



Sardar Swaran Singh National Institute of Bio-Energy  
Kapurthala, India



German RETech Partnership  
Recycling & Waste Management  
Made in Germany

## Exchange Programme on Rice Straw Biogas Technology and its Implementation

### Summary of the programme

A bilateral Exchange Programme between India and Germany on 'Rice Straw Biogas Technology and its Implementation' was conducted on May 05, 2021 at 14.30 hrs IST / 11.30 hrs CET. The main objective of the exchange programme was to facilitate technical exchange, knowledge and technology transfer sharing between the participants from both the sides. More than 20 participants technical experts, stakeholders, researchers, academicians and technology facilitators attended the programme. The participants learnt from each other about the developments in the Indian RICE STRAW to BIOENG initiative and came out with possible technical solutions to resolve issues related to pre-processing of rice straw, digester plant design and operation and maintenance of such plants. The programme began with welcome address by **Mr. Dinesh D. Jagdale**, Joint Secretary, MNRE and Director General, SSS-NIBE. He gave an overview of initiatives taken by Government of India to mitigate the energy and environment issues and offered complete support from his ministry in taking up DEMO projects in joint collaboration. He also appreciated the initiative taken by SSS-NIBE and German RETech Partnership. Further, the presentations were delivered by technical experts from both the countries. **Mr. Gaurav Kedia**, Chairman, Indian Biogas Association emphasized on technical challenges in the setting-up of rice straw based large-scale biogas plants and suggested pre-treatment as one of the challenges and provided some possible solutions. **Mr. Srinivas Kasulla** – Director, Arka Brenstech Private Limited emphasized on technical issues in rice straw collection, transportation and storage and also shared case studies of different states of India. Later, **Dr. Sachin Kumar**, Dy. Director, SSS-NIBE shared technical challenges starting from supply chain management to rice straw handling and its processing to biogas. He also presented the research work, a novel thermophilic anaerobic digestion, carried out at SSS-NIBE. From German side, **Mr. Lars Weiss**, Sales Engineer, Tietjen Verfahrenstechnik GmbH gave presentation on the technical options for Pre-Treatment of Rice straw developed by their inhouse team. In continuation, **Dr. Robert Lackner**, Sr. Sales Manager, Thöni Environmental Energy Engineering suggested solutions for handling rice straw in digester with their highly efficient agitator. He also suggested TNV Semi-Dry AD Treatment of Rice Straw, as a possible solution which works with 15% DS and has almost no Liquid digest. At the end, a panel discussion was moderated by **Mr. Brijesh Patel**, Head of working group – India at German RETech Partnership. e.V. The participants raised their queries, which were answered by the experts. The programme was ended with the vote of thanks by Dr. Sachin Kumar.



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## **Background**

The Ministry of New and Renewable Energy (MNRE) has been supporting programmes for promoting biogas as a clean fuel for domestic cooking, off-grid and grid power generation and bio-CNG for transport applications. Biogas generation from agriculture waste is also emerging as potential area not only for biogas generation but also as climate change concerns in view of recent environmental risk due to burning of paddy straw in the farms of Haryana and Punjab states. Thus, there is a strong need to take up research and development initiatives for technology development and demonstration to integrate biogas technology for biogas generation for various applications and biofertilizer for sustainable energy and agriculture development. Biogas technology development and validation in integrated manner need to be addressed to make the biogas technology as potential source of energy and sustainable agriculture development.

## **About Sardar Swaran Singh National Institute of Bio-Energy (SSS-NIBE)**

Sardar Swaran Singh National Institute of Bio-Energy is an autonomous Institution of the Ministry of New and Renewable Energy, Govt. of India. The vision of the Institute is to carry out state-of-the-art research and development, demonstration, testing and standardization activities, including human resource development at all levels, post-doctoral research and research for wide promotion of bioenergy in the country. SSS-NIBE is located in the state of Punjab on Jalandhar-Kapurthala Road, 18 km away from Jalandhar city towards Kapurthala. The Institute is located in between Punjab Technical University and Pushpa Gujral Science City. Jalandhar is well connected both by railways and roadways with the nearest airport at Amritsar.

