

# A framework for forecasting oil production in Mexico after the Energy Reform

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## Introduction

- Former Mexican constitution was amended, allowing private investors to participate in the O&G industry.
- Mexico is a resource abundant offshore and onshore country + New contractual areas.
- Forecasting will allow the oil production to stay on track to meet the government goals.

## Research Questions

- How was the oil production distribution in Mexico before the ER?
- Does ER might change the production profiles?
- How does ER work, and what are the significant changes?
- What is the Mexican energy sector overview for the following years?

## Methodology

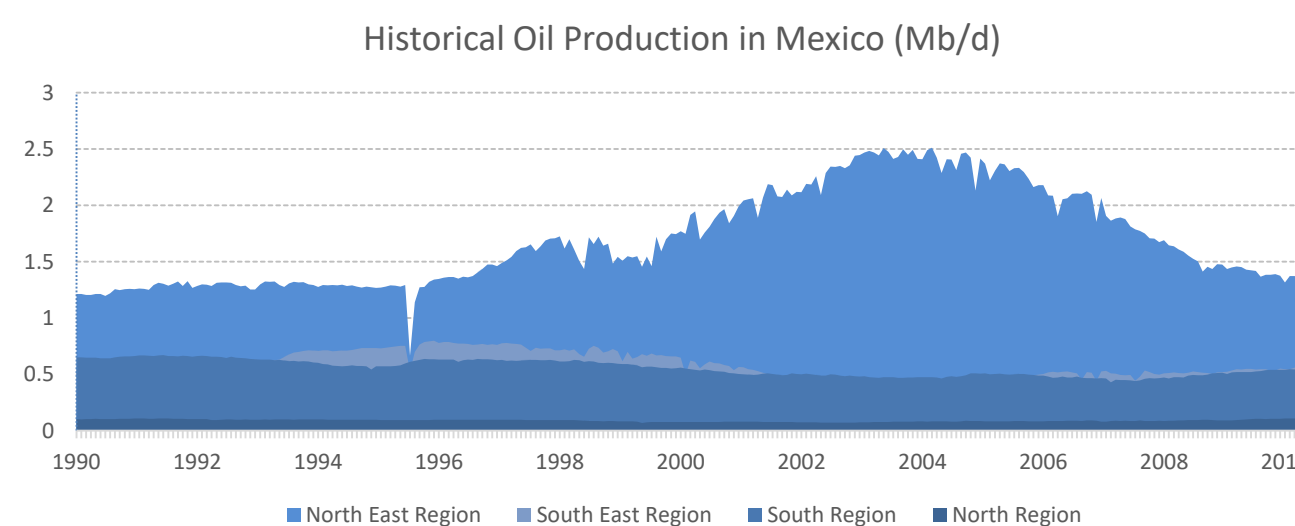
Create a reliable framework by:

1. Appraise the past; historical oil production.
2. Evaluate the present conditions; framework significant changes on the ER.
3. Consider the economic overview; Industry leaders and experts opinions.
4. Make a projection that considers the new discoveries.

ER: Energy Reform

## Analysis Undertaken

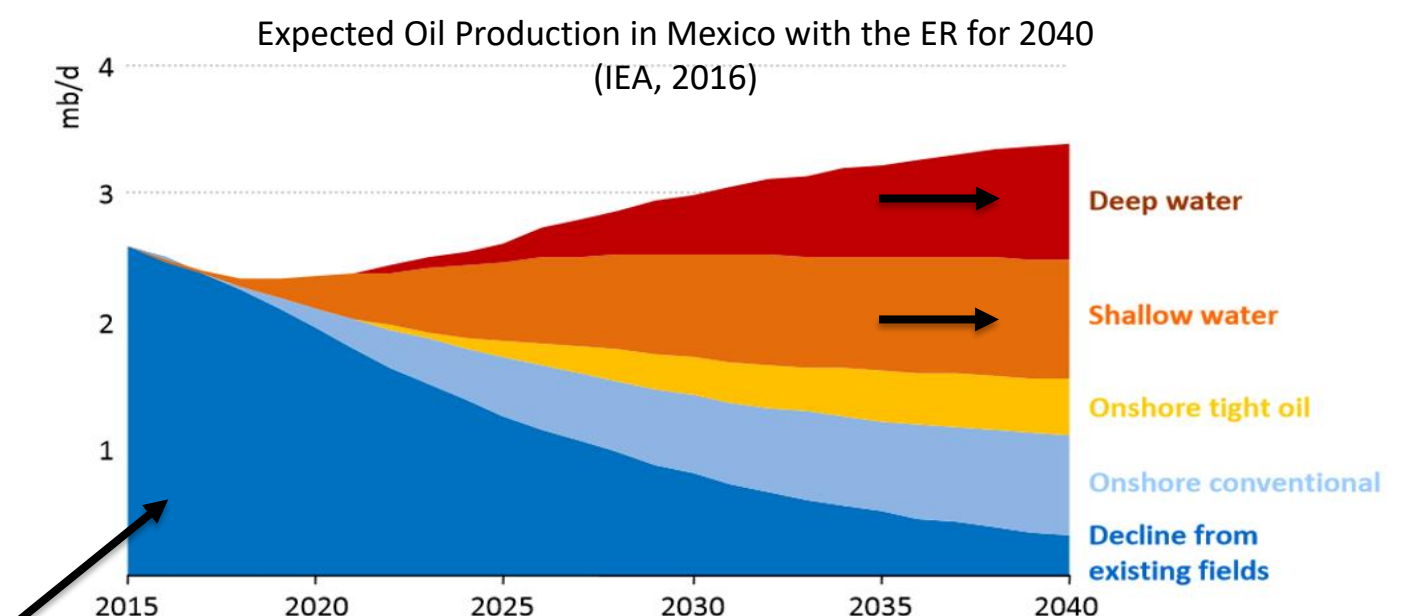
- Economic analysis of the ER focusing on the significant changes on:
  1. New structure, led by the Secretary of Energy.
  2. New fiscal and legal framework, nine new laws.
  3. Activities carried on the private sector, upstream (exploration, extraction and development) and middle stream (transportation).
  4. New auction system, CNH-R01 & CNH-R02.
- PEMEX historical aggregated production per region.



- Study of a Monte Carlo Simulation method based on a model presented for the UK and Norway (2014) considering the new discoveries. (Hubbert's variant using disaggregated profiles to fit the curve before extrapolation).

## Results

- ER will increase the differentiation on supply of products, services, improving Mexico's energy sector and economy.
- The investments expected on the oil industry are up to \$USD 23 for the next five years.
- Forecasting using the new discoveries will avoid underestimation of the reserves of the new contractual areas.



## Conclusion

- As a result of the ER, the oil industry is overall strengthened.
- With the new discoveries and new technological implementation the levels of oil could rise up to 3 Mb/d for 2018 and 3,5 Mb/d for 2025.
- The prices of oil is not expected to be highly reacting and the imports of oil will gradually decline.