

Reaching Mexico's Climate Change Goals: A Sensitivity Analysis

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Under the mentorship of Dr. Erin Baker and PhD Candidate Rodrigo Mercado, I am conducting research on how Mexico's climate change goals will influence the development of its electrical grid. This study is being done with the PEGyT Model which was developed at the National Institute of Electricity and Clean Energies (INEEL), Cuernavaca, Mexico. The PEGyT model is used for Generation Expansion Planning (GEP) in the Mexican electrical grid. I am conducting a sensitivity analysis on the PEGyT Model by analyzing how changes in the cost of transmission will affect the layout of the energy system. We will study other variables such as discount rates, cost of fuels and evolution of technologies further down the road. The results from this study could aid in energy policy formulation which would ideally lead to Mexico successfully and optimally reaching its climate change goals. While this study focuses on the Mexican electrical grid, the methodology developed could also be applied to energy planning more broadly.