



MEXICO

DBFZ Research and Project Country Profile Activities & Partners



DBFZ Activities

DBFZ has implemented R&D projects in Mexico since 2009. The main focus of the activities was on biogas applications and the utilization of solid biomass residues. These projects resulted in a cooperation network between researchers from Germany and Mexico in the bioenergy field.

DBFZ R&D and Project Focus

The main focus of the previous DBFZ engagement in Mexico has been on knowledge transfer, improvement of framework conditions for use of bioenergy as well as exploitation of unused biomass potential. In particular:

- Strengthening and development of scientific bioenergy networks
- Sustainable utilization of forest biomass, agricultural biomass (energy crops, agricultural residues), (biogenic) waste, landfill gas and mine gas
- Sustainable integration of bioenergy in already existing infrastructures
- Development of concepts for self-sustaining energy in agricultural complexes

DBFZ Future Activities

Mexico is one of the focus countries of DBFZ cooperation in Latin America. The DBFZ would like to strengthen its activities in Mexico in the following fields:

- Exchange of the scientific basics of using biomass and biogenic waste material for energy purposes
- Knowledge transfer in the field of biogas production
- Consultancy for organic waste treatment
- Consultancy for biogas out of sewage sludge
- [Projects related to phytomining and phytoremediation](#)
- Interchange of young scientists and PhD students

DBFZ Partners

DBFZ has signed two cooperation agreements with Mexico:

Cooperation Agreements	Universidad Nacional Autónoma de México (UNAM); Instituto Tecnológico de Durango (ITD);
Project Partners	Instituto Tecnológico de Durango; Universidad Nacional Autónoma de México; Universidad Autónoma Chapingo.



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DBFZ Reference Projects (selected)

01/2012- 08/2014	Energy production (biogas) based on various biomass resources (BMBF/DLR) The goal of this collaboration was a transfer of knowledge with mutual benefit. The DBFZ has provided the mexican partners with the technological know-how of energetic biomass utilization with a focus on biogas technology. By contrast, the DBFZ has gained experience and knowledge about the situation in Mexico with regard to the framework conditions, potential, skills and equipment of the partners.
06/2018- 09/2018	Assessment of two biogas plants in Mexico (GIZ) DBFZ evaluated two running biogas plants in order to optimize biogas production and performance. The plants treat solid urban residues. Besides technical aspects, DBFZ also analyzed communal and economic framework conditions.

DBFZ Reference Publications

Zehnsdorf, Andreas; Moeller, Lucie; Stabenau, Nele; Bauer, Aline; Wedwitschka, Harald; Gallegos, Daniela et al. (2018): Biomass potential analysis of aquatic biomass and challenges for its use as a non-conventional substrate in anaerobic digestion plants. In: *Engineering in Life Sciences* 18 (7), S. 492–497. DOI: 10.1002/elsc.201800032.

Gallegos, Daniela; Wedwitschka, Harald; Moeller, Lucie; Zehnsdorf, Andreas; Stinner, Walter (2017): Effect of particle size reduction and ensiling fermentation on biogas formation and silage quality of wheat straw. In: *Bioresource Technology* (245, Pt A), S. 216–224. DOI: 10.1016/j.biortech.2017.08.137.

Rensberg, Nadja (2010): Argentinien, Mexiko und Brasilien. Biomasse (feste Biomasse). In: *Exporthandbuch erneuerbare Energien. Lateinamerika*. 2010/2011. Berlin: Dena.

About the DBFZ

DBFZ is the leading German research institute in the field of energetic and related material use of biomass. The DBFZ monitors and evaluates the most promising applications for bioenergy in theory and practice, realizing research and collaborative research projects at both national and international level, with partners and stakeholders from industry, administration, politics and academia. Currently about 180 scientists in the departments Bioenergy Systems, Biochemical Conversion, Thermo-chemical Conversion and Biorefineries carry out application-oriented R&D that also provides scientifically-based results to support informed political decision making.

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