

Case study:

GIZ (German Development Cooperation)

EnRes Program, Mexico. 2016.

Background

In the framework of technical cooperation between Mexico and Germany, the Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (German Development Cooperation/GIZ) in conjunction with the Secretariat of Environment and Natural Resources (SEMARNAT) and the Secretariat of Energy (SENER) are executing the program "Energy use of Solid Urban Waste in Mexico (EnRes)" from 2014 and until 2019.

The sludge generated in wastewater treatment plants (WWTP) is waste with clear potential for power generation. For that reason, the GIZ hired the German company Akut Partner, which along with the Brazilian company Rotary do Brasil and the Mexican company IBTech® are advising the GIZ to develop the line of work for the utilization of WWTP sludge from the EnRes Program.

EnRes program objective

Introduce the use of energy as an option for waste management in Mexico.

Specific activities about sludge topic

1. Accompaniment of demonstration projects:
 - Identification of demonstrative plants, technical-economic review, advice, accompaniment in implementation and operation, as well as assurance of an economically sustainable operation.
2. Strengthening of financing instruments:
 - Identification of financing options, Economic feasibility study, project evaluation model
3. Support for knowledge exchange and capability development:
 - Support professional training, technical guide for biogas use, provide technical support, promotion of cooperation between water operator organisms, promote dialogue
4. Technical advice to partners:
 - Awareness, establishment of working groups, review and proposals for improvement of norms and standards, systematization

Resultados of the advice

1. Agreement with ANEAS-GIZ to introduce the issue of energy use of biogas in WWTP.
2. Nine (9) municipal WWTPs visited with potential for energetic use of sludge, which derived the elaboration of four (4) technical-economic evaluations of biogas reuse projects carried out to support the search for investment funds.
3. Accompaniment to the demonstration project "WWTP León" (Mexico) for the start-up of the biogas desulfurization system (in process).
4. Development of "Technical Guide for the management and use of sludge in WWTPs", published by GIZ, SENER, SEMARNAT, ANEAS and CONAGUA, with feedback from experts in the sector.

5. Participation in the group of experts who are developing two (2) Competition Standard (CONOCER/ SEP) related to the biogas sector (in process).
6. Development and delivery of three (3) courses to develop skills in the biogas sector.
7. Organization of two (2) exchange meetings per year within the biogas sector. The aim of these exchanges is to discuss common problems and share solutions between water operator organisms and concessionaires of WWTP.
8. Results presentation at the annual conventions of ANEAS.



Work team for the integration of the Technical Guide for the use of biogas in wastewater treatment plant



Courses



Group dynamics during the courses



Visits to WWTPs during the courses

Contact us:



ibtech@ibtech.com.mx



+52 (55) 5619 4216

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