the two EnviTec technical planners Oliver Ahlemeyer and Daniel Hagemann, Dubický, as the responsible construction supervisor, received the components locally on 19 January, after their 4-week-long sea journey. "Thanks to the extremely transparent trade agreement with Japan, the customs procedure could be completed in a very short time and the parts were loaded on to the lorry," adds the construction manager. After a roughly one-hour drive to the urban district of Kishiwada, the technical and roof assembly of the 986 cubic metre-large digester was begun over the following days. "The plant was set up as planned; by the beginning of February, we had already fitted the digester including the roof technically and on 1 March, the mixing technology was assembled completely," says Dubický. The precise preliminary planning of the plant short-



5 questions for → *Ivan Dubický*

In your opinion, what is the biggest difference between European and Japanese mentalities? The unbelievable hospitality. My colleagues and I have never been welcomed as warmly and genuinely as we have in Japan. A working day is followed by a convivial dinner. It is wonderful.

Which qualities do you value most in the cooperation with your Japanese partners? Knigge, the German authority on etiquette, would have enjoyed Japan, and my colleagues and I also value the mutual respect and ever polite and friendly interaction with one another.

What differences do you see during official meetings? Naturally, the extremely high number of participants at one of my first planning meetings was surprising for me. However, thanks to the participation of all maintenance groups and work units, the meetings are very well organised, and do not leave any questions unanswered.

How have you overcome the language barriers? As anywhere else in the world: with English. The Japanese speak very good English; at times, the technical terms have to be translated. For a private excursion, however, one should stock up on business cards or exact route directions in Japanese, since the taxi drivers here often do not speak any English.

Which faux-pas should one avoid making? A direct contradiction is, understandably, often seen to be curt and irritating. In this respect, we must all take a good look at ourselves – we can learn a great deal from the Japanese when it comes to interaction and etiquette. Business cards should never be exchanged "for no special reason", but with due respect, and always with both hands.

ened the construction time to a total of only three months. "This is perhaps almost record-breaking, but for us in Japan, it is common practice," reports Masaharu Yoshimi, CTO of RENAGEN.

The perfectly planned procedure was reflected even at the construction site: Every morning, the construction team of 15 began the working day at exactly 7:30. "Following a quick breakfast and lunch with rice and fish, the workers return to work together," continues Masaharu Yoshimi.

It wasn't quite so easy to set up the warehouse for the construction material. "Here, you can see that the team works on an island and space is limited," says Dubický. The trade metropolis Osaka, with a population of 2.6 million, has relatively small construction fields. "As a result, we had to store our material temporarily approx. ten kilometres away from the site," explains the construction supervisor. Since using cranes is very expensive, even the individual work processes during construction had to be coordinated precisely. Thanks to the perfect cooperation, RENAGEN is pursuing a strategic partnership with EnviTec. "An annual total of up to ten biogas plants is planned for construction in Japan," says Hendrik van der Tol. The first steps towards constructing two more plants have already been introduced this year.

The island state is not only setting a standard for a green energy revolution to the outside world.

"In our discussions with the Japanese, we could actually feel that the entire population was examining the issue," says Dubický. "In the meantime, 4.7 per cent of our power comes from renewable energy resources; this is a good start," resumes Daisuke Mishima. However, the current government under Prime Minister Shinzô Abe has recently made a case for resuming operation of nuclear power plants – naturally after a detailed scientific examination. Whatever the final decision may be, Fukushima is still, four years after the terrible disaster, a monument to a radical energy revolution.

Limited space to build: the trade metropolis, Osaka, with a population of 2.6 million, has relatively small building plots.



South-East Asia

Four countries with a lot of potential: Although the biogas sector in the Philippines, Malaysia, Indonesia and Thailand is still in its infancy, the demand for green energy generation is continuously increasing.

Pioneering work is nothing new for EnviTec Biogas. As one of the first biogas allrounders, the company is now using its expertise to gain a foothold in the young South-East Asian market. Thailand, in particular, is one of the largest growth markets for renewable energies. EnviTec needs to impress the local biogas market with high-tech solutions and high performance. "The existing technology is low-priced, but has low output figures," said Hendrik van der Tol, EnviTec Regional Manager for Asia/the Pacific Region. Feed-in tariffs for biogas plants that process residual materials from the local palm oil industry have already been implemented here and with REMATEC, one of the leading recycling companies in Japan and South-East Asia, EnviTec has a local partner. "These are good conditions for also scoring points with a project in this young market in the near future," continued Mr van der Tol.

Apart from Thailand, the Philippines also presents promising market opportunities with regard to the decentralised provision of green energy. "By 2030, the capacities of renewable energies are to be increased from the current 5.4 gigawatts to a total of 15.6 gigawatts, thereby contributing to the country's energy security," Mr van der Tol points out. The 4 MW biogas plant planned by EnviTec in the Quezon province will also contribute to this. After commissioning, it should provide more than 32 million kilowatt hours of green energy per year from 2016 onwards.

The opportunities for implementing future plant projects in the Malaysian and Indonesian biogas markets are also very good. EnviTec has already entered into a solid cooperation with Aquakimia, an engineering company specialised in turn-key planning and construction of palm oil mills, including waste water treatment.



5 questions for → Hendrik van der Tol

How do you experience the immense cultural diversity of this region? The cultural diversity of this

region is like a gift for me. Geographies and histories of different countries have fascinated me since my childhood; my favourite book was an atlas. Later on, I moved from the Netherlands to the Czech Republic. My inter-cultural horizon is therefore very wide and I am used to quickly settling into different cultures.

Today Manila, tomorrow Jakarta – how do you bridge the language barriers in your work? English is a door opener in the entire region, especially as a business language – and naturally our local partners help bridge the language barriers.

Which qualities of your local colleagues do you value the most? We primarily select our local colleagues based on reliability because the person must fit into our EnviTec team. Experience and a good local network are also decisive for a good cooperation with our local colleagues.

In your opinion, which country offers the best conditions for renewable energies? In South-East Asia, I reckon it's Malaysia. Nevertheless, Indonesia has a higher potential and good conditions for renewable energies.

What are the biggest challenges for renewable energies in this region?

The renewable energy sector is definitely still in its infancy in the entire region and this always brings challenges. We must primarily convince the local partners that our expertise and technology provide more benefits than those of local service providers – this is our biggest challenge.

Premiere in the UK

With EnviThan, EnviWaste and EnviFarm, the United Kingdom is focusing on three successful EnviTec technologies.

Magically short construction time: After just six months, the 300 standard cubic meter Envi-Than plant is feeding green energy into the grid together with the 360 kWel combined heat and power plant (CHP) in Ipsden, Oxfordshire. The plant is operated with a combination of pig slurry, agricultural by-products and energy crops. Up to 10,000 tonnes of pig slurry can be recycled each year. "With our biogas plant, Icknield Gas Ltd. will be able to produce an energy value of around 35 million kilowatt hours (kWh) of bio-methane per year," said Roel Slotman, EnviTec Sales Director. A UK household consumes about 16,500 kWh of gas yearly. With the plant, sufficient gas can be produced for the annual needs of approx. 2,150 households. The second completed EnviTec project on English soil has a power rating of 499 KW. The CHP of High Hedley Hope Farm in Durham, in the north-east of England, fed into the grid for the first time in December 2014. The plant, which runs on food waste, manure, and cattle slurry is able to score highly thanks to EnviTec's pasteurisation technology. Last but not least, the 499 kW plant of Allpress Farm was also put into operation at the end of the year. It is located in Chatteris, Cambridgeshire. Renewable raw materials and vegetable waste are recycled here. Three more EnviThan plants are being constructed this year in Wormit, Brinklow and Crowle.

5 questions for → *Mike McLaughlin,* Managing Director of EnviTec UK, and *Markus Ter Heide,* Project Manager

EnviTec has been actively involved with a joint venture in Great Britain since 2007: How many plants have already been finished? Altogether, EnviTec Biogas has now installed nine plants with a total capacity of 6.8 MW

in England. The three new plants give us confidence that our market outlook will continue to be assessed positively.

The UK is aiming to achieve a total share of 15 percent from renewable energy sources such as biogas – how much of this has already been achieved? With some lasting success, the British Government is promoting the development of regenerative energy sources with a feed-in remuneration tariff for renewable energy (FIT) and the "Renewable heat incentive" (RHI). Biogas is making a big contribution in the sense of the amount of gas now being fed into the existing network.

How is the English-German co-operation working out with local customers? Each site is managed by an experienced English Site Manager. Together with the german EnviTec Project Manager and a construction manager, all steps are carefully planned and implemented and the co-operation with local trades is coordinated.

What special features – positive and/or negative – does the British biogas market hold for EnviTec? Regarding both the service business as well as in plant construction, there is certainly potential available in this respect. More time-consuming in this case are the safety standards, which even during the construction phase cause a lot of correspondence.

What typical British characteristics do you appreciate most? I most admire the discipline of the British – once they set their minds to do something, they follow it through to the end!

The land of opportunity

With the construction and operation of two biogas plants, EnviTec Biogas successfully mastered the step into the USA – now the task is to open up further potential...

"We hope to be able to build two more plants this year," says Steve McGlynn, Managing Director at EnviTec Biogas

USA. He was the manager of a dairy and has gathered a lot of experience with anaerobic biogas plants. This expertise is important for winning over potential clients in the rural parts of the USA. Farms with more than 1000 cows in the shed are not rare here. "The 1700 cows at the Lawnhurst Dairy Farm give an average of 37.5 litres of milk per cow per day with each cow producing about 12 kilogrammes of cow slurry," explains McGlynn. An advantage that the family of operators has been utilising for producing energy since autumn 2013. The 541 kW plant in Stanley, US state of New York, has been making positive headlines ever since, predominantly in biogas expert circles. The American Biogas Council praised the EnviTec plant's sustainable mode of operation. The completely stirred digester also won over the second EnviTec client. "American plants are typically operated on the basis of a 'plug flow' process, which results in sand settling in the digester and facilitates the formation of hydrogen sulphide (H₂S)," says farmer Christopher Noble. Thanks to EnviTec, this is not the case with his 425 kW plant. The quantity of H₂S is reduced and the plant runs reliably.



5 questions for → *Steve McGlynn*

How have the EnviTec plants coped with the extreme winter storms? Very well! Our plants were the one of only a few in the USA with consistent

operation in spite of temperatures of as low as -20 degrees! We were on hand for the operators during the entire period and our service technician checked all the plants every week.

How would you estimate the potential for the construction of more biogas plants in the USA? Very good, because to date, the USA only has around 240 biogas plants in the agricultural sector. The actual remuneration and funding opportunities, which differ from one state to another, are problematic. Connection to the electrical grid can also delay securing a contract. Across the nation, the main factor is which political party will have future control at the White House and in Congress.

Which states have subsidised plants? New York, for instance, offers a subsidy especially for digesters, with the NYSERDA fund. Moreover, there are government remunerations in Massachusetts with ten to twelve cents per kilowatt-hour and in the small state of Vermont. New York, Pennsylvania, Connecticut, Vermont and Indiana offer the best incentives.

Where do you see realistic opportunities for EnviTec's next projects?

We were in California; soon, twenty percent of the power generated here should come from biomass. But Nebraska, Maryland and Wisconsin are also of potential interest to us. At the moment, we are working on three feasibility studies for plants in the north-east. All in all, our aim must be to become more well known, particularly among dairy companies. The process of signing a contract with a period of six to eight months, needs a lot of patience.

How is the collaboration with your German colleagues across the big pond? Excellent. Because it is actually almost as though my colleagues were in the next room. Since I am an early riser, the time difference doesn't bother me either.

The most recent technical trends at a glance

Generating new revenue streams

One catchword that EnviTec Biogas is currently preoccupied with is "biobased economy", which refers to the production of recyclables from biomass with the objective of generating new revenue



streams.

The focus lies on research into new applications and procedures and the opening of new markets – naturally with the goal of making EnviTec Biogas even

stronger. "The idea is to try to generate as much as possible from a single product – but not only at the lowest level of the value chain. We want to go farther up the ladder and achieve higher value creation from biomass", Chief Technical Officer Jürgen Tenbrink explains. The combination with a biogas plant results in synergies for the optimal use of biomass. "It allows us, for example to generate methanol or formic acid, which can be used as fuel substitutes by the chemical industry, in fuel cells and other areas of application", Tenbrink adds.

Economic and efficient: the Highgester

The new type of digester yields the same amount of biogas despite its reduced size.

As the digested suspension is not fully mixed in this case, the Highgester requires less power and heat. For operators, this



means a reduction above all of operating costs. But maintenance costs are minimised as well, among other reasons because no rotating parts are installed in the digester. The test results obtained at EnviTec-owned plants show that the dwell time of the fermentation substrate can also be shortened down to 15 to 25 days. The first Highgester is currently in development at the Mühlendamm biogas plant in Bakum. "The project is even being funded by the German Federal Ministry for Economic Affairs and Energy", says Jens Bischoff of EnviTec Research and Development.

Thermal pressure hydrolysis brings higher biogas yield

Thermal pressure hydrolysis – TPH in short – is particularly suitable for the pretreatment of organically contaminated wastewater and biomass prior to fermentation in biogas plants.

At temperatures of up to 180 degrees and simultaneous high pressures reaching 12 bar, the substrate is completely broken down. This results in an increased gas yield, with the accelerated decomposition allowing for even better regulation of the biogas plant. Thermal pressure hydrolysis also allows the exploitation of other, poorly degradable substrates that could only be used to a limited extent in the past. The improved decomposition process and the use of inferior, lower cost substrates result in a significant increase in the economic efficiency of biogas plants. The plant is currently under construction in Saerbeck.

EnviStrip for reduced fermentation residue

The EnviStrip process developed by EnviTec reduces the amount of fermentation residue by half.

Through the newly developed EnviStrip system, we have been able to significantly alleviate the digestate problem. At the same time, the cost-effectiveness of the plants has been further improved through the production of high-quality fertilizer. In the first step, the liquid phase from the fermentation residue separation is condensed in an air current. In the process, ammonium escapes from the fermentation residue

in the form of ammonia gas. "With each densification, we can lower the fermentation residue content by 50%, and the nitrogen content is also significantly reduced", explains Jens Bischoff. In the second step, ammonia is stripped and bound in the form of a concentrated fertiliser. An additional advantage of the process, which is already in testing, is the fact that an ammonium reduction can even be achieved in the digester, which cuts down



reduction can even be achieved in the digester, which cuts down on substrate costs considerably. "The plant went into operation at the beginning of March, and we are now starting test operations", says Dietmar Stockdiek from the Research and Development Unit at EnviTec.

More energy with a hydrogen digester

The use of a hydrogen digester is expected in future to boost energy yields by at least 10%.

This installation, which acts as preliminary stage upstream of the actual biogas digester, produces a gas mixture with high hydrogen content which is mixed with biogas and fed to the co-generation plant. Thanks to the higher energy gain, the separate production of hydrogen results in a higher yield overall.

As a next step, EnviTec intends to research into the conversion of hydrogen into other storable energy carriers, as well as into important raw materials used in the large-scale chemical industry. "Our goal is to make power storable and thus to decouple consumption from the place and time of production", Jürgen Tenbrink explains. The tests for this have been running at a company-owned plant in East Germany since the end of 2014. According to Jens Bischoff, the first findings have been highly promising, and they are currently under analysis.



External view of a hydrogen reactor: at least 10% higher energy yield.



State-of-the-art laboratory technology

... is what the newly opened laboratory of EnviTec Biogas Service Italy S.r.l. has to offer at their branch office in Verona to complement the biogas all-rounder's service range in Italy. Very secretly and quietly, with only a little bubbling to give them away, numerous biological and chemical processes are taking place in a biogas plant which remain a secret to operators. If one only pays attention to the gas yield as a plant operator, it is often only possible to react to deviations from the rule when it is too late. Laboratory analysis can remedy this problem.

"State-of-the-art technology can help operators to better monitor the bacteriology in their biogas plant", says engineer Silvia Di Fabio, head of the laboratory at EnviTec Biogas Service Italy. Together with her colleague Dr. Giorgio Malvicini, the environmental engineer is responsible for the EnviTec Biogas laboratory which opened at the beginning of 2015.

Her typical workday usually begins with an inspection of a biogas plant. "Together with the operator, we assess the efficiency of the plant and then we take samples", the biotechnologist Malvicini explains. An initial evaluation of the sample can usually be made right on site thanks to portable analysis equipment.

² "However, the detailed evaluation is only made following an exact analysis in the laboratory", adds his colleague. After determining the pH value, the buffering capacity, the acid content and other parameters, the team of biologists assesses the condition of the biological process, the increase or decrease of the organic load at the digester input and the optimal dosage of possible EnviTec additives.

Furthermore, the 90,000 Euro investment in a company-owned laboratory offers operators not only efficient, but above all time-saving analyses: Within just a few hours, the biologists already have the results ready and, thanks to the use of automated technology, it is now even possible for the EnviTec service experts to test samples simultaneously.

3 Apart from scientific laboratory analyses, biological support for company-owned and external biogas plants also requires good cooperation between the service employees and the operators: "The best mix is always an exact observation of the biology and the common exchange of ideas and suggestions", as Di Fabio reports from experience. In addition to routine analysis and the evaluation of operational data, including suggestions for optimisation with respect to feeding, the use of substrates and basic technical settings, EnviTec is also capable of carrying out studies using the laboratory facilities. "Our cooperation with research establishments helps us to further optimise applications", explains Martin Brinkmann, Managing Director of EnviTec Service. ●







On your marks, lean back and get optimised!

Technical problem + short response time = less idle time: The equation from EnviTec Service is adding up. Thanks to very well trained employees, short routes and perfectly equipped warehouses, EnviTec offers the all-round carefree package for operators.





Ever ready: EnviTec Service staff are quickly on site. Below: EnviTec Service team, Martin Brinkmann (left) with Stephan Stiens and Jan Meistermann. There are mechanics, electricians, biologists, merchants and warehouse clerks, all of whom have the same goal: to keep biogas plants biologically and technologically fit for the future, in the most cost efficient manner possible. Thanks to the excellent services of about 125 service employees all over the world, the average efficiency of the plants – about 280 plants technically supported by EnviTec worldwide – is approximately 95 percent!

"We provide help and advice to our customers 365 days a year", says Martin Brinkmann, Managing Director of EnviTec Service. In most cases, putting a call through to the 24-hour hotline is all it takes to obtain a long-distance diagnosis that ends up solving the problem. However, should the fault turn out to be more serious than anticipated, EnviTec promptly dispatches a technician. Thanks to the company's

Flex-Overhaul

extensive supply of warehouse equipment, the procurement of important spare parts is no problem either. "In over 95 percent of the cases, we can repair the damage within one day", adds Brinkmann.

This is the very claim that Brinkmann and his colleagues pursue overseas as well. As a "global player" in the biogas sector, EnviTec is active in more than 20 countries around the world - and counting. "It is rather clear that we too from the Service department follow suit and offer our maintenance service to domestic and overseas customers", says Brinkmann. "Internally, we are also working on a European network", adds Brinkmann. The aim is to have a service network that promotes the exchange of knowhow. The internationalisation of the company becomes particularly apparent in the service sector. "We support each other, no matter where and when", says the service expert. Colleagues from Latvia and the Czech Republic were already present in Germany for support, and German colleagues have been to England, France and Italy. Annual training of all the employees thereby guarantees that they are always up-to-date on every aspect of service.

This is because the EnviTec service experts must be fit: five to six assignments are no rarity on weekends. "Fortunately, all our employees are highly motivated and enjoy their work", says

Brinkmann. Being able to adapt to newer and newer challenges is the basic prerequisite for the service profile. No two plants are similar and thus even the standard maintenance schedules need to be adapted from plant to plant.

Plants that are in the second half of their life are currently the focus of EnviTec's service work. Depending

on the condition and age of the plant, work such as a major engine overhaul, exchange of the roof or cleaning of the digester may need to be carried out. "The scope and thus the costs of a maintenance are always decided together with the customer", says Jan Meistermann, sales employee at EnviTec Service. "Depending on the respective legal and support framework, and the available financial resources, we can submit an individual analysis or recommendation, which has been prepared on the basis of a ProFit report", says

The gas engine division of GE Jenbacher and EnviTec offer customers a special type of service. Operators of the "J312" series biogas engines can reserve the so-called "Flex-Overhaul" package by request. Until now, a major overhaul was carried out after 60,000 operating hours. With this package, the engine will only undergo an extended maintenance after 60,000 hours. This includes cleaning the combustion chamber, for example, and maintenance of the most important components such as cylinder heads or valves. After reaching a running time of 80,000 operating hours, the necessary major overhaul is then carried out automatically. A plus point of the new service concept: should the "old" engine refuse to start before the major overhaul, a replacement engine is available promptly. The replacement engines are pre-reserved for the customers. If you wish to reserve the package, you need to decide on it at the latest up to a service life of 55,000 hours of your CHP. During the major engine overhaul, Flex-Overhaul customers can optionally also fall back on an "upgrade" programme, which will result in an increase in either the efficiency level or the output. A popular package is the increase in output up to 625 kilowatts. For a previous limitation of 500 kW, this corresponds to an additional 25 percent in production.

> Meistermann. After authorising this analysis, plant operators receive an individual check-up, an analysis with the determination of the necessary investments and possible additional revenues as well as an evaluation of the possible optimisation measures. Once the favoured variant has been selected and the order given, it can all begin.

> > The central point of the analysis is a simulation model, which compares the actual quantities to values achievable in future and compares company earnings and expenses for one operating year. Possible measures for existing plants include for example adding a combined heat and power plant (CHP) or replacing an old CHP with a new one with greater power.

Operators can also get more out of their plants in the feeding and processing of substrates. The targeted processing of substrates allows larger volumes of gas to be generated from the input, thereby considerably improving the overall efficiency of the plant. Moreover, the reduced and more flexible input purchasing that is required is easy on the operators' budgets.

In addition to technical "large scale operations" such as replacing a double membrane roof or adding a CHP, EnviTec Service also offers

PROFIT

The ProFit analysis offers operatorsan individualised check-up.Necessary investments are identifiedand they receive a list of potentialoptimisation measures.

smaller power packages for older plants. "With our OptiPacks, older biogas plants also reach their optimum, while reducing operating costs at the same time", explains Stephan Stiens, Co-Director of EnviTec Service. The intelligent software packages from the biogas all-rounder from Lower Saxony have been impressive in the market: "Our OptiPacks 'Slurry direct', ,Rezi direct' and 'Aerator Packs' are currently enjoying particular popularity with our customers", reports Jan Meistermann, Sales Representative. The software solutions reduce pump wear and accelerate the mixing process while also reducing the consumption of self-generated power. With these upgradable technologies and systems, EnviTec is addressing the strong demand for intelligent repowering, because today's biogas plant technology has to be more efficient than it was a few years ago. "With the rising prices of raw materials and energy costs, this is something operators of existing plants in particular have noticed", continues Stiens.

In addition to the OptiPacks and the standard maintenance packages, the biogas all-rounder is also offering newer and newer products in

the service sector. This includes flex-overhaul contracts for plant operators, which are fixed reservation contracts for CHPs with "J312" series biogas engines by GE Jenbacher. "We have already concluded 40 contracts here in Germany and three in the Czech Republic", <u>Alway</u> reports Stephan Stiens. The main part of the service contract: GE ensures the operating time extension of the engines from 60,000 to up to 80,000 hours without having to carry out a major overhaul. And the flex-

ible agreement of the overhaul. And the nexible agreement of the overhaul schedule is an advantage for the operator. A general overhaul in the middle of winter is an unfavourable time for many operators as the waste heat from the CHP will be required for heating the digester, explains Jan Meistermann. "With the completion of a Flex-Overhaul package, the biogas plant operator can choose the ideal time for the major overhaul on his own", he adds.



Long delivery times for spares is not in EnviTec's vocabulary: the majority of components are always in stock.

Worn components of a biogas plant seem less flexible when it comes to selecting a date for repairs. "Our experience shows that the solids dosing feeder in particular is relatively susceptible to failure", reports Jan Meistermann. The operator database of the North Rhine-Westphalia Chamber of Agriculture has a similar view –

> about 23% of all the faults could be attributed to this component. While evaluating just under 400 plants, it also became clear that the feeding system had also replaced the combined heat and power plant, which is responsible for 22% of the reported faults, as the component most susceptible to failure. The

agitators came in third place with 16%. However, it is not necessary to use the technical service at all times. "If you work preventively, you can also minimise repairs", reports Meistermann, having experienced this from everyday practice. This certainly requires the operator to have a certain qualification, and the substrate quality used is also very important. "Stones and tyre residues in the maize are of no good for any of the plants", says Meistermann. It is important to identify errors in the system as early as possible. "Do not wait until something breaks. Carry out maintenance in advance. That is our motto", says Meistermann.

TIP:

Always check, don't just wait and see: working preventively minimises the need for repairs.

Fitness for plants worldwide

Internationalisation is now also making a noticeable mark at EnviTec Service. A total of 44 employees are working abroad to keep plants fit, in part under adverse circumstances ...

Italy, Latvia, France – the list of EnviTec Service locations is growing continuously – as is the satisfaction of plant operators, who value the service provided by the biogas all-rounder from Lower Saxony. "In Italy, we founded a wholly owned subsidiary of EnviTec Service as early as 2011", reports Christian Fürste, Head of the Service International department at EnviTec. Maintenance contracts are now in place there for 26 plants. An additional pillar of EnviTec Service in Europe based in Velké Mezirící is EnviTec Biogas Service s.r.o., which operates in the Czech Republic and Slovakia. Its 14 employees provide EnviTec customers with ,on demand' services which are billed based on actual expenditure. Full maintenance contracts represent the primary market in the United Kingdom, where five service personnel work for EnviTec Biogas Service UK ltd. At the end of 2014, plants with a combined capacity of 6.8 MW were operational in the country, among which a remarkable 4.8 MW was under a full service contract.

France Another important target market of the EnviTec Service range is France. Here, EnviTec operates through EnviTec Biogas France SARL. At

the end of 2014, plants with an output of 4.7 MW were in operation or under construction in France, of which three were placed under full maintenance contracts. "In the coming two years, we expect increased demand for our service range in both England and France, and this also applies to our gas upgrading technique", says Fürste.

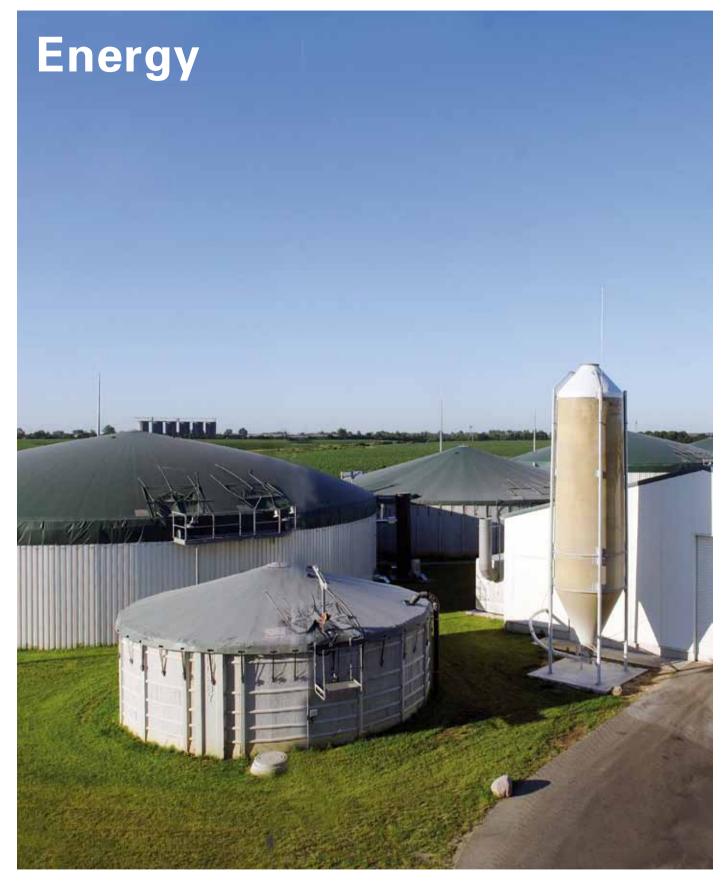
Latvia A total of five out of seven plants constructed by EnviTec in Latvia are also under full maintenance contracts. "In the winter, our three service personnel on site must often work in difficult conditions here", reports Fürste. "Temperatures of 28 degrees below zero are not uncommon, and frozen ground and plants are the standard programme."

When it comes to its services abroad, EnviTec's main focus lies on the technical expertise of the personnel – and not only for meeting challenges such as these. All newly recruited employees are apprenticed and trained at EnviTec's headquarters in Lohne, "and we have just recently extended our international team in Germany from two to four employees", concludes Fürste.

In heat or freezing cold: EnviTec plants work in all temperatures and even defy temperatures of -30°C.







Own plant: At Anklam EnviTec Biogas tries out new technologies and processes, including power-to-heat, that is the conversion of electricity to heat using the innovative HeatBox.

Turbocharged route to balancing energy

100 percent power without switching off the engine: For plant operators, the EnviTec HeatBox opens up the benefits of the balancing energy market.

It is economical and energy efficient: We are talking about the EnviTec HeatBox – it functions on the Power-to-Heat (P2H) principle, i.e. converts power into heat. "We offer our customers the additional benefits of the balancing energy market, and without needing to switch off the engine of a plant," explaines Alfred Gayer, the Managing Director of Energy and Stromkontor subsidiaries of EnviTec. The power output of a combined heat and power plant (CHP) can be rendered suitable for feeding into available district heating

BENEFITS OF THE HEATBOX:

A total of 100% of the power generated can be placed in the secondary balancing market, with the operator profiting from the additional revenues. However, the HeatBox doesn't merely offer monetary, but also ecological advantages, as the heat produced is simultaneously used in an existing district heat grid or by internal heat consumers. Additional flare run times can also be prevented through the remote shutdown of the CHP. Moreover, the method is advantageous due to simple maintenance which only involves checking and cleaning the switch cabinet fan. the HeatBox and CHP can be selected. As a result, the heat infeed can be directly controlled and can be increased strongly or moderately depending on the mode, or even maintained nearly constant if necessary," explained Hinrichs.

As a whole, the EnviTec-HeatBox impresses due to its cost-effective and low-maintenance usage and due to continuous development activity: "Based on the initial earnings from the secondary balancing power at our own plant at Anklam, the procurement of the HeatBox becomes profitable

after three to four years," concluded Hinrichs.

grids with the aid of P2H and the heat generated by it. "Most customers would be glad to offer the entire engine power as the balancing power. Furthermore, they know EnviTec is an all-rounder and that is where we score points," added Nicolai Hinrichs, the Head of the Technology Department. At present, eight customers are using the Heat-Box for participation in the secondary balancing power.

The HeatBox, available as a 300 kW or 550 kW unit depending on the respective heat utilisation concept, functions like a tank-less water heater, "Though with an integrated control and switching unit for an optimal connection to the CHP of the biogas plant. Thanks to different operating

modes, the operation can be adapted as per the prevailing conditions of the biogas plant. Depending on the heat requirement, different modes like Low Priority, High Priority and Parallel control of The EnviTec HeatBox provides balancing energy at turbocharged speed.



Electricity, eggs and milk from your neighbour

From farmer to energy provider? Thanks to EnviTec Stromkontor, an increasing number of plant operators have now begun to market their electricity themselves and guarantee their customers fair prices and security of supply.

Switch once -

reap benefits for life!

We are getting

milk from the

farm and eggs from the farmer next door but now we even get electricity from the neighbour. The model of regional direct marketing has made it possible: "Using the market premium model as per EEG 2012, plant operators can sell electricity they produced via regional direct marketing," explains Alfred Gayer, managing director of the EnviTec subsidiaries Energy and Stromkontor. The electricity supplied here is not traded on the electricity exchange, as is otherwise usually the case, but passed on to customers living in the immediate vicinity of the biogas plant. "From the region - for the region: this is the motto of the regional direct marketing, which is primarily aimed at household, commercial and agricultural customers with an electricity requirement of up to 100,000 kWh a year," says Gayer.

Plant operators such as Henning Seele from Frille continue to receive the market premium from distribution network operators as well as the price for electricity from end customers. "This price, in turn, comprises 50% taxes and duties, which must actually be paid in full," says Gayer. Yet, it is precisely here where the advantages of regional electricity marketing come into play: additional income can be earned from the traditional market premium model thanks to the electricity tax-related benefits. However, certain prerequisites must be met for this. "The most important criterion is the physical proximity between the biogas plant and end consumer," Gayer points



Henning Seele, operator biogas plant Frille

Mr. Seele, from a farmer with three sites in Minden and Petershagen to an electricity provider: How do you manage the balancing act between two challenging fields of work? With a lot of inner peace and a good amount of flexibility. Of course, I do not have fixed office hours even though three PCs have to be monitored and processed in my office. The agricultural sector is always dependent on the weather, disruptions come suddenly and there is still a lot of paperwork for the end of the day. This is a lot, but enriching nevertheless. At any rate, I do not get bored so easily.

out. The installed capacity of the plant must not exceed 2 MW, and the electricity generated must flow through the public grid. "Furthermore, it is necessary to prove that the electricity sold to the customer has been generated at the same

time," continues the energy expert.

WE GUARANTEE ABSO-LUTE DELIVERY RELIABILITY AND FAIR PRICES – THAT'S **CONVINCING!** Hans-Heiner Brand. Operator Biogas plant Steinfurt

100% supply reliability," said Lefert at a public information event for the Ostendorf farming community. Around 30 interested people were present and listened to the statements of the farmer and new electricity supplier. All in all, the team of operators is looking at a

BLK Bioenergie from Steinfurt meets all these requirements. Its operators, Hans-Heiner Brand and Dirk Lefert, have been providing green electricity since March 2015: "BLK Strom in Steinfurt guarantees low prices, fair discounts and customer base of around 1000 households. Their biogas plant in the Steinfurt-Hollich, with a capacity of 3 x 190 kW, has been in operation since 2011. "It was primarily the holistic concept of electricity generation and marketing with the help of EnviTec Stromkontor that paved the way for us

Who helps you with your work? My father and I make a dynamic management team; another permanent employee and the flexible assistance of a student constitute the firm support in my daily work life. With EnviTec Stromkontor, I have a reliable partner at my side when it comes to questions of direct marketing. The EnviTec employees in Lohne and Saerbeck undertake the processing and administration work.

