

High Temperatures and Fair Heat

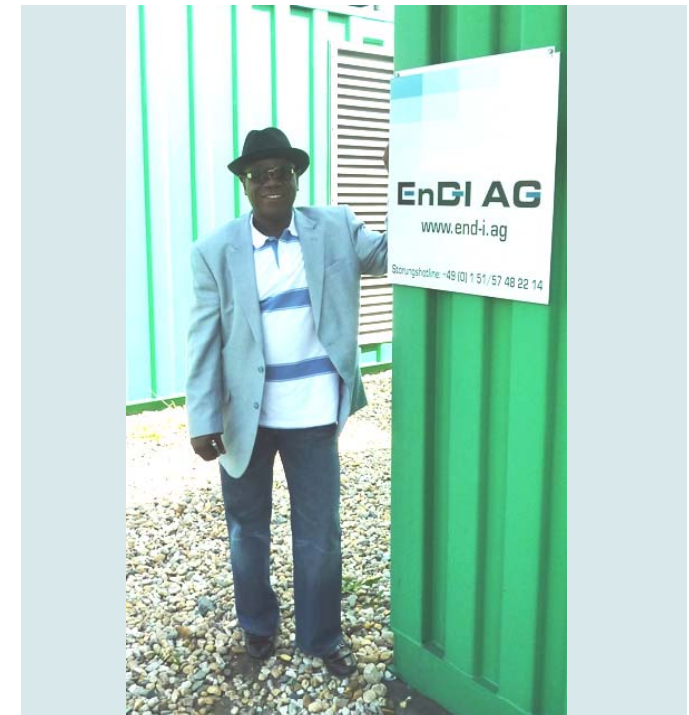
On Friday July 2, we celebrated the laying of the foundation stone for a new biogas plant close to Saelhuysen, a village in the lower Rhine region. Despite suffocating heat (according to "Neue Rheinzeitung") and Soccer World Championship we could welcome quite a number of guests. As it took almost five years to get through all the permit procedures and overcome all resistance, nobody wanted to miss this event. Now we are sure that we will convince all sceptics once the plant is in operation and that next time we will also get quicker through the permit procedures. Particularly with Saelhuysen we make decisive progress towards more efficient production of biogas, due to a more advanced design and dimensioning of the plant. With this know-how we will develop new projects in the next few months.

In Saelhuysen we are especially proud that the heat generated in the CHP can be used very reasonably. From the beginning of next year we will be able to heat the greenhouses of a big market garden in the neighbourhood and also provide the buildings with heat and warm water. Especially this mixture between electricity and

distant heating makes biogas so attractive. Particularly when biogas is converted into bio methane and is delivered to a CHP which is close to the customers through the natural gas grid.

Unfortunately, up to now this solution is not feasible, due to restrictive regulations concerning the transmission. With a lot of public expenditure from federation and federal states distant heating systems have been established in Germany which are supplied with natural gas and coal, while the transmission of heat ecologically produced on the basis of bio methane is not admitted in many cases. Here we would really like to have a fair competition for all, i.e. also for producers of biogas. As already done with the electricity and gas grids, distant heating grids should also be accessible for all, without any restrictions. In this spirit we wish all the readers of EnD-I News a beautiful summer.

Karl-Heinz Pasch Hans-Joachim Nebel
Management Board of the EnD-I AG



At the beginning of June the Ghanaian business man Richmond N. Aggrey (photo) visited EnD-I's landfill gas and biogas plants. He was especially interested in the production process of electricity and heat from landfill gas in a CHP. Aggrey, who is business partner to EnD-I and is also active on the political scene in his home country, was quite impressed by the simple but nevertheless highly efficient technology of the landfill gas plants. The objective is to install similar plants in Ghana with the assistance of EnD-I.

Masthead

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Representatives from politics and industry celebrated on Friday, June 2, the laying of the foundation stone for a biogas plant in Saelhuysen in the lower Rhine region. After its completion, this biogas plant will be one of the most modern throughout Germany

Annually about 34 000 tons of substrates are fed into the plant. The substrates come mainly from agro crops from the vicinity and will be converted into 1.2 MW el power. The electricity will be fed into the public grid. Due to further developed process engineering the plant is highly efficient and consequently environmentally friendly. "No one in the neighbourhood has to be afraid of unpleasant odour". These were the words of Karl-Heinz Pasch, chairman of EnD-I board and at the same time one of the building owners.

Together with the Naturgas Niederrhein GmbH, which is an association of local farmers, EnD-I built the new plant through the project company Bionergie Saelhuysen GmbH & Co. KG. With this, the local farmers are linked up as suppliers to the project. Moreover, here we developed a plant concept which is optimally adapted to the local conditions. In order to produce the biogas

An Important Step Towards Improved Efficiency

for the generation of electricity the farmers in the vicinity of Saelhuysen will supply about 26 000 tons of agro crops – mainly maize, but also intermediate crops to the plant. About one third of the needed substrates will be liquid manure.

Thanks to the huge process of the engineering know-how of EnD-I the substrates can be processed in the digesters much more efficiently than in the regular plants so far, i.e. six kg organic dry substrate per cubic metre digester volume instead of so far only four kg dry substrate.

That makes the whole plant more compact, reduces construction costs by about 20% and helps to save energy: the need for own energy e.g. for electricity and other operational costs will also be decreased.

The operators pay extreme attention that no unpleasant odours will occur. The outlet air is extracted and cleaned in bio filters. The fermentation residues are also dried before they are spread on the fields. Through this procedure the development of odour is minimized in comparison to original liquid manure. Through this drying process even the transportation problem is smaller.



Together representatives of stakeholder groups put according to good old tradition the construction plans in a PVC tube as a replacement of the foundation stone. This will be buried in the foundations of the plant (please see picture on the left). Here from left to right: Rolf Pütz, (authorized signatory of Florack GmbH), Peter Benger (managing director NGN), Klaus Kleinenkuhnen (mayor of Rheurdt), Karl-Heinz Pasch (chairman of the board of EnD-I AG), Hermann-Josef Pasch (managing director, NGN)

Facts about the plant

Building owner	Bioenergie Saelhuysen GmbH & Co. KG
Capacity	1.200 kW el
Investment	5,4 Mio. €
Substrates	ca. 34 000 t/year
Beginning of construction	1st May 2010
Planned start of operation	31st December 2010

Happy Birthday to Hans-Joachim Nebel Who is 60 years



EnD-I AG in the media: Biogas market – more courage for market

In the issue no. 6 of “Energiewirtschaftliche Tagesfragen” (in its 60th year 2010) a much discussed article of Karl-Heinz Pasch was published

You can read it here:

www.end-i.ag -> News - > Presse

About 60 invited guests came to the birthday reception of Hans-Joachim Nebel organized by EnD-I AG in the garden of the main offices. Again cordial congratulations!

We would like to take this opportunity to thank all the sponsors who donated money to the HFL Hallesche Leichtathletik Freunde (Halle Friends of Athletics) instead of a birthday present to Hans-Joachim Nebel. It was his explicit wish. As a special gift from the colleagues from EnD-I Mr. Nebel got a golden cycle helmet which is meant to protect him also during his future trips all over Germany (picture above on the left).

Below on the left: Wolfgang Eschment (advisory board of EnD-I AG) and Tobias Gottschalk (EWE), below on the right: Dagmar Szabados (supervisory board EnD-I), Heidi Eckert (meeting chairperson of Hallesche Werfertage (thrower festival)), Ingrid Häußler (president of HLF) and above on the right: Matthias Lux (managing director of Stadtwerke Halle GmbH (Public Utilities)).