

## **Socioeconomic and environmental effects of the Mexican climate policies**

Topic: Climate Change Topics

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Global warming is one of the main concerns in the last decades worldwide and many measures and policies have been designed in order to minimize the negative effects over the environment, in general, and climate, in particular, that our well-being can cause. One of the main sources of greenhouse gas emissions (GHG) is the energy sector. Energy demand worldwide has increased rapidly in the last years driven by the population growth, and the welfare in many countries that have now access to many goods and services. Renewable energies have been seen by policy makers as an opportunity to mitigate climate change, by substituting fossil energies with renewable sources. Therefore, many countries have designed energy plans that aim to cover part of the energy demand with renewable energies. Additionally, renewable energies offer other benefits that are not always taken into account, such as energy security due to their indigenous origin and socio-economic effect like economic activity increase or job creation. Mexico is one of these countries that aims to benefit of its energy sources potential by setting several objectives for the next 10, 20 and 40 years, limiting the GHG emissions and setting a share of clean energies in electricity production. This study will estimate the socio-economic benefits, in terms of value added and job creation, and the CO<sub>2</sub> emissions associated to different electricity scenarios. Input-Output Tables and social accounts from the World Input-Output Database project have been used to create a multiregional analysis. The evolution of the Mexican electricity system in the long term through different scenarios is the result of using the global energy optimization model EFDA TIMES Model (ETM). ETM will provide information concerning the investment and operation costs from the different technologies of the electricity system in each scenario. Results will show direct and indirect environmental and socio-economic impacts by technology, distinguishing between investment and operation and maintenance for each scenario and identifying those regions and sectors that are most economically stimulated and those that are the main contributors to climate change.