Since 2005, you are a biogas farmer. What exactly were your reasons for entering regional electricity marketing?

Without a doubt, the holistic and strong concept of Stromkontor, which enables me to not only generate electricity, but also market it myself. This has turned energy transition into a living reality for me and is more than just lip service.

Was there ever a moment for which you doubted whether the decision to market electricity directly was the right one?

Naturally, we are still in the initial phase of direct marketing. It was not difficult for me to make the decision. because regional direct marketing

is virtually the finishing touch that completes our Frille energy transition and also allows the customers to be a receiving part of our electricity from renewable energy resources.

What demands do you expect this year? Or, to put it differently, is there a specific number of customers that vou wish to reach?

Our biogas plant with a capacity of 400 kW and the attached CHP

generate approx. 3.5 million kilowatt hours (kWh) of electricity a year. Thus, we produce enough electricity for around 1000 household customers with an annual average consumption of 3500 kWh. This magnitude is certainly a desirable goal.

Does the Frille electricity already have its first customers?

Yes, the first 30 signed contracts are on my desk and the customers have \rightarrow



customers in Frille could be supplied bourhood.

 \rightarrow

to offer our electricity in the market ourselves," adds Brand. The company helps the operators in the overall administrative processing from the order approval and change proposal to the management of the customers' advance payments. In addition, Stromkontor provides the operators with a customised information package, which they can use for advertising purposes.

Regional direct marketing has also started to bear fruit in East Germany. Here, the inhabitants of Neutrebbin, 60 kilometres east of Berlin, already have good experience with the heat supply. The biogas plant built by EnviTec Biogas produces roughly twelve million kilowatt hours of heat

and roughly 13 million WITH THE HOLISTIC kilowatt hours CONCEPT OF THE STROMof electricity, KONTOR, REGIONAL DIRECT and can thus MARKETING IS EASY FOR ALL sustain 3000 **OPERATORS.**« households. Dirk Lefert, The electricity operator biogas plant Steinfurt should now

as electricity from Neutrebbin, directly to the households. "The savings compared to the default provider vary depending upon the region. Here, the savings are between 36 to 56 euros a year for \rightarrow



already received their order confirmations. Everything is going well.

What questions or doubts do your customers come to you with?

The people are mostly interested in knowing how the model works. How will the biogas plant supply electricity to me? What happens when the plant is being serviced? Is the supply of electricity guaranteed even then? This is where I provide explanations. Some people have had bad experiences with respect to a tariff change. In response to this, I can say with a clear conscience that Frille electricity customers can expect transparency and fair tariffs and do not buy a pig in a poke.

In your opinion, what exactly is the most powerful argument in favour of electricity from Frille?

Our slogan is "Switch once – reap benefits for life". It means fair tariffs in the long term and complete transparency. There are three adjectives that best describe our offer: "per-

Two genera-
tions and two
employees -
the "Seele
team" sup-
plies electric-
ity to thesonal, professional, economical". In
addition, there are the arguments of
renewable energy on site and our
price guarantees – you can't offer
more than this in the competition in
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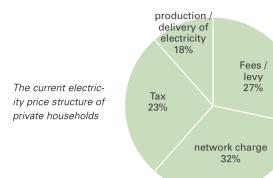
You advertise with a price cut guarantee – what exactly does this mean?

be supplied

First, Frille electricity offers a price guarantee during the desired contract period for the price components that we can influence. Of course, we cannot take taxes, levies and duties into consideration here. For this reason, we have supplemented our promise with the price cut guarantee. This means that we always transfer the reduced price components to the end customers in full, at the beginning of a contract extension.

What advice do you have for those who are not sure whether they should enter direct marketing?

The basic prerequisite for direct marketing of electricity is good, neighbourly interaction with potential customers. If this is in place and you have a knack for transparent communication, you have already met the basic prerequisites.



around 3500 kilowatt

hours consumed, whereas

other locations can also save more than EUR 100 a year," says Alfred Gayer, managing director of Stromkontor. "The deciding factor is not the price difference, but the local customer approach."

Regional direct marketing of electricity may still be in its infancy, but Alfred Gayer is certain that "the trend of self-marketing will grow and the operators will prepare for the time that lies ahead of them following the expiry of the Renewable Energy Sources Act (EEG)." •



Alfred Gayer, Managing Director EnviTec Energy

EnviTec has compiled a sales promotion package for the marketing of the electricity which is tailored to the respective operators.



Further opportunities in energy marketing for biogas and biogas processing plant operators

Procuring electricity

By selecting the electricity supplier, the operators decide who purchases electricity for them and with whom they settle the accounts for the quantity of electricity purchased. EnviTec Stromkontor addresses all of the customers' questions regarding trade and sales as well as related contractual and organisational aspects, and supplies the electricity at attractive conditions.

Direct Marketing

EnviTec has been growing and expanding its pool of plants for direct marketing continuously since 2012. The philosophy of the EnviTec direct marketing is that the additional proceeds from the management premium should be guaranteed to plant operators and not be offset against the risks of the electricity market.

.....

Balancing energy

As a direct marketer, EnviTec has the required pool of plants in the control zones 50 Hertz, Amprion and TenneT for participating in the balancing energy markets with the plants. Balancing energy is needed to maintain a constant voltage in the electricity grid. The customers of Stromkontor can contribute actively to the stability of the German electricity grids. Because biogas is the only renewable source of energy that fully meets the requirements of controllability and base load capacity.

Flexibility premium

With its proFit consulting tool, EnviTec offers an approach to further developing existing plant concepts, for instance by taking the flexibility premium into account. This is interesting for plant operators who opt for regional direct marketing because there are too few customers in the immediate vicinity.



Company-owned operations – a success story!

With regular turnover and attractive margins, company-owned plants have now been an integral part of EnviTec's business strategy since 2007. Now a new old plant boosts the fleet of 74 company-owned plants.

It is the success story par excellence: EnviTec Biogas launched its company-owned operations in 2007 with 1.8 MW and now has a total installed capacity of roughly 57.9 MW – and counting.

In addition to the option of operating plants completely independently, there is also the option of operating plants co-operatively, both at home and abroad: this particular model is usually used by partners from the agricultural sector or local industry, who operate their plants independently with assistance from EnviTec. The term 'company-owned operation' doesn't only refer to the processes of developing and operating the biogas plant – it also covers the processes of feeding the digester with substrates, processing or disposing of the fermentation residues and feeding the energy produced into the existing electrical, heat or natural gas grid.

Since the start of the New Year that is exactly what is happening in the biogas plant next to the L'Oréal factory in the Belgian town of Libramont, which was commissioned in 2009 and is now operated by the company. "It supplies green heat to the cosmetics factory - the surplus energy, enough for approximately 4000 households, is fed into the public grid," says Robert Engeman, who is responsible for international companyowned operations. One of the reasons for taking over the 3.2 MW EnviWaste plant is the change in feed-in tariff for biogas plants. "Furthermore, the buyback gives us the opportunity to develop and test technical innovations in our own plant," adds Engeman. The four on-site employees are currently working to bring the industrial plant up to the latest technical standard. EnviTec Eigenbetrieb employs a total of 83 people throughout Europe. Profits from this lucrative business segment amounted to 9.8 Mio. Euros in the current financial year. 🔹



EnviTec own plant operation in Libramont: excess energy is fed into the national electricity network

SHARE OF TURNOVER FF OWN PLANT OPERATION COMPARED TO OTHER SE		
OWN PLANT OPERATION	39,7%	
PLANT CONSTRUCTION	30,8%	
ENERGY	16,6%	

12,9%

SERVICE



A successful start in the professional world

Ever since the company was founded, EnviTec Biogas has been offering young adults attractive apprenticeship training positions. About 20 (former) apprentices have gained profound technical knowledge in the process and a perfect start to their careers.

How does a biogas plant function? What does the renewable energy market environment look like and what rights and duties does an apprentice have? "Questions like these preoccupy most of

our apprentices during their first few weeks with us", explains Kristin Gravemeyer, training manager at EnviTec. Each year the biogas all-rounder offers an average of two to four new apprentices a successful start in the professional world. After their application, aptitude test, selection interviews and introduction week, their apprenticeship programmes can begin, which last either two or three years depending on their educational background. The apprenticeship training positions for industrial management assistants are highly sought-after: "We receive about 120 applications per year", says Gravemeyer.

EnviTec employee Christian Eilert explains to trainees how a biogas plant works. Vogler and Marie Pümpel. While Marie is still in the first year of her apprenticeship, Oliver is preparing for his graduation. But both of the wouldbe industrial management assistants spent time abroad at the start of their programmes. "This is a new development", says Katrin Selzer, Head of Corporate Communication at EnviTec. "Many businesses from our regions are becoming increasingly international - as we are ourselves. As a result, gualified employees with a substantial knowledge of international trade are required who can communicate and cooperate with their foreign partners", Selzer adds. In order to satisfy this requirement, the Handelslehranstalten Lohne (Lohne Commercial Schools) offer an additional qualification as a "Foreign Trade Dealer" which

Among the successful applicants were Oliver





runs parallel to their apprenticeship programmes. It is just this opportunity that the two EnviTec apprentices took advantage of in April 2015, taking a three-week trip to Italy to the EnviTec branch office in Verona.

"In the past, we trained not only industrial management assistants, but also architectural draughtsmen and IT specialists", Gravemeyer reports. "Today we are increasingly looking for electronic engineering apprentices for machines and drive technology." According to Gravemeyer, this special apprenticeship is not very widespread and is still relatively unknown among graduates. EnviTec offers a joint training program for this job together with Schulz Systemtechnik.

EnviTec is currently training seven apprentices,

among them two in retraining to become management logistics experts, one retraining to become an industrial management assistant who is completing the practical part of her training at EnviTec, and an industrial management assistant who is already in his second and thus last year of training. Two industrial management assistants, among them Marie Pümpel, started in 2014, "and we also have an additional new entrant in our dual studies programme", adds Gravemeyer. Selzer sums up: "As an employer, we take our duty to maintain Germany's economic strength very seriously and offer young people as well as our entire team of employees apprenticeship positions and opportunities for continuing education. Apart from English language courses, we also have advanced training programs for draughtsman and sales managers, while other colleagues are acquiring further training in online marketing or in finance and balance sheet accounting."

Teamwork required. Whether at work or in their spare time, friendly cooperation is the basis for working successfully at EnviTec.



»MY INTERNSHIP IN ITALY NOT ONLY BROUGHT ME CLOSER TO COMPLETING MY ADDITIONAL QUALIFICATIONS BUT, ABO-VE ALL, GAVE ME MORE SELF-CONFIDENCE. SOLVING PROBLEMS ON YOUR OWN, IMMER-SING YOURSELF IN A DIFFERENT CULTURE AND CONVERSING IN ENGLISH ARE ALL CHARACTER-BUIL-DING!«

Marie Pümpel, Trainee

»MY INTERNSHIP ABROAD WAS THE PERFECT WAY TO ROUND OFF MY TWO YEARS AT EN-VITEC: MY ITALIAN COLLEAGUES WERE VERY HELPFUL AND I HAD TIME AT THE WEEKEND TO VISIT VERONA, VENICE AND BOLOGNA.«

> Oliver Vogler, Trainee

»IN ORDER TO KEEP UP TO DATE ON EMPLO-YEES' RIGHTS AND OBLIGATIONS, I REGULAR-LY ATTEND TRAINING COURSES ON LABOUR LEGISLATION AND WAGE ACCOUNTING. I CAN CHOOSE THE MODULES MYSELF.«

Roswitha Steinhaus, Wages Clerk

Highlights from 2014

Trade fairs in Germany and abroad

EnviTec offers innovations and information about the green energy resource biogas at many different trade fairs in Germany and abroad. Whether at the two leading German trade fairs EuroTier and Agritechnica in Hanover or at Bovino da Latte in Cremona: Board members and sales and service staff are always on hand With usually over 160,000 visitors, EnergyDecentral has established itself in the context of Euro-Tier as an international meeting place for decentralised energy supply and has a permanent place in EnviTec's business calendar.



to provide expert information.



Board & Co. rolling up the EnviTec calendars every morning.

Always busy: Marcello Barbato, Sales Manager South-East Asia, at Energy Smart, in Manila in autumn 2014 and speaking at the Biogas Forum Batanga.









Practical tour followed by talks: whether during a visit from a foreign delegation or at the annual operators» conference, our visitors' questions are always our priority.

Welcome to EnviTec!

Every year we welcome more than 500 visitors to our EnviThan sites at Sachsendorf and Köckte or to the company headquarters at Saerbeck and Lohne. A travel essential: interest in the green multi-talent that is biogas.





Underground with colleagues: the Zeche Ibbenbüren mine is one of the three active coal mines left in Germany and is the destination for a project manager trip.

Celebrations and trips

EnviTec does not leave team spirit and good working relationships to chance: Christmas, company party and "EnviTec for Fit" all help to foster a team spirit.

Skill and quick reactions were necessary for the Human Kicker game at the EnviTec company party in the summer.





<u>"EnviTec goes</u> <u>global" and we are</u> <u>going with it. What</u> <u>impact does increasing</u> <u>globalisation have on</u> <u>day-to-day work? We</u> <u>asked around...</u>

From EnviTec out into the world ...



»Getting used to the different units of measurement«

Emilio Petrucci, Project Manager

»When we were building the second EnviTec plant in the USA I first of all had to get used to the different units of measurement. You have to be very careful when converting the numbers but it all works out if you have a good team! And that's important, wherever you work – even if, like me, you are nearly 8000 km from home – team spirit counts and at EnviTec it is great everywhere in the world!«

»Own peculiarities, especially when it comes to body language«

Marcello Barbato, EnviTec Sales international

»As an Italian, I am currently working in Asia for a German firm and so I am used to the mix of cultures but every new country has its own peculiarities, especially when it comes to body language. For example, raising your eyebrows in the Philippines means 'Yes' – that was quite new to me because where I come from it means 'Absolutely not'.«



»Flexibility above all else«

Oliver Ahlemeyer, Technical Planner at EnviTec Biogas

»International collaboration requires flexibility above all else. Every country is different and so is the ground. Because of the specific geological conditions in Japan, we had to plan with seismic safety in mind – here we were able to call upon our many years of experience in plant design and construction.«



»polished up English in a one-week language course in England«

Kai Fischer, Technician Trainer international, EnviTec Service

»As technical trainer I am responsible for Service trainings throughout the world. This means that I have to speak English, of course. I polished up my English in a one-week language course in England. However, since none of us were native English speakers, we are all at a similar level and that definitely makes it easier!«

All set for the first of two team mountainbike excursions in the Teutoburg Forest.







Out of puff? The EnviTec running workshop required stamina and perseverance.



EnviTec for Fit!



Triathlon, mountain-bike tour, running workshop – the fitness program EnviTec Biogas has provided for its employees since 2014 has it all. So far around 50 employees have taken part – rising trend and rising motivation!





On your marks, get set, go: for the triathlon swimming and for the bodyweight workshop (left) you have to overcome your "inner couch potato".



EnviTec **REPORT**¹⁴

Financials

(Mio. EUR)	2014	2013	
Sales	163.4	148.8	
Germany	120.3	103.7	
Abroad	43.1	45.1	
Gross result	62.9	63.8	
EBITDA	21.8	18.4	
EBIT	6.3	2.4	
Net income	4.2	0.3	
Earnings per share	0.28	0.02	
Employees	350	350	
Orders on hand	37.3	67.6	
thereof Own Plant Operation	0.9	12.8	
thereof abroad	27.5	21.9	
Incoming orders	52.3	60.3	
Cancellation of orders	27.9	34.1	
Orders completed	54.7	51.5	
Installed electrical capacity	366	354.4	
thereof abroad	95.8	92.5	
Installed electrical capacity	1.1	4.1	
thereof abroad	1.1	0.4	

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FOREWORD OF THE EXECUTIVE BOARD

DEAR SHAREHOLDERS, DEAR CUSTOMERS, EMPLOYEES AND FRIENDS OF ENVITEC BIOGAS AG,

The past fiscal year was again characterised by major challenges for EnviTec Biogas AG and the entire biogas industry, especially in Germany, which used to be EnviTec's most important market. Due to the new German Renewable Energy Resources Act (EEG), biogas plant construction activity in this country has come to a virtual standstill and will remain negligible in future. While an installed base of approx. 8,000 plants means that Germany will remain the No. 1 in Europe, the conditions required for expanding this leading position are no longer in place due to the amended Act. The collapse of the German market has led to numerous insolvencies and a loss of jobs among local biogas plant builders. We remain convinced that bioenergy can fulfil indispensable systemic tasks in the generation of electricity and heat and will therefore gain importance on a global scale. The advantages of bioenergy should be given greater weight also in Germany when it comes to taking decisions about the future energy mix in order to ensure a reliable, efficient and climate-friendly energy supply.

The growing revenues and results reported by EnviTec for the year 2014 in this difficult market environment are primarily attributable to the fact that the company has been restructured from scratch as well as to the commitment of our employees, who actively helped to implement the EnviTec strategy. The success of our strategy is based on four elements, which we pushed ahead with determination over the past years, namely the international expansion of the plant construction activities, the expansion of our own plant operations, the extension of our value chain by the Service and Energy segments and the strengthening of our innovation leadership. We have also optimised our corporate structure and streamlined it by spinning off the plant construction activities into a subsidiary. This increases the transparency of our revenues and costs and reflects the declining dominance of this segment within the Group as a whole.

EnviTec back on the growth track

The 9.8% increase in sales revenues to EUR 163.4 million shows that EnviTec Biogas AG is back on the growth track. Especially our Plant Construction segment has clearly recovered from the slump in 2013 and defied the general industry trend. The sharp increase in revenues was driven by our strong international business. The EnviTec Group's earnings before interest and taxes (EBIT) improved by an impressive 163.7 % to EUR 6.3 million. Net income after taxes amounted to EUR 4.2 million, which represents a strong increase in earnings per share from EUR 0.02 in the previous year to EUR 0.28. The financial basis of EnviTec Biogas remains very solid. At the end of 2014, EnviTec Biogas had an equity ratio of roughly 54% and a very solid liquidity position.

Outlook

Supported by robust financial figures and a forwardlooking strategy, we are cautiously optimistic about the future. Our plant construction activities focus on attractive foreign markets such as France and Great Britain as well as Asian countries such as China and Japan.

As an agricultural country, France offers excellent conditions for the generation of energy from biogas. The number of plants in France is expected to triple by 2017. Great Britain, too, definitely remains a growth market, with several projects currently in our pipeline. In the still young Asian biogas market, plants built in Germany enjoy an excellent reputation. We are excellently positioned in this market and recently took a pilot plant into operation in Osaka (Japan) in cooperation with a Japanese partner.

Besides the plant construction activities, the selective expansion of the Own Plant Operation segment, which generates high cash flows, and the further development of the complementary Service and Energy segment are on the agenda for 2015. The aim is to seize market opportunities as quickly and efficiently as possible, to develop new markets and products and to achieve a solid revenue and earnings performance.

, en Ch

Olaf von Lehmden

Jürgen Tenbrink

Sinder

Jörg Fischer

Roel Slotman



from left to right
Roel Slotman International Sales Director (CCO), Enter/Netherlands
Jörg Fischer Finance Director (CFO), Weyhe-Erichshof
Olaf von Lehmden Chairman of the Board (CEO), Lohne
Jürgen Tenbrink Technical Director (CTO), Steinfurt

REPORT OF THE SUPERVISORY BOARD

DEAR SHAREHOLDERS,

While the year 2013 was as challenging as had been expected, EnviTec was able to increase both its sales revenues and earnings notably again in the fiscal year 2014. The EnviTec Group generated total sales revenues of EUR 163.4 million in 2014, up 9.8% on the previous year. Earnings before interest and taxes (EBIT) improved by 163.7% to EUR 6.3 million. Medium-term planning remains difficult, as the regulatory environment continues to change, but thanks to the strong financial basis and the successful internationalisation of the business activity, EnviTec is looking at a promising future. The focus is placed on attractive foreign markets for the Plant Construction segment, the selective expansion of the Own Plant Operation segment, which generates high cash flows, and the further development of the complementary Service and Energy segments. The aim is to seize market opportunities as guickly and efficiently as possible, to develop new markets and products and to achieve a solid revenue and earnings performance.

Activity report of the Supervisory Board

In the context of our Supervisory Board activity, we again executed all controlling and advisory tasks imposed on us by law, the statutes and the rules of procedure in 2014. We continuously monitored the Executive Board and provided it with assistance and advice in steering the company. We were directly involved in all decisions that were of fundamental importance for the company at an early stage. To allow us to execute our advisory and supervisory tasks, the Executive Board provided us with written and verbal information on all relevant issues in a regular, timely and comprehensive manner. These include, in particular, planning and budgeting as well as strategic development, the development of new business fields, the business trend and the situation of the Group as well as the risk position, risk management and compliance. We were also kept informed about the restructuring at all times. After thorough examination, the Supervisory Board approved all business events requiring its approval.

The Executive Board and the Supervisory Board liaised regularly also in between the meetings. Due to the detailed reports provided by the Executive Board, we are convinced that the company and the Group are managed lawfully, correctly and efficiently. We saw no need to exercise our audit rights pursuant to section 111 para. 2 of the German Stock Corporation Act. No conflicts of interest of members of the Executive Board or the Supervisory Board that require immediate reporting to the Supervisory Board and must be disclosed to the Annual General Meeting occurred in the past fiscal year.

Formation of committees

As the Supervisory Board consists of only three members, no committees were formed in 2014. All issues that would have been addressed by committees were discussed by the full Supervisory Board. Moreover, the Supervisory Board is convinced of the efficiency of its work. Pursuant to section 100 para. 5 AktG RegE BilMoG, at least one independent member of the Supervisory Board must have special accounting or auditing knowledge. This task is performed by our member Hans-Joachim Jung.

Meetings and main aspects of the consultations

The Supervisory Board held four ordinary meetings on 28 April, 31 July, 18 September and 11 December. All meetings were attended by all members of the Supervisory Board. Topics addressed at all meetings included the business trend, the net worth, financial and earnings position, investment projects as well as the risk situation and risk management of EnviTec Biogas. In addition, the following topics were on the agenda:

- > The audit for 2013
- > Planning and budgeting for 2014
- > The current market situation in the biogas sector
- > The 2014 EEG amendment
- > New developments in the electricity marketing sector
- > Overview of the Group's international activities
- > Implementation of the spin-off of the Plant Construction segment
- > Competitive situation
- > Early repayment of the note loan
- > Report on R&D projects / development of new business fields
- > Planning and budgeting for 2015

Audit of separate and consolidated financial statements

At the Annual General Meeting on 31 July 2014, the shareholders again elected Rödl & Partner GmbH Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft, Munich, auditors of the separate and the consolidated financial statements for the fiscal year 2014. After having obtained a declaration of independence from the auditor, the Supervisory Board commissioned the auditor to perform the audit, agreed the audit fee and determined the focal points of the audit. On this basis and including the company's accounts, Rödl & Partner GmbH audited the financial statements of EnviTec Biogas AG prepared by the Executive Board in accordance with the German Commercial Code (HGB) and the consolidated financial statements prepared to International Financial Reporting Standards (IFRS), both for the period ended 31 December 2014, as well as the combined management report of EnviTec Biogas AG and of the Group. As the audits led to no objections, the auditor issued an unqualified audit certificate (see page 102). The auditor also audited the Executive Board's related party disclosures ("dependency report"), which also received an unqualified audit certificate.

At the meetings on 30 April 2015 and 13 May 2015, the financial statements were reviewed and discussed by the Supervisory Board in detail. This meeting was also attended by the auditor of Rödl & Partner GmbH, and by the Executive Board, who discussed the key results of the audits and answered additional questions of the Supervisory Board members. No objections were raised after our own audit and the talks with the Executive Board and the auditor. The Supervisory Board therefore joined the audit result of Rödl & Partner GmbH and approved the separate financial statements prepared by the Executive Board for the period ended 31 December 2014 as well as the consolidated financial statements. The financial statements of EnviTec Biogas AG have thus been endorsed. Having scrutinised the Executive Board's proposal for the allocation of the retained profit, we have endorsed this proposal as well.

We would like to thank all employees and the Executive Board for their great commitment in the difficult fiscal year 2014. The coming year will also be a challenging one, but we have laid the requisite foundations for operating successfully in this market environment.

Lohne, 13 May 2015

Bernard Ellmann Chairman of the Supervisory Board

from left to right Hans-Joachim Jung Vice Chairman Bernard Ellmann Chairman Michael Böging



THE SHARE

The capital market environment

German shares recorded moderate growth in 2014. After the record year 2013, Germany's DAX showed a positive performance and closed the year a good 4% higher. Driven by the positive economic trend and the generally positive capital market environment, the DAX passed the 10,000 points mark in mid-2014 and closed the year at 9,805 points.

The German technology index, TecDAX, performed in sync with the DAX. After a successful start to the year, the index passed the 1,300 points mark in early June, driven by the economic outlook in the third and fourth quarter, and reached a high of 1,381.41 points at the beginning of December. The TecDAX closed the year 17.55% higher.

Just like the German equity market, the global capital markets were also positively influenced by central banks' expansionary monetary policies. The Dow Jones gained 8.4% in 2014, while the S&P Index closed the year almost 12% higher than a year ago. The European EuroStoxx 50 and the Asian Nikkei and Hang Seng indices picked up, partly quite sharply, in the course of the year.

By contrast, the ÖkoDAX, the index for Germany's largest renewable energy shares, showed a much poorer performance in the course of 2014. Due to the uncertainty arising from the adoption of the German Renewable Energy Sources Act (EEG) in June 2014 and the adverse consequences especially for the biogas industry, this index exhibited a negative performance and lost about 33% in the course of the year. The annual high was reached already in early January, at 47.78 points; as the year progressed, the index dropped to 28.4 points in mid-December and closed the year at 29.51 points.

The EnviTec Biogas share

Just like the market as a whole, the EnviTec share showed a positive performance. The share opened the year at EUR 6.41 and rose sharply to a high of EUR 7.85 on 17 January. After a moderate decline, the share price then moved sideways at around EUR 7.00. In the wake of the adoption of the EEG and the Annual General Meeting, the EnviTec share hit a low of EUR 6.00 on 17 September. The share then recovered and closed the year at EUR 7.00, i.e. a good 9% higher. Based on 15 million shares outstanding, this is equivalent to a market capitalisation of EUR 105 million. The annual average share price amounted to EUR 6.84.

Annual General Meeting approves special dividend

The ordinary Annual General Meeting of EnviTec Biogas AG was held in Lohne on 31 July 2014. The main items on the agenda, e.g. the release from liability of the Executive Board and the Supervisory Board were approved by the majority of the shareholders. In addition, the shareholders approved the proposal to carry the profit generated in 2013 forward to new account.

Investor relations at EnviTec Biogas

In the fiscal year 2014, we again placed great store by continuous, timely and comprehensive communication. Our aim is to provide our shareholders and other stakeholders with equal information. We also attach great importance to a regular exchange of views with all interested investors.

Also after having transferred from the Prime Standard to the Entry Standard of the Frankfurt Stock Exchange in 2013, we continue to overfulfil the respective regulations in order to offer our investors comprehensive transparency.



Basic information on	
ISIN	DE000A0MVLS8
Stock exchange symbol	ETG
Stock exchange segment	Entry Standard (Open Market)
Sector	Renewable energy
Annual high	EUR 7.85
Annual low	EUR 6.00
Year-end price	EUR 7.00
Number of shares	15.000.000 shares
Market capitalisation at end of year	EUR 105 million
Earnings per share	EUR 0.28
Dividend proposal per share	EUR 0.35

The share of EnviTec Biogas AG was covered by MATELAN Research during the reporting period.

Analyst valuations			
Date	Institute	Recommendation	Price target (EUR)
02.05.2014	MATELAN Research	Hold	7.20
01.10.2014	MATELAN Research	Hold	8.10

Shareholder structure (as at 12/31/2014)		
von Lehmden Beteiligungs GmbH	8,638,317 shares	57.60 %
TS Holding GmbH	3,880,000 shares	25.90 %
Free float	2,331,683 shares	15.50 %
Own shares	150,000 shares	1.00 %
Total number of shares	15,000,000 shares	100.00 %

COMBINED MANAGEMENT REPORT

of the EnviTec Group and EnviTec Biogas AG In accordance with section 298 para. 3 in conjunction with section 315 para. 3 of the German Commercial Code (HGB), the management report for the separate financial statements of EnviTec Biogas AG for the year ended 31 December 2014 was combined with the management report for the consolidated financial statements for the year ended 31 December 2014.

General Information on the company

EnviTec Biogas AG headquartered in Lohne, Germany, is one of the leading manufacturers and operators of biogas and biomethane plants. We cover the entire value chain for the production of biogas. This includes planning and turnkey construction of biogas plants and biogas upgrading plants as well as their taking into operation. Where required, the company also provides biological and technical services and offers the full range of plant management and plant operation services. In addition, EnviTec operates its own plants, making the company one of the largest biogas producers in Germany.

Our customer-oriented construction has set standards in terms of reliability and profitability. EnviTec plants can produce clean energy from all types of feedstock materials – from organic waste to renewable resources. Established in 2002, the company is today active in 14 countries. EnviTec expanded its business activities by establishing EnviTec Energy and EnviTec Stromkontor, the latter's wholly-owned subsidiary, which market upgraded biomethane as well as green and balancing electricity.

Our high quality standards are confirmed not only by satisfied customers and the impressive efficiency of the plants served by us but also by internationally acknowledged certifications. We have implemented our quality management system to DIN EN ISO 9001:2008 at EnviTec Biogas AG and EnviTec Service GmbH & Co. KG.

Corporate structure and business segments

The Group is structured into four business segments: Plant Construction, Own Plant Operation, Service and Energy. All segments are closely integrated in strategic, technical and financial terms. Until November 2014, the Plant Construction segment essentially represented the business activity of the parent company, EnviTec Biogas AG. The business segment was spun off with effect from 1 December 2014 and has since operated in the legal form of a "GmbH & Co. KG", i.e. essentially in the same legal form as the other three segments. This move has streamlined the corporate structure and led to further synergies. Moreover, the transfer of the plant construction operations into a separate subsidiary makes revenues and costs more transparent. The parent thus operates as a holding company, which provides services such as controlling, HR management, legal consulting, treasury and marketing for the four business segments. The business purpose of the parent company also includes the holding of equity investments in the Own Plant Operation segment as well as start-up financing of the respective project companies. In 2014, the basis of consolidation comprised 133 fully-consolidated companies, 2 more than in the previous year.

Plant Construction (EnviTec Biogas AG)

The Plant Construction segment builds biogas and biomethane plants for customers such as farmers, industrial enterprises and investors. We plan the plant, build it and start up the production of biogas. Our product portfolio covers the complete value chain of biogas plant engineering for plants from 75 kWel. We rely on a modular design approach using standardised elements, which can be combined to meet the respective local requirements. This means that we offer customised solutions and tried-and-tested technology at the same time. The advantages include faster plant start-up, high operational safety and low operating costs. Besides large-scale plants, EnviTec also launched a compact plant design in 2014, which is marketed under the name of "EnviFarm Compact". The compact plants in the 75 to 450 kW range are primarily targeted at the German and Italian markets. At the end of 2014, EnviTec had an installed base of 366 MW (previous year: 354 MW).

Own Plant Operation
INSTALLED CAPACITY
12/31/2013
354 MW
12/31/2014
366 MW

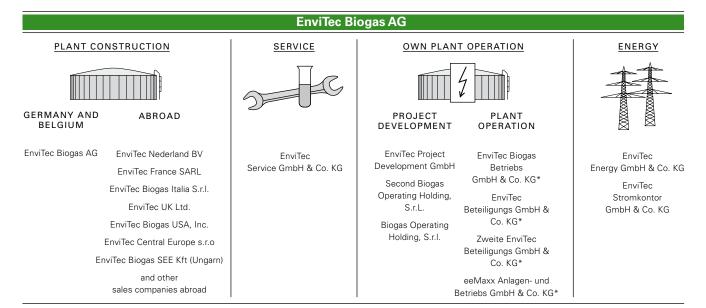
The Own Plant Operation segment handles the generation of electricity, heat and gas in the company's own biogas plants in Germany and abroad. This is usually done in cooperation with local partners from the agricultural or energy sectors. These partnerships are characterised by a clear division of tasks, with every partner concentrating on their respective strengths. The local partner makes available the site, procures the feedstock materials and assumes responsibility for the operation of the plant. EnviTec is in charge of project planning and turnkey plant construction. Once the plant is in operation, we perform all maintenance work, provide biological services and take care of commercial management. Our partners usually are farmers who operate the plants on their farms. We also cooperate with local authorities, investment companies, industrial corporations and energy utilities. Outside Germany, our own projects are

an important door-opener to convince potential local customers of the economic and ecological benefits of biogas production and our expertise. The integration of our technological knowledge with the expertise of our regional partners results in high efficiency and attractive margins for EnviTec and its partners. The Own Plant Operation segment ideally complements the Plant Construction segment thanks to its steady cash flows.

Energy

EnviTec Energy offers heat customers what we call "contracting models". Under these models, we sell heat which is generated locally from internally produced biomethane in efficient CHP plants under long-term supply contracts. The buyers, such as industrial and commercial enterprises or local authorities with high heat requirements, are supplied with green heat at attractive terms under long-term contracts, thereby improving their carbon footprint.

