

# **Strategies to achieve a successful energy transition in Mexico: From fossil to renewable energies**

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## **Abstract**

In a world where change is the only constant, the energy transition has always been present in the history of humanity: from the discovery of fire generated by burning wood to the sun or wind energy, passing by the energy produced by coal and oil. However, our world is constantly evolving: the global population has grown rapidly, and most of it has migrated to urban areas in search of better living conditions, causing an increase in the amount of energy consumed per capita, mainly coming from fossil sources, which has caused damage to the environment.

Based on international agreements promoted by the United Nations and other organisms, most countries have agreed to implement actions to combat and reverse the damage caused to our ecosystem through renewable energy sources. However, renewable sources still cannot satisfy current energy demand. Therefore, it is necessary to design a strategic path that successfully leads the transition from fossil to renewable energies.

This thesis identifies the best practices and mistakes made to design a successful energy transition process. In parallel, we analyze the efforts made by the Mexican government through the energy reform. The result of this research is the design of an energy transition strategy for Mexico that is based on two fundamental pillars: a driving agent, the government, which directs, regulates, and coordinates the efforts of the members of the quadruple helix of technology transfer and an intermediate energy element, the Natural Gas, which functions as a temporary bridge covering the existing gap between current global energy consumption and the production of renewable sources, to reach a successful energy transition without affecting humanity's quest to achieve ever better living standards and environmental sustainability.

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