## **About German RETech Partnership e.V**

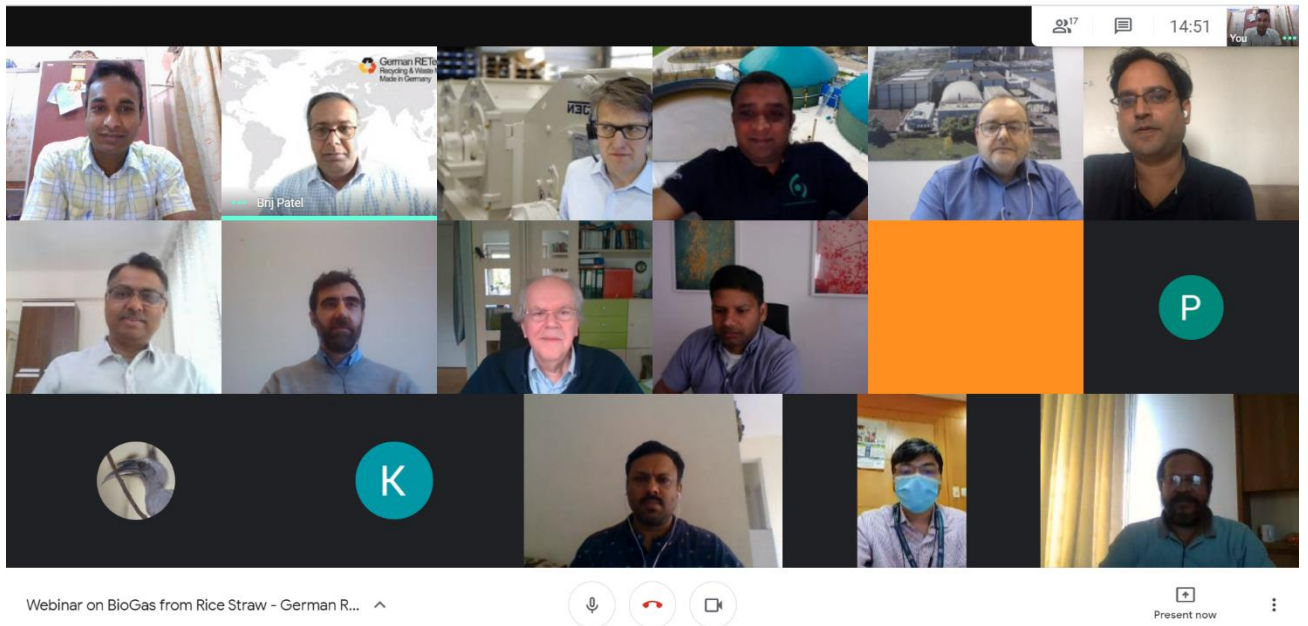
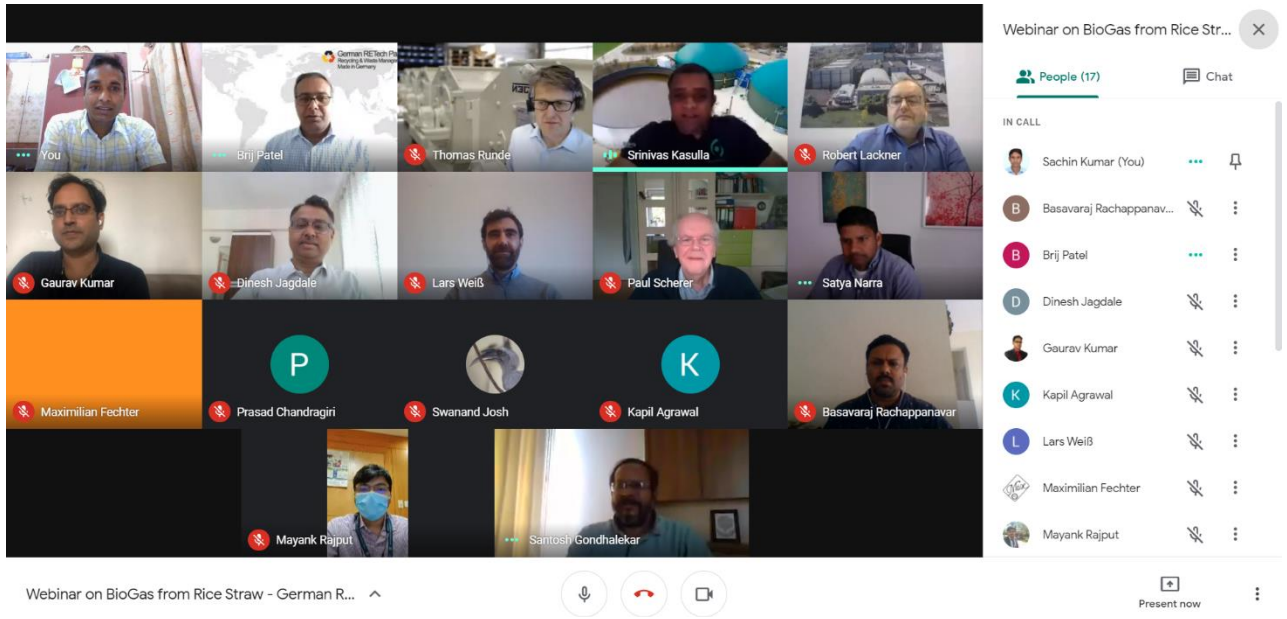
German RETech Partnership is the network of German companies and institutions in the waste management and recycling industry for the export of innovative technologies and the transfer of know-how. RETech consolidates companies and institutions from the entire area of the waste management and recycling industry from collection and logistics to treatment and marketing as well as consultation, planning, research and teaching under one roof. The RETech activities are supported by an advisory body in which the BMU, the BMBF, the BMWi and BMZ, UBA, GIZ, KfW as well as the BDE associations, the bvse, VKU, VAK and VDMA cooperate. Due to this network the RETech platform provides a unique opportunity for supporting the establishment of a well-ordered waste management industry, improving the requirements significantly for the export of German waste management and recycling technology.



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Glimpses of the programme