EnviTec Stromkontor also operates under the umbrella of EnviTec Energy. This subsidiary combines the capacity of a large number of biogas plants into a virtual power plant and directly markets the energy generated in combined heat and power (CHP) plants at the electricity exchange on behalf of its customers. The plants can also be placed in the balancing energy market in order to increase the stability of the German power grid.



* Various project companies of biogas plants. Details of participation and minimum holding requirement see notes p. 67 et seq.

The energy is marketed in cooperation with AXPO Deutschland GmbH, a subsidiary of Swiss electricity company AXPO Holding AG.

Service

EnviTec's Service segment provides all services related to the operation of biogas plants. Besides Germany, we also have strong Service Teams in Italy and the Czech Republic. Our experts take care of starting up the plant and constantly control the biological processes. In our lab, feedstock materials and fermentation residues are checked for optimum quality so as to make recommendations on boosting the plant's efficiency. Our range of services also includes regular plant inspections and training of the operators and their employees. EnviTec Biogas also offers partial maintenance services, which are charged by actual expense, or full maintenance including assumption of the repair risk. Regular maintenance reduces the downtimes and is therefore key to the profitable long-term operation of a biogas plant. Our customers benefit from the expertise of our highly qualified experts, who are available 24/7.

Strategy and competition

Over the past years, we have attained a leading position in the biogas market and operate plants in as many as thirteen countries. Our strategic objective is to achieve sustainable growth and to expand our market position as an integrated supplier and operator of biogas plants. In this context, we attach top priority to the satisfaction of our customers and their involvement in the ongoing development of our plants in accordance with their wishes and requirements. The short to medium-term strategic positioning is strongly influenced by the ongoing discussion about the legal framework in the individual markets. The individual markets are very heterogeneous, which is primarily due to the different subsidisation models. France, the UK and Asia (China, Japan) are currently the most attractive markets for EnviTec. We are closely monitoring developments in the individual countries so as to be able to respond in a timely manner to changes in the operating environment. We have defined the following cornerstones for sustainable growth:

International expansion to drive growth

We closely monitor worldwide developments in the

biogas sector. As soon as sustainable structures arise in a market, we review them thoroughly and then take a timely decision as to whether or not we should enter this market.

When making inroads into new markets, we rely on regional partners; this way, we combine our long-standing experience in plant construction and operation with their knowledge of the regional specifics. EnviTec pushed ahead its internationalisation at an early stage and today has a presence in 14 countries besides Germany through its subsidiaries, sales offices, strategic cooperations and joint ventures. The new EEG Act 2014 has brought the German market to a standstill, as a result of which international revenues from plant construction are now clearly higher than domestic revenues from the same activity. Apart from established markets such as France, the UK and Italy, we see the biggest opportunities in Japan, China and the USA in the medium term, where EnviTec has erected the first plants. The company now hopes that these reference projects will lead to further successful transactions. The aim is to build plants profitably also in a difficult market environment while maintaining sufficient capacity to seize market opportunities as they arise.

Effective expansion of own plant operation

EnviTec Biogas clearly expanded its own plant operation activities in the past years and this segment today makes the biggest contribution to total Group revenues. At the end of 2014, plants with a combined capacity of 57.9 MW were online, including 10.7 MW abroad. In Germany, EnviTec primarily relies on optimising the existing plants. In addition, the company selectively develops new markets for its own plant operation activities. Generating regular cash flows, the segment ideally complements the plant construction activities for third parties. The purpose of this segment is to stabilise the Group's revenue streams. We plan to further expand the capacity in future. Another 5 megawatts are to be erected or taken over in 2015.

Service segment to expand its offerings; Energy segment to be further developed

The Service and Energy segments have become reliable income generators for EnviTec and are to be expanded further. It is the declared strategic objective to expand the biological and technical services on an international scale and to offer more services also for third-party plants. In the Energy segment, we aim to complete the value chain "from the renewable source to the domestic heating system." The direct feeding of upgraded biomethane produced in EnviTec plants means that the green energy can be transported and later be used locally wherever needed. We intend to exploit this potential even more effectively and supply more customers with green heat and green, local electricity.

Strengthening our innovation leadership

By consistently expanding our technological expertise, we aim to consolidate our leading position in the sector and to increase the ecological and economic attractiveness of our core product, biogas. Our objective is to continuously improve the operation of our plants and to reduce the amount of substrates they require without affecting their performance. We see great development possibilities to increase the cost efficiency of biogas especially at the upstream and downstream stages of the fermentation process. To strengthen our innovation and technological expertise, we also do research into the biobased economy. This concept not only revolves around the efficient use of vegetable matter for the production of biogas. Instead, we pursue an integrated approach aimed at ensuring maximum value creation from input materials (such as plants) through the intelligent combination of different uses (such as food, biogas, fuel). Another key focus is on testing alternative feedstock materials such as organic waste. We are also working on improvements in the agricultural sector, e.g. optimised harvest times and the development of seeds.

Company management

The aim of our corporate activity is to grow profitably. From this basis, we derive our key performance indicators: sales revenues, EBIT, cash flow and return on equity. The Group is managed operationally and strategically at regular meetings of the Executive Board members. Depending on the issues to be discussed and planned, these weekly meetings are usually attended by executive staff. Strategic management issues are discussed and adjustments implemented if necessary. In addition to these meetings, the Divisional Managers and the Executive Board meet on a monthly basis, primarily to discuss operational issues. This body is provided with a variety of analyses and other documents to facilitate decision-making and project planning. Moreover, the Executive Board regularly receives the results of analyses of sales revenues, orders on hand, costs, liquidity and leverage. In this context, targets and actual results are compared. ERP (Enterprise Resources Planning) software is used throughout the Group for the fast and comprehensive presentation of all processes such as materials handling, finance and accounting, project controlling as well as sales and marketing. Our guality management system was certified to DIN EN ISO 9001:2008 in 2010. Revised in 2008, the DIN EN ISO 9001:2008 standard makes high demands on quality management systems. At EnviTec, it covers not only the construction and operation of biogas plants but also the biological and technical services provided by the company.

Economic Environment

Macroeconomic conditions

The world economy grew moderately in 2014. While the International Monetary Fund (IMF) had projected a global growth rate of 3.7% at the beginning of 2014, the January 2015 estimate for the full year 2014 was down to 3.3%. According to the IMF, the reduced global economic momentum is mainly attributable to increased geopolitical risks as well as to growing volatility in the global financial markets. The emerging and developing countries posted a growth rate of 4.4% for the full year 2014, compared to 4.7% projected by the IMF. The industrialised economies expanded by only 1.8% instead of 2.2%. The eurozone economy also failed to reach the originally projected 1.0% growth. The rate of 0.8% means, however, that the eurozone economy picked up year-on-year for the first time after the two-year recession. Growing by 1.5%, the German economy showed a solid performance in 2014.

2014 was another very good harvest year for the agricultural sector. Accordingly, the prices of agricultural resources used as feedstocks are at a low level.

The biogas market

The legal frameworks play a very important role for manufacturers and operators of biogas plants. In Germany, the Renewable Energy Sources Act (EEG) constitutes the relevant basis for the biogas sector. In addition, the feeding of refined biogas into the natural gas grid is governed by the German Gas Grid Access Directive. Due to the amended EEG, which was adopted on 27 June 2014 and came into force on 1 August, the biogas market in Germany has come to a virtual standstill. The reduced feed-in tariffs and the 100 MW p.a. limit introduced for the construction of new biogas plants has put plant builders focused on Germany out of business and led to numerous insolvencies as well as staff cuts. EnviTec chose to internationalise and flexibilise its plant construction activities at an early stage and made this business segment fit for the future.

According to a forecast issued by the German Biogas Association last November, 94 biogas plants with a

total capacity of only 41 megawatts (MW) were built in Germany in 2014 (2013: 335 plants). This means that the number of new plants in Germany has dropped sharply since 2011, when close to 1,300 new plants with a combined capacity of approx. 800 MW were erected. At the end of 2014, a total of about 7,944 biogas plants with an installed capacity (incl. electricity feed-in from biomethane) of 3,859 MW were online. The Biogas Association estimates that some 27.6 billion kWh of climate-friendly energy from biogas was produced in Germany in 2014 - enough to supply 7.9 million households. This means that biogas now accounts for 4.67% (previous year: 4.02%) of Germany's total electricity consumption. Due to the legal situation, the focus is increasingly shifting to plant expansions and repowering. According to the German Biogas Association, the installed electrical output of the biogas CHP plants increased by approx. 316 MW (2013: 191 MW) in 2014. In contrast to past practice, however, a growing number of these expanded plants no longer operate permanently at baseload; instead, the electricity is grid-fed at peak load times when greater demand means that higher revenues can be generated.



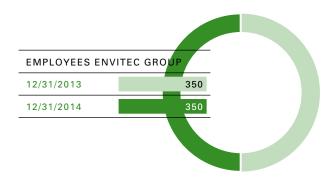
Apart from this, the biogas industry, including EnviTec, is increasingly focusing on promising foreign markets. In Europe, France and the UK are particularly attractive. Italy has the second largest installed base behind Germany (28 Feb. 2015: 1,318 plants). Under the amended Italian Renewable Energy Act of 2013, the government's subsidy scheme favours plants rated for less than 300 kW. EnviTec, which is one of the top 5 suppliers in Italy, has responded to this situation and sold its first compact plants in the local market last year.

According to the European Biogas Association (EBA), the biogas markets in France and the UK continue to grow steadily. France is preparing a new law which will have positive effects for the construction of new plants, even though lengthy approval procedures and financing conditions remain a problem in the French market. The UK, whose 360 plants make it the seventh biggest market in Europe, primarily subsidises biogas plants which produce renewable heat. Moreover, the UK market, just like its French counterpart, offers good opportunities for new gas upgrading projects. EnviTec has been active in both markets for several years and has gained a very good market position. Besides Europe, the Asian markets, especially China and Japan, also offer growing potential for the environmentally friendly generation of energy from biomass. EnviTec has already launched the first projects in these markets and is one of the largest and most innovative industry players and remains positioned for continued growth.

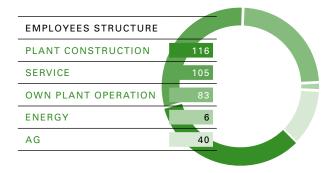
Especially in Asia, but also in Europe, bioenergy is increasingly used not only to produce electricity but also to sell heat in the market. Co-generation plants supplying heat to local consumers gained in importance last year. The fuel market might also open up additional growth opportunities in future.

Employees

By respecting our employees and developing their skills and potentials, we open up future perspectives for each individual and increase the value of the Group as a whole.



Well trained, motivated employees are the most important asset and the basis for the success of the EnviTec Biogas Group. Due to the difficult environment in Germany described above, we had to adjust our corporate structure and our capacities in 2013. The number of employees remained stable in the fiscal year 2014 and stood at the prior year level of 350 on 31 December 2014. At 262, most of the staff continued to work in Germany (previous year: 270), while 88 employees worked at EnviTec's foreign locations as of the balance sheet date (previous year: 80). The Plant Construction segment continues to employ most people (116), followed by the Service segment (105) and the Own Plant Operation segment (83).



We continue to attach top priority to sustainable human resources development and want to give young graduates the opportunity to start their career in an interesting industry of the future. Due to the rapidly changing environment in which we operate, we need flexible employees who are willing to work abroad, to embrace other cultures and to represent the company appropriately. The human resources policy of EnviTec aims to not only meet our own requirements but to also cater to the interests and potential of our employees. This includes monetary incentive systems in some areas, e.g. performance-based additional compensation. Our internal training and further education measures give employees opportunities for ongoing development and aim to retain them in the long term. These job-oriented measures are complemented by activities fostering the team spirit and communicating our corporate culture, which is characterised by reliability and fairness.

The Executive Board and the Supervisory Board expressly thank all employees of the EnviTec Group. Thanks to their commitment, the company reached the economic targets it had set itself for the past fiscal year and will embrace the future challenges from a stronger position.

Research and Development

Ongoing development is key to sustainable success. We take this very seriously and continue to improve our technologies in order to increase the gas yield while optimising our quality management and researching potential alternative feedstock materials at the same time.

Our R&D activities also focus on process monitoring and the processing of digestates, which ensures even more efficient utilisation of our plants.

The "biobased economy" is another important element of our research activities, i.e. the production of resources from biomass with the aim of generating new sources of income. In this context, we focus on researching new applications and processes and developing new markets. For instance, we are trying to tap as yet unused product potential in the generation of energy in order to expand the biomass value chain by using raw materials repeatedly, more intensively and efficiently.

Own plants serve as laboratories

As of 31 December 2014, EnviTec Biogas operated 74 own biogas plants with an electrical output of 57.9 MW in Germany, Belgium, France and Italy. These facilities are an important knowledge pool for the further development, improvement and application of new plant technology. New processes and technologies are directly tested in practice in our own plants or in close cooperation with customers. Our own plant operation activities allow us to develop technical innovations at our own plants. Aside from plants wholly owned by EnviTec Biogas, it is possible to operate plants under cooperation agreements in order to actively support research; this possibility is normally used by partners from the agricultural sector or local industry, who operate their plants independently with assistance from EnviTec. The use of our own plants for research purposes has resulted, for instance, in the development of a new kind of hydrogen fermenter facilitating a higher energy yield and in the reduction of fermentation residues with the help of EnviTec's proprietary EnviStrip process.

Another research project in 2014 was the development of a "Highgester", a new type of fermenter, which, in spite of its more compact size, produces the same amount of biogas while consuming less electricity and heat. This reduces the operating and maintenance costs for the operator. The first Highgester is currently in the installation phase at a biogas plant in Bakum. The test results in EnviTec's own plants show that, apart from the above advantages, the Highgester also allows for a significant reduction of the time the fermentation substrate spends in the plant.

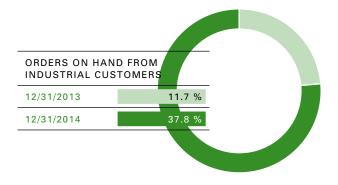
EnviTec focuses on practice-oriented research and development. Besides Executive Board member Jürgen Tenbrink, the R&D Department has two permanent employees, who are supported primarily by colleagues from the Service segment. In addition, we cooperate with universities, also with a view to promoting young talent. We work closely with students and faculty, both in the context of research projects and the writing of Bachelor and Master's theses. Total investments in research and development amounted to approx. EUR 1 million in 2014.

Order Situation

At the end of the fiscal year 2014, EnviTec Biogas' Plant Construction segment had an order backlog of EUR 37.3 million (previous year: EUR 67.6 million). The decline is primarily attributable to the slump in demand in Germany, formerly the company's main market, where the order backlog amounted to only EUR 9.8 million at the end of the year (previous year: EUR 45.7 million).



By contrast, EnviTec's order intake outside Germany increased. As of the balance sheet date, the number of projects with foreign customers was up from EUR 21.9 million to EUR 27.5 million. France accounts for EUR 10.5 million (previous year. EUR 11.3 million) of the orders placed by foreign customers. Orders from China totalled EUR 6.2 million as of the balance sheet date (previous year: EUR 2.8 million). Other important markets include Italy (EUR 3.8 million), the UK (EUR 3.5 million) and Belgium (EUR 2.6 million). EnviTec Biogas has a very broad customer base, which means that the company is not dependent on individual customers.



59.1% of the orders were placed by customers from the agricultural sector (previous year: 63.7%). At approx. 37.8%, industrial customers account for a much higher

share than in the previous year (11.7%). The remaining orders were placed by project developers and the Own Plant Operation segment.

Segment Performance

EnviTec Biogas operates in four segments, Plant Construction, Own Plant Operation, Service and Energy. As in the previous year, the Own Plant Operation segment made the biggest contribution to Group sales, at 39.7% (previous year: 42%). The contribution from the formerly biggest contributor, the Plant Construction segment, declined from 31.8% to 30.8%. The highest growth rate was posted by EnviTec's Energy segment, which increased its share in total Group revenues from 13.3% to 16.6% in 2014. The Service segment contributed 12.9% to Group revenues. The figures and developments presented in this paragraph have been adjusted for intra-Group transactions. The trend in the individual segments was largely consistent with the expectations announced in the previous year.

SEGMENT REVENUE CONTRIBUTIONS		
OWN PLANT OPERATION	39.7%	
PLANT CONSTRUCTION	30.8%	
ENERGY	16.6%	
SERVICE	12.9%	

Plant Construction

EnviTec's Plant Construction segment successfully compensated for the slump in the German market caused by the new EEG and returned to growth. The company has thus defied the industry trend and benefits from its successful internationalisation strategy. This greatly helped to increase profitability in the fiscal year 2014. Sales revenues climbed from EUR 47.3 million to EUR 50.4 million. The segment's earnings before interest and taxes (EBIT) improved notably from EUR -12.1 million in 2013 to EUR -1.9 million. In the previous year, however, the result was influenced by many one-time

effects resulting from the market collapse. The segment meanwhile generates most of its sales revenues abroad. In 2014, EnviTec's most important foreign markets included France, the UK and Italy as well as the USA and Japan and China in Asia. The strong year-end order backlog in China shows that the first plants erected in the Chinese market swiftly lead to additional projects. The aim is to operate the Plant Construction segment profitably in a challenging market environment based on the optimised cost structures.

Own Plant Operation

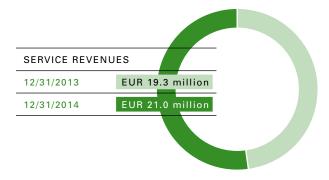
EnviTec Biogas continued to expand the Own Plant Operation segment in 2014, thus stabilising the revenue contributions for the Group. At EUR 64.8 million (previous year: EUR 62.5 million), the segment made the biggest contribution to Group revenues in the past fiscal year. Two new plants were taken into operation and seven existing plants were acquired in 2014. This means that a total of 74 plants with a combined capacity of 57.9 MW were connected to the grid as of the end of 2014, including 10.7 MW outside Germany. The segment's earnings before interest and taxes amounted to EUR 9.8 million, compared to EUR 15.4 million in the previous year. The EBIT margin stood at 15.1% (previous year: 24.6%). The sharp decline in the margin is attributable to considerable one-time effects in the previous year, which primarily resulted from the sale of seven biogas plants.



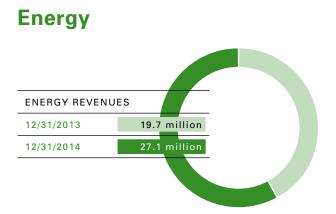
EnviTec is confident that the construction of new plants abroad, the optimisation of existing plants and the acquisition of new plants in Germany will open up further revenue and profit potential in this segment. The Own Plant Operation segment will continue to make selective inroads into new markets in the current fiscal year in order to continue the capacity expansion.

Service

2014 saw continued demand for our services related to the operation of biogas plants. Our experts take care of the plant start-up and constantly control its operation and the biological processes. Feedstocks and digestates are checked for optimum quality in the lab to give recommendations on how to increase the performance of the plant. Our range of services also includes regular on-site inspections as well as training of operators and their staff.



At the end of 2014, the Service segment provided biological services for plants with a total electrical output of 78 MW (previous year: 79 MW) and technical services for plants with an electrical output totalling 211 MW (previous year: 211 MW). Outside Germany, we provide services for plants with a total electrical output of 77 MW (previous year: 73 MW), which break down into technical services for 41 MW (previous year: 41 MW) and biological services for 36 MW (previous year: 32 MW). The Service segment generated sales revenues of EUR 21.0 million in 2014, up 8.7% on the previous year. The segment's earnings before interest and taxes amounted to EUR -1.7 million (previous year: EUR -0.9 million). This is primarily due to the sharp increase in revenues generated with Own Plant Operation companies, which have a negative consolidation result for the Service segment in the consolidated financial statements. On a stand-alone basis, the Service segment's EBIT are positive.



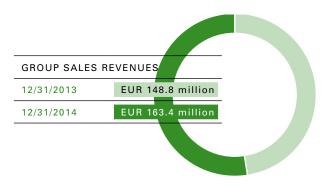
The Energy segment aims to create a complete value chain "from the renewable source to the domestic heating system". The direct feeding of upgraded biomethane produced in EnviTec plants means that green energy can be transported and later be used locally wherever needed. The segment also offers our customers services related to the direct marketing of the electricity produced in biogas plants. We exploited this potential in 2014 and expanded this segment significantly. Boosting its sales revenues from EUR 19.7 million to EUR 27.1 million, the Energy segment achieved the strongest revenue growth of all EnviTec segments. These are primarily trading transactions, which only generate low margins and consequently the segment's earnings before interest and taxes improved by only EUR 0.3 million to EUR 0.3 million. This means, however, that the youngest business segment of the Group passed breakeven already in its third year of operation.

Earnings, Financial and Net Worth Position

Sales revenues

Group

2014 was a successful fiscal year for the EnviTec Group. While 2013 had been a difficult year for the biogas industry and the Group, marked by a sharp drop in demand, EnviTec was able to halt the negative sales trend and achieved a strong increase in both revenues and earnings. The Group's sales revenues for the fiscal year 2014 totalled EUR 163.4 million, up 9.8% on the previous year. This corresponds to the upper end of the projections. The strongest revenue growth was achieved by the Energy segment, whose sales revenues climbed from EUR 19.7 million to EUR 27.1 million. At EUR 64.8 million, up 3.8% on the previous year, the Own Plant Operation segment made the biggest contribution to total sales revenues. The Plant Construction segment also returned to growth thanks to good international business and generated revenues of EUR 50.4 million (previous year: EUR 47.3 million). EnviTec's domestic sales revenues totalled EUR 120.3 million (previous year: EUR 103.7 million). The Group's international sales revenues declined moderately from EUR 45.1 million in 2013 to EUR 43.1 million. At EUR 18.3 million (42.5% of total sales revenues), Italy was the most important market for the Group's international operations, which were dominated by the Own Plant Operation activities. Other operating income declined from EUR 15.7 million to EUR 12.1 million. This resulted in total output of EUR 175.5 million in 2014, compared to EUR 164.5 million in the previous year (+6.7%).



Separate financial statements

EnviTec Biogas AG prepares its separate financial statements in accordance with the provisions of the German Commercial Code (HGB).

Sales revenues amounted to EUR 21.8 million in 2014, down EUR 123.9 million on the previous year's EUR 145.7 million. Other operating income increased by EUR 0.2 million from EUR 1.5 million in the previous year to EUR 1.7 million. While work in progress increased by EUR 17.3 million according to the income statement, work in progress related to plant building is no longer recognised in EnviTec Biogas AG's balance sheet as of the end of 2014. This is due to the spin-off into EnviTec Anlagenbau GmbH & Co. KG. The spin-off also had an effect on the total output of EnviTec Biogas AG, which declined from EUR 59.7 million in the previous year to EUR 40.8 million.

Expenses

Group

The cost of materials is the main expense item of EnviTec Biogas. In the fiscal year 2014, this item increased at a disproportionate rate of 11.8% to EUR 112.6 million, which is mainly attributable to the increased share of the Energy segment. These are primarily trading transactions characterised by relatively low gross profit margins. Accordingly, the gross profit margin dropped from 42.9% to 38.5%.

At EUR 17.2 million, personnel expenses were down by 9.3% on the previous year's EUR 19.0 million, which included extraordinary expenses for headcount adjustments. Personnel expenses as a percentage of sales revenues declined from 12.8% to a solid 10.5%. At EUR 15.5 million, depreciation/amortisation, which is primarily attributable to the Own Plant Operation segment, remained below the prior year level. Other operating expenses, which comprise operating, administrative and selling expenses, dropped from EUR 26.4 million to EUR 23.8 million in the reporting period, mainly due to cost adjustment measures. Thanks to thorough and successful cost management, personnel and other expenses were reduced by EUR 4.3 million.

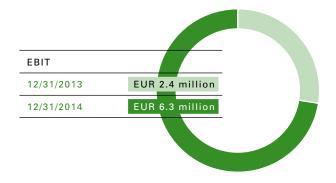
Separate financial statements

In the separate financial statements of EnviTec Biogas AG, the cost of materials declined by EUR 4.3 million from EUR 31.9 million to EUR 27.5 million. Personnel expenses were reduced significantly due to the structural and staff adjustments announced in the last Annual Report and declined by EUR 1.4 million from EUR 6.7 million to EUR 5.3 million. Other operating expenses were reduced by EUR 2.5 million from the previous year's EUR 11.0 million to EUR 8.4 million. Due to the spin-off of the Plant Construction segment into EnviTec Anlagenbau GmbH & Co. KG, the comparison with the prior year figures is of limited relevance.

Earnings

Group

EnviTec clearly increased its profitability in the fiscal year 2014. Earnings before interest and taxes (EBIT) improved by 163.7% to EUR 6.3 million, while earnings before interest, taxes depreciation and amortisation (EBITDA) rose by 18.5% to EUR 21.8 million. The increased earnings are attributable not only to the non-recurrence of one-time expenses but also to the fact that the cost base has been adjusted to the market situation. An EBIT margin of 3.6% (previous year: 1.5%) shows that EnviTec's profitability is very solid given the industry environment. The net financial result amounted to EUR -1.0 million, compared to EUR -1.1 Mio. million in the previous year. Another EUR 5.5 million tranche of the note loan (EUR 23.5 million as at 31 Dec. 2014) was repaid at the end of March, which means that financial expenses will decline in the current year. EnviTec's Group profit increased from EUR 0.3 million to EUR 4.2 million, which is equivalent to earnings per share of EUR 0.28 for the year 2014 (previous year: EUR 0.02).

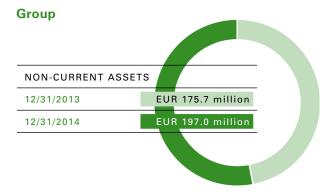


Separate financial statements

The gross result declined by EUR 14.6 million from EUR 27.8 million to EUR 13.2 million. EnviTec Biogas AG posted a result from ordinary activities of EUR 5.8 million in the separate financial statements prepared in accordance with the provisions of the German Commercial Code (HGB). This represents a decline of EUR 10.8 million on the previous year's EUR 16.7 million. Net income declined from EUR 9.8 million by EUR 4.7 million to EUR 5.1 million. The financial result contributed EUR 7.4 million to net income. This amount includes income from investments of EUR 2.5 million as well as income-reducing write-downs of financial assets of

EUR 0.5 million. The spin-off of the Plant Construction segment into EnviTec Anlagenbau GmbH & Co. KG had no material effect on the result.

Net worth position



Compared to the previous year, EnviTec's total assets increased by 8.2% to EUR 319.6 million as of 31 December 2014. On the assets side, non-current assets of EUR 196.5 million exceeded the previous year's EUR 175.7 million by 11.8%. While property, plant and equipment rose by EUR 23.5 million to EUR 141.1 million due to the expansion and acquisition of biogas plants by the Own Plant Operation segment, shares in investments accounted for using the equity method declined by EUR 1.3 million and other non-current receivables dropped by EUR 9.2 million. EnviTec's current assets increased in the fiscal year. This applies primarily to inventories, which were up by EUR 11.0 million. By contrast, other current assets declined by EUR 4.3 million. Trade receivables were down on the previous year, at approx. EUR 29.0 million. On balance, however, current assets were up by EUR 3.5 million to EUR 123.1 million.

Separate financial statements

As of 31 December 2014, total assets of EnviTec Biogas AG amounted to EUR 223.7 million, down EUR 2.0 million on the previous year. On the assets side, financial assets increased by EUR 35.3 million from EUR 142.1 million to EUR 177.4 million, while current assets declined by EUR 35.4 million from EUR 74.7 million to EUR 39.3 million. Fixed assets comprise intangible assets and property, plant and equipment totalling EUR 7.0 million as well as financial assets in the amount of EUR 177.4 million. At EUR 34.4 million, receivables from affiliated companies are the biggest current asset item.

Due to the spin-off of the Plant Construction segment into EnviTec Anlagenbau GmbH & Co. KG, the comparison with the prior year figures is of very limited relevance. The balance sheet of EnviTec Biogas AG merely reflects its function as a holding company. This is particularly evident in the analysis of the changes in the company's net worth position, which no longer includes inventories and trade receivables relating to the Plant Construction segment.

Capital structure

Group

On the liabilities side, equity amounted to EUR 174.0 million at the end of 2014, up EUR 4.6 million on the previous year. This primarily reflects the positive effect of the Group's net income in the amount of EUR 4.2 million. While the equity ratio declined from 57.4% to 54.4% due to the increase in total assets, it still reflects the very solid capital structure of the EnviTec Group.

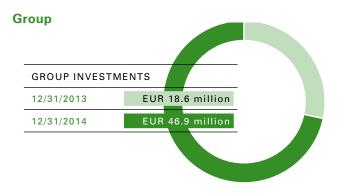
As of the balance sheet date, current and non-current liabilities totalled almost EUR 145.6 million - including EUR 108.5 million in financial liabilities – and were up by EUR 12.5 million on the previous year. Current liabilities increased by EUR 21.7 million to EUR 66.2 million, reflecting the fact that the company raised additional current financial liabilities in the amount of EUR 13.4 million. At approx. EUR 79.4 million, non-current liabilities were down by close to EUR 1.9 million on year-end 2013. This amount included approx. EUR 76.6 million in long-term loans (previous year: EUR 77.6 million) An amount of EUR 5.5 million related to a loan carrying a variable interest rate based on the 6M-EURIBOR plus a margin. This loan was repaid in full on 27 March 2015. The firmly agreed interest rates range from 2.4% to 5.7%. In addition, deferred tax liabilities were reduced from EUR 1.6 million to EUR 1.1 million in the fiscal year.

Separate financial statements

Thanks to the good result for the year posted in the separate financial statements, equity capital increased by EUR 5.1 million from EUR 174.2 million to EUR 179.3 million. Liabilities amount to EUR 41.2 million of which approx. EUR 37.6 million is due to banks. Of the liabilities, EUR 13.8 million is due within one year, while EUR 26.6 million has a remaining term of one to

five years. Due to the spin-off of the Plant Construction segment into EnviTec Anlagenbau GmbH & Co. KG, the comparison with the prior year figures is of very limited relevance. The separate financial statements no longer include provisions and trade liabilities relating to the Plant Construction segment.

Investments



The Group's investments totalled EUR 46.9 million in 2014, compared to EUR 18.6 million in the previous year. At EUR 44.4 million (previous year: EUR 15.7 million), the Own Plant Operation segment accounted for the bulk of the Group's investments. This amount includes investments of EUR 27.1 million for initial consolidation. New plants with an electrical output of 1.9 MW were added to the portfolio in the course of the year. In addition, the 4 megawatts sold in 2013 were added to the portfolio again. We plan to build further plants in the coming years, mainly in the UK. Investments in Germany will probably be lower in 2015 than in 2014. Other investments of EUR 0.5 million (previous year: EUR 0.5 million) related to the Plant Construction segment, while the Service and Energy segments made investments of EUR 2.0 million (previous year: EUR 2.4 million).

Separate financial statements

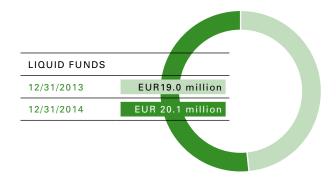
EnviTec Biogas AG's investments in 2014 primarily related to financial assets in the form of loans to affiliated companies and to companies in which investments are held. Capital expenditures in investments thus exceeded the income from investments by EUR 18.4 million (previous year: EUR 7.4 million). Investments in intangible assets as well as property, plant and equipment amounted to EUR 0.3 million (previous year: EUR 0.3 million).

Cash position

Group

The cash position of EnviTec Biogas was very solid at the end of 2014. Liquid funds totalled EUR 20.1 million (previous year: EUR 19.0 million) and other current assets amounted to EUR 22.5 million (previous year: EUR 26.7 million). This total amount of EUR 42.6 million covers the current financial liabilities of EUR 30.6 million (previous year: EUR 17.2 million) 1.39 times and reflects a comfortable financial position. Repayments are made from cash inflows from current assets. In addition, EnviTec Biogas had unused overdraft facilities of EUR 10.4 million as of the balance sheet date.

Separate financial statements



The Group's liquidity amounted to approx. EUR 0.5 million as of the end of 2014. The decline by roughly EUR 3.5 million from the previous year's EUR 4.0 million is primarily attributable to the granting of loans. The spinoff of the Plant Construction segment into a separate entity had only a limited impact on liquidity.

Cash flow statement

Group

At EUR 35.4 million, EnviTec's net cash flow was down by EUR 2.4 million on the previous year's EUR 37.8 million. The high net cash flow is primarily attributable to the cash inflow from the decline in trade receivables and current assets as well as the increase in other non-current assets. This contrasts with the cash outflow resulting from the sharp increase in inventories resulting from the good harvest in 2014 and increased feedstock purchases. Net cash used for investing activities totalled EUR 43.0 million, compared to EUR 20.4 million in the previous year. Cash inflow from financing activities amounted to EUR 8.8 million in the past fiscal year.

Separate financial statements

EnviTec Biogas AG's cash flow from current operating activities amounted to EUR 31.9 million in the fiscal year (previous year: EUR 24.3 million). The increase was mainly due to the spin-off of the Plant Construction segment, which led to an inflow of cash in the amount of EUR 29.9 million resulting from the reduction in inventories and receivables. Net cash used for investing activities amounted to roughly EUR 17.2 million and related to investments in subsidiaries. Net cash provided by financing activities totalled EUR 1.7 million; this is the result of an inflow of short-term funds in the amount of EUR 10.9 million and an outflow of EUR 9.2 million for the repayment of long-term loans.

At the bottom line, EnviTec Biogas AG's liquid funds decreased by EUR 3.5 million.

General statement on the financial situation

Opportunity and Risk Report

The conscious and controlled management of risks and opportunities is the basis for successful long-term corporate development. The changing global energy market opens up opportunities for EnviTec Biogas which the company wants to exploit. Opportunities naturally entail risks, which must be adequately managed and minimised in order to ensure successful corporate development. EnviTec Biogas has therefore introduced a management system which systematically identifies potential risks and shows measures to minimise these risks. All executive staff are trained in identifying risks and taking appropriate responses. They encourage their employees to think in an entrepreneurial manner and to avoid risks. Risk management forms the basis for corporate control and helps to achieve the company's objectives. It is an integral element of all business processes and business units.

