

## **Mexico, towards the energy transition? The possibilities of success of Mexico's current energy policy**

Topic: Input-Output Analysis: Energy Policies - IV

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The need to lessen the impacts of climate change calls for energy alternatives based on clean energies that facilitate the energy transition. In Mexico, the new government shares this vision and considers it urgent to achieve the national energy transition within the framework of the Energy and Climate Change Program, one of the Strategic National Programs that are part of the government's development strategy.

To achieve this objective, it is necessary to consider that on the one hand, the national energy demand has increased significantly during the decade of the 2000s and is mainly satisfied with hydrocarbons, generating a dependence on fossil fuels that is significantly higher than that of the world, with 85% and 55% respectively (BP, 2022: 9); and on the other hand, that the Mexican State historically controls and exploits a sector of clear strategic character key to national macroeconomic stability in terms of exchange rate and public budget, which represents an opportunity in the long term to promote the change towards national energy transition (IEA, 2020).

Therefore, this paper aims to analyze the current national energy policy with the objective of understanding and assessing the possibilities of achieving this energy transition process and its impact on the energy sector and the national economy. Specifically, we analyze the impact that a change in the national energy matrix with greater use of renewable energies would have on the energy sector and the national economy in terms of GDP, employment, and level of CO<sub>2</sub> emissions.

This exercise is carried out with a multifactor input-output methodology, which will allow us to build scenarios and systematically understand with precision and depth the impact of these policies and identify opportunities for improvement and success of the policies implemented. Under this modeling framework, we will build scenarios to understand the possible structural changes in the Mexican economy and the oil and gas sector caused by the change of the energy matrix towards one with greater use of renewable energies. In a novel way, this model considers the economic transactions of all activities and processes that create value linked to the production and consumption of oil and gas products, including the activities of the conventional hydrocarbon value chain; and allows us to adequately map all the value chains in supply and provision and the energy sector, and to understand the economic, environmental and social impact of public policies and identify possible changes about their implementation.

The results suggest that the use of renewable energies in the energy matrix would generate a limited impact in terms of economic growth and employment in the national economy and a decrease in the level of CO<sub>2</sub> emissions. Based on these results, we put forward some energy policy recommendations for government policymakers to increase the chances of success of the current energy policy.