SCENARIO ANALYSES

The Mexican-Danish Climate Change Mitigation and Energy Program (CCMEP) supports Mexico in implementation of its climate policy and energy reform. Under the Renewable Energy (RE) component of the Program Denmark collaborates with SENER on the elaboration of long term clean energy scenarios and the annual Renewable Energy Outlooks for Mexico.

Mexico has ambitious goals in terms of expansion of clean energy within the electricity sector and reducing national CO_2 emissions. The clean energy goals as formulated in the Energy Transition and Climate laws are:

- 25% by 2018
- 30% by 2021
- 35% by 2024
- 50% by 2050

This compares to the current share of 20% in 2016.

The progress in achieving the target is reported in the annual Renewable Energy Outlook (REO) that from 2016 had a time horizon of 30 years, compared to 15 years in the earlier outlooks. The long-term perspective makes it relevant to develop model-based RE-scenarios for achieving the targets in a cost-effective manner. The ultimate long-term ambition and objective of the model based RE-scenarios is to improve planning, modelling and analytical practices that will enable Mexico to achieve it's envisioned environmental and RE goals.

The Danish Energy Agency is, therefore, supplying training in state-of-the-art modelling tools that can be applied directly in the development of the annual submissions of the REO for analysis of topical planning issues, and can be used in the improvement of already existing Mexican energy modelling tools, as for instance the SIMISE model.

OUTPUTS:
- 6 workshops from Oct 2015 to June 2017 with different themes conducted;

- Support for REO 2015, 2016 and preparation for 2017;
- New long-term power sector planning modelling framework developed for Mexico using the Balmorel model and integrated with the SIMISE model;
- Input to SENER's long term energy transition strategy;
- Intensive training in the use and operation of the Balmorel model for SENER and UNAM staff;
- Analyses of a range of scenarios focusing on CO_2 prices, increase in natural gas prices, flexibility issues (eg. interconnectors to neighboring countries, electrical vehicles and pumped storage);
- Comparison of model results with Mexico's RE auctions;
- Analysis of Mexico's NDC using Balmorel.

OUTCOME:
- Capacities and methodologies for long-term power sector planning in SENER and UNAM enhanced.
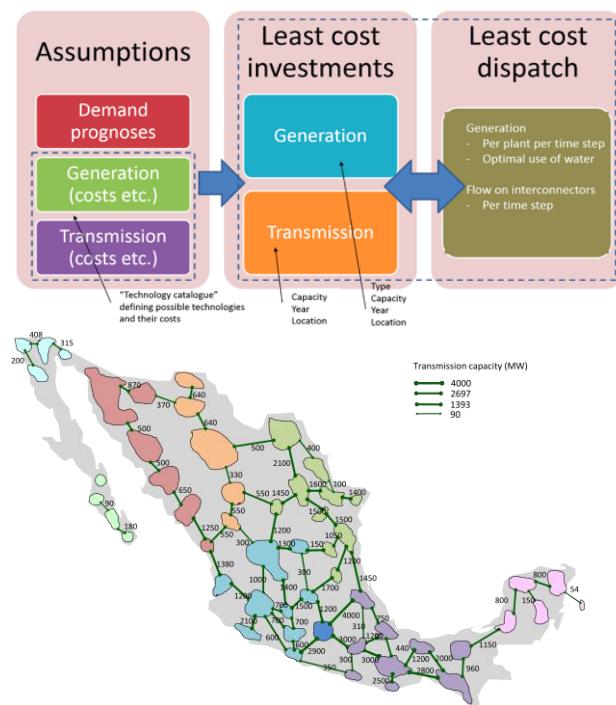
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