Opportunities

Sector-specific opportunities

The growing global demand for energy and the challenges of climate change open up opportunities for the biogas industry. As a renewable energy source which can cover base load and peak load requirements, biogas will continue to gain importance going forward. Moreover, the production of biogas facilitates the intelligent use of biological waste, which opens up additional opportunities for EnviTec. In the coming years, EnviTec will endeavour to expand and strengthen its market position by continuing to internationalise into the most promising biogas and biomethane markets. We see opportunities not only in established markets such as France, the UK and Italy but above all in emerging markets such as Japan, China and the USA in the medium term.

In established markets, opportunities arise where competitors are unable to respond appropriately to short-term changes in the general framework or to successfully face the competition. The German market, in particular, will continue to consolidate. This will open up opportunities primarily for EnviTec's Service and Own Plant Operation segments to win new customers as well as market share.

Strategic corporate opportunities

Strategic corporate opportunities result from the ongoing development of the product portfolio – with regard to both scope and quality – and the expansion of the technological leadership. We therefore focus on investments in research and development, quality assurance and employee qualification. In this context, the focus has increasingly shifted to the concept of the "biobased economy", which stands for as yet unused, innovative uses of plants. The holistic approach of a biobased economy is aimed at sustainable operation on the basis of renewable resources and wastes and to create alternatives to the oil-based industry. EnviTec is increasingly conducting research into this field, looking for new processes and products which could open up new opportunities in new markets for the company.

Performance-related opportunities

Performance-related opportunities arise for EnviTec Biogas along the value chain from purchasing to production to sales and marketing. Analysis and optimisation open up opportunities to increase the profitability.

Risks

Risk management

EnviTec Biogas has laid down the tasks, reporting and organisational structures in a Risk Management Manual. This Manual defines risks and describes the complete risk management process. The task of the Risk Officers is to assess, monitor and counter-act all risks in accordance with defined categories. Based on a regularly updated risk inventory, these are reviewed at quarterly intervals. Any risks which arise all of a sudden and have a notable impact on the company's business performance and earnings position as well as on the enterprise value are immediately reported to the Executive Board, which will then take the necessary decisions. In the context of its reports to the Supervisory Board, the Executive Board continuously informs the latter about the main risks and outlines the measures taken to manage these risks.

We are a company operating in a dynamically changing international market environment. This gives rise to risks which are inextricably linked with our business activities. As a matter of principle, risks cannot be entirely avoided by changing the basic framework or through technological development. Our risk management system is therefore constantly being adapted to the latest developments. The Group does not take risks that are unrelated to the key objectives of corporate development.

These key objectives include:

- > development and implementation of the business model and sustainable corporate value creation,
- > defending the technological leadership,
- > securing liquidity.

The Executive Board has no knowledge of any risks jeopardising our continued existence. Individual risks capable of jeopardising our business performance and corporate value are described below.

Environmental and industry risks

The financial success of the products and services offered by EnviTec Biogas is dependent on the promotion of renewable energy sources under appropriate policies and regulations. In Germany, these include, for instance, the German Renewable Energy Sources Act (EEG). Most of the other EU member states and a number of non-EU countries have also put in place regulations comparable to the German Renewable Energy Sources Act (EEG). These regulations are of decisive importance for the success of the biogas sector in these countries. Regulations under construction law and pollution control law must be observed both when building or enlarging biogas plants and when operating such plants. Some of these regulations place biogas plants in a privileged position in relation to other plants; in particular, they provide for size-related simplification of the licensing procedure when erecting such plants in outdoor areas as defined by construction law. Any changes in the statutory conditions governing the erection, enlargement and operation of biogas plants, both in Germany and in other countries, may have a negative effect on the net worth, financial and earnings position of EnviTec Biogas. As a result of the amended EEG 2014, the German biogas market has come to a virtual standstill. Going forward, EnviTec's plant construction activities will

focus primarily on foreign growth markets. Apart from the legal framework, some parts of the general public as well as certain special interest groups have reservations about biogas plants and their construction. This is why, in June 2009, EnviTec Biogas and other companies established the German Biogas Council, which acts as a source of advice and port of call for policy-makers, the corporate sector and special interest groups and aims to eliminate prejudices. The aim is to promote the agricultural and industrial orientation of biogas technology and to represent the industry's shared interests with regard to legislation and products. EnviTec Biogas intends to expand its international activities, which gives rise to a number of risks. These include potential changes in the political, economic, social, legal, cultural and fiscal conditions prevailing in individual countries. In addition, there is the risk of unexpected changes in local laws and regulations, which may have an adverse impact on the business activity of EnviTec Biogas. Some countries in which we are already active or plan to become active are considerably less stable in economic, political and legal terms than the member states of the European Union. This applies to Asia, in particular. Inadequate legal and administrative systems may make it more difficult or even impossible to obtain official permits, hamper the completion of customers' orders or jeopardise the enforcement of financial and other claims. The company has built up substantial know-how in the foreign representative offices and the Group management team and aims to anticipate potential changes and to prepare itself and its customers accordingly. Moreover, the processes and documents needed to obtain local approvals are optimised with regard to specific local requirements. Countries in which EnviTec Biogas sees no opportunities following close monitoring are not taken into account by the management or exited by the company.

In summary, EnviTec classifies the above environmental and industry risks as strategic risks, whose occurrence is likely but whose impact on the business activity as well as the financial and earnings position of the Group would be moderate if such a risk occurred.

Order, sales and default risk

The effects of macroeconomic developments on the company's customers and its order and sales situation are difficult to assess. A decline in the order backlog due to cancellations or a lack of new orders would have an impact on the future sales and earnings position. EnviTec Biogas has intensified its communication with its customers to anticipate any potential postponement of orders and supports its customers in the approval processes. The company's Energy segment takes out long-term sales and purchase positions. These positions might incur significant losses in an oversupplied (long) or undersupplied (short) market environment combined with a negative market trend. At this time, all relevant positions are covered either by counterparties from within the Group or counterparties of excellent credit standing. With a view to preventing the loss of receivables, the company has optimised its receivables management process as well as the creditworthiness review. The open positions are reported to the Executive Board in a weekly report. Moreover, every responsible project manager is informed of the outstanding receivables at 14-day intervals so that dunning can be initiated.

In summary, EnviTec currently classifies the order and sales risk as a strategic risk, whose occurrence is unlikely. Moreover, the potential impact on the business activity as well as the financial and earnings position of the Group are considered to be low. Overall, EnviTec sees no material risks arising from order and sales management.

Currency risks

All sales and purchases are made in the Group currency, the euro. This does not entail major currency risks. Currency risks may arise in conjunction with transactions of the subsidiaries in the UK and the USA. Exchange rates are therefore monitored on an ongoing basis to ensure that currency hedging measures can be taken at an early stage. To hedge risks in conjunction with contracts in the UK and the USA, currency forward contracts in an amount of EUR 5.6 million were signed. They are used to hedge payments expected to be received by the subsidiaries.

In summary, EnviTec currently classifies currency risks as operational risks, whose occurrence is unlikely because of the conservative hedging strategy and whose impact on the Group would be moderate if they occurred.

Competitive risks

Existing or future competitors may try to win market share by pursuing an aggressive pricing or acquisition

policy. This competition is made even fiercer by the continuous reduction in the minimum remuneration paid for electricity which is fed into the public grid from biogas plants in accordance with the German Renewable Energy Sources Act (EEG) and the associated imperative to permanently cut costs, as well as by similar trends in other countries.

In summary, EnviTec currently classifies competitive risks as strategic risks, whose occurrence is likely but whose impact on the Group would be low if they occurred.

Technological risks

Biogas plants are subject to rapid technological change. The market for biogas plants is driven by constantly improved products and services and is characterised by short product lifecycles and frequently changing customer requirements. We assume that this will continue to be the case going forward. By introducing new products or services earlier or at more favourable conditions than our company, our competitors could gain a lead or secure exclusive rights to new technologies.

The future success of EnviTec Biogas therefore depends on its ability to continuously develop new products and services and to enter into technology partnerships.

In summary, EnviTec currently classifies technological risks as strategic risks, whose occurrence is likely but whose impact on the Group would be low if they occurred.

Procurement risks

The components needed to build biogas plants are to a large extent purchased from suppliers. Particularly the combined heat and power units are only produced and supplied by a small number of manufacturers worldwide. This could give rise to supply bottlenecks or rising prices for the components. We aim to prevent this by maintaining close business relationships and signing fixed-price agreements. Supply bottlenecks may also result from environmental disasters or poor weather conditions affecting large areas. The latter may lead to lost harvests of the substrates used in the operation of biogas plants, i.e. renewable or organic resources and waste. Prices for the required feedstock materials may rise as a result of the high demand. This could jeopardise the cost-efficiency of the biogas plants operated by EnviTec's Own Plant Operation segment. Among other things, long-term delivery contracts are concluded with regional agricultural operations in order to reduce this risk. Particularly outside Germany, the strategy of EnviTec Biogas is to involve regional farmers directly in the operation of the plants, as partners, and thus assure the supply of raw materials.

In summary, EnviTec currently classifies procurement risks as operational risks, whose occurrence in the Own Plant Operation segment and in the Plant Construction segment is unlikely and very unlikely, respectively. The potential impact on the Group is considered to be moderate for the Own Plant Operation segment and low for the Plant Construction segment.

Corporate growth and internal risks

EnviTec Biogas has established internal organisational structures and management processes that must keep pace with the volatile environment. These include the organisation for financial accounting according to IFRS, the necessary IT systems and strict receivables management. The EnviTec Group has an internal controlling and risk management system regarding the accounting process, which defines suitable structures that are implemented in the organisation. This system is designed to ensure timely, consistent and correct accounting of all business processes and transactions. It also guarantees compliance with legal standards, accounting regulations and internal instructions. The consolidated accounts are produced centrally on the basis of the data of the consolidated subsidiaries. Specially trained employees are responsible for consolidation. The management teams of the Group's member companies are responsible for implementing and monitoring the local internal controlling systems. Generally, it should be noted that an internal controlling system, irrespective of the size and structure, does not provide 100% security that material misstatements in the accounts are avoided or identified.

However, it serves to prevent with sufficient certainty that corporate risks have a material effect. The future processes will make high demands on our organisation and will tie down substantial management resources. There is a risk that the company's organisation and structure will be unable to keep pace with the company's requirements. The company therefore attaches top priority to developing and refining the necessary organisational, information and management structures.

In summary, EnviTec currently classifies risks arising from corporate growth as well as internal risks as risks which are unlikely to occur and whose impact on the Group would be low if they occurred.

Personnel risks

The growth of EnviTec Biogas depends first and foremost on highly qualified employees. Growth will be slowed if it is not possible to hire well trained employees in a timely manner or to retain key qualifications in the company. The company makes consistent and intensive use of recruitment tools and constantly coordinates the company's hiring needs with the individual departments. At the same time, the company continues to train and educate its employees and expands its knowledge by cooperating with the scientific departments of technical colleges.

In summary, EnviTec currently considers personnel risks to be unlikely to occur and their impact on the Group to be moderate if they occurred.

Risks from financing instruments

In September 2012, EnviTec Biogas AG issued a EUR 30 million note loan. In this context, EnviTec undertook to meet certain financial covenants such as a minimum equity ratio (economic equity capital / total assets) and maximum leverage (net liabilities /EBITDA). The agreed covenants are met by EnviTec. A violation of these covenants would entitle the banks to terminate the note loan

A first EUR 6.5 million tranche of the note loan was repaid in the reporting period. Current and non-current financial liabilities to banks in the amount of EUR 5.5 million mean that EnviTec Biogas AG is generally exposed to an interest rate risk. This risk is being mitigated by derivative financial instruments. The EUR 5.5 million loan was repaid prematurely and fully on 26 March 2015. The other non-current liabilities carry fixed interest rates and are therefore exposed to a fair-value risk, which means that potential interest rate increases do not represent a risk to the company.

In summary, EnviTec currently considers risks from the above financing instruments to be unlikely to occur and their impact on the Group to be considerable if they occurred.

Post balance sheet events

Under the merger agreement dated 1 January 2015, the following companies were merged with Zweite Biogas Anklam GmbH & Co. KG:

- > Dritte Biogas Anklam GmbH & Co. KG
- > Vierte Biogas Anklam GmbH & Co. KG
- > Fünfte Biogas Anklam GmbH & Co. KG
- > Sechste Biogas Anklam GmbH & Co. KG
- > Biogas Quakenbrück GmbH & Co. KG
- > Biogas Kalefeld GmbH & Co. KG

At the time of the preparation of the consolidated financial statements, the mergers had not yet been entered in the Commercial Register.

Related party disclosures

In accordance with section 312 of the German Stock Corporation Act (AktG), the company published related party disclosures, which ended with the following statement: "Each of the transactions mentioned in the related party disclosures was made on terms equivalent to those that prevail in arm's length transactions, based on the circumstances known to us at the time when such transactions were made. There were no reportable measures at the instigation or in the interest of the controlling company." The auditors of EnviTec Biogas AG, Rödl & Partner GmbH, audited the related party disclosures and issued an unqualified audit certificate.

Forecast Report

Stable macroeconomic environment

In the second half of 2014, the world economy recovered more quickly than previously expected. Various factors which had an adverse impact on global economic activity last years have lost importance over the past months. In its latest forecast of January 2015, the International Monetary Fund (IMF) therefore projected a 3.5% increase in global GDP for 2015 and a 3.7% increase for 2016. The economic consolidation process has reached an advanced state, especially in the USA, and the IMF expects accelerated growth of 3.6% for the current year. In the eurozone, confidence in the survival of the common currency area has stabilised and the European Central Bank's expansionary monetary policy is providing additional economic stimulus. This will lead to expected eurozone GDP growth of 1.2% in 2015 and 1.4% in 2016. The IMF experts project a growth rate of 1.3% and 1.5%, respectively, for Germany. According to the IMF, growth in the emerging and developing countries will slow down further to 4.3% in 2015 and 4.7% in 2016. Growth rates of 6.8% and 6.3%, respectively, mean that China will remain the global growth engine in 2015 and 2016, although growth will slow down moderately.

Sector developments

In 2014, the German market for the construction of new biogas plants already came to a virtual standstill due the coming into force of the new EEG. The new Act has resulted in an adverse legal situation because of which the outlook for new plant construction in 2015 is unfavourable. Accordingly, the German Biogas Association expects the installed capacity to increase by only a moderate 8 MW from newly built plants. The industry association therefore believes that biogas companies will primarily focus on service, internationalisation, plant flexibilisation in the electricity market and on developing new business models in the heat and mobility sector in the coming years.

By focusing on international expansion, own plant operation, service and innovation leadership in the past years, EnviTec has already laid the strategic basis for mitigating the effects of the unattractive market situation in Germany.

In contrast to Germany, France and the UK as well as China and Japan in Asia remain especially attractive markets for EnviTec.

Market conditions in France continued to improve last year. The French government plans to increase the number of biogas plants in operation from 389 in 2013 to 1,500 in 2017. According to a potential study carried out by gas provider GDP, biogas plants may produce as much as approx. 100 TWh of energy by 2020. The British biogas sector has posted constant growth rates for many years. So far, however, the focus has been on smaller plants (<250 kW), which mostly run on farm fertiliser but also on renewable resources. As the feed-in tariff is declining gradually, larger biogas plants (>250 kWel) are gaining importance. In addition, feeding biomethane into the natural gas grid is becoming increasingly attractive due to attractive subsidy terms.

The use of waste for the production of energy for own consumption opens up opportunities even in the still young US and Chinese markets. In August 2014, the US government issued a Biogas Opportunities Roadmap, which is aimed at a significant increase in the use of biogas systems. The current 5-year plan of the Chinese government also provides for a marked expansion of biogas production.

In Italy, the official subsidy scheme, which was amended as of 1 January 2013, remains in place. It generally opens up opportunities for biogas plants up to 300 kW and partly also for larger plants. EnviTec has adapted to this situation at an early stage and offers appropriate plant designs. While the Italian market first had to get adjusted to the new legal framework, demand has since stayed at a low level due to difficult financing conditions.

Performance of EnviTec Biogas

EnviTec Biogas rests on a very solid financial foundation. This has enabled us to cope with the slump in the German biogas market and to defy the general industry trend. The successful internationalisation strategy of the past years allows the Group to effectively seize the opportunities that arise in foreign markets. At the end of 2014, the cash position of EnviTec Biogas was very solid.

The Group had cash and cash equivalents in the amount of EUR 20.1 million (previous year: EUR 19.0 million) and other current assets of EUR 22.5 million (previous year: EUR 26.7 million). The total amount of EUR 42.6 million covers the current financial liabilities of EUR 30.6 million (previous year: EUR 17.2 million) 1.39x and underlines the comfortable financial position. In addition, EnviTec Biogas had unused overdraft facilities of EUR 10.4 million as of the balance sheet date. We aim to once more reduce our receivables in 2015 in order to improve the overall cash position even further.

Segment performance

Because of the adverse market conditions, the German market will no longer play a role for the Plant Construction segment's new business. We believe that the domestic market will not even come close to the 100 MW limit stipulated in the new EEG for new plant capacity. Our company will place its focus on reconstruction measures and the optimisation of its existing plants. The industry trend will lead to further market consolidation in Germany and push financially weak players out of the market. By contrast, EnviTec will continue its early internationalisation strategy and plans to expand its strong position in the most promising biogas and biomethane markets. At present, the UK is EnviTec's most important

foreign market, followed by France as well as China and Japan in Asia. Experience has shown, however, that the legal framework may change quickly also in foreign markets. We therefore need to seize opportunities quickly and comprehensively while at the same time efficiently managing the risks associated with doing business abroad, such as different legal systems, construction regulations and language barriers.

Over the past years, we have laid the basis by adjusting our corporate and personnel structure and building up an innovative product range. We believe that the outcome of the elections in the UK will not lead to a deterioration in the legal framework for biogas. We nevertheless need to monitor the regulatory framework permanently in all markets and assess the implications of any change for our business model.

At the end of the fiscal year 2014, EnviTec Anlagenbau GmbH & Co. KG had an order backlog of EUR 37.3 million, which forms a good basis for stable business in 2015. We currently project sales revenues at the prior year level and positive EBIT for the Plant Construction segment.

EnviTec expects additional revenue and profit potential to arise for the Own Plant Operation segment from the construction of new plants and the optimisation of existing sites. If permitted by the overall conditions, the production capacity is to be expanded selectively in 2015, with the main focus on Germany and the UK. In April 2014, EnviTec repurchased seven biogas plants that had been sold at the end of 2013. These plants will make full revenue and earnings contributions in the current fiscal year. Costs are expected to increase moderately, as the engines of some plants need to undergo regular maintenance in 2015. The Executive Board therefore projects slightly higher revenues as well as stable EBIT for the Own Plant Construction segment for 2015. For 2016, the Board projects a further moderate improvement in the segment's EBIT as well as stable revenues.

Stable revenues and earnings are projected for the **Service** segment for 2015. This trend is likely to continue in 2016. Our experts remain in high demand with regard to the biological processes as well as plant operation. In Germany, growth prospects are highly constrained due to the collapse of the market for new plants. By contrast, we see opportunities arising in foreign markets where the number of plants will increase.

We project a positive revenue and earnings trend for the **Energy** segment for the coming years. Business in this promising segment is currently still focused very much on Germany. In view of the continued start-up expenses incurred by this segment, we project a result close to breakeven point for the current fiscal year.

In view of the segment performance described above, EnviTec expects business at **Group level** to remain stable in 2015, with Group sales revenues coming in at the prior year level and EBIT remaining stable or improving slightly. The performance in 2015 will depend largely on the development the international markets, especially in the UK, where we are currently involved in several projects.

Forecast for EnviTec Biogas AG

The separate financial statements will reflect the spinoff of the Plant Construction segment into EnviTec Anlagenbau GmbH & Co. KG, as a result of which EnviTec AG will no longer generate relevant revenues.

Only the financial result will contribute to positive EBIT. Accordingly, the Executive Board's projections for the Group as a whole will also be reflected in the separate financial statements for 2015 and 2016.

General statement on the future outlook

After the difficult year 2013 and the transitional year 2014, the opportunities will outweigh the risks for EnviTec. Many countries in Europe – as well as the promising Japanese and Chinese markets – offer opportunities for the biogas industry. However, the constantly shifting regulatory frameworks continue to make medium-term planning a challenge for our business.

The future of EnviTec lies in attractive foreign markets for plant construction, the selective expansion of the high cash flow generating Own Plant Construction segment and the further development of the complementary Service and Energy segments. We are well prepared for this – we rest on a strong technological and financial foundation and have adjusted our corporate structure to the volatile market conditions. Our aim is to capitalise on opportunities arising in attractive markets, to develop new markets and to achieve solid sales revenues and earnings.

CON-SOLIDATED FINANCIAL STATEMENTS

Consolidated profit and loss account for financial year 2014

		2014 in EUR	2013 in EUR	Notes
1.	Sales	163,396,160	148,828,206	21.
2.	Other operating income	12,125,730	15,712,011	22.
	Total performance	175,521,890	164,540,218	
3.	Cost of materials	112,619,612	100,744,244	23.
	Gross result	62,902,278	63,795,974	
4.	Staff costs a) Wages and salaries b) Social security, pensions and other benefits	13,806,721 3,419,865	15,353,387 3,644,024	24.
		17,226,585	18,997,412	
5.	Depreciation	15,502,109	16,031,391	25.
6.	Other operating expenses	23,838,053	26,364,305	26.
	Operating income	6,335,530	2,402,866	
7.	Result from at-equity valued participations	813,821	-318,760	27.
8.	Interest earnings	2,732,045	2,392,127	28.
9.	Interest expenses	3,731,097	3,486,586	29.
	Pretax income	6,150,299	989,647	
10.	Income tax expense	2,230,915	717,125	30.
11.	Net income	3,919,384	272,522	
12.	Income inputable to minority interests	-292,444	-46,490	
13.	Consolidated profit	4,211,828	319,012	
Earr	nings per share in EUR nings per share in EUR (basic) nings per share in EUR (diluted)	0.28 0.28	0.02 0.02	31.
Wei g Basi Dilu	-	14,850,000 14,850,000	14,850,000 14,850,000	

Consolidated Statements of Comprehensive Income for financial year 2014

	12/31/2014 in EUR	12/31/2013 in EUR
Net income	3,919,384	272,522
Changes in fair value of derivates designated as cash flow hedges	-31,612	61,884
Changes recognized outside profit and loss (cash flow hedges)	-31,612	61,884
Exchance differences on translation of operations outside the euro zone	-49,419	-64,593
Changes recognized outside profit and loss (exchange differences)	-49,419	-64,593
Income and expenses recognized in equity to be reclassified though profit or loss in the future	-81,031	-2,709
Other comprehensive income	-81,031	-2,709
Total comprehensive income	3,838,353	269,813
of which attributable to minority interests	-292,444	-46,490
of which attributable to EnviTec Biogas AG shareholders	4,130,797	316,303

Consolidated balance sheet as at 31 december 2014

Assets

Α.	Fixed assets	12/31/2014 in EUR	12/31/2013 in EUR	Notes
I.	Intangible assets	12,123,011	4,777,120	5.
II.	Tangible assets	141,123,879	117,585,787	5.
III.	Shares in at-equity valuation of participations	9,756,430	11,068,942	6.
V.	Other long-term receivables	29,488,706	38,644,328	8.
V.	Deferred taxes	4,011,921	3,625,509	30.
Tota	l fixed assets	196,503,947	175,701,686	

D .				
Ι.	Stocks	40,977,629	29,949,652	10.
II.	Receivables from long-term construction contracts	10,336,812	9,876,330	9.
III.	Trade receivables	29,025,357	33,809,076	11.
IV.	Other short-term financial assets	22,466,309	26,748,038	12.
V.	Tax receivables	113,687	178,582	13.
VI.	Liquid funds	20,132,314	18,956,775	32.
Total	current assets	123,052,108	119,518,453	
Total	assets	319,556,055	295,220,137	

Equity and liabilities

Α.	Equity	12/31/2014 in EUR	12/31/2013 in EUR	Notes
Ι.	Subscribed capital	14,850,000	14,850,000	
П.	Capital reserves	132,995,741	132,995,741	
III.	Revenue reserves 1. Currency translation reserves 2. Other reserves 3. Other revenue reserves	-193,045 360,979 10,000,000	-143,626 392,591 10,000,000	
IV.	Retained earnings brought forward	12,142,300	11,823,288	
V.	Minority interests	-397,883	-876,128	
VI.	Consolidated profit	4,211,828	319,012	
Tota	l equity	173,969,920	169,360,879	14.

В.	Non-current liabilities			
l.	Long-term provisions	425,400	941,000	15.
П.	Long-term financial liabilities	76,593,142	77,552,964	16.
Ш.	Other long-term liabilities	1,320,898	1,259,719	18.
IV.	Deferred taxes	1,054,153	1,569,170	30.
Tota	l noncurrent liabilities	79,393,593	81,322,852	

C.	Current liabilities			
Ι.	Short-term provisions	9,895,895	8,678,494	15.
П.	Short-term financial liabilities	30,571,927	17,169,809	16.
Ш.	Trade payables	19,962,975	15,165,806	17.
IV.	Liabilities from long-term construction orders	233,031	888,551	9.
V.	Other short-term liabilities	3,949,019	2,483,102	18.
VI.	Tax liabilities	1,579,695	150,645	19.
Tota	l current liabilities	66,192,542	44,536,406	
Tota	I equity and liabilities	319.556.055	295.220.137	

Consolidated cash flow statement for financial year 2014

	2014 in EUR	2013 in EUR
Consolidated net income before minority interests	3,919,384	272,522
Income tax expenses	2,230,915	717,125
Net interest income	999,052	1,094,459
Profit (-) losses (+) from at-equity companies	-468,624	318,760
Paid income tax	-1,122,732	-3,644,252
Depreciation on fixed and current assets	15,502,109	16,031,391
Write up of fixed assets	-153,045	0
Decrease / Increase in other provisions	701,801	-2,860,580
Profit (-) losses (+) from spin off	0	-4,516,979
Profit (-) losses (+) on the sale of tangible assets	89,083	40,218
Gross cash flow	21,697,943	7,452,664
Increase/decrease in stocks	-11,027,977	1,719,076
Increase/decrease in receivables from long-term construction contracts	-460,482	38,511,487
Decrease in liabilities from long-term construction contracts	-655,520	-758,947
Decrease/increase in trade receivables	4,783,719	-4,840,590
Increase/decrease in trade payables	4,797,169	-12,550,600
Increase in other long-term liabilities	61,179	604,630
Decrease in other short-term assets	2,879,727	9,809,566
Decrease/increase in other long-term receivables	8,941,011	-4,664,241
Increase in deferred taxes	-386,412	-1,305,415
Increase/decrease in other short-term liabilities	1,465,917	-1,799,364
Decrease in tax receivables	64,895	3,464,068
Decrease/increase from transaction tax and tax deductions	-194,150	307,325
Other non cash payments	689,658	-537,904
Interest received	2,732,045	2,392,127
Flow from operative activities (net cashflow)	35,388,722	37,803,882

2014 in EUR	2013 in EUR
743,706	486,795
-7,773,201	-214,805
-39,112,636	-18,350,029
-237,500	-2,539,507
1,996,585	0
22,050	62,556
1,325,242	125,089
-43,035,754	-20,429,900
26,707	2,592,189
30,613	4,516,979
57,320	7,109,168
28,615,306	15,849,706
-18,932,922	-11,612,908
148,093	-2,299,349
0	-14,850,000
2,665,871	-9,777,520
-3,731,097	-3,486,586
8,765,250	-26,176,657
1,175,538	-1,693,507
18,956,776	20,650,282
	743,706 -7,773,201 -39,112,636 -237,500 1,996,585 22,050 1,325,242 -43,035,754 26,707 30,613 28,615,306 -18,932,922 148,093 2,665,871 2,665,871 3,731,097 1,175,538

Statement of changes in equity as at 31 december 2014

in EUR	Subscribed Capital	Capital reserves	Revenue reserves	Currency translations reserves
Balance at 01/01/2013	14,850,000	132,995,741	330,707	-79,033
Reclassifications	0	0	0	0
Profit distribution	0	0	0	0
Minority interests	0	0	0	0
Income	0	0	0	0
Increase of investments in subsidaries recognized in equity	0	0	0	0
Other comprehensive income	0	0	61,884	-64,593
Balance at 12/31/2013	14,850,000	132,995,741	392,591	-143,626
Balance at 01/01/2014	14,850,000	132,995,741	392,591	-143,626
Reclassifications	0	0	0	0
Minority interests	0	0	0	0
Income	0	0	0	0
Other comprehensive income	0	0	-31,612	-49,419
Balance at 31/12/2014	14,850,000	132,995,741	360,979	-193,045

Total	Minority interests	Total shareholders interests	Consolidated profit/loss	Retained earnigs brought forward	Other revenue reserves	
184,478,232	-848,551	185,326,783	1,181,442	26,047,926	10,000,000	
0	0	0	-1,181,442	1,181,442	0	
-14,850,000	0	-14,850,000	0	-14,850,000	0	
-537,167	-537,167	0	0	0	0	
272,522	-46,490	319,012	319,012	0	0	
0	556,080	-556,080	0	-556,080	0	
-2,709	0	-2,709	0	0	0	
169,360,879	-876,128	170,237,006	319,012	11,823,288	10,000,000	
169,360,879	-876,128	170,237,006	319,012	11,823,288	10,000,000	
0	0	0	-319,012	319,012	0	
770,689	770,689	0	0	0	0	
3,919,384	-292,444	4,211,828	4,211,828	0	0	
-81,031	0	-81,031	0	0	0	
173,969,920	-397,883	174,367,803	4,211,828	12,142,300	10,000,000	

NOTES TO THE 2014 CONSOLIDATED FINANCIAL STATEMENTS

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1. General information

In accordance with section 315a of the German Commercial Code (HGB), the consolidated financial statements of EnviTec Biogas AG for the year ended 31 December 2014 were prepared to the International Financial Reporting Standards (IFRS) of the International Accounting Standard's Board (IASB), London, valid at the balance sheet date and recognised by the European Union, as well as the interpretations of the International Financial Reporting Interpretations Committee (IFRIC).

EnviTec Biogas AG is a Germany-based company operating on an international scale whose activities range from the construction and sale of biogas plants through its subsidiaries and the operation of own biogas plants to technical and biological services to the marketing of electricity.

Headquartered in Lohne (Oldenburg), Industriering 10a, Germany, EnviTec Biogas AG is the parent company of the EnviTec Group and was a listed joint stock company as defined in section 3 para. 2 of the German Stock Corporation Act (AktG) up to its change to the Entry Standard on 29 August 2013. The consolidated financial statements and the Group Management Report of EnviTec Biogas AG for the year ended 31 December 2014 are available via the electronic Federal Gazette and the Company Register as well as our website www.envitec-biogas.de.

On 7 May 2015, the Executive Board of EnviTec Biogas AG released the consolidated financial statements for presentation to the company's Supervisory Board. The latter has the task to review the consolidated financial statements and to declare whether they are approved

The information below comprises disclosures and comments which, in addition to the income statement, the statement of comprehensive income, the balance sheet, the statement of changes in equity, the segment report and the cash flow statement, must be included in the consolidated financial statements as notes in accordance with IFRS.

The financial statements were prepared in euros. Unless otherwise stipulated, all amounts are rounded to full euros (EUR) or to thousands of euros (EUR k). In the income statement, as well as in the balance

sheet, individual items are combined for purposes of clarity and explained in the Notes. The nature of expense method was used to prepare the income statement. Assets and liabilities are classified in the balance sheet in accordance with their maturities. Assets and liabilities are regarded as current if they are due or to be sold within one year; accordingly, assets and liabilities are classified as non-current if they are likely to be held by the company for more than one year. Trade receivables and payables as well as inventories and construction contracts are generally recognised as current items. Deferred taxes are generally recognised as non-current.

2. Effects of new financial reporting standards

2.1. Financial reporting standards first applied in the fiscal year

The International Accounting Standards Board (IASB) and the IFRS Interpretations Committee (IFRS IC) have adopted a number of amendments to existing International Financial Reporting Standards (IFRS) as well as several new IFRS and interpretations, which are effective for the EnviTec Group from the fiscal year 2014 but have no significant effect on the group. This concerns the following:

IFRS 10	Consolidated Financial Statements
IFRS 11	Joint Arrangements
IFRS 12	Disclosure of Interests in Other Entities
IFRS 10, 12, IAS 27	Consolidated Financial Statements, Joint Arrangements and Disclosure of Interests in Other Entities: Transi- tion Guidance (2012)
IAS 19	Employee Benefits
IAS 27	Separate Financial Statements
IAS 28	Investments in Associates and Joint Ventures
IAS 32	Financial instruments: presentation

IAS 36	Impairment of assets
IAS 39	Novation of Derivates and Continua- tion of Hedge Accounting
IFRIC 21	Levies

2.2. Newly published financial reporting standards that have not been applied yet

The International Accounting Standards Board (IASB) and the International Financial Reporting Interpretations Committee (IFRS IC) have adopted additional standards and interpretations, whose application was not mandatory for fiscal 2015. Application of these IFRS requires their approval by the EU, which has not yet been granted for all of them. The company did not opt for early application.

The following new and revised standards and interpretations may be effective from 2015 or thereafter subject to EU endorsement. The impacts of these standards and the time at which they will be applied are currently being reviewed.

In the context of the Annual Improvements Process (2010-2012), (2011-2013) and (2012-2014), a number of minor amendments were made, which are applicable for financial years beginning on or after 1 January 2015 or 1 January 2016.

Standard	Regulation	Effective date	Expected effects
IFRS 9	Financial Instruments	01/01/2018	Still being reviewed.
IFRS 15	Revenue from Contracts with Customers	01/01/2017	Still being reviewed.
IFRS 11	Joint Arrangements	01/01/2016	Still under final review; we assume that no material changes will arise.
IFRS 14	Regulatory Deferral Accounts	01/01/2016	Still under final review; we assume that no material changes will arise.
IAS 1	Presentation of Financial Statements	01/01/2016	Still under final review; we assume that no material changes will arise.
IAS 16/IAS 38 und IAS 16/ IAS 41	Clarification of Acceptable Methods of Depreciation and Amortisation	01/01/2016	Still under final review; we assume that no material changes will arise.
IAS 27	Equity-Method in Separate Financial Statements	01/01/2016	Still under final review; we assume that no material changes will arise.
IFRS 10/IAS 28	Sale or Contribution of Assets between an Investor and its Associate or joint Venture	01/01/2016	Still under final review; we assume that no material changes will arise.
IFRS 10, IFRS 12, IAS 28	Investment Entities: Applying the Consolidation Exception	01/01/2016	Still under final review; we assume that no material changes will arise.

3. Basic principles of the consolidated financial statements

3.1. Basis of consolidation and consolidation methods

The consolidated financial statements of EnviTec Biogas AG include those companies in which EnviTec Biogas AG has either directly or indirectly the majority of the voting rights (subsidiaries), insofar as their influence on the net worth, financial and earnings position of the Group is not of subordinate significance. Inclusion is from that point in time when the possibility of control comes into existence. It is terminated when the possibility of control no longer exists.

If required, the financial statements of subsidiaries are adjusted to align the accounting and valuation methods with those applied by the Group.

Business combinations are accounted for in accordance with IAS 27 (Consolidated Financial Statements and Accounting for Investments in Subsidiaries) using the purchase method by netting the carrying amounts of the investments with the remeasured equity capital of the subsidiaries at the time of their acquisition. Assets, liabilities and contingent liabilities of acquired subsidiaries are recognised at their respective fair values. A positive difference remaining after the purchase price allocation is capitalised as goodwill, while negative differences are immediately recognised in profit or loss upon subsequent review.

Receivables and liabilities between the consolidated companies are netted. Unrealised results of intragroup transactions are eliminated, and deferred tax assets and liabilities resulting from consolidation recognised in profit or loss are taken into account. Intragroup sales as well as all intragroup earnings are netted with the respective expenses and recognised in equity.

The equity method is used to measure joint ventures and associated companies which are under the joint management (joint ventures) or controlling influence (associated companies) of EnviTec Biogas AG. The cost of investments consolidated at equity is increased or reduced each year by the equity changes that correspond to EnviTec's share in the capital. Upon the initial consolidation of investments using the equity method, differences resulting from the initial consolidation are treated according to the principles of full consolidation. The changes in pro-rated equity which are recognised in profit or loss are shown separately in the income statement. The Notes to the consolidated financial statements include additional information on the EnviTec Group's at-equity investments. Goodwill included in a recognised investment is tested for impairment once a year and whenever there are indications of impairment. The share in associated companies' other comprehensive income is shown in the EnviTec Group's other comprehensive income on a pro-rated basis.

The same consolidation methods as in the previous year were applied.

Changes in the basis of consolidation and the consolidated companies are addressed below.

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3.2. Basis of consolidation

The basis of consolidation in the period from 1 January 2014 until 31 December 2014 had developed as follows:

	Germany	Abroad	Total
EnviTec Biogas AG and consolidated companies			
12/31/2013	99	32	131
Additions of subsidiaries	21	1	22
Disposal of subsidiaries	20	0	20
12/31/2014	100	33	133

	Germany	Abroad	Total
Companies valued at equity			
12/31/2013	65	8	73
Additions of companies valued at equity	2	0	2
Disposal of companies valued at equity	8	0	8
12/31/2014	59	8	67

As at the balance sheet date, the EnviTec Group comprised 200 (previous year: 204) companies, including EnviTec Biogas AG, of which 133 (previous year: 131) are fully consolidated. For a list of the subsidiaries and associated companies, refer to point 7. The list of shareholdings is published in the electronic Federal Gazette. The changes which occurred in the fiscal year 2014 with regard to the fully consolidated companies in the basis of consolidation are shown in the table below:

Name and head offices of the company	Capital share in %
Addition	
Biogas Thomasburg GmbH & Co. KG, Lohne	90.60
Biogas Thomasburg Verwaltungs- GmbH, Lohne	90.60
Biogas Hirl GmbH & Co. KG, Bresegard	94.00
Biogas Hirl Verwaltungs- GmbH, Bresegard	94.00
RePro Beber GmbH & Co. KG, Lohne	64.60
RePro Beber Verwaltungs- GmbH, Lohne	64.60
Biogas Nieheim GmbH & Co. KG, Lohne	64.80
Biogas Nieheim Verwaltungs- GmbH, Lohne	64.80
Biogas Wanzleben GmbH & Co. KG, Wanzleben	70.00
Biogas Wanzleben Verwaltungs- GmbH, Wanzleben	70.00
Biogas Angern GmbH & Co. KG, Lohne	87.60
Biogas Angern Verwaltungs- GmbH, Lohne	87.60
Biogas Osterburg GmbH & Co. KG, Lohne	100.00

EnviTec Biogas Ventures Ltd., Rugeley / Großbritannien	60.00
EnviTec Anlagenbau GmbH & Co. KG, Saerbeck	100.00
EnviTec Anlagenbau Verwaltungs- GmbH, Saerbeck	100.00
Biogas Reinsfeld GmbH & Co. KG, Lohne	100.00
Biogas Reinsfeld Verwaltungs- GmbH, Lohne	100.00
Biogas Forst GmbH & Co. KG, Forst	100.00
Biogas Forst Verwaltungs- GmbH, Forst	100.00
Biogas Barby GmbH & Co. KG, Lohne	100.00
Biogas Barby Verwaltungs GmbH, Lohne	100.00

Disposals due to merger	
Biogas Dingelstedt GmbH & Co. KG, Garrel	100.00
Biogas Dingelstedt Verwaltungs-GmbH, Garrel	100.00
Biogas Glauzig GmbH & Co. KG, Garrel	100.00
Biogas Glauzig Verwaltungs- GmbH, Garrel	100.00
Biogas Gramzow GmbH & Co. KG, Lohne	100.00
Biogas Greifswald GmbH & Co. KG, Lohne	100.00
Biogas Oderaue GmbH & Co. KG, Garrel	100.00
Biogas Oderaue Verwaltungs- GmbH, Garrel	100.00
Biogas Schönhausen GmbH & Co. KG, Garrel	100.00
Biogas Schönhausen Verwaltungs- GmbH, Garrel	100.00
Biogas Topfstedt GmbH & Co. KG, Lohne	100.00
Biogas Wesenberg GmbH & Co. KG, Lohne	100.00
Biogas Barby GmbH & Co. KG, Lohne	100.00
Biogas Barby Verwaltungs GmbH, Lohne	100.00

Disposals due to sale	
Biogas Düben GmbH & Co. KG, Garrel	90.00
Biogas Düben Verwaltungs- GmbH, Garrel	100.00
Biogas Mühlengeez GmbH & Co. KG, Garrel	100.00
Biogas Mühlengeez Verwaltungs- GmbH, Garrel	100.00
Biogas Weyhausen GmbH & Co. KG, Garrel	100.00
Biogas Weyhausen Veraltungs- GmbH, Garrel	100.00

The changes which occurred in the fiscal year 2014 with regard to the companies accounted for using the equity method in the basis of consolidation are shown in the table below:

Name and head offices of the company	Capital share in %
Addition	
Alternativ-Energie Priborn GmbH & Co. KG, Priborn	50.00
Alternativ-Energie Priborn Verwaltungs- GmbH , Priborn	50.00
Disposals	
Biogas Forst GmbH & Co. KG, Forst	40.00
Biogas Forst Verwaltungs GmbH, Forst	40.00
Biogas Reinsfeld GmbH & Co. KG, Lohne	50.00
Biogas Reinsfeld Verwaltungs GmbH, Lohne	50.00
Biogas Anlagenbau GmbH & Co. KG (Biogas Woltersdorf GmbH & Co. KG), Saerbeck	50.00
Biogas Anlagenbau Verwaltungs GmbH (Biogas Wolterdorf Verwaltungs. GmbH), Saerbeck	50.00
Biogas Barby GmbH & Co. KG, Lohne	50.00
Biogas Barby Verwaltungs GmbH, Lohne	50.00

Additions of fully consolidated companies

On 12th of May 2014 (effective acquisition date 1st of April 2014) the Zweite EnviTec Beteiligungs GmbH & Co. KG acquired the below mentioned shares of the limited partnership contribution of the mentioned companies for a total price of EUR 6,586k:

Name and head offices of the company	Capital share in %	Limited partner's contribution in total euro
Biogas Thomasburg GmbH & Co. KG, Lohne	65.5	100,000
Biogas Hirl GmbH & Co. KG, Bresegard	64.0	100,000
Biogas Wanzleben GmbH & Co. KG, Lohne	70.0	100,000
Biogas Nieheim GmbH & Co. KG, Lohne	64.8	100,000
Biogas Angern GmbH & Co. KG, Lohne	87.5	200,000
RePro Beber GmbH & Co. KG, Lohne	64.6	100,000

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Due to this acquisition the groups sales increased by EUR 5,504k. The groups result for 2014 includes a profit of those companies of EUR 227k. If the acquisition had already taken place as of 1st January 2014 the turnover would have increased by EUR 7,344k and the groups result by EUR 355k. The difference between the companies acquisition prices and book values of equity is recognized as Goodwill of EUR 4,183k.

The fair values of the assets and liabilities to be recognised pursuant to IFRS 3.67f at the time of acquisition are shown below:

	Fair value at the acquisition date in EUR k
Non-current assets	8,895
Current assets	4,206
Non-current liabilities	7,023
Current liabilities	3,662

Along with the shares of the limited partnership companies shares for their gerneral partners in the same amounts were acquired as well- each share capital amounting to EUR 25,000. The impact on the groups sales and results are of minor importance.

During the course of the year the Zweite EnviTec Beteiligungs GmbH & Co. KG increased its shares in Biogas Thomasburg GmbH & Co. KG and Biogas Thomasburg Verwaltungs GmbH by 25,1% and in Biogas Hirl GmbH & Co. KG and Biogas Hirl Verwaltungs GmbH by 30%. On 12th of May 2014 (effective acquisition date 1st of April 2014) EnviTec Biogas Betriebs GmbH & Co. KG acquired 94% of shares of the limited partnership contribution of EUR 100k of the Biogas Osterburg GmbH & Co. KG for a total price of EUR 686k.

Due to this acquisition the group sales increased by EUR 811. The groups result for 2014 includes a profit of those companies of EUR 41k. If the acquisition had already taken place as of 1st January 2014 the turnover would have increased by EUR 1,082k and the groups result by EUR 47k.

The fair values of the assets and liabilities to be recognised pursuant to IFRS 3.67f at the time of acquisition are shown below:

	Fair value at the acquisition date in EUR k
Non-current assets	2,454
Current assets	511
Non-current liabilities	1,589
Current liabilities	631

The shares in Biogas Forst GmbH & Co. KG and Biogas Forst Verwaltungs GmbH were increased by 60% for a purchase price for both companies of EUR 3,282k. Thus EnviTec AG's total shares in both companies now amounts to 100%.

The fair values of the assets and liabilities to be recognised pursuant to IFRS 3.67f at the time of acquisition are shown below:

	Fair value at the acquisition date in EUR k	
Non-current assets	7,779	
Current assets	1,797	
Non-current liabilities	4,515	
Current liabilities	502	

In addition the shares in Biogas Woltersdorf GmbH & Co. KG were increased by 50% for a purchase price of 1 Euro and also the shares in Biogas Woltersdorf Verwaltungs GmbH were increased by 50% for a purchase price of EUR 25k. Thus EnviTec AG's total shares in both companies now amounts to 100%. After the acquisition the companies names were changes to EnviTec Anlagenbau GmbH & Co. KG and EnviTec Anlagenbau Verwaltungs GmbH.

The fair values of the assets and liabilities to be recognised pursuant to IFRS 3.67f at the time of acquisition are shown below:

Current assets	54 k
Current liabilities	27 k

The shares in Biogas Reinsfeld GmbH & Co. KG and Biogas Reinsfeld Verwaltungs GmbH were increased by 50%. In 2013 the shares in both companies amounted to 50% and thus they were shown as associated companies.

The fair values of the assets and liabilities to be recognised pursuant to IFRS 3.67f at the time of acquisition are shown below:

	Fair value at the acquisition date in EUR k
Non-current assets	2,141
Current assets	512
Non-current liabilities	2,489
Current liabilities	119

In 2014 the EnviTec Biogas Ventures ltd. was established. The group's shares in the company amount to 60%.

Name and head office of the company
EnviTec Beteiligungs GmbH & Co. KG, Lohne
Zweite EnviTec Beteiligungs GmbH & Co. KG, Lohne
Biogas Schönthal GmbH & Co. KG, Willebadessen
Biogas Heilemann GmbH & Co. KG, Rotenburg/Wümme
Biogas Friedland GmbH & Co. KG, Lohne
EnviTec Biogas Betriebs GmbH & Co. KG, Lohne
Erste Biogas Anklam Betriebs GmbH & Co. KG, Anklam
Zweite Biogas Anklam Betriebs GmbH & Co. KG, Anklam
Dritte Biogas Anklam Betriebs GmbH & Co. KG, Anklam
Vierte Biogas Anklam Betriebs GmbH & Co. KG, Anklam
Fünfte Biogas Anklam Betriebs GmbH & Co. KG, Anklam
Sechste Biogas Anklam Betriebs GmbH & Co. KG, Lohne
EWS Biogas Projektentwicklungs-GmbH & Co. KG i.L., Lohne
Biogas Kalefeld GmbH & Co. KG, Kalefeld
Biogas Herzberg GmbH & Co. KG, Lohne
Biogas Lüchow GmbH & Co. KG, Lohne
EnviTec Energy GmbH & Co. KG, Lohne
Biogas Quakenbrück GmbH & Co. KG, Lohne
Biogas Groß Warnow GmbH & Co. KG, Karstädt

Disposals of fully consolidated companies

20 investments in biogas plants and their general partners were eliminated from the basis of consolidation. The Group collected liquid funds of EUR 53k from this sale. A capital gain of EUR 26k was realised.

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Additions of companies accounted for using the equity method

In 2014 the Alternativ-Energie Priborn GmbH & Co. KG and the Alternativ-Energie Priborn Verwaltungs GmbH were established. The group's shares in both companies amount to 50%. The business purpose is the operation of a biogas plant.

In December 2014 EnviTec Biogas AG increased its shares in EnviTec Central Europe s.r.o. from 55% to 65% for a purchase price of EUR 18k.

In fiscal 2014, the exemption rule provided for in section 264b of the German Commercial Code (HGB) was applied by the following fully consolidated German Group companies.

Biogas Falkenberg GmbH & Co. KG, Falkenberg
EnviTec Service GmbH & Co. KG, Lohne
Biogas Heilemann-Holsten GmbH & Co. KG, Rotenburg
ETBKN GmbH & Co. KG, Lohne
Biogas Sachsendorf GmbH & Co. KG, Schwarz
Biogas Dambeck GmbH & Co.KG, Friesoythe
Biogas Schenkenhorst GmbH & Co. KG, Garrel
Biogas Kalbe GmbH & Co. KG, Garrel
Biogas Brehna GmbH & Co. KG, Garrel
eeMaxx Anlagen- und Betriebs GmbH & Co. KG, Garrel
Biogas Klein Mühlingen GmbH & Co. KG, Vogelsang
Biogas Ringleben GmbH & Co. KG, Lohne
Biogas Neutrebbin GmbH & Co. KG, Neutrebbin
Biogas Trüstedt GmbH & Co. KG, Garrel
Biogas Böddenstedt GmbH & Co KG, Salzwedel
Biogas Schönwalde GmbH & Co. KG, Schönwalde
EnviTec Stromkontor GmbH & Co. KG, Lohne
Biogas Lampertheim GmbH & Co. KG, Darmstadt
Erste Biogas Bützow GmbH & Co. KG, Bützow
Dritte Biogas Bützow GmbH & Co. KG, Bützow

Vierte Biogas Bützow GmbH & Co. KG, Bützow	
Fünfte Biogas Bützow GmbH & Co. KG, Lohne	
Zweite Biogas Neese GmbH & Co. KG, Vechta	
Biogas Thomasburg GmbH & Co, KG, Lohne	
Biogas Hirl GmbH & Co, KG, Bresegard	
RePro Beber GmbH & Co, KG, Lohne	
Biogas Nieheim GmbH & Co, KG, Lohne	
Biogas Wanzleben GmbH & Co, KG, Wanzleben	
Biogas Angern GmbH & Co, KG, Lohne	

EnviTec Anlagenbau GmbH & Co, KG, Saerbeck

Biogas Reinsfeld GmbH & Co, KG, Lohne

Biogas Forst GmbH & Co, KG, Forst

ET Energie Lucka GmbH & Co. KG (vormals Biogas Stegelitz GmbH & Co. KG), Lohne

ET Energy Leipzig GmbH & Co. KG (vormals Biogas Elsteraue GmbH & Co. KG), Lohne

ET Energie Quakenbrück GmbH & Co. KG (vormals Biogas Straußfurt GmbH & Co. KG), Lohne

3.3. Currency translation

Receivables and liabilities generally arise on a euro basis, which means that no currency translation is required. The financial statements of the consolidated companies are prepared in euros save for seven exceptions. The equity is translated at the historical rates, the assets and liabilities in the foreign-currency financial statements are translated at the mean rates on the balance sheet date. Expense and income items are translated at average annual exchange rates. Exchange differences are recognised in equity. For details, please refer to the statement of changes in equity and the statement of comprehensive income. The foreigncurrency financial statements of the companies valued at equity are translated using the closing rate method.

3.4. General accounting and valuation principles

The financial statements of the companies included in the consolidated financial statements are based on consistent accounting and valuation methods.

The acquisition cost principle was used as the general measurement concept in the consolidated financial statements. Where other measurement principles are required under IFRS, these are used. In the following information on the measurement of asset and liability items, this is specifically mentioned.

Sales revenues and other operating income

Sales revenues from the sale of completed biogas plants – after tax and sales deductions – are realised at the time of final acceptance of the plants. Sales revenues from construction contracts for biogas plants that have not been completed or finally handed over as at the balance sheet date are determined using the percentage-of-completion (POC) method. In this context, both the percentage of the work completed in relation to the total volume of the contract and the profit from the complete contract are estimated and realised accordingly.

Revenues from the sale of goods are recognised at the time when the material risks and benefits associated with ownership of the goods sold have been transferred to the buyer and the realisable revenues can be reliably determined. Where it is not likely that the company will gain the economic benefit from the sale, no revenues are recognised. Sales revenues are shown net of reductions in revenues such as discounts, bonuses or rebates. Revenues from services are recognised in the period in which the service is rendered.

Goodwill and other intangible assets

Purchased intangible assets are capitalised at cost. If they have a determinable useful life, they are written off over a period of up to ten years using the straight-line method, unless the actual depreciation requires a writeoff depreciation period. Both the expected useful lives and the write-off periods are determined on the basis of estimates of the period and the distribution of cash flows from the intangible assets over time.

Development expenses were not capitalised pursuant to IAS 38, as the conditions for their capitalisation were not in place as at the balance sheet date.

Goodwill is not amortised but tested for impairment on an annual basis. For details of the impairment test, please refer to point 3.7 "Impairment test".

Property, plant and equipment

Property, plant and equipment are carried at acquisition or production costs less accumulated straight-line depreciation – with the exception of land and leasehold rights – and impairment losses.

Acquisition costs comprise the purchase price, ancillary costs and subsequent acquisition expenditure as well as cost reductions.

Production costs include all direct costs attributable to the production process and a reasonable portion of the production-related overheads. Financing costs are not recognised.

The cost of the repair of property, plant and equipment, such as current maintenance expenses, are generally recognised in profit or loss. Subsequent costs are capitalised if the costs relating to the property, plant or equipment will result in a future economic benefit.

Accumulated depreciation of property, plant and equipment is performed according to the straight-line method.

The useful lives on which depreciation is based reflect the estimated/anticipated useful lives for the Group and are shown in the table below:

	Useful life
Buildings	20 to 40 years
Other buildings	10 to 20 years
Technical equipment	6 to 20 years
Machinery and appliances	6 to 12 years
Operating and office equipment	3 to 11 years
Vehicles	5 to 8 years
EDP equipment	3 to 5 years

Financial assets

Financial assets are generally divided into the following categories:

- > financial assets measured at fair value through profit or loss
- > loans and receivables
- > held-to-maturity investments
- > available-for-sale financial assets

The classification of a financial asset into a given category depends on the purpose for which the financial asset was acquired.

Financial assets measured at fair value through profit or loss

Financial assets measured at fair value through profit or loss comprise financial assets held for trading as well as all financial assets that are to be measured at fair value by the management from the very beginning at the time of acquisition. No assets of this category (previous year: EUR 34k) are recognised in the 2014 consolidated financial statements of EnviTec Biogas AG.

Loans and receivables

Loans and receivables are original or acquired loans and receivables with fixed or determinable payments, which are not listed in an active market. They are usually created by providing money, goods or services. They form part of the current assets, with the exception of those loans and receivables that are due more than twelve months after the balance sheet date. Financial instruments of this category are measured at amortised cost. Trade receivables, financial receivables and loans included in other non-current receivables, receivables and loans included in other current financial assets as well as cash and cash equivalents fall into this category. If there are indications that a receivable is impaired, it is written down to the present value of the expected future cash flows. Indications of impairment include, in particular, several years in which the entity reported operating losses, a substantial deterioration in creditworthiness, a high probability of bankruptcy or other forms of financial reorganisation of the debtor. Loans and receivables are shown under trade receivables and other current assets.

Held-to-maturity investments

Held-to-maturity investments are characterised by: fixed or determinable payments, fixed maturity and the intent and ability of EnviTec Biogas AG to hold these investments to maturity.

Available-for-sale financial assets

This category comprises all financial assets that do not fall in any of the other three categories or that are subjectively classified by the management as available-for-sale financial assets. The assets are generally measured at the fair value. Gains and losses resulting from the fair value measurement are recognised in equity. This does not apply to permanent or material impairments or currencyrelated changes in the value of financial instruments. These are recognised in profit or loss.

At every balance sheet date, the company examines whether there are objective indications of an impairment of a financial asset or a group of financial assets.

Inventories

In accordance with IAS 2 (Inventories), assets that are consumed in the execution of construction contracts (materials or supplies) are recognised under inventories. Inventories are measured at the average costs of purchase. If the current purchase price is lower than the average costs of purchase, inventories are recognised at the lower value, unless they are incorporated in finished products that are expected to be sold at or above cost (IAS 2.32). Borrowing costs are not capitalised as the requirements of IAS 23 are not met.

The costs of purchase include all costs incurred to convey the inventories to their present place and to put them in their present state.

Construction contracts in progress

In accordance with IAS 11, construction contracts are accounted for using the percentage-of-completion (POC) method. The underlying stage of completion is determined using the cost-to-cost method. Contracts whose revenues exceed the advance payments received as at the balance sheet date are recognised under the gross amount due from customers for contract work. Contracts whose advance payments received exceed the revenues as at the balance sheet date are recognised under the gross amount due to customers for contract work.

Held-for-sale assets

Non-current assets are classified as being held for sale if the associated carrying amount is realised largely through a sales transaction and not through continuous use. This condition will be regarded as fulfilled only if the disposal is highly probable and the non-current asset is available for immediate sale in its current condition. Management must have committed to a sale. In this context, it must be assumed that the sales transaction will take place within a year of such classification.

Non-current assets classified as being held for sale are shown at the lower of their original carrying amount and the fair value less costs to sell.

Deferred taxes, tax liabilities, tax refund claims

Taxes imposed on the companies' taxable income and the changes to deferred taxes are recognised as income taxes. Current income taxes are measured on the basis of the statutory regulations enacted or substantially enacted as at the balance sheet date at the amount in which they are expected to be paid.

Deferred taxes are calculated in accordance with IAS 12 (Income Taxes). Deferred taxes are determined for temporary differences between the asset and liability amounts recognised in the IFRS balance sheet (carrying amounts) and the tax balance sheet (tax base) as well as for tax loss carryforwards. The calculation is based on the tax rates expected to apply at the time of utilisation. These are based on the tax laws that are applicable on the balance sheet date. Deferred tax assets and liabilities are offset if they refer to taxes levied by the same tax authority.

Deferred tax assets for deductible temporary differences and tax loss carryforwards are capitalised if it is probable that future taxable profit will be available against which the tax loss carryforwards can be utilised. The assessment of the value of deferred tax assets resulting from temporary differences and tax loss carryforwards are subject to an entity's individual projections, e.g., regarding the future profit situation of the respective Group company.

For more information on income taxes, refer to point 30 in the Notes.

Provisions

Provisions are established for obligations resulting from past events that will probably lead to an outflow of resources and whose amount can be estimated reliably.

Other provisions are measured in accordance with IAS 37 (Provisions, Contingent Liabilities and Contingent Assets), with the best estimate of the expenses that would be needed to meet the current obligation as at the balance sheet date.

Potential legal disputes and administrative proceedings are examined on a case-to-case basis. We assess the possible outcomes of such legal disputes on the basis of available information and following consultation with our lawyers.

Financial liabilities

Financial liabilities relate to original and derivative liabilities.

Original liabilities are measured at amortised cost. This means that current liabilities are recognised at the repayment or settlement amount. Non-current financial liabilities are recognised at amortised cost.

Derivatives are initially recognised at the fair value at the time the contract is signed and are subsequently measured at the fair value at each reporting date. The resulting gain or loss is immediately recognised in profit or loss unless the derivative qualifies for hedge accounting. In this case, the time of recognition in profit or loss depends on the type of hedge.

Financial liabilities are derecognised if the contractual obligation is discharged, cancelled or expires.

Other assets and other liabilities

Deferrals, advance payments as well as non-financial assets and liabilities are recognised at amortised cost. They are released on a straight-line basis or in accordance with the performance of the service.

Hedging instruments

The company designates hedging instruments to secure cash flows (cash flow hedges). At the beginning of hedge accounting, the hedge relationship between the hedged item and the hedging instrument is documented in accordance with IAS 39.88. Both at the start and in the course of the hedge relationship, It is regularly documented whether the hedging instrument used in the hedge relationship is highly effective with regard to the risk hedged.

In the case of a cash flow hedge, the effective portion of the change in the fair value of the derivatives designated in the context of a cash flow hedge is recognised in other comprehensive income. Ineffective value changes are immediately recognised through profit or loss. Amounts recognised in other comprehensive income are transferred to the income statement in the period in which the hedged item is recognised in profit or loss. The hedge relationship is not longer recognised in the balance sheet when the Group terminates the hedge relationship, the hedging instrument expires, is sold, terminated or exercised or is not longer suitable for hedging purposes. The full profit or loss recognised in equity through other comprehensive income at that time continues to be recognised in equity and is not recognised in profit or loss before the expected transaction is also recognised in the income statement. If the transaction is no longer expected, the complete amount recognised in equity is immediately transferred to the income statement.

3.5. Statement of cash flows

The statement of cash flows shows the changes in cash and cash equivalents in the course of the fiscal year as a result of the inflow and outflow of funds. In accordance with IAS 7, a distinction is made between cash flows from operating, investing and financing activities. The liquidity shown in the capital finance account includes cash in hand as well as cash in banks.

3.6. Segment reporting

Pursuant to IFRS 8, operating segments must be separated from Group segments on the basis of internal reporting, which is regularly reviewed by the chief operating decision-maker to make decisions about resources to be allocated to the segment and assess its performance.

In view of the product-oriented management of the business activity of the EnviTec Group, the company continued to identify the following segments: Plant Construction, Own Plant Operation, Service and Energy, which are also used for internal reporting. Plant Construction comprises the planning, approval planning and construction of biogas plants, while the Service segment comprises the technical and biological maintenance of biogas plants. The Own Plant Operation segment comprises the company's own biogas plants. The Energy segment markets EEG electricity and sells heat.

in kEUR	Plant Construction	Service	Own Plant Operation	Energy	Reconciliation	Group
- External revenues	50,410	21,013	64,834	27,139	0	163,396
- Internal revenues	3,893	3,889	11,332	16	-19,130	0
Operating result	-1,939	-1,736	9,758	253	0	6,336
Cost of materials	38,235	15,322	32,829	26,234	0	112,620
Personnel expenses	8,308	4,670	3,731	518	0	17,227
Other operating expenses	9,435	2,928	10,404	1,071	0	23,838
At-equity result	-25	0	839	0	0	814
Interest income	2,524	18	190	0	0	2,732
Interest expense	1,586	7	2,138	0	0	3,731
Income taxes	2,986	370	-1,177	52	0	2,231
Earnings after taxes	-4,012	-2,095	9,825	201	0	3,919
Segment assets	264,682	20,042	231,498	10,955	-207,621	319,556
Segment liabilities	89,116	10,662	224,535	10,549	-189,276	145,586
Depreciation/amortisation	678	370	14,892	338	-776	15,502
Capital expenditures	465	569	44,420	1,431	0	46,885

Segment report for the period from 1 January to 31 December 2014

Segment report for the period from 1 January to 31 December 2013

- External revenues	47,287	19,327	62,477	19,737	0	148,828
- Internal revenues	3,194	4,648	11,723	81	-19,646	0
Operating result	-12,058	-914	15,402	-27	0	2,403
Cost of materials	36,293	15,855	36,584	26,376	-14,363	100,745
Personnel expenses	11,174	4,364	2,945	515	0	18,998
Other operating expenses	14,820	1,733	16,788	490	-7,467	26,364
At-equity result	-994	0	675	0	0	-319
Interest income	2,234	26	130	2	0	2,392
Interest expense	1,313	14	2,075	85	0	3,487
Income taxes	469	562	-352	38	0	717
Earnings after taxes	-5,063	-1,555	6,587	248	102	319
Segment assets	242,141	17,780	211,185	8,685	-184,571	295,220
Segment liabilities	65,252	9,714	159,150	7,885	-116,142	125,859
Depreciation/amortisation	3,180	170	13,356	117	-792	16,031
Capital expenditures	466	202	15,689	2,207	0	18,564
Write-down construction contracts	1,374	0	0	0	0	1,374

The accounting and valuation principles of the reportable segments are the same as those described under 3.4 above. This also applies to business transactions between the segments. Reconciliation effects relate to intragroup transactions. The regional segmentation is based on the country in which the construction activity takes place / services are provided and is shown in the table below:

2014	Germany	Czech Republic	Italy	Other countries	Reconciliation	Group
Sales revenues	120,322	2,398	18,260	22,416	0	163,396
Non-current segment assets	218,729	318	35,730	569	-58,842	196,504
2013						
Sales revenues	103,722	8,158	29,761	7,187	0	148,828
Non-current segment assets	194,789	748	36,893	179	-56,907	175,702

In 2014 EUR 10,650k of the revenues from other countries were generated in Great Britain, EUR 5,232k in China.

Of the sales revenues generated by the Plant Construction segment, EUR 5.4 million (previous year: EUR 4.3 million) were related to the Group's largest customer. No other customers accounted for more than 10% of the sales revenues.

EUR 14.3 million (previous year: EUR 12.4 million) of the sales revenues generated by the Own Plant Operation segment were related to the segment's largest customer, while the second largest customer accounted for EUR 12.5 million (previous year: EUR 11.9 million). No other customers accounted for more than 10% of the sales revenues.

The largest customer of the Energy segment accounted for EUR 24.1 million of the revenues from electricity marketing.

In the Service segment, no customer accounts for more than 10% of total sales revenues.

3.7. Impairment test

Pursuant to IFRS 3, in conjunction with IAS 36 and IAS 38, goodwill is regularly tested for impairment.

If goodwill can be allocated to a cash-generating unit, these assets must be tested for impairment annually or, if events or circumstances arise that suggest that the assets may be impaired, at shorter intervals. In this context, the carrying amount of the unit is compared with the recoverable amount of the unit, i.e. the higher of its fair value less costs to sell and its value in use.

If the carrying amount of the cash-generating unit exceeds the recoverable amount of the unit (value in use), the entity must recognise an impairment loss in the amount of the difference. The recoverable amount is determined on the basis of the present value of the future cash flows expected to arise from the continuing use of the asset until its disposal. The projections of future cash flows for the determination of the recoverable amount are based on the current planning of the EnviTec Group, with a planning period of 12 to 19 years taken as the basis, which results from the remaining term of the cash-generating unit. The remaining term is derived from the duration of the operating permits of the units.

The carrying amounts of the access of cash-generating units were EUR 2,994k (Unit Angern), EUR 1,402k (Unit Hirl), EUR 4,563k (Unit Repro), EUR 2,344k (Unit Nieheim), EUR 1,251k (Unit Thomasburg), EUR 2,229k (Unit Wanzleben), EUR 19,296k (Unit Forst), EUR 3,818k (Unit Reinsfeld). The recoverable amount of the cash-generating units was determined on the basis of the value in use. Due to the tariff regulations under the Renewable Energy Sources Act (EEG) constant revenues were assumed for the cash flow. Cost increases were taken into account for the expenses. The interest rate used to discount the estimated cash flows is 6.58% (previous year: 7.77%) and is equivalent to the weighted average cost of capital (WACC) of the cash-generating units. The interest rate is based on assumptions and estimates regarding specific cost of capital. Risk adjustment is performed by comparison with peer companies operating in the same sector. No growth rate was taken into account in the calculation.

The sensitivity analysis is based on the assumption that the future cash flows will decline by 15% and the WACC will increase by 15%, as such changes are assumed to be reasonably possible. Based on these assumptions, the impairment test has revealed no need for recognition of an impairment loss.

The estimates performed are deemed to be appropriate with regard to the expected useful lives of certain assets, the assumptions regarding macroeconomic conditions and trends in the sectors in which the EnviTec Group operates and the estimate of the present value of future cash flows. Modified assumptions or changed conditions may nevertheless require corrections, which may lead to write-downs for impairment.

Of the increases in the recognized goodwill EUR 2,141k relate to the biogas plant in Angern, EUR 256k relate to the biogas plant in Hirl, EUR 305k relate to the biogas plant in Nieheim, EUR 193k relate to the biogas plant in Thomasburg, EUR 683k relate to the biogas plant RePro, EUR 667k relate to the biogas plant in Forst, EUR 423k relate to the biogas plant in Reinsfeld, TEUR 605k relate to the biogas plant in Wanzleben and EUR 61k relate to Biogas Barby GmbH & Co. KG.

Of the goodwill recognised, an amount of EUR 2,229k (previous year: EUR 2,229k, already in the previous years) relates to the five biogas plants in Anklam, while an amount of EUR 2,129k (previous year: EUR 2,129k) relates to the biogas plants in Bützow. No other intangible assets with indefinite useful lives exist.

4. Uncertainty of estimates

Consolidated financial statements are prepared on the basis of certain assumptions and estimates which have an effect on the amount and presentation of the reported assets, liabilities, income and expenses. Assumptions and estimates primarily relate to the definition of the useful lives of fixed assets, the measurement of construction contracts, the collectibility of receivables and the provisions for guarantees. Our estimates are based on past experience and other assumptions that are regarded as realistic under the given circumstances. The actual values may differ from these estimates. Estimates and assumptions are reviewed on an ongoing basis.

Accounting and valuation principles are regarded as being important to the extent that they have a material impact on the presentation of the net worth, financial and earnings position and the cash flows of the Group and require a difficult, subjective and complex assessment of facts and circumstances, which are often uncertain by nature and may change in subsequent reporting periods and whose consequences are therefore difficult to assess. The most important accounting and valuation principles are described in point 3.4 of the Notes. Not all important accounting rules require a difficult, subjective or complex assessment of facts and circumstances. The following accounting and valuation principles may nevertheless be regarded as being important:

Intangible assets and property, plant and equipment

Intangible assets with certain useful lives and property, plant and equipment are amortised/depreciated over their expected useful lives. The expected useful life is based on estimates in the period in which the intangible assets or property, plant and equipment generate cash flows.

Intangible assets with certain useful lives and property, plant and equipment must be tested for impairment if certain events or changed circumstances indicate that the carrying amount of the asset may be impaired.

The management considers the estimates of the expected useful lives of certain assets and the as-

sumptions regarding the macroeconomic environment and development of the sector in which the company operates to be appropriate. Nevertheless, corrections may be required as a result of changes in assumptions or circumstances. These may lead to impairment losses or reversals of impairment losses if the developments anticipated by the company change.

In order to determine whether goodwill is impaired, it is necessary to determine the value in use of the cash-generating unit to which the goodwill is allocated. The calculation of the value in use requires an estimate of future cash flows from the cash-generating unit as well as a suitable discount rate for the calculation of the present value.

Sales revenues

The Group's sales revenues are also the result of revenues under construction contracts as defined in IAS 11 (Biogas Plants). To measure the sales revenues of the contracts in progress (projects) as at the balance sheet date, it is necessary to determine the total profit and the stage of completion. To determine these figures, the individual project calculations and the documents of the project management department are used. These documents necessarily include estimates, as the total profit and the stage of completion of projects in progress depend on the development of the projects after the balance sheet date.

At the time of the preparation of the consolidated financial statements, the assumptions and estimates used were not subject to any material risks, which means that it is safe to assume, at the present time, that the carrying amounts of the assets and liabilities recognised in the consolidated balance sheets will not have to be adjusted in the next fiscal year.

Notes to the consolidated balance sheet

5. Intangible assets and property, plant and equipment

The changes in property, plant and equipment and intangible assets in the fiscal year 2014 are shown in the fixed-asset movement schedule. Land and buildings primarily include office buildings on the company's own land in Saerbeck and Lohne as well as land and buildings related to the biogas plants. The additions in 2014 to land and buildings essentially relate to the construction of various buildings in connection with the erection of biogas plants. Plant and machinery mainly comprise the own biogas plants operated by the company. Fixtures and fittings primarily include equipment for the construction of biogas plants and motor vehicles as well as equipment for the provision of services.

Property, plant and equipment in an amount of EUR 66,985k (previous year: EUR 57,571k) are subject to restraints on disposal in the form of land charges and property assignments. The disposals of property, plant and equipment resulted from the sale of assets.

There were no impairment losses in 2014 (previous year: EUR 330k). There was a reversal of an impairment loss for tangible fixed assets of EUR 153k.

6. Investments in companies valued at equity

The tables below summarise the aggregated financial information (income statements and balance sheets) of the companies consolidated at equity in the consolidated financial statements of EnviTec.

The list of shareholdings to be prepared pursuant to section 313 para. 2 no. 2,3 of the German Commercial Code (HGB) contains additional information on investments in companies valued at equity.

Financial information of the companies valued at equity as at 31 December 2014

Income figures of the investments accounted for using the equity method pursuant to IAS 28	2014 in EUR	2013 in EUR
Sales revenues	41,462,302	39,001,295
Gross profit	22,973,763	23,288,797
Net income for the year	1,125,151	2,360,538
Result from companies accounted for at equity	391,662	1,086,313

Combined financial information of the investments accounting for using the equity method pursuant to IAS 28	2014 in EUR	2013 in EUR
Non-current assets	72,067,674	70,581,885
Current assets	32,912,225	30,235,608
Non-current liabilities	50,854,162	53,256,227
Current liabilities	38,285,705	37,073,165
Equity capital	15,840,032	15,696,530
Carrying amount of investments valued at equity	9,504,448	10,893,921

Income figures of the investments accounted for using the equity method pursuant to IAS 31	2014 in EUR	2013 in EUR
Sales revenues	5,351,877	3,331,218
Gross profit	1,039,784	686,755
Net income for the year	-135,023	62,156
Result from companies accounted for at equity	76,962*	-578,975*

*The income contains write-downs for impairment of shares in joint ventures in the amount of EUR 30k (previous year: EUR 619k).

Combined financial information of the investments accounting for using the equity method pursuant to IAS 31	2014 in EUR	2013 in EUR
Non-current assets	2,174,631	2,187,966
Current assets	4,459,166	5,081,879
Non-current liabilities	4,259	4,259
Current liabilities	4,779,994	5,257,535
Equity capital	1,849,545	2,008,052
Carrying amount of investments valued at equity	251,983	175,021

7. Investments in affiliated companies

The list of shareholdings to be prepared pursuant to section 313 para. 2 no. 1 of the German Commercial Code (HGB) contains additional information on investments in affiliated companies.

List of shareholdings

List of consolidated companies and other equity investments as at 31 December 2014:

I. Subsidiaries (fully consolidated)	Group s	hare in %	Equity ca	apital in EUR	Result in EUR	
	2014	2013	2014	2013	2014	2013
EnviTec Service GmbH & Co. KG, Lohne	100	100	7,340,479	6,176,805	1,167,549	1,250,070
EnviTec Service Verwaltung GmbH, Lohne	100	100	-94,341	-89,971	-1,495	-942
Zweite EnviTec Beteiligungs GmbH & Co. KG, Lohne	100	100	26,709,822	11,258,598	1,351,224	3,809,787
Zweite EnviTec Verwaltungs GmbH, Lohne	100	100	40,601	37,635	2,966	2,345
ET Agro Trade GmbH i.L., Lohne	100	100	0	37,399	0	-819
EnviTec Biogas Nederland B.V., Enter/Niederlande	100	100	-403,057	-406,245	9,498	12,310
EnviTec Baltic SIA, Riga/Lettland	100	100	131,268	-56,533	189,073	-8,496
EnviTec Iberica S.L., Bilbao/Spanien	100	100	-592,792	-592,792	0	0
EnviTec Italia GmbH, Lohne	100	100	-440,691	-440,691	0	398,900
EnviTec Biogas Italia s.r.l., Sommacampagna/Italien	100	100	1,273,782	1,599,631	-651,425	-679,573
EnviTec Energy GmbH & Co. KG, Lohne	100	100	336,350	334,894	1,457	-146,118
EnviTec Energy Verwaltungs GmbH, Lohne	100	100	32,880	30,889	1,990	2,048
EWS Biogas Projektentwicklungs- GmbH & Co. KG i.L., Lohne	100	100	0	6,853	0	-1,515
EWS Biogas Projektentwicklung Verwaltungs GmbH i.L., Lohne	100	100	0	35,685	0	1,373
Biogas Anklam Verwaltungs GmbH, Lohne	100	100	1,275,412	1,329,238	-53,826	298,689
Erste Biogas Anklam Betriebs GmbH & Co. KG, Anklam	93.85	93.85	735,562	1,042,153	243,408	286,194
Zweite Biogas Anklam Betriebs GmbH & Co. KG, Anklam	100	100	604,007	635,767	218,240	295,759
Dritte Biogas Anklam Betriebs GmbH & Co. KG, Anklam	100	100	723,013	691,712	231,302	293,340
Vierte Biogas Anklam Betriebs GmbH & Co. KG, Anklam	100	100	746,851	677,938	268,913	283,462
Fünfte Biogas Anklam Betriebs GmbH & Co. KG, Anklam	100	100	848,058	712,198	185,859	155,650
Sechste Biogas Anklam Betriebs GmbH & Co. KG, Anklam	100	100	18,126	37,830	-19,704	-18,482
Pieve D'Olmi Biogas Soc. Agricola a.r.l., Bozen/Italien	100	100	-55,747	-154,312	-31,435	-165,432
Stagno Lombardo Biogas Soc. Agricola a.r.l., Bozen/Italien	100	100	117,340	65,666	51,675	55,566
EnviTec Beteiligungs GmbH & Co. KG, Lohne	98.6	98.6	3,408,902	2,691,117	1,042,786	3,411,854
EnviTec Verwaltungs GmbH, Lohne	98.6	98.6	40,890	39,189	1,701	1,573
Biogas Falkenberg GmbH & Co. KG, Falkenberg	100	100	173,832	385,314	-211,482	-42,237
Biogas Falkenberg Verwaltungs GmbH, Falkenberg	100	100	33,067	31,229	1,838	1,815
Biogas Groß Warnow GmbH & Co. KG, Karstädt	91.5	91.5	11,000	149,697	-138,697	-115,140
Biogas Groß Warnow Verwaltungs GmbH, Karstädt	91.5	91.5	32,630	30,884	1,746	1,429
EnviTec Biogas Betriebs GmbH & Co. KG, Lohne	91.5	91.5	11,742,790	11,934,540	-195,443	120,048
ET Energie Quakenbrück GmbH & Co. KG (vormals Bio- gas Straußfurt GmbH & Co. KG), Lohne	100	100	86,999	110,860	-23,861	891
Biogas Herzberg GmbH & Co. KG, Lohne	91.5	91.5	119,931	37,161	82,770	-43,924

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Biogas Kalefeld GmbH & Co. KG, Kalefeld	91.5	91.5	152,608	74,102	78,506	-100
Biogas Lüchow GmbH & Co. KG, Lohne	91.5	91.5	832,254	809,825	22,429	93,102
Biogas Quakenbrück GmbH & Co. KG, Lohne	91.5	91.5	5,553	-706,690	212,243	-48,859
EnviTec Projektentwicklung GmbH , Lohne	87.5	87.5	466,651	441,685	24,966	-9,840
Biogas Friedland GmbH & Co. KG, Lohne	87.5	87.5	3,693,331	2,217,246	1,026,085	860,413
Biogas Böddenstedt GmbH & Co. KG, Salzwedel	100	100	823,613	513,706	9,906	860
Biogas Böddenstedt Verwaltung GmbH, Salzwedel	100	100	31,281	29,615	1,666	1,493
Biogas Friedland Verwaltungs GmbH, Lohne	87.4	87.4	134,121	116,289	17,832	19,645
EnviTec Biogas d.o.o., Zagreb/Kroatien	85	85	-43,162	-43,162	0	0
Biogas Schönthal GmbH & Co. KG, Willebadessen	79	79	133,848	144,956	-11,108	-44,494
Biogas Schönthal Verwaltungs GmbH, Willebadessen	79	79	36,935	35,285	1,650	1,646
Baura Biogas Soc. Agricola a.r.l., Bozen/Italien	75	75	69,123	37,892	31,231	-36,815
Fabrico Biogas Soc. Agricola a.r.l., Bozen/Italien	75	75	1,466	1,466	0	-71,848
Rolo Biogas Soc. Agricola a.r.l., Bozen/Italien	80	80	-6,430	-6,430	0	-15,932
Malombra Biogas Soc. Agricola a.r.l., Bozen/Italien	75	75	-10,630	-10,630	0	-16,676
Latina Biogas Soc. Agricola a.r.l., Bozen/Italien	100	100	-420	-420	0	0
Formignana Biogas Soc. Agricola a.r.l., Bozen/Italien	100	100	-66,746	-584,403	-165,342	-567,966
Brazzolo Biogas Soc. Agricola a.r.l., Bozen/Italien	100	100	-14,656	-14,656	0	-19,655
Biogas Operating Holding s.r.l., Sommacampagna/Italien	100	100	291,088	243,550	-91,695	-70,102
Pressanna Biogas Soc. a.r.l., Sommacampagna/Italien	100	100	-6,539	-6,539	0	-13,625
Urbana Biogas Soc. a.r.l., Sommacampagna/Italien	100	100	9,331	16,334	-7,002	6,322
Schio Biogas Soc. a.r.l., Sommacampagna/Italien	100	100	-17,635	-49,450	-23,185	-59,303
Cona Biogas Soc. a.r.l., Sommacampagna/Italien	100	100	-8,100	-8,100	0	-13,483
Foresti Biogas Soc. a.r.l., Sommacampagna/Italien	100	100	-7,871	-7,871	0	-13,520
Caldogno Biogas Soc. a.r.l., Sommacampagna/Italien	100	100	-17,115	-198,258	-36,857	-210,304
Merlara Biogas Soc. a.r.l., Sommacampagna/Italien	100	100	57,654	-189,070	58,725	-200,267
Massa Fiscaglia Biogas Soc. a.r.l., Sommacampagna/Italien	100	100	-12,659	-12,659	0	-13,205
A3 Water Solutions GmbH, Gelsenkirchen	70	70	928,383	903,290	25,093	-83,409
MMF MaxFlow Membran Filtration GmbH, Gelsenkirchen	70	70	-508,350	-510,426	2,076	-370,122
Biogas Heilemann GmbH & Co. KG, Rotenburg/Wümme	70	70	705,264	501,247	204,017	93,438
Biogas Heilemann Verwaltungs GmbH, Rotenburg/Wümme	70	70	42,997	40,172	2,825	2,856
Biogas Heilemann-Holsten GmbH & Co. KG, Rotenburg/ Wümme	100	100	-40,007	42,253	-82,260	-86,982
Second Biogas Operating Holding s.r.l., Sommacampa- gna/Italien	70	70	741,249	647,307	-216,058	-229,119
Envitec France sarl, Tregueux/Frankreich	65	65	-536,790	-759,539	222,748	3,730
Envitec Biogas UK Ltd., Rugeley/Großbritannien	60	60	478,854	-64,820	535,316	-298,405
Biogas Nordholz GmbH, Minden	60	60	460,458	429,599	30,859	141,498
EnviTec Biogas SK s.r.o., Levice/Slowakei	100	100	446,456	446,456	0	101,493

EnviTec Biogas Central Europe s.r.o., Velké Mezirici/Tsche- chien	65	55	52,026	335,598	-272,961	364,105
ETBKN GmbH & Co. KG, Lohne	75	75	1,044,681	1,015,149	29,532	39,465
ETBKN Verwaltungs GmbH, Lohne	75	75	30,325	28,611	1,714	1,463
Biogas Ringleben GmbH & Co. KG, Lohne	100	100	-178,074	-195,157	17,083	-280,296
Biogas Klein Mühlingen GmbH & Co. KG, Vogelsang	100	100	544,441	200,755	-6,314	-10,878
Biogas Schönwalde GmbH & Co. KG, Schönwalde	100	100	601,105	373,285	-22,180	-116,909
Biogas Schönwalde Verwaltung GmbH, Schönwalde	100	100	32,602	30,848	1,754	1,482
Biogas Sachsendorf GmbH & Co. KG, Schwarz Sachsendorf	100	100	425,254	195,036	230,218	-466,826
eeMaxx Anlagen- und Betriebs GmbH & Co. KG, Garrel	73	73	5,305,295	5,436,389	-148,260	215,658
eeMaxx Verwaltungs GmbH, Garrel	73	73	25,857	25,291	567	610
Biogas Schenkenhorst GmbH & Co. KG, Garrel	85	85	-309,832	-80,904	-228,928	-67,271
Biogas Schenkenhorst Verwaltungs- GmbH, Garrel	100	100	32,458	31,113	1,344	1,376
Biogas Brehna GmbH & Co. KG, Garrel	90	90	342,439	399,725	-57,286	-22,005
Biogas Brehna Verwaltungs- GmbH, Garrel	100	100	30,760	29,415	1,345	1,381
Biogas Kuck Verwaltungs- GmbH, Garrel	100	100	31,743	30,230	1,513	1,351
Biogas Dambeck GmbH & Co. KG, Garrel	100	100	571,937	619,179	-47,242	12,306
Biogas Dambeck Verwaltungs- GmbH, Garrel	100	100	33,276	31,814	1,462	1,425
Biogas Kruse Verwaltungs- GmbH, Garrel	100	100	26,363	25,818	544	373
Biogas Kalbe GmbH & Co. KG, Garrel	100	100	723,831	687,740	-96,445	111,340
Biogas Kalbe Verwaltungs- GmbH, Garrel	100	100	32,787	31,383	1,403	1,334
Vierte EnviTec Beteiligungs GmbH & Co. KG, Lohne	88	88	-133,701	45,656	-183,243	-27,978
Vierte EnviTec Verwaltungs GmbH, Lohne	88	88	29,367	27,731	1,636	1,011
Biogas Trüstedt GmbH & Co. KG, Garrel	100	100	884,668	947,902	-63,234	-66,435
Biogas Trüstedt Verwaltungs- GmbH, Garrel	100	100	28,915	27,177	1,739	1,428
Biogas Neutrebbin GmbH & Co. KG, Garrel	100	100	2,422,312	2,054,495	336,949	74,125
Biogas Neutrebbin Verwaltungs- GmbH, Garrel	100	100	29,937	28,445	1,492	1,235
EnviTec Biogas USA, Inc., Rochester/USA	100	100	-642,900	-221,928	-370,543	-178,690
EnviTec Stromkontor GmbH & Co. KG	100	100	50,000	50,000	504,115	343,813
EnviTec Biogas Service Italy s.r.l., Sommacampagna/ Italien	100	100	905,055	1,153,504	-48,450	696,110
EnviTec Biogas Service UK Ltd., Rugeley/Großbritannien	60	60	96,665	152,491	-63,192	93,935
Zweite Biogas Nesse Betriebs GmbH & Co. KG, Lohne	100	100	-1,016,498	-958,677	-57,821	-1,025,697
Dritte EnviTec Verwaltungs GmbH, Lohne	100	100	89,960	129,354	35,606	25,278
Erste Biogas Bützow GmbH & Co. KG, Bützow	100	100	-148,984	-190,057	41,073	64,831
Dritte Biogas Bützow GmbH & Co. KG, Bützow	54.4	54.4	-204,570	-297,666	93,096	145,581
Vierte Biogas Bützow GmbH & Co. KG, Bützow	60.5	60.5	-145,394	-239,012	100,732	168,044
Fünfte Biogas Bützow GmbH & Co. KG, Bützow	100	100	234,464	98,982	135,482	106,387
EnviTec Biogas Service s.r.o., Velké Mezirici/Tschechien	85	85	674,060	511,500	165,389	338,208
Biogas Lampertheim GmbH & Co. KG, Lohne	70	70	64,418	65,369	-952	-2,522

Biogas Lampertheim Verwaltungs GmbH, Lohne	70	70	26,447	25,998	449	1,624
ET Energy Leipzig GmbH & Co. KG (vormals Biogas Elsteraue GmbH & Co. KG), Lohne	100	100	83,398	97,599	-14,202	3,620
EnviTec Assekuranzmakler GmbH, Lohne	75	75	200,755	93,198	107,557	26,002
Biogas Wanzleben GmbH & Co. KG, Lohne	70	0	164,017	192,066	71,951	47,516
Biogas Wanzleben Verwaltungs GmbH, Wanzleben	70	0	36,570	34,881	1,688	1,717
Biogas Thomasburg GmbH & Co. KG, Lohne	90.6	0	-177,474	-199,425	21,951	278
Biogas Thomasburg Verwaltungs GmbH, Lohne	90.6	0	37,384	35,719	1,665	1,684
Biogas Nieheim GmbH & Co. KG, Lohne	64.8	0	848,785	866,537	-17,752	73,819
Biogas Nieheim Verwaltungs GmbH, Lohne	64.8	0	36,936	35,250	1,687	1,707
RePro Beber GmbH & Co. KG, Lohne	64.6	0	845,491	667,188	178,303	311,367
RePro Beber Verwaltungs GmbH, Lohne	64.6	0	38,104	36,491	1,613	1,730
Biogas Hirl GmbH & Co. KG, Bresegard	94	0	370,120	439,486	-69,365	67,613
Biogas Hirl Verwaltungs GmbH, Bresegard	94	0	36,260	34,683	1,577	2,283
Biogas Osterburg GmbH & Co. KG, Lohne	100	6	1,185,127	738,640	46,989	50,357
Biogas Angern GmbH & Co. KG, Lohne	87.6	0	548,240	376,959	351,282	165,149
Biogas Angern Verwaltungs GmbH, Lohne	87.6	0	38,850	37,159	1,691	1,718
Biogas Reinsfeld GmbH & Co. KG, Lohne	100	50	495,340	134,186	-138,846	-173,034
Biogas Reinsfeld Verwaltung GmbH, Lohne	100	50	30,951	30,593	358	1,185
Biogas Forst GmbH & Co. KG, Forst	100	40	8,534,863	4,605,051	-1,070,189	-18,575
Biogas Forst Verwaltungs GmbH, Forst	100	40	12,500	12,500	0	0
EnviTec Anlagenbau GmbH & Co. KG (vormals Biogas Woltersdorf GmbH & Co. KG), Saerbeck	100	50	4,638,260	52,915	-314,655	-45,319
EnviTec Anlagenbau Verwaltungs GmbH (vormals Biogas Woltersdorf Verwaltungs GmbH), Saerbeck	100	50	26,763	26,344	419	1,239
EnviTec Biogas Ventures Ltd., Rugeley/Großbritannien	60	0	0	0	0	0
Energie Lucka GmbH & Co. KG (vormals Biogas Steglitz GmbH & Co. KG), Lohne	100	100	121,874	117,700	4,174	1,924

II. Joint ventures (valued at equity)	Group share in %		Equity ca	pital in EUR	Result in EUR		
EnviTec Biogas kft., Ungarn*	51.14	51.14	-223,704	-223,704	0	9,756	
EnviTec Biogas (India) Private Limited, Indien	50	50	1,015,513	1,015,513	0	0	
ETFT EnviTec Filtration Technik GmbH, Lohne	50	50	-79,874	-79,874	0	-14,450	
Envitec van de Velde Service B.V.B.A., Belgien	50	50	59,316	59,316	0	0	
EnviTec-Greten Behälterbau GmbH & Co. KG, Lohne	50	50	108,433	243,457	-135,023	66,940	
EnviTec-Greten Behälterbau Verwaltungs-GmbH, Lohne	50	50	24,910	24,910	0	-90	

* Due to certain clauses in the articles of incorporation of EnviTec Biogas SEE kft, the Envitec Group cannot control the company; accordingly, EnviTec Biogas SEE kft. continues to be accounted for using the equity method.

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III. Associated companies (valued at equity)	Group sh	are in %	Equity o	apital in EUR	Re	sult in EUR
Biogas Neu Sterley GmbH & Co. KG, Lohne	50	50	587,572	716,213	231,358	473,531
Biogas Neu Sterley Verwaltungs GmbH, Lohne	50	50	37,052	35,167	1,884	1,686
Biogas Spekendorf GmbH & Co. KG, Lohne	50	50	408,644	347,361	61,284	-14,759
Biogas Spekendorf Verwaltung GmbH, Lohne	50	50	39,311	37,665	1,646	1,809
Biogas Golzow GmbH & Co. KG, Golzow	48	48	1,076,854	1,059,880	16,974	66,043
Biogas Golzow Verwaltungs GmbH, Golzow	48	48	34,635	32,601	2,034	1,934
Biogas Gut Rigterink GmbH & Co. KG, Bad Bentheim	46	46	-50,485	10,833	-61,318	-70,205
Biogas Gut Rigterink Verwaltungs GmbH, Bad Bentheim	46	46	34,442	32,708	1,734	1,652
Biogas Putzar GmbH & Co. KG, Putzar	50	50	576,141	583,994	-7,853	100,388
Biogas Putzar Verwaltungs GmbH, Putzar	50	50	34,489	32,515	1,973	1,654
Knipgas GmbH & Co. KG, Kleve	50	50	676,739	606,375	174,437	48,090
Knipgas Verwaltungs GmbH, Kleve	50	50	32,435	30,867	1,567	1,664
Biogas Löschenrod GmbH & Co. KG, Lohne	44	44	-112,727	3,878	-116,605	-53,441
Biogas Löschenrod Verwaltungs GmbH, Lohne	44	44	37,157	35,442	1,716	1,718
Biogas Dishley GmbH & Co. KG, Lohne	50	50	990,440	986,698	3,742	198,226
Biogas Dishley Verwaltungs GmbH, Lohne	50	50	31,677	30,217	1,460	1,619
Biogas Exter GmbH & Co. KG, Vlotho-Exter	49	49	337,204	400,311	-63,107	-34,241
Biogas Exter Verwaltungs GmbH, Vlotho-Exter	49	49	32,901	31,183	1,718	1,544
Biowatt Sarl, Frankreich	50	50	908,914	770,279	90,096	7,379
Biogas Ihorst GmbH & Co. KG, Holdorf	27.5	27.5	539,375	574,370	115,005	195,360
Biogas Ihorst Verwaltungs GmbH, Holdorf	27.5	27.5	32,936	31,286	1,649	1,641
Rentech Bioenergas S.A., Athen/Griechenland	21	21	0	0	0	0
Helianthus srl, San Dona di Piave/Italien	50	50	0	0	0	0
Biogas Potthast GmbH & Co. KG, Beverungen	50	50	860,146	788,599	71,547	216,876
Biogas Potthast Verwaltungs GmbH, Beverungen	50	50	33,243	31,468	1,775	1,743
Biogas Kleve GmbH & Co. KG, Kleve	50	50	24,734	12,365	12,370	-45,750
Biogas Kleve Verwaltungs GmbH, Kleve	50	50	31,962	30,038	1,924	1,694
Biogas Medebach GmbH & Co. KG, Medebach	50	50	-84,827	10,871	-10,697	-63,423
Biogas Medebach Verwaltungs GmbH, Medebach	50	50	32,310	30,561	1,748	1,755
Biogas Altentreptow GmbH & Co. KG, Altentreptow	50	50	1,718,958	1,523,803	195,155	302,376
Biogas Altentreptow Verwaltungs GmbH, Altentreptow	50	50	32,222	30,579	1,643	1,736
Biogas Roga GmbH & Co. KG, Datzetal	50	50	1,333,860	1,261,784	72,077	230,363
Biogas Roga Verwaltungs GmbH, Datzetal	50	50	29,793	28,540	1,254	1,202
Biogas Elm GmbH & Co. KG, Bremervörde	49	49	434,339	314,327	120,012	-8,586
Biogas Elm Verwaltungs GmbH, Bremervörde	49	49	35,422	33,302	2,121	1,939
Biogas Brakel GmbH & Co. KG, Brakel	50	50	626,656	744,080	42,576	82,238
Biogas Brakel Verwaltungs GmbH, Brakel	50	50	32,461	30,689	1,772	1,809

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Biogas Penzlin GmbH & Co. KG, Lohne	50	50	659,054	416,776	242,278	117,884
Biogas Penzlin Verwaltungs GmbH, Lohne	50	50	29,071	28,485	585	1,552
Biogas Dirkes GmbH & Co. KG, Südmerzen	50	50	680,592	697,999	57,593	113,486
Biogas Dirkes Verwaltungs GmbH, Südmerzen	50	50	32,443	30,570	1,873	1,714
Biogas Grieben GmbH & Co. KG, Grieben	49	49	500,218	460,633	39,585	170,869
Biogas Grieben Verwaltungs GmbH, Grieben	49	49	31,421	29,643	1,778	1,634
Biogas Rönnau GmbH & Co. KG, Ahlhorn	50	50	-763,197	-275,010	-488,187	-383,436
Biogas Rönnau Verwaltungs GmbH, Ahlhorn	50	50	32,137	30,438	1,699	1,480
Biogas Kruse GmbH & Co. KG, Garrel	50	50	564,926	727,614	-162,688	-50,124
Biogas Meetzen GmbH & Co. KG, Holdorf	49	49	9,369	-6,666	16,034	-9,827
Biogas Meetzen Verwaltungs GmbH, Holdorf	49	49	29,890	28,030	2,211	1,422
Biogas Talge Verwaltungs- GmbH, Garrel	49	49	30,514	29,052	1,462	1,418
Biogas Talge GmbH & Co. KG, Garrel	49	49	534,405	475,611	58,794	20,823
Biogas Kuck GmbH & Co. KG, Garrel	49	49	-15,013	148,080	-156,974	-82,223
Saergas GmbH & Co. KG, Saerbeck	33.33	33.33	1,070,068	974,470	95,598	159,541
Zweite Biogas Bützow GmbH & Co. KG, Bützow	46.5	46.5	-179,524	-274,320	94,796	136,099
Biogas Gallin I GmbH & Co. KG, Gallin-Kuppentin, Gallin	50	50	210,184	-62,388	272,572	354,485
Biogas Gallin I Verwaltungs GmbH, Gallin-Kuppentin, Gallin	50	50	27,714	26,388	1,326	1,391
Biogas Gallin II GmbH & Co. KG, Gallin-Kuppentin, Gallin	50	50	942,997	653,732	245,745	275,941
Biogas Gallin II Verwaltungs GmbH, Gallin-Kuppentin, Gallin	50	50	27,588	26,481	1,107	1,484
Biogas Eikeloh GmbH & Co. KG, Erwitte	50	50	92,628	93,796	-1,169	-1,802
Biogas Eikeloh Verwaltungs GmbH, Erwitte	50	50	25,000	25,000	0	0
Libramont Energie Vertes, Libramont-chevigny	50	50	-571,926	-281,081	-290,845	-381,081
Alternativ-Energie Priborn GmbH & Co. KG, Priborn	50	0	357,504	0	-42,497	0
Alternativ-Energie Priborn Verwaltungs GmbH, Priborn	50	0	37,320	0	-1,169	0

Equity and earnings figures are based on the financial statements prepared to the German Commercial Code (HGB) or local GAAP principles.

With the exception of EnviTec Biogas (India) Private Limited, all companies prepare their financial statements as of 31 December. Due to national regulations, the reporting date of EnviTec Biogas (India) Private Limited is 31 March.

8. Other non-current receivables

Other non-current receivables exclusively relate to fixed-interest loans with a residual term of more than one year granted to external third parties and to associated companies. Changes against the previous year are primarily attributable to reclassifications from current receivables.

9. Construction contracts

The table below shows the construction contracts as at 31 December 2014:

Construction contracts	2014 in EUR	2013 in EUR
Gross amount due from customers for biogas plant contract work in progre	SS	
Contract revenue recognised in the fiscal year	40,327,917	39,791,226
Accumulated costs incurred	35,113,495	22,154,767
Accumulated profits recognised	3,340,316	646,837
Accumulated advance payments received	-28,116,998	-12,925,275
Gross amount due from customers for contract work	10,336,812	9,876,330
Gross amount due to customers for biogas plant contract work in progress		
Contract revenue recognised in the fiscal year	3,676,668	4,012,645
Accumulated costs incurred	1,741,657	1,378,712
Accumulated profits recognised	409,256	249,837
Accumulated advance payments received	-2,383,944	-2,517,100
Gross amount due to customers for contract work	233,031	888,551

In the past fiscal years, construction contracts were written down for impairment by EUR 1,135k (previous year: EUR 1,374k).

10. Inventories

Inventories comprise the following:

Inventories	2014 in EUR	2013 in EUR
Raw materials and supplies	38,535,348	28,789,137
Fertige Erzeugnisse und Waren	57,950	0
Advance payments	2,384,331	1,160,515
	40,977,629	29,949,652

No material valuation allowances on inventories were required in the fiscal year.

11. Trade receivables

All trade receivables are due within one year. The table below shows the changes in itemised allowances on receivables:

Trade receivables	2014 in EUR	2013 in EUR
Accumulated allowances as at 1 Jan.	2,638,542	1,857,341
Additions	739,313	1,729,133
Rebooking	-696,800	0
Reversal	1,427,778	947,932
Accumulated allowances as at 31 Dec.	1,253,277	2,638,542

Specific bad debt reserves were established for receivables due from third parties experiencing unexpected financial difficulties. The amount of the bad debt reserves was calculated in accordance with the expected net payment defaults. The impairments are shown in the consolidated results as other operating expense. The carrying amount of the value-adjusted receivables was EUR 1,665,061 as of 31 December 2014 (previous year: EUR 5,096,622).

Receivables in an amount of EUR 21,838k (previous year: EUR 28,156k) are not due yet. The following table summarises the overdue receivables for which no bad debt reserves have been established in EUR k:

Analyse of receivables in EURk	2014	2013	2012
31 < 90 days	1,147	1,140	3,999
91 > 180 days	520	424	2,067
181 < 360 days	1,052	1,119	1,646
> 360 days	5,691	5,609	4,636
Total	8,410	8,292	12,348

Overdue receivables are usually secured by way of contract performance guarantees requested from the customer or by other securities such as the assignment of receivables from electricity generation or the assignment of investments and/or other assets. No doubts about the creditworthiness of the customers exist with regard to the overdue and unimpaired receivables. Actual defaults are unessential (previous year: EUR 265k).

12. Other current assets

Other current assets comprise the following:

The other current assets	2014 in EUR	2013 in EUR
Loans to third parties	2,957,959	3,704,552
Receivables from associa- ted companies	3,151,241	7,270,809
Interest claims	60,619	83,803
Prepaid expenses	2,791,806	2,542,628
Receivables from employees	42,606	33,516
Refund of transaction taxes	6,076,521	8,308,731
Supplier refund	152,990	183,657
Outstanding credits / charges	4,455,701	601,350
Currency forward transaction	0	33,829
Other short-term receivables	2,776,866	3,985,163
Total	22,466,309	26,748,038

Receivables from associated companies and joint ventures are mostly receivables from the sale of biogas plants and machines (EUR 1,057k; previous year: EUR 2,013k) as well as loan receivables. The loans are granted at interest rates that are comparable to average market rates and are unsecured. The decline in loans to third parties and receivables from associated companies is mainly due to reclassifications to the long-term segment.

Other assets consist of financial and non-financial assets as defined in IAS 32. Other current assets comprise financial assets in the amount of EUR 13,597,982 (previous year: EUR 15,896,679) and non-financial assets in the amount of EUR 8,868,327 (previous year: EUR 10,851,359). Non-financial assets comprise the prepaid and deferred items and the claim to the refund of transaction taxes.

The table below shows the changes in valuation allowances for other current assets:

	2014 in EUR	2013 in EUR
Accumulated allowances as at 1 Jan.	543,027	466,428
Additions	348,418	155,527
Rebooking	696,800	0
Reversal	0	78,928
Accumulated allowances as at 31 Dec.	1,588,245	543,027

Valuation allowances were established for current assets towards third parties experiencing unexpected financial difficulties. The amount of the valuation allowances was calculated in accordance with the expected net payment defaults.

13. Tax refund claims

The tax refund claims relate to income taxes and transaction taxes of the current fiscal year, which have not yet been refunded by the tax authority. They are recognised at the amount of the expected tax refund.

14. Equity

14.1. Changes in equity

The individual equity components and their changes in 2013 and 2014 are shown in the statement of changes in equity.

The company's share capital amounts to EUR 15,000k. It is divided into 15,000,000 bearer shares with a par value of EUR 1.00 per share.

As of 31 December 2014, EnviTec Biogas AG held 150,000 (previous year: 150,000) shares in EnviTec Biogas AG with a par value of EUR 1.00. The acquisition costs of EUR 2,082k were deducted from the carrying amount of equity capital. Taking account of the acquisition of own shares, a total of 14,850,000 shares were outstanding as of 31 December 2014. For more information, please refer to the statement of changes in equity.

The Annual General Meeting on 26 June 2007 authorised a conditional increase in the share capital by an amount of up to EUR 4,500,000.00 (authorised capital 2007/I). The purpose of the conditional capital increase is to enable the issue of shares to the holders and creditors of bonds with warrants and/or convertible bonds that will be issued by the company or a subordinated Group company once or several times based on the authorisation granted by the Annual General Meeting on 26 June 2007. The shares will be issued at the warrant exercise or conversion price to be determined in accordance with the above authorisation. The conditional capital increase must be effected only to the extent that option and/or conversion rights arising from bonds issued against cash are exercised and/or conversion obligations from such bonds are met and no cash compensation is granted or own shares are used to meet such obligations. The Executive Board is authorised to define the further details of the conditional capital increase.

The capital reserve primarily relates to the premium of the IPO on 12 July 2007. As a result, the capital reserve after deduction of IPO expenses (EUR 7,092k) pursuant to IAS 32.37 increased by EUR 133,479k. For further details of the capital reserve, please refer to the statement of changes in equity.

Based on a resolution adopted by the Annual General Meeting on 25 June 2009, EUR 10,000,000.00 of the profit carried forward was allocated to the newly established revenue reserve.

The currency translation reserve in an amount of EUR -193,045 (previous year: EUR -143,626) comprises the difference resulting from the translation of the financial statements of the fully consolidated companies, whose reporting currency is not the euro. These are the subsidiaries in Great Britain, the Czech Republic, Croatia and the USA. The currency translation reserve declined by EUR 49,419 due to currency translations by foreign subsidiaries.

Other reserves contain the valuation through equity of the cash flow hedge in the amount of EUR -163k (previous year: EUR -113k).

The equity capital as at 31 December 2014 includes results from other comprehensive income in the amount of EUR -81,031 (previous year: EUR -2,709).

The balancing item for non-controlling interests in an amount of EUR -398k (previous year: EUR -876k) comprises minority interests in fully consolidated Group companies.

14.2. Capital management

EnviTec Biogas AG manages its capital with the aim of maximising the return on capital. This also includes optimising the debt-to-equity ratio. The focus is on longterm value creation in the interest of investors, employees and customers.

As is standard practice in the biogas sector, the company monitors its capital on the basis of leverage, which is calculated as the relation between debt capital and total capital. The total capital relevant for this purpose comprises shareholders' equity and financial liabilities. Shareholders' equity includes subscribed capital, capital reserves, revenue reserves, profit carried forward, minority interests and the consolidated net income for the year. Financial liabilities comprise all financial obligations including current financial liabilities and trade payables.

As at 31 December 2014, the equity ratio stood at 54.4% (previous year: 57.4%).

Under the note loan issued in September 2012, the company must comply with financial covenants relating to equity ratio and leverage. As of 31 December 2014, the financial covenants were met. In addition, a margin step-up of 0.5% p.a. has been agreed, which is payable when the company's leverages moves within certain ranges.

For more information, please refer to the disclosures on risk management in the management report.

15. Provisions

The table below shows the changes in the individual provision categories in the fiscal year 2014:

	As at 01/01/14 in EUR	Use 2014 in EUR	Reversal 2014 in EUR	Allocation 2014 in EUR	As at 12/31/14 in EUR
Provisions for unbilled work	6,254,417	5,764,649	489,768	8,236,711	8,236,711
Thereof current	6,254,417	5,764,649	489,768	8,236,711	8,236,711
Warranty and goodwill provisions	1,705,077	1,279,677	0	498,183	923,583
Thereof current	764,077	764,077	0	498,183	498,183
Other provisions	1,660,000	337,925	322,075	161,001	1,161,001
Thereof current	1,660,000	337,925	322,075	161,001	1,161,001
	9,619,494	7,382,251	811,843	8,895,895	10,321,295
Thereof current	8,678,494	6,866,651	811,843	8,895,895	9,895,895

The table below shows the changes in the individual provision categories in the fiscal year 2013:

	As at 01/01/13 in EUR	Use 2013 in EUR	Reversal 2013 in EUR	Allocation 2013 in EUR	As at 12/31/13 in EUR
Provisions for unbilled work	11,441,602	10,912,420	529,182	6,254,417	6,254,417
Thereof current	11,441,602	10,912,420	529,182	6,254,417	6,254,417
Warranty and goodwill provisions	1,539,132	699,132	0	865,077	1,705,077
Thereof current	699,132	699,132	0	764,077	764,077
Other provisions	190,576	190,576	0	1,660,000	1,660,000
Thereof current	190,576	190,576	0	1,660,000	1,660,000
	13,171,310	11,802,128	529,182	8,779,494	9,619,494
Thereof current	12,331,310	11,802,128	529,182	8,015,417	8,678,494

The expected cash flows for the provisions recognised in 2013 and 2014 are shown below:

Expected outflow of funds	12/31/14 in EUR	Expected outflow of funds	12/31/13 in EUR
2015	9,895,895	2014	8,678,491
2016	425,400	2015	941,000
	10,321,295		9,619,494

The provisions for unbilled work refer to work performed by third parties whose amount and time of completion is still uncertain.

The warranty and goodwill provisions refer to contractually agreed warranties on biogas plants built and sold. The provisions are based on management's best estimate of the future outflow of funds through the fulfilment of warranty obligations. The estimate was made on the basis of historical figures and may fluctuate because of new materials and/or other factors. A deduction in an amount of EUR 4k (previous year: EUR 27k) was made. This effect is included in the presentation of the provisions in the "Allocation" column. Discounting is performed on the basis of the discount rate published by Deutsche Bundesbank; it was 2.90% (previous year: 3.43%) for a remaining term of 2 years.

16. Financial liabilities

Financial liabilities are composed as shown below:

	Total in EUR	Thereof current in EUR	Total in EUR	Thereof current in EUR
	12	/31/14	12	2/31/13
Liabilities to banks	91,806,061	19,709,517	82,123,678	8,919,218
Liabilities to minority shareholders	4,677,264	180,667	4,421,047	150,193
Advance payments received	8,617,379	8,617,379	6,334,099	6,334,099
Other financial liabilities	3,221,924	1,901,027	1,724,566	1,646,916
Liabilties from derivative financial instruments	163,338	163,338	119,383	119,383
	108,485,967	30,571,927	94,722,773	17,169,809

Financial liabilities have the following maturities:

Due in	12/31/14 in EUR	Due in	12/31/13 in EUR
2015	30,571,927	2014	17,169,809
2016	12,143,557	2015	15,828,299
2017	7,060,512	2016	5,587,961
2018	21,393,112	2017	20,405,823
2019	11,298,115	2018	4,827,056
2020 and thereafter	26,018,744	2019 and thereafter	30,903,825
	108,485,967		94,722,773

Current financial liabilities totalled EUR 30,571,927 (previous year: EUR 17,169,809). The weighted average interest rate was 3.29% (previous year: 3.47%).

Non-current liabilities to banks primarily comprise loans for the financing of office buildings, biogas plants as

well as fixtures and fittings. Liabilities to banks are secured by land charges and property assignments.

As at 31 December 2014, the following securities for liabilities to banks existed:

Lenders	ers Liability Liability Type of security as at as at 12/31/14 12/31/13		Carrying amount of security as at 12/31/14	Carrying amount of security as at 12/31/13	
Landessparkas- se zu Oldenburg	3,046,637	3,673,867	Land charge of EUR 2,250,000 in the site in Saer- beck, Boschstrasse 2, as well as a land charge of EUR 2,000,000 EUR in the property in Lohne, Indus- triering 10a	6,213,209	6,524,012
Landessparkas- se zu Oldenburg	1,377,467	1,674,445	Subordinated land charge of EUR 1,430,000 in the site in Rotenburg, Kesselhofskamp 2 Assignment of biogas plants including machinery and equipment Assignment of claims of electricity producers	1,492,384	1,832,437
Bremer Landes- bank	4,824,503	3,648,041	First priority land charge of EUR 1,725,000.00 in the site in Friedland, Am Schwarzen Weg Assignment of biogas plants Assignment of claims of energy utilities	4,655,417	5,345,665
Bremer Landes- bank	227,265	318,175	First priority land charge of EUR 7,500,000.00 in the property in Anklam, Konrad-Zuse-Str. 8; assignment of biogas plant Assignment of claims of energy utilities	627,334	631,691
Bremer Landes- bank	227,265	318,175	First priority land charge of EUR 7,500,000.00 in the property in Anklam, Konrad-Zuse-Str. 8; assignment of biogas plant Assignment of claims of energy utilities	536,771	624,407
Bremer Landes- bank	227,265	318,175	First priority land charge of EUR 7,500,000.00 in the property in Anklam, Konrad-Zuse-Str. 8; assignment of biogas plant Assignment of claims of energy utilities	536,428	624,383
Bremer Landes- bank	227,265	318,175	First priority land charge of EUR 7,500,000.00 in the property in Anklam, Konrad-Zuse-Str. 8; Assignment of biogas plant assignment of claims of energy utilities	550,401	639,516
Bremer Landes- bank	72,209	216,655	First priority land charge of EUR 7,500,000.00 in the property in Anklam, Konrad-Zuse-Str. 8; assignment of biogas plant Assignment of claims of energy utilities	640,838	748,156
Bremer Landes- bank	1,094,948	1,263,404	First priority land charge of EUR 2,003,000.00 in the property in Willebadessen, Schönthal 25; assign- ment of biogas plant Assignment of claims of energy utilities	959,169	1,194,393
Volksbank Gel- senkirchen	144,975	170,827	First priority land charge of EUR 1,111,000.00 in the site in Gelsenkirchen, Magdeburger Straße 16a	873,544	899,986
Deutsche Kredit- bank	1,520,700	1,760,597	First priority land charge of EUR 2,400,000.00 in the property in Minden, Stemmer Landstraße 151; assi- gnment of biogas plant and inventory Assignment of claims of energy utilities	1,386,987	1,509,974
Bremer Landes- bank	1,633,040	1,781,520	First priority land charge of EUR 2,030,000.00 in the local subdistrict of Lüchow sheet 2055 cadastral district 4 lot 69/51; assignment of biogas plant Assi- gnment of claims of energy utilities	2,071,308	2,335,522

Oldenburgische Landesbank AG	1,363,854	1,545,645	First priority land charge of EUR 1,740,000.00 in the pro- perty in Kalbe, An der Bahn; assignment of biogas plant Assignment of claims of energy utilities	2,316,724	2,291,723
Oldenburgische Landesbank AG	1,234,091	1,398,636	First priority land charge of EUR 1,810,000.00 in the pro- perty in Salzwedel, Im Dorf; assignment of biogas plant Assignment of claims of energy utilities	1,679,059	1,924,139
Deutsche Kredit- bank	4,576,800	4,992,900	First priority land charge of EUR 5,609,000.00 in the property in the local subdistrict of Neunaundorf; assignment of biogas plant Assignment of claims of energy utilities	2,779,886	3,285,456
Oldenburgische Landesbank AG	1,310,540	1,474,360	First priority land charge of EUR 1,802,000.00 in the property in Sandersdorf-Brehna; assignment of biogas plant Assignment of claims of energy utilities	1,695,695	1,915,014
Landessparkas- se zu Oldenburg	1,546,470	1,689,810	First priority land charge of EUR 2,160,000 in the sheet 574 of the Bötersen Land Register Assignment of biogas plants including machinery and equipment Assignment of claims of electricity producers	1,301,943	1,561,681
Bremer Landes- bank	3,513,842	4,132,879	First priority land charge of EUR 6,269,000 in the local subdistrict of Groß Rosenburg-Sachsendorf, sheets 409 and 312 Assignment of claims of electri- city producers	3,890,451	4,310,947
Bremer Landes- bank	1,998,323	2,179,380	First priority land charge of EUR 2,436,000 in the lo- cal subdistrict of Schönwalde, sheet 271 Assignment of biogas plants and inventories including machine- ry and equipment Assignment of claims of electricity producers	2,515,671	2,584,880
Bremer Landes- bank	1,827,680	1,993,840	First priority land charge of EUR 2,260,000 in the local subdistrict of Salzwedel, sheet 14046 cadastral district 80 Assignment of biogas plants and invento- ries including machinery and equipment Assignment of claims of electricity producers	2,412,343	2,725,280
Oldenburgische Landesbank AG	1,586,510	1,762,790	First priority land charge of EUR 1,895,000.00 in the property in Schenkenhorst, sheet 201 cadastral district 248/0; assignment of biogas plants and inventories including machinery and equipment Assignment of claims of energy utilities	1,674,933	1,911,085
Hypo Alpe-Adria Leasing GmbH	2,588,411	3,023,901	First priority land charge of EUR 2,160,000.00 in the property in Bützow, sheet 4983 cadastral district 7 lot 72/18; assignment of biogas plant Assignment of claims of energy utilities	1,941,685	2,271,247
Volksbank Dinkklage-Stein- feld eG	571,400	685,700	Assignment of CHPP Assignment of claims of energy utilities resulting from the operation of the biogas plant by Fünfte Biogas Bützow Betriebs GmbH & Co. KG	413,469	473,253
Landessparkass zu Oldenburg	104,122	258,790	First priority land charge of EUR 1,100,000.00 in the property in Angern, Loitscher Weg 5, Assignment of biogas plants including machinery and equipment, Assignment of claims of electricity producers	448,993	556,490
Oldenburgische Landesbank	1,091,631	1,257,358	First priority land charge of EUR 1,800,000.00 in the site in Wanzleben, Vor dem Schlosstor 2; assignment of claims of energy utilities as well as various claims resulting from the operation of the biogas plant	1,107,598	1,261,518
Oldenburgische Landesbank	1,113,636	1,272,727	First priority land charge of EUR 1,750,000.00 in the site in Thomasburg, Hagenweg; assignment of claims of energy utilities as well as various claims resulting from the operation of the biogas plant	1,005,483	1,203,817
Bremer Landes- bank	1,181,810	1,363,630	First priority land charge of EUR 2,350,000.00 in the site in Nieheim, Steinheimer Straße 99; assignment of biogas plant, assignment of claims of energy utilities	1,445,715	1,706,509

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Bremer Landes- bank	1,021,086	1,178,178	First priority land charge of EUR 2,128,000.00 in the site in Bresegard, Hauptsraße 42; assignment of biogas plant, assignment of claims of energy utilities	921,848	1,123,957
Bremer Landes- bank	2,866,171	3,211,432	First priority land charge of EUR 3,766,000.00 in the site in Beber, Zum Dachtelfeld 29; assignment of biogas plant, assignment of claims of energy utilities	2,889,924	3,173,777
Bremer Landes- bank	1,628,624	1,789,012	First priority land charge of EUR 2,184,000.00 in the local subdistrict of Osterburg, sheet 10359 cadastral district 5, assignment of biogas plant and invento- ries including machinery and equipment. Assign- ment of claims of electricity producers	2,298,591	2,477,050
Deutsche Kredit- bank	8,132,244	8,781,000	First priority land charge of EUR 9,055,290.00 in the property in the local subdistrict of Neutrebbin, cadastral district 2; first priority land charge of EUR 1,461,100,00 in the property in the local subdistrict of Neutrebbin, cadastral district 2, assignment of biogas plant and inventories including machinery and equipment. Assignment of claims of energelec- tricity producers	9,022,449	9,405,911
DZ Bank	2,662,695	3,637	First priority land charge of EUR 2,800,000.00 in the local subdistrict of Trüstedt, assignment of biogas plant and inventories including machinery and equipment. Assignment of claims of electricity producers	2,929,274	3,184,312
Bremer Landes- bank	749,000	999,000	Pledge over shares in limited partnerships	1,749,001	1,749,001

Of the total liabilities to shareholders, an amount of EUR 181k (previous year: EUR 150k) relates to short-term loans granted by minority shareholders in the context of liquidity management for the company's own biogas plants. These loans carry an interest rate of 5%. An amount of EUR 4,497k (previous year: EUR 4,271k) relates to compensation claims of minority interests. Other financial liabilities in an amount of EUR 3,222k (previous year: EUR 1,725k) represent loan payables towards third parties that are no banks or minority shareholders and long-term grants.

17. Trade payables

All trade payables are due within one year.

18. Other current financial liabilities

Other current financial liabilities comprise the following:

Other current financial liabilities	12/31/14 Total in EUR	12/31/13 Total in EUR
Payroll liabilities	989,693	942,036
Social security liabilities	184,196	107,984
Liabilities from transaction taxes and amounts of withholding taxes	310,800	159,860
Deferred income	692,123	233,416
Other current liabilities	1,772,207	1,039,806
	3,949,019	2,483,102

The liabilities from transaction taxes and amounts of withholding tax represent wage and church tax due as at the balance sheet date.

Other current liabilities relate to short-term loans granted by third parties to various subsidiaries, debtors with credit balances as well as unbilled work whose amount is certain but whose time of completion is still uncertain. The loans carry an interest rate of 5% p.a. and are used for short-term liquidity management.

Deferred income includes short-term grants as defined in IAS 20 in the amount of EUR 40k (previous year: EUR 40k). The long term portion of those grants is shown under other long term liabilities. These grants concern grants for redemption payments which are dissolved over the residual period of the respective assets. The corresponding income is shown under other operating income.

19. Tax liabilities

Tax liabilities relate to the income tax of the current fiscal year, which has not yet been paid to the tax authorities. They are recognised at the amount in which they are expected to be paid.

20. Disclosures on financial instruments

20.1. Financial risk management

As non-current and current financial liabilities carry variable interest rates, EnviTec Biogas AG is exposed to an interest rate risk, i.e. changes in the value of future payments under a financial instrument. The interest rate risk is managed and analysed by the company's management.

In 2012 EnviTec Biogas AG concluded two interest rate swaps (payer swaps) with a nominal value of EUR 12 million to hedge the interest rate risk of the current interest payments under two new loan agreements with floating interest rates. In 2014 one interest rate swap was canceled because the corresponding loan was paid. There is still one interest rate swap with a nominal volume of EUR 5.5 mio, no inefficiency occurred. The reclassification amount from other comprehensive income of the interest rate swap for the amounts paid amounted to EUR -116k in 2014. Other comprehensive income includes value changes of the interest rate swaps in the amount of EUR -32k. Fixed interest rates have been agreed for long-term loans exposed to a fair value risk. Accordingly, possible interest rate increases represent no risk for the company. The EnviTec Group aims to raise its long-term loans at fixed interest rates during times of low interest rates to achieve maximum planning certainty. In the past fiscal year, the EnviTec Group had no short-term floating rate financial liabilities. Long-term floating rate financial liabilities amounted to EUR 5,500k (previous year: EUR 12,000k). They carry a floating rate on the basis of the 6-month EURIBOR plus margin. The risk is hedged by

Fluctuations by +/- 50 base points or 0.5% p.a. were used in the sensitivity analysis. An increase by 50 basis points would reduce the financial result by EUR 28k, while a decline would increase the financial result by EUR 28k. Accordingly, equity would decline/increase by EUR 20k.

the above mentioned interest rate swaps.

As of the end of the fiscal year, long-term loans amounted to EUR 72,097k (previous year: EUR 73,204k). Fixed interest rates between 2.15% and 6.23% have been agreed.

Sales and purchases are generally effected in the company currency and entail no material currency risks. Currency risks may arise in conjunction with the subsidaries in the UK, the USA and Czech, as material payments are made in euros and in the local currency. Exchange rates are therefore monitored on an ongoing basis to ensure that currency hedging measures can be taken at an early stage. Derivative financial transactions are subject to close monitoring, which is ensured through the separation of functions.

In 2014, the company signed currency forward transactions in an amount of TGBP 4.291 (previous year: TCZK 10.624) and in an amount of TUSD 255 (previous year: TUSD 255). These are used to hedge future cash flows from transactions that are highly likely to materialise. No hedge accounting was performed. Changes in the value were recognised in other operating expenses and other operating income, respectively.

The value of receivables and other financial assets may be adversely affected where counterparties fail to meet their payment or other obligations. The amounts of the financial assets stated in the balance sheet represent the maximum default risk in the event that business partners fail to meet their obligations. Credit risks are mitigated by constant monitoring of the individual receivables as well as by appropriate hedging measures such as creditworthiness checks by external agencies and the presentation of financing commitments from banks. A comprehensive set of securities has been implemented for a loan which amounts to EUR 8,004k (previous year: EUR 8,165k). Actual defaults in the past were low. As of the reporting date, the EnviTec Group had term and overnight accounts with German banks that are members of the "Einlagensicherungsfonds" (German deposit guaranty fund). A material creditworthiness risk does not exist.

Liquidity risks are mitigated by advance payments from customers, which are matched to the specific contract and the stage of completion. The construction of the properties in Lohne and Saerbeck was financed with long-term bank loans carrying fixed interest rates. Liquidity management measures include the daily reporting of the liquidity status and monthly liquidity budgets based on the company's budgets as well the holding of a sufficient reserve of liquid funds. Due to the existing credit lines, no liquidity risks exist. Unused credit lines totalled EUR 10,388k as of 31 December 2014 (previous year: EUR 21,261k). Under the note loan issued in 2012, the company must comply with certain financial covenants. These relate to the equity ratio and to leverage. As of 31 December 2014, the financial covenants were met.

Due in	12/31/14 in EUR	Due in	12/31/13 in EUR
2015	68,389,368	2014	46,961,155
2016	13,113,377	2015	18,966,124
2017	8,735,070	2016	7,453,279
2018	22,298,503	2017	22,080,381
2019	12,026,192	2018	5,732,447
2020 and thereafter	29,544,492	2019 and thereafter	35,656,746
	154,107,002		136,850,133

The table below shows the payments agreed for the non-current and current liabilities:

The table below shows the payments agreed for the derivatives:

Due in	12/31/14 in EUR	Due in	12/31/13 in EUR
2015	40,271	2014	27,839
2016	38,968	2015	-6,700
2017	16,770	2016	-39,069
2018	0	2017	-20,507
	96,009		-38,437

20.2. Presentation of financial instruments

The table below shows the measurement categories and carrying amounts of financial assets and liabilities:

Financial instruments 2013 and 2014	IAS 39 Measurement category		Carrying amount In kEUR		Fair Value in kEUR	
	2014	2013	12/31/14	12/31/13	12/31/14	12/31/13
Assets						
Other non-current receivables	LAR	LAR	29,466	38,588	30,543	40,106
Participating interests	Afs	Afs	23	56	23	56
Trade receivables	LAR	LAR	29,025	33,809	29,025	33,80
Loans to third parties	LAR	LAR	2,958	3,705	2,958	3,705
Receivables from associated companys	LAR	LAR	3,151	7,271	3,151	7,271
Interest claims	LAR	LAR	61	84	61	84
Other short-term receivables	LAR	LAR	7,428	4,922	7,428	4,922
Derivatives	HfT	HfT	0	34	0	34
Liquid funds	LAR	LAR	20,132	18,957	20,132	18,957

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Financial instruments 2013 and 2014		IAS 39 Measurement category		Carrying amount In kEUR		Fair Value in kEUR	
	2014	2013	12/31/14	12/31/13	12/31/14	12/31/13	
Liabilities							
Non-current financial liabilities	FLAC	FLAC	77,914	77,553	70,584	69,541	
Current financial liabilities	FLAC	FLAC	30,572	17,170	30,572	17,170	
Trade payables	FLAC	FLAC	19,963	15,166	19,963	15,166	
Derivatives (interest rate swap)	n. a.	n. a.	163	119	163	119	

EUR 23k

Financial instruments 2014

Available for sale (Afs)

Thereof aggregated by measurement categories pursuant to IAS 39: Loans and Receivables (LAR): EUR 92,221k Financial Liabilities at Amortised Costs (FLAC): EUR 128,449k

Financial instruments of the Afs category include investments in "GmbHs" and "GmbH & Co. KGs" of clearly below 20%. These are held-to-maturity investments for which no active market exists at present. A sale of the investments is not planned.

Financial instruments 2013

Thereof aggregated by measurement categories pursuant to IAS 39:

Loans and Receivables (LAR):	EUR 107,392k
Financial Liabilities at Amortised	
Costs (FLAC):	EUR 109,889k
Held for Trading	EUR 34k
Available for sale (Afs)	EUR 56k

In view of the short terms of trade receivables, other assets (excl. derivative financial instruments) as well as cash and cash equivalents, it is assumed that the carrying amount is equivalent to the fair value. It is assumed that the carrying amount of current financial liabilities (excl. derivative financial instruments) is equivalent to the fair value. The fair value of non-current financial liabilities and financial assets is derived from the present value of the expected future cash flows. Discounting is performed at the rates applicable as of the balance sheet date.

The fair value of the long-term financial liabilities of EUR 361k (previous year: EUR 407k) was determined

using the DCF method and relates to the obligation to compensate the atypical silent partners in Biogas Nordholz GmbH, Minden. A planning period of 13 years was chosen for the calculation, which is consistent with the duration of the operating permit. In view of the tariffs provided for under the German Renewable Energy Sources Act (EEG), constant revenues were assumed for the cash flow. Cost increases were taken into account for the expenses. The underlying WACC is 5.52% (previous year: EUR 7.13%). The maximum default risk results from the recognition in the balance sheet and amounts to EUR 361k (previous year: EUR 407k). An interest rate change of 0.1% would reduce/ increase the claim by EUR 4k. According to the fair value hierarchy defined in IFRS 7, this is a fair value of level 3 (measurement using factors not based on observable market data). The change in the fair value of EUR 46k (previous year: EUR 69k) includes withdrawals from the claim in the amount of EUR 48k and was recognised as an interest expense. Liabilities to minority shareholders totalled EUR 4,497k (previous year: EUR 3,896k). They were accounted for in accordance with the anticipated acquisition method.

The fair value of the currency forwards as well as the interest swap is a level 2 fair value (measurement based on parameters that are not quoted prices used at level 1 but which are observable for the financial instrument either directly (i.e. as a price) or indirectly (i.e. derived from prices)). The fair value is determined using generally accepted valuation methods.

Of the financial liabilities shown, an amount of EUR 2,629k (previous year: EUR 1,682k) has been furnished as collateral for liabilities to banks.

Net result and allowances by measurement categories:

EURk	12/31/2014	12/31/2013
Loans and receivables	3,072	1,611
Thereof allowances on loans and receivables	-1,088	-1,729
Thereof interest income	2,732	2,392
Thereof retransfer of valuation allowances	1,428	948
Net result Liablilities at net book value	-3,731	-3,487
Thereof interest expenses	-3,731	-3,487
Net result Held for trading	0	76

Disclosures on the consolidated income statement

21. Sales revenues

In 2014 the group was once more able to generate more revenues from operation than from sale of biogas plants. The revenues from electricity feed-in and heat deliveries increased from EUR 62,477k to EUR 64,834k. The revenues from plant construction also increased from EUR 47,287k to EUR 50,410k. Sales revenues in the Plant Construction segment also include revenues from projects not completed as of the balance sheet date in relation to the stage of completion of the projects. The biggest increase in revenues form marketing of electricity increased from EUR 19,737k to EUR 27,139k. Sales revenues also include service revenues in the amount of EUR 21,013k (previous year: EUR 19,327k).

The table below shows the changes in sales revenues:

2014	2013		Change
in EUR	in EUR	in TEUR	in %
163,396,160	148,828,206	14,568	9.8

22. Other operating income

The other operating income's major components include income from the sale of raw material for biogas plants of EUR 1,330k (previous year: EUR 2,655k), employee deductions for non-monetary compensation in an amount of EUR 357k (previous year: EUR 424k), income from retransfer of valuation allowances of receivables in the amount of EUR 730k (previous year: EUR 948k), income from recharged costs of EUR 982k (previous year: EUR 2,305k), income from the reserval of provisions in the amount of EUR 812k (previous year: EUR529k), income from supplier refunds of EUR 179k (previous year: EUR 184k), income from recharged services of EUR 616k (previous year: EUR 844k), income from insurance claims and compensation for damages of EUR 493k (previous year: EUR 601k). In the previous year the other operating income also included revenues from the sale of shares in intermediary holding companies in the amount of EUR 4,517k which constitutes the significant difference between both years.

2014	2013		Change
in EUR	in EUR	in TEUR	in %
12,125,730	15,712,011	-3,586	-22.8

23. Cost of materials

The cost of materials primarily includes material costs in the amount of EUR 76,950k (previous year: EUR 63,603k) as well as the cost of outside services for the construction and operation of biogas plants in the amount of EUR 7,493k (previous year: EUR 8,786k) This item also includes expenses for substrates of EUR 28,176k (previous year: EUR 28,355k). The changes in the cost of materials are shown below:

2014	2013		Change
in EUR	in EUR	in TEUR	in %
112,619,612	100,744,244	11,875	11.8

The increase of costs for raw material is mostly related to the segment Energy because of the big increase of marketing of elctricity, especially with third parties.

24. Personnel expenses and employees

Personnel expenses

Personnel expenses include wages and salaries in an amount of EUR 13,806k (previous year: EUR 15,353k) as well as social security expenses and pension and support expenses in an amount of EUR 3,420k (previous year: EUR 3,644k). The table below shows the changes in personnel expenses at Group level:

 2014
 2013
 Change

 in EUR
 in EUR
 in TEUR
 in %

 17,226,585
 18,997,412
 -1,771
 -9.3

25. Amortisation and depreciation

Due to the expansion of the Own Plant Operation segment the regular depreciation increased compared to the previous year however in total amount the depreciation is less than before. This results from the impairment loss of receivables which is by EUR 1,886k less than 2014.

2014	2013		Change
in EUR	in EUR	in TEUR	in %
15,502,109	16,031,391	-529	-3.3

Employees

An average of 345 people were employed in 2014 (previous year: 379), which represents a decrease of 9.0% over the previous year. Of the average headcount, 284 people are white-collar workers while 61 people are blue-collar workers. Most employees are employed in the production and technology departments.

Employer's contribution to pension insurance

Personnel expenses in the fiscal year included employer's contributions to pension insurance of EUR 896k (previous year: EUR 1,041k). Amortisation and depreciation include write-downs of other long-term receivables in the amount of EUR 180k (previous year: EUR 2,066k). For further details on depreciation and amortisation, please refer to the fixedasset movement schedule.

26. Other operating expenses

Other operating expenses comprise operating expenses, administrative expenses and selling expenses. Selling expenses were down on the previous year primarily due to the marked decline in costs in the Plant Construction segment. The increase in other operating expenses is mainly attributable to the Own Plant Operation segment. The changes in other operating expenses are shown below.

2014	2013		Change
in EUR	in EUR	in TEUR	in %
23,838,053	26,364,305	-2,526	-9.6

Other operating expenses comprise the following items:

	2014 in EUR	2013 in EUR
Operating expenses	16,541,165	16,415,042
Selling expenses	2,510,501	4,662,988
Administrative expenses	4,786,387	5,286,275
Total	23,838,053	26,364,305

27. Result from companies valued at equity

The result from companies consolidated at equity comprises the pro-rated results of 67 (previous year: 73) companies.

Pursuant to IAS 28.37g, losses that exceed the interest in an associate are not recognised but carried in separate account to be offset against potential profits subsequently reported by the associate. Losses not recognised due to this provision totalled EUR 379k (previous year: EUR 349k) in the fiscal year (cumulative: EUR 829k).

