

## **Project Dealing with Energy Research in the Altmark Region started at the Max Planck Institute Magdeburg**

17.02.2017 - In the presence of representatives of the energy agency 'Altmarkkreis Salzwedel' and the department 'gas power grid development' of the Avacon AG, the cooperative project 'Altmarkenergie' was launched at the Max Planck Institute for Dynamic of Complex Technical Systems in Magdeburg on January 30th, 2017. The aim is the development of concepts for the storage of electrical power from renewable energies together with regional energy producers and -distributors

Surplus wind- and solar power is converted to hydrogen via a power to gas procedure, which is further used for the production of the fuel gas methane. For this procedure, carbon dioxide is required. Therefore, it is the aim to employ excess carbon dioxide which emerges during the conversion of biomass in biogas plants, for the production of methane.

Scientists from six expert groups within the Max Planck Institute Magdeburg as well as researchers from Otto von Guericke University Magdeburg are participating in the four work packages: carbon dioxide separation, methanation, integration into the power grid in Sachsen-Anhalt and whole system analysis for a biogas plant in the Altmark region.

For instance, novel chemical separation methods for the separation of carbon dioxide from gaseous mixtures will be investigated. Furthermore, the biological methanation of carbon dioxide will be analysed theoretically and experimentally. The optimal coupling of natural gas and power network for a secure energy supply is envisioned

and is to be simulated with specific parameters. Ultimately, the entire process for a biogas plant in Gardelegen in the Altmark region is to be analysed.

The project is part of the CDS research field energy conversion.

Dr. Liisa Rihko-Struckmann, project coordinator of 'Altmarkenergie' and scientist at the Max Planck Institut Magdeburg, introduces a test plant for controlling power to gas processes in the Technikum of the Max Planck Institute to the cooperating partners.



Photograph: MPI DCTS Magdeburg, Gabriele E

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