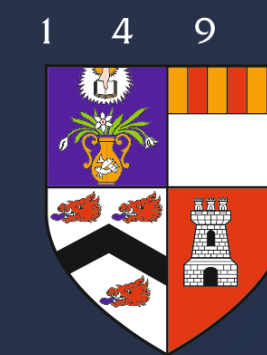


# ECONOMIC ANALYSIS OF PUBLIC POLICY INFLUENCE ON WIND ENERGY ELECTRICITY GENERATION IN MEXICO

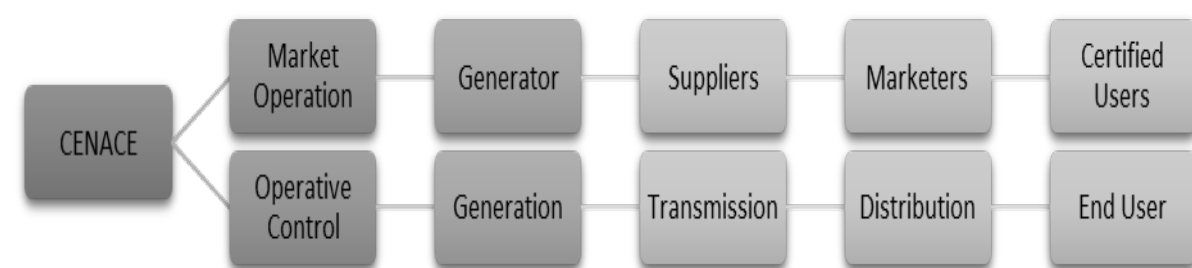
Ricardo Solis Hernandez



UNIVERSITY OF ABERDEEN

## Research Objective

Contrast of the current policy mix and structure of the Mexican Electricity Market, consisting on Competitive Auctions with Tradable Green Certificates, to an alternative combination of Competitive Auctions with Feed-in Tariff, assessing social benefits and economic impact of both schemes.

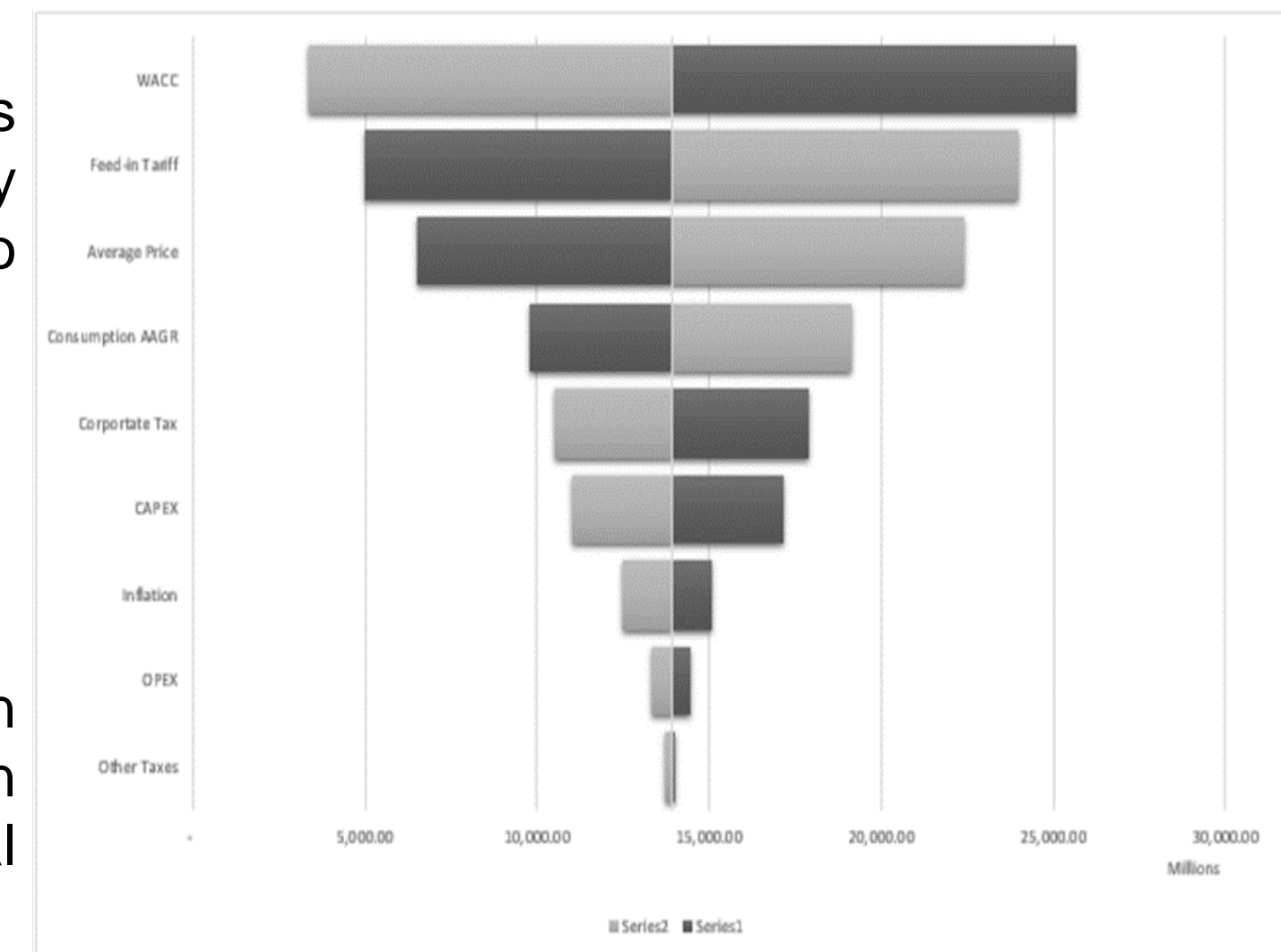


Finally, given the geographical proximity and market similarities, data from the United States is incorporated to estimate possible electricity prices in Mexico, performing a Monte Carlo Simulation with 1,000 trials.

## Results

Based on key drivers set by the Mexican Government in the National Development Plan 2013-2018 regarding Security of Supply, Social Welfare and Universal Electricity Coverage.

Complemented with macro economical variables, capital expenditures and cases from more mature electricity markets to estimate market conditions, in accordance with integration targets.



## Conclusion

Considering that WACC presents a higher impact on investment than a subsidy, project developers should look after adequate asset finance structure.

The Mexican Government should focus on providing stable and reliable economical and political conditions for investment.

The amount of taxes collected under a Feed-in Tariff is greater but does not justify subsidy expenditure, thus, the current policy mix is the best option to achieve the set objectives.

## Methodology

Characteristics of both options are subject to a mathematical analysis, following the work conducted by (Tamás et al. