

## **Delegation visit to Germany, October 2017**

### **‘Biogas from Biogenic Residue and Waste Material’**

The Indo-German Chamber of Commerce (IGCC) together with Baden - Wuerttemberg international (BW-i) organised a fact-finding Mission to Germany in October 2017, on the topic-‘Biogas from Biogenic Residue and Waste Material’. This visit was organised on behalf of the German Federal Ministry of Economic Affairs and Energy (BMWi). The IGCC was also supported by the German as well as the Indian Biogas Association. The programme took place from the 9<sup>th</sup> to 13<sup>th</sup> of October in Stuttgart and surrounding areas of Baden-Wuerttemberg and Bavaria. 12 representatives from 11 Indian companies took part in this 5 day trip. The delegates were mainly from the sector of waste management and biogas as well as manufacturers of equipment and components for biogas plants.

The programme officially kick-started on the 9th of October, with a workshop which was held at the famous “Haus der Wirtschaft” in Stuttgart where the participants received an overview of the current status and new developments in the biogas market in Germany as well as regulatory framework to support the market. Other topics covered were biogas from municipal organic waste as well as agricultural waste. Of special interest was the presentation on cooling application with biogas developed by the company Bert Energy GmbH.

On the other days visits to various installations were organised which covered the entire value chain of the industry and various applications of biogas. The delegates had an opportunity to visit State Institute of Agronomy and Bioenergy, at the University of Hohenheim where Prof. Dr. Oechsner presented about the research on various topics in biogas. They also visited a biogas plant in Kemnat where kitchen waste from canteens & restaurants is the substrate and which has an electricity output of approx. 200 KW. One of the highlights of the trip was the visit to the ultra-modern mechanical-biological waste treatment plant installed by Kahlenberg Waste Treatment Association (ZAK) in Ringsheim, which is patented throughout Europe was organised. Here the participants got to see the use of the innovative “Maximum Yield Technology” MYT where the municipal solid waste is used to recover valuable material and minerals, produces refuse derived fuels as well as biogas for the generation of electricity and thermal energy for the district heating network.

Another highlight was the visit to a bioenergy village Wildpoldsried in the scenic region of Allgau in Bavaria. Wildpoldsried has about 2,600 residents, who have actively participated in the past 18 years and invested in a holistic range of renewable energy projects that include district heating network and 4,983 kWp of photovoltaics, five biogas facilities, 11 wind turbines and a hydropower system and a smart grid which regulates the power from various sources. As a result, the village has gone beyond energy independence – and it now produces 500% more energy than it needs and profits from sales of the surplus power back to the grid.

Additionally the group also visited Schradenbiogas GmbH & Co. KG which uses wet fermentation processes as well as a plant installed by BEKON GmbH in Wangau which uses dry fermentation process to produce biogas. Also of great interest was the visit to an agricultural enterprise engaged in poultry farming and vegetable farming, Lohwiesenhof, which also generates biogas from agricultural feedstock such as grass and manure. The biogas is used to generate electricity in a CHP unit with an output of 190kW and the waste heat of the CHP is used to heat the operating buildings or for the absorption refrigeration system to cool the storage rooms.

The organisation of the trip was highly appreciated by the participants as it covered the various aspects of biogas sector. The companies and institutions which hosted the Indian delegation gave them a good insight into the entire system of preparing and processing waste and the practical aspects of operating the plants. The exposure to new technologies as well as to set practices and examples of large scale and operational biogas plants was an enriching experience for the delegates. We hope that this also gives a much needed impetus to the Indian biogas industry.

For further details please contact:

Dipti Kanitkar, Tel: 020-4104 7121, [dipti.kanitkar@indo-german.com](mailto:dipti.kanitkar@indo-german.com)