2014	2013		Change
in EUR	in EUR	in EURk	in %
813,821	-318,760	1,133	355.3

28. Interest income

2014	2013		Change
in EUR	in EUR	in EURk	in %
2,732,045	2,392,127	340	14.2

29. Interest expense

Interest expenses include interest and similar expenses, especially for bank liabilities and current liabilities for the liquidity management of related parties. The changes in other financial expenses are shown below:

2014	2013		Change
in EUR	in EUR	in EURk	in %
3,731,097	3,486,586	245	7.0

A breakdown of interest expenses into non-current financial liabilities, current financial liabilities and other liabilities is provided below:

	2014 in EUR	2013 in EUR
Non-current financial liabilities	3,381,972	3,223,018
Current financial liabilities	128,611	77,885
Other liabilities	220,514	185,683
Total	3,731,097	3,486,586

30. Income taxes

Tax expenses

Income taxes paid or due as well as deferred tax assets and liabilities are shown as income taxes. In the fiscal year 2014 and the previous year, deferred taxes primarily resulted from taxable temporary differences between the carrying amounts and the tax bases of the balance sheet items "gross amount due from and to customers for contract work". Changes in tax expenses are shown below:

2014	2013		Change
in EUR	in EUR	in EURk	in %
2,230,915	717,125	1,514	211.1

Tax expenses break down as follows:

	2014 in EUR	2013 in EUR
Deferred tax income/ expense	153,537	-3,829,073
Income taxes paid or due	2,077,378	4,546,198
Total	2,230,915	717,125

Tax reconciliation

Current tax expenses of the year 2014 in an amount of EUR 2,231k (previous year: EUR 717k) deviated by EUR 504k (previous year: EUR 439k) from the expected tax expenses in an amount of EUR 1,727k (previous year: EUR 278k), which would result from the application of an average tax rate on the company's pre-tax profit. This average tax rate is determined on the basis of corporate income tax (15%), solidarity surcharge (5.5%) and a trade tax rate of 350%. The reasons for the difference between expected and current tax expenses are illustrated below:

	2014	2013
	in EUR	in EUR
Earnings before income taxes	6,150,299	989,647
Applicable tax rate	28.08%	28.08%
Expected tax expenses	1,727,004	277,893
Loss carryforwards that cannot be used and/or use of unrecog- nised loss carryforwards and depreciation of loss carryfor- wards	983,092	-305,359
Difference between expected and current trade tax rates as well as Trade tax additions and	007 171	477.000
reductions	-927,171	-477,388
Profits/losses attributable for tax purposes only	55,025	175,743
Result from companies accoun- ted for at equity	-235,541	-189,574
Deviations from tax ra- tes at subsidiaries in other		
jurisdictions	42,009	-128,610
Non-deductible expenses	698,183	514,026
Off-period taxes	5,897	343,346
Foreign taxes	-110,724	481,145
Miscellaneous	-6,859	25,903
Current tax expenses	2,230,915	717,125

The table below shows the deferred tax assets and liabilities as of 31 December 2014 and 31 December 2013:

	12/31/2014 in TEUR	12/31/2013 in TEUR
Tax loss carryforwards	2,216	2,086
Current assets	1,535	1,298
Non-current financial liabilities	261	241
Deferred tax assets	4,012	3,625
Property, plant and equipment	880	1,350
Current assets	0	8
Goodwill	174	211
Deferred tax liabilities	1,054	1,569

The change in deferred taxes was recognised in the income statement in the fiscal year.

Deferred tax assets were recognised for the tax losses carried forward by foreign subsidiaries and companies of the Own Plant Operation segment, as these companies could determine with sufficient certainty that it will be possible to offset these against future profits.

31. Earnings per share

Basic earnings per share are the quotient of the Group profit (2014: EUR 4,212k, 2013: EUR 319k) and the weighted average (2014: 14,850,000, 2013: 14,850,000) of the shares outstanding in the fiscal year. Earnings per share in the fiscal year amounted to EUR 0.28 (previous year: EUR 0.02).

The conditional increase in the share capital by up to EUR 4,500,000.00 approved by the Annual General Meeting on 26 June 2007 serves to grant shares to the holders of option and/or convertible bonds issued by EnviTec Biogas AG or a subordinate Group company once or several times in accordance with the authorisation of the Annual General Meeting. This instrument may potentially dilute the basic earnings per share in future. It was not taken into account in the calculation of the diluted earnings, as it had no diluting influence in the reporting period.

Disclosures on the statement of cash flows

The statement of cash flows shows the changes in cash and cash equivalents of the EnviTec Group in the course of the fiscal year as a result of cash inflows and outflows. In accordance with IAS 7, a distinction is made between cash flows from operating, investing and financing activities. Cash and cash equivalents shown in the statement of cash flows comprise cash in hand and cash at banks.

32. Cash inflows from operating activities

The gross cash flow in an amount of EUR 21,698k (previous year: EUR 7,453k) shows the operating cash flow before any changes in working capital. The inflow of funds from operating activities (net cash flow) in an amount of EUR 35,389k (previous year: EUR 37,804k) additionally reflects the changes in working capital, especially in conjunction with construction contracts, and in other net assets as well as other non-cash transactions.

33. Cash outflows from investing activities

Cash outflows from investing activities amounted to EUR 43,036k in 2014 (previous year: outflows of EUR 20,430k) and were mainly attributable to investments in property, plant and equipment (biogas plants) as well as plant and office equipment. The sale of fully consolidated companies led to an inflow of cash of EUR 57k (previous year: EUR 7,109k).

34. Cash inflows from financing activities

Cash inflows from financing activities totalled EUR 8,765k (previous year: EUR -26,177k). Bank loans raised by the company provided cash in the amount of EUR 28,615k (previous year: EUR 15,850k), while liabilities to banks in the amount of EUR 18,933 were repaid. Cash in the amount of EUR 2,814k (previous year: EUR 12,077) was flowed in by other long-term and shortterm financial liabilities.

35. Cash and cash equivalents

Cash and cash equivalents include cash in hand and cash at banks with a term of up to 3 months.

Other disclosures

36. Contingent liabilities and other financial obligations

Contingent liabilities

As of the reporting date, the Group had extended a guaranty in a total amount of EUR 1,000k towards Bremer Landesbank for obligations of four fully consolidated subsidiaries and a subsidiary accounted for using the equity method (previous year: EUR 1,000k). No claims are expected to be raised under this guaranty.

Moreover, the Group has extended a guaranty in an amount of EUR 200k (previous year: EUR 200k) towards Sparkasse Rotenburg-Bremervörde for obligations of a subsidiary accounted for using the equity method. The risk of claims being raised under this guaranty is below 50%.

The Group has issued a guaranty to VR Bank Dinklage-Steinfeld eG for obligations in an amount of EUR 250k of another company accounted for using the equity method. The risk of claims being raised under this guaranty is below 50%.

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The company has undertaken to secure all receivables due to Bremer Landesbank from a non-Group entity in the amount of EUR 2,500k. The risk of claims being raised under this obligation is also below 50%.

Other financial obligations

Other financial obligations are shown in the table below:

in EUR	Total			Remaining term
		up to 1 year	1 to 5 years	more than 5 years
From lease agreements	25,887,50	12,350,00	3,800,00	9,737,50
From license agreements	67,656,10	67,656,10	0.00	0.00
From purchase commit- ments	18,000,00	18,000,00	0.00	0.00
Total	111,543,60	98,006,10	3,800,00	9,737,50

In addition, some of the own plants have lease agreements of minor importance. Rent payments in 2014 totalled EUR 51,709.68 (previous year: EUR 42,870.71).

Finance Lease

In the previous years, three Group companies sold their biogas plants to Hypo Alpe-Adria Leasing GmbH at a price of EUR 1,620,000 each and repurchased them under finance leases in the context of sale-and-buyback transactions. As of 31 December 2014, the respective liabilities had a value of EUR 2,588,411.24 and are shown under liabilities to banks. Based on a discount rate of 4.37, the repayment rates had the following present values, broken down by maturities:

in EUR	Total			Remaining term
		up to 1 year	1 to 5 years	more than 5 years
Ammortization	2,322,746,34	447,574,75	1,875,171,59	0,00

37. Related party disclosures

Companies under joint control or having a material impact on the company

In accordance with IAS 24, parties that have the ability to exercise influence over EnviTec Biogas AG or may be influenced by EnviTec Biogas AG are regarded as related parties.

Under an agreement dated 27 June 2013, von Lehmden Beteiligungs GmbH, Lohne, Ruhe Verwaltungs GmbH, Lüsche, and TS Holding GmbH, Visbek, terminated the consortium agreement of 27 June 2007 on the pooling of voting rights. Up to this date, 74.90% (previous year: 74.90) of the voting rights of EnviTec Biogas AG were attributable to the above companies. No transactions with this consortium occurred in the past fiscal year or the previous year. Since 2014 the von Lehmden Beteiligungs GmbH, headquartered in Lohne, has to be classified as controlling company.

Transactions with individual companies of the consortium are listed further below.

Members of the management in key positions

Please refer to "Disclosures on Corporate Officers". These include the members of the Executive Board and the Supervisory Board. Relationships with companies controlled by Executive Board members are also shown here.

Subsidiaries, joint ventures and associated companies

Please refer to "Basis of consolidation and consolidation methods" and to shareholdings. Balances and business transactions with fully consolidated companies were eliminated in the context of consolidation and are not explained here.

Other related parties

Related parties also include enterprises as defined in IAS 24.9(b)(vi), (vii).

Transactions with related parties

In the context of its operations, EnviTec Biogas AG sources materials, inventories and services from numerous business partners. These include companies that are related to controlling bodies or shareholders of the company

Transactions with related parties	Transad	nsaction Amount Rece in EUR		able Amount/ in EUR	Liability Amount in EUR	
in EUR	2014	2013	2014	2013	2014	2013
Controlling company						
von Lehmden Beteiligungs GmbH	7,288,885	4,473,415	134	320	1,547	2,142
Associated companies						
Accumulated	22,336,074	10,949,869	15,907,538	18,902,579	627,679	1,011,239
Related parties						
Accumulated	7,682,408	4,809,014	694,104	3,980,212	362,292	513,038

In the transactions income and expenses presented cumulatively.

38. Auditor's fees

The following fees were recognised as expenses for the services provided by the auditors of the consolidated financial statements, Rödl & Partner GmbH, Wirtschaftsprüfungsgesellschaft, Steuerberatungsgesellschaft, Munich:

	2014 in EURk	2013 in EURk
Audits of financial statements	184	204
Tax advisory services	30	31
Total	214	235

The audit fees comprise the fees for the audit of the consolidated financial statements and of the separate financial statements of EnviTec Biogas AG. In the past fiscal year, the fees for other advisory or valuation services exclusively relate to the review of the interim report. The tax advisory services relate to advice on VAT provided in conjunction with construction sites abroad.

39. Disclosures on corporate officers

Executive Board

The Executive Board had the following members in the fiscal year 2014:

Olaf von Lehmden, businessman, Lohne, Chairman of the board (CEO) since 1 July 2007

Jörg Fischer, businessman, Weyhe, Finance director (CFO) since 1 July 2007

Roel Slotman, businessman, Enter/Netherlands, International sales director (CCO) since 1 October 2009

Jürgen Tenbrink, engineer, Steinfurt Technical director (CTO) since 1 July 2012

The members of the Executive Board held no other mandates.

The compensation of the Executive Board consists of the following components:

- > Fixed compensation in the form of a monthly salary
- > Variable compensation based on the operating result of the EnviTec Group and the achievement of personal targets

As compensation for a competition prohibition imposed on them following the regular end of their activity as a member of the Executive Board, the members of the Executive Board will receive an ex gratia payment equal to 50% of the fixed compensation last received for a period of up to one year. In the event of premature termination of their activity as a member of the Executive Board, the ex gratia payment depends on the circumstances of the termination pursuant to section 75 of the German Commercial Code.

The following compensation was paid to the members of the Executive Board in the fiscal year 2014:

in EUR	Fixed co	mpensation	Variable com	pensation	Other *		Total	
	2014	2013	2014	2013	2014	2013	2014	2013
Olaf von Lehmden	147,097	147,097	0	0	15,861	15,111	162,958	162,208
Jörg Fischer	136,000	136,000	0	0	10,667	9,917	146,667	145,917
Roel Slotman	126,000	126,000	0	0	10,386	9,636	136,386	135,636
Jürgen Tenbrink	124,466	124,466	0	0	13,403	12,654	137,869	137,120

*Other compensation includes benefits in money's worth resulting from the use of company cars as well as the portions of the D&O insurance attributable to the Executive Board members

Supervisory Board

Appointees to the Supervisory Board in the reporting period:

> Mr Bernard Ellmann, businessman, (Chairman)

Former Group Vice President of Unilever Group, Rotterdam/London,

Member of the Supervisory Board of Unilever Deutschland Holding GmbH, Hamburg

Chairman of the Supervisory Board of Finco Signature BV. Losser, the Netherlands

 > Mr Hans-Joachim Jung, businessman, (Vice Chairman)

Former member of the Executive Board of KELAG Kärntner-Elektrizität Aktiengesellschaft

> Mr Michael Böging, businessman

Managing Partner of Unternehmensgruppe Weiße Köpfe GmbH, Emstek

The expenses for the compensation of the Supervisory Board in the fiscal year 2014 include fixed compensation for the Supervisory Board activity at EnviTec Biogas AG in an amount of EUR 40,000 (previous year: EUR 40,000).

Other compensation (meeting attendance fees and refunds of expenses) totalled EUR 18,000 (previous year: EUR 24,000).

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40. Post balance sheet events

Merger

Under the merger agreement dated 1 January 2015, the following companies were merged with Zweite Biogas Anklam GmbH & Co. KG:

- > Dritte Biogas Anklam GmbH & Co. KG
- > Vierte Biogas Anklam GmbH & Co. KG
- > Fünfte Biogas Anklam GmbH & Co. KG
- > Sechste Biogas Anklam GmbH & Co. KG
- > Biogas Quakenbrück GmbH & Co. KG
- > Biogas Kalefeld GmbH & Co. KG

At the time of the preparation of the consolidated financial statements, the mergers had not yet been entered in the Commercial Register.

Application of profits

At the shareholders meeting Executive Board and Supervisory Board of the EnviTec Biogas AG will propose to the stockholders a dividend of 0.35 EUR per share. In consideration of own shares these corresponds to an amount of EUR 5,198k.

As the payout of dividens requires the agreement of the shareholders meeting no liabilities have been accrued in the balance sheet.

Lohne, den 11 May 2015

Olaf von Lehmden

Jörg Fischer

,enc

Jürgen Tenbrink

Roel Slotman

Fixed asset schedule as at 31 december 2014

xec EL	I Assets IR	Balance on 01/01/14	Addition 2014	Addition first consolidation	Disposals 2014	Rebooking 2014	Balance on 12/31/14
				Historica	al costs		
	Intangible Assets						
1.	Concessions, industrial property and similar rights and assets, and licenses in such rights ans assets						
		2,439,979	56,411	2,134,775	266,804	71,314	4,435,674
2.	Goodwill	4,358,457	0	5,334,048	0	0	9,692,505
2.	Prepayments	76,213	247,968	0	8,713	-67,500	247,968
		6,874,649	304,379	7,468,822	275,516	3,814	14,376,147

II. Tangible Assets

		156,897,406	19,443,135	19,669,501	2,149,175	-3,814	193,857,051	
4.	Prepayments and construction in process	3,148,791	11,421,385	4,904,838	57,242	-12,530,583	6,887,189	
3.	Other equipment, factory and office equipment	15,514,841	3,376,874	358,002	1,954,805	2,165	17,297,077	
2.	Technical equipment and machinery*	104,660,223	3,554,723	11,298,129	112,732	7,385,202	126,785,545	
1.	Land, similar-rights and buildings including buildings on leasehold hand	33,573,550	1,090,153	3,108,531	24,397	5,139,402	42,887,239	

163.772.055	10 747 514	07 100 000	2,424,692	0	208.233.198
103,772,055	19,747,514	27,138,323	2,424,692	0	208,233,198

Balance on 01/01/14	Addition 2014	Disposals 2014	Write up 2014	Balance on 12/31/14	Balance on 12/31/14	Balance on 12/31/13
		Depreciation			Book	value

2,097,529	422,374	266,767	0	2,253,136	2,182,538	342,450
0	0	0	0	0	9,692,505	4,358,457
0	0	0	0	0	247,968	76,213
2,097,529	422,374	266,767	0	2,253,136	12,123,011	4,777,120

 737,062	0	0	0	737,062	6,150,127	2,411,729
8,420,837	1,900,762	1,279,644	0	9,041,956	8,255,122	7,094,004
24,535,037	10,862,559	45,492	153,045	35,199,059	91,586,486	80,125,186
5,618,683	2,136,413	0	0	7,755,095	35,132,144	27,954,867

I	41,409,149	15,322,109	1,591,903	153,045	54,986,310	153,246,890	122,362,906

Fixed asset schedule as at 31 december 2013

n El	d Assets UR	Balance on 01/01/13	Addition 2013	Disposals 2013	Disposals spin off 2013	Rebooking 2013	Balance on 12/31/13		
_		Historical costs							
	Intangible Assets								
1.	Concessions, industrial property and similar rights and assets, and licenses in such rights ans assets								
		2,245,657	195,690	0	1,368	0	2,439,979		
2.	Goodwill	4,358,457	0	0	0	0	4,358,457		
2.	Prepayments	57,098	19,115	0	0	0	76,213		
		6,661,212	214,805	0	1,368	0	6,874,649		
II.	Tangible Assets								
1.	Land, similar-rights and buildings including buildings on leasehold hand	33,473,089	3,641,941	56,925	3,484,555	0	33,573,550		
	Technical equipment and machinery	86,645,529	12,031,160	0	16,263,199	22,246,732	104,660,223		
2.			731,520	2,362,995	678,859	25,020	15,514,841		
	Other equipment, factory and office equipment	17,800,156							
2. 3. 4.		17,800,156 23,843,785	1,945,408	45,736	1,600	-22,593,066	3,148,791		

168,423,772	18,564,833	2,465,656	20,429,581	-321,314	163,772,054	
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* Values in column rebooking also show rebooking into current assets.

Balance on 01/01/13	Addition 2013	Disposals 2013	Disposals spin off 2013	Balance on 12/31/13	Balance on 12/31/13	Balance on 12/31/12
		Depreciation			Book v	alue
1,811,164	287,597	0	1,232	2,097,529	342,450	434,493
0	0	0	0	0	4,358,457	4,358,457
0	0	0	0	0	76,213	57,098
1,811,164	287,597	0	1,232	2,097,529	4,777,120	4,850,048
4,317,204	2,160,573	0	859,095	5,618,683	27,954,867	29,155,885
22,086,693	9,368,926	0	6,920,582	24,535,037	80,125,186	64,558,836
22,000,000	3,300,320	0	0,920,902	24,000,007	00,123,100	04,550,050
8,925,825	1,818,306	1,938,642	384,652	8,420,837	7,094,004	8,874,330
407,073	329,989	0	0	737,062	2,411,729	23,436,712
35,736,796	13,677,794	1,938,642	8,164,329	39,311,620	117,585,786	126,025,763
,		,,	.,,		,,	
	40,005,004	4 000 010	0.407-704	11 100 110	100 000 000	400.075.04
37,547,960	13,965,391	1,938,642	8,165,561	41,409,149	122,362,906	130,875,811

Independent Auditors' Report

We have audited the consolidated financial statements prepared by EnviTec Biogas AG, Lohne, comprising the balance sheet, the income statement and statement of comprehensive income, statement of changes in equity, cash flow statement and the notes to the consolidated financial statements, together with the group management report which is combined with the management report of EnviTec Biogas AG for the business year from January 1 to December 31, 2014. The preparation of the consolidated financial statements and the group management report in accordance with IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to § 315a (1) HGB and supplementary provisions of the articles of incorporation are the responsibility of the company's management. Our responsibility is to express an opinion on the consolidated financial statements and on the group management report based on our audit.

We conducted our audit of the consolidated financial statements in accordance with § 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institute of Public Auditors in Germany (Institut der Wirtschaftsprüfer). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the consolidated financial statements in accordance with the applicable financial reporting framework and in the group management report are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Group and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the consolidated financial statements and the group management report are examined primarily on a test basis within the framework of the audit. The audit includes assessing the annual financial statements of those entities included in consolidation, the determination of entities to be included in consolidation, the accounting and consolidation principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated

financial statements and the group management report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion, based on the findings of our audit, the consolidated financial statements comply with IFRSs as adopted by the EU, the additional requirements of German commercial law pursuant to § 315a (1) HGB and supplementary provisions of the articles of incorporation and give a true and fair view of the net assets, financial position and results of operations of the Group in accordance with these requirements. The group management report which is combined with the management report of the company is consistent with the consolidated financial statements and as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

Munich, 11 May 2015

Rödl & Partner GmbH Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft

gez. Ronald Hager Wirtschaftsprüfer

gez. Joachim Heinrich Wirtschaftsprüfer

GLOSSARY

GLOSSARY

Α

Acetic Acid

The oldest known and most important carbonic acid to this very day, it is an important base for methane accumulation.

Acid level

The total acid in the fermenter. High loads in the fermenter in the starting phase lead to a very high concentration of acid.

Adaptation

Ability of microorganisms to adapt to an elevated ph level without experiencing sustained disturbances in the process biology.

Aerobe

A microorganism that grows in the presence of oxygen. See Anaerobe organisms.

Agitator

Machine for the consistent mixing of substances in tanks.

Air Pollution Prevention

In some countries it may be necessary to observe the emissions of odours, harmful substances and dust.

Amino acid

Any of the 20 basic building blocks of proteins. Composed of a free amino (NH_2) end, a free carboxyl (COOH) end, and a side group (R).

Anaerobic organisms

Organisms which can temporarily or continuously live without free oxygen. Anaerobic bacteria convert biomass into fermentation (bio) gas.

Anhydrous mass

Organic and inorganic components of the input material. Only the organic part of the anhydrous mass can be used for methane production.

Anionic trash

Substances that can impair the functionality of the plant and are removed manually or mechanically.

Antibiotics

A class of natural and synthetic compounds that inhibit the growth of or kill other microorganisms. Also used as feed additives that inhibit the process biology and aerosis similar to the inhibitors NH_4 and NH_3 as well as the heavy metals copper and zinc.

В

Bacterium

A single-celled, microscopic prokaryotic organism: a single-cell organism without a distinct nucleus.

BHKW (Blockheizkraftwerk) Block heat and power plant.

Biogas

Gas which develops during the anaerobe

decomposition of organic substances.

Biogas Cleaning

Precipitation of humidity and corrosive gas from the biogas to protect the engine.

Biomass

Energy source from organic substances, where scorched biomass releases only the amount of CO_2 which it has taken from the atmosphere during growth. That's why the energy production does not contribute to the greenhouse effect.

Block heat and power plant

Engine with an attached generator for production of electricity and heat.

С

Carbon dioxide

Gas that develops when fossil combustibles like coal, oil or natural gas are used. CO_2 is the main cause for the greenhouse effect that changes the climate.

Cellulose

Cell membranes which are hard to decompose microbially.

Coal

Fossil energy source with low energy content. Almost two thirds of the electricity used in Germany is produced in coal power plants. In comparison to all other energy sources, the coal causes the highest CO emissions.

Colonisation surfaces

Serve bacteria as location/surface habitat.

Combustion engine system

Engine for the production of electricity, steam, hot water and process heat.

Combustion heat output

Amount of energy from a BHKW that is necessary for a full load operation.

Condensate

Humidity that is separated from biogas through condensation.

Condensate shaft

Shaft for collecting and pumping down of the accumulating condensate.

Condensation

Transition from a gaseous to a fluid aggregate state.

Container load

> Digestor load

Corn acceptance

Accepting technique for supply inventory and consistent feeding of a biogas plant with corn silage.

Corrosion

Chemical alterations in the material at the surface of solid bodies, i.e. the fermenter.

Crusher

Conditioning method with the target to increase the accessible surface of the material.



Decomposition speed

Speed of decomposition of the organic substance. It depends on the condition, surface and composition of the basic substances as well as the temperature in the fermenter.

Deodorisation

Removal of disturbing odours of odour-intensive substances to avoid emission.

Deposits

Procedure that occurs especially in heterogeneous substances which tend to segregate and which can be avoided in a container with smooth walls, agitator and a flow temperature that is not too high.

Desulphurisation

Precipitation of hydrosulphide from biogas.

Digester

> Fermenter

Digester load

Amount of additives consisting of organic dry substances per cubic meter of fermenter volume and day.

Dry fermentation

Plant in which predominantly dry substrates are fermented to become compact and which cannot be agitated. This supplies less gas than wet fermentation.

DVGW-Codes

Codes for the manufacturing of gas containers.

Е

Ecology

The study of the interactions of organisms with their environment and with each other.

Ecosystem

The organisms in a plant population and the biotic and abiotic factors which impact on them.

Electricity home requirements

Electricity requirement of the plant in order to hold up the operation.

Emission

Releasing of harmful substances, dust or odours into the environment.

Enzymes

Proteins that control the various steps in all chemical reactions.



Fermentation

Process of turning biomass into biogas with the aid of microorganisms.

Fermenter

Airtight heated tank for the anaerobe decomposition of organic substances.

Fermenterheater

Heating system in the fermenter for acceleration of decomposition of anaerobe substances.

Fermenting

Biochemical process in which organic sub-stances are decomposed through anaerobe microorganisms and energy is obtained.

Fermenting residue processing

Separation of the fermenting residue into solids, fertiliser concentrate and water in special treatment plants.

FederalimmissionProtectionLaw (Bimschg)

German law with the goal to protect people, animals, plants, soil, water, atmosphere, cultural and other real assets from harmful environmental effects.

Fertilising value

Quality of the fermenting residue regarding certain substances of content, e.g., nitrate, phosphate or potash.

Flare

Safety device for safe combustion of excess gas.

FlexoRoof

Roof cover made of foil for fermenters and storage tanks with or without gas storage bubble.

Flow temperature

Temperature in the heating water before the heat is withdrawn in heat usage.

Fos (volatile organic acids) Amount of different acids in the fermenter measured in mg/l.

Fossil energy sources

Energy source which, in contrast to renewable raw materials, does not grow again. Brown coal, anthracite, natural gas and crude oil are such fossil energy sources.

Fuel cell

It turns hydrogen and oxygen into water by releasing energy and heat.

G

Gas engine

Piston-power machine that is driven by combustible gas. It is used among other things for power- and heat generation in block heat and power plants and biogas plants as well as drives for vehicles.

Gas injection

Method for mixing different substances in the fermenter. Biogas is compressed by high pressure through injectors at the bottom of the fermenter.

Gas membrane

Gastight foil for collecting and storing biogas.

Generation of methane

Process that occurs during the production of biogas.

Generation time

Time it takes for reproduction of bacterial cultures.



Hammermühle (hammermill)

Electrical device for processing input substances by crushing the material.

Heat exchanger

Apparatus for conveying heat between two heating systems.

Heat value

Energy contents of fuel gas; unit: kilowatt hour per norm cubic metre.

Hydrolyse

One of a total of four biochemical single processes in the fermenting of biomass. With the aid of microorganisms, amongst others, the biopolymers are separated into monomeric basic modules or other soluble decomposition products.

Hydrosulphide

Type of gas that is generated during the biogas production and has to be separated from biogas through desulphurisation before it can be used, because it can cause corrosion damage in the engine.

Hygienisation

Pasteurising, i.e. heating of the input material to 70 degrees centigrade for one hour to kill the bacteria and germs.

Immission Protection Law

Regulation for plants for biological treatment of waste products. According to this regulation, it may not come to a dangerous impact on humans, animals or nature

Immersion agitator

Fast-running propellers which mix the input substances evenly at 300–400rpm. variable position within the fermenter.

Inhibition

Process which slows down the generation of methane, e. g. through acids.

Input material

Substances which are suitable for the operation of a biogas plant, like liquid manure, dung, bio waste, renewable raw products, etc.

Insulation

Heat insulation of components against frost, protection against loss of heat and prevention of temperature fluctuation.

L

Lignin

Wood substance or an element in the wood which cannot be decomposed in the anaerobe process

Longdistance heating

Heat that develops during the power production in heating- or block heat and power plants. It gets to the consumer by help of steam or hot water through pipelines.

Μ

Maintenance

Regular testing, replacing and servicing of plant components.

Manhole

Inspection opening in the container wall

Membrane technique

Filtration technique with pore-membranes for cleaning of waste water.

Methane

Combustible type of gas which is generated during the bacterial decomposition of biomass. Methane is the substance in biomass that can be used for energy production. The higher its proportion the more valuable i. e. higher in energy is the biogas.



NawaRos (Nachwachsende Rohstoffe) > Renewable primary products

Natural gas

Fossil fuel. Natural gas is considered the cleanest fossil energy source, because it contains the lowest amount of carbon in comparison to coal and crude oil and thus generates the least CO_2 emissions.

Noise emission

In the process of licensing a plant, some countries have noise emission levels that should not be exceeded.

Noise reduction

In some countries it may be necessary to consider the location, building materials and the execution of the construction because of the noise emission limitations.

Nuclear energy

Heat energy that is released when splitting uranium atomic nuclei. 27 % of the electricity in Germany comes from nuclear power plants. Because of the risks in splitting atomic nuclei and disposing of the fuel rods, the last German

nuclear power plant is planned to be taken off the net in 2025.

0

Oxygen

This is gas that is colorless, flavourless and odourless. Free oxygen is found as an element of the air. It makes approx. 20.8 % of the oxygen on earth. In its combined form, it can be found in water and many minerals. Altogether it makes 49.5 percent of the weight on the surface of the earth and is thus the most frequently found element.

Output

Capacity of a plant in tonnes or time units per day.

Organic Rankine cycle Plant (ORC)

Plant for the use of electricity from industrial waste heat using high-speed Organic Rankine cycle (ORC). An Organic Rankine Cycle uses a heated chemical instead of steam, as used in the original Rankine Cycle. Chemicals or refrigerants.

Р

Pasteurising

> Hygienisation

Ph level

Measured level for the concentration of the hydrogen ions in a solution. A ph range between 6.5 and 7.2 is ideal, higher or lower levels disrupt the process biology.

Photovoltaics

Energy production through solar energy with the aid of solar collectors that convert light into electrical power.

Pilot injection gas engine

This is an engine on the basis of a diesel engine that was converted for biogas use. It needs backup firing equipment and is not as long living as a gas engine.

Placing into operation

Official start of plants or parts of plants, as a general rule the beginning of the warranty period.

Plant safety

Particular demands on hazardous areas, e.g., combustible atmosphere in gasholders through establishment of fire breaks, etc. according to the VDE regulations.

Powerheat

Process in which electricity is produced and at the same time the waste heat of the BHKW is used. KWK plants, in comparison to conventional technologies, reduce emissions of CO_2 and other harmful substances by 30-40 %.

Pressure control device for pipes

Safety equipment for pressure monitoring.

Propagation calculation

Calculation of the immission prognosis of pollutants and odours. It considers wind direction, wind velocity, vertical temperature layers, etc.

Propinoic acid

Type of acid which is not desired in the process. It is generally enriched in process failures and is an additional obstruction for the aerobic metabolism.

Protein

Proteins are generally based on amino acids, which are the most important input substances next to carbohydrates and fats.



Raw glycerine

Substance that accrues when biodiesel is made.

Recirculation shaft

Insulated tank which holds fermenting substrate after it is taken from the fermenter. It is necessary, for example, when the fermenting substrate is used for mixing the fermenter input material.

Regenerative energy sources

Resources which are not limited in comparison to fossil energy sources, i.e. water, wind, photovoltaics and biomass. On top of this, they are climateand environment-friendly.

Renewable energies

> Regenerative energy sources

Renewable primary products

Products from agriculture or forestry operations used for industry or the production of heat, electricity and other forms of energy.

Retention period

Time period that the substance remains in the fermenter and is incumbent to the organic decomposition.

Reverse cooling

Process in which the substances that are heated during hygienisation are cooled before being fed into the fermenter

Risk material

Input material that cannot be used for fermenting because of its risk potential.

Rotary piston pump

Device for inserting substances into the fermenter.



Sedimentation > Sedimentary deposition

Sewage sludge regulation

Regulation which determines the limit value for the pollution of sewage sludge with heavy metal and other harmful substances, among other.

Stable disinfectant

Substances that can retard the biogas production when overdosed.

Steam production plant

Plant for production of hot steam and process steam.

Squeeze ramming separator

Device for separating particulate material from suspension.

Switching room

Location of the central control station of a biogas plant.



TA air Technical manual for air pollution prevention.

TA noise

Technical manual for the evaluation of sonic immissions .

Total acid concentration

Amount of the different acids in the fermenter, measured in milligramme per litre.

U

Ultrafiltration

Procedure for the conditioning of fermenting residue. It normally takes place after the first compact/liquid separation and is the precursor of reverse osmosis.



Vaporising facility

Facility for vaporising water to lower the water contents in a product.

Vertical flow

Vertical movements of substrates in a tank.



Water power

Natural power source for the electricity production. More than 20 % of the electricity worldwide originates from water power plants. Only 20 % of the water power assets worldwide are used.

Watt

Unit of measurement for electrical power capacity according to James Watt (1736 – 1819), the inventor of the steam engine. 1 kilowatt = 1,000 watts; 1 megawatt (mw) = 1,000,000 watts.

Wet Fermentation Plant

Reactor where substrates are fermented within liquids.

Wind power

Inexhaustible energy source where the natural current energy of the wind is used for electricity production.

FINANCIAL CALENDAR

<u>15 MAY 2015</u> ANNUAL ACCOUNT 2014

25 JUNE 2015 ANNUAL GENERAL MEETING

<u>30 SEPTEMBER 2015</u> INTERIM REPORT 2ND QUARTER 2015

IMPRINT

PUBLISHER

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