Biomass Roadmap and Petacalco Co-Firing Study

The Mexican-Danish Climate Change Mitigation and Energy Program (CCMEP) supports Mexico in implementation of its climate policy and energy reform. The Renewable Energy (RE) component of the Program included exchange of experience between Denmark and Mexico on the use of bioenergy resources in the energy system, assistance in the preparation of a biomass road map for Mexico, and specific feasibility studies for using solid biomass to produce electricity (the Petacalco co-firing study and feasibility studies for using bagasse to produce electricity at 2 selected sugar mills – see also the Sugar NAMA Fact sheet).

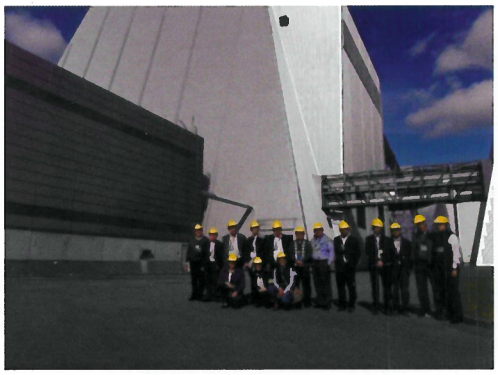
The objective of this work is to support SENER in meeting the clean energy goal of 25% clean energy in 2018 and 35% in 2024 through an increased use of bioenergy (particularly solid biomass and biogas) for energy production. Mexico has a particular goal related to bioenergy for 2018 in the PETE which is to increase the generation of energy from biofuels from 1391 GWh in 2015 (baseline) to 2142 GWh/year in 2018.

OUTPUTS:

- Exchange of Danish experience using biomass and biogas to produce energy at 6 different workshops in Mexico and during study tour to Denmark for 15 Mexican experts from government and industry;
- Biomass roadmap for selected biomass residues developed focusing on the assessment of potentials for using solid biomass and biogas to produce energy in Mexico. The roadmap contains: Description of framework conditions and the current use of bioenergy in Mexico; Assessment of biomass and biogas resources and energy potentials taking into account sustainability issues; Assessment of technologies and the biomass supply chain; Identification of biomass and biogas hotspots and calculation of selected business cases; Assessment of opportunities and challenges; Recommendations for SENER.
- Technical and economic feasibility study concerning 5% biomass co-combustion at one 350 MW unit at CFE's coalfired power plant in Petacalco completed and discussed in detail with CFE and SENER. The study shows that even with the low prices from the 2nd clean energy auction, the co-firing with locally collected biomass (sugar cane trash and sorghum straw as back-up) can be economically feasible.

OUTCOME:

- Methodologies for biomass and biogas energy planning has been enhanced and the feasibility of biomass for electricity production demonstrated in the Petacalco co-firing pilot project.



"A very successful closing study tour to visit bioenergy plants in Denmark was arranged for 15 different Mexican stakeholders involved in biomass use for energy generation. Both the agenda and the selection of participants were extremely well chosen. We met many inspiring ideas and possible solutions to problems we are facing today in Mexico"

Luis Muñozcano
Deputy Director General, SENER

For further information contact: Sergio Gasca sgasca@energia.gob.mx or Bo Riisgaard Pedersen brp@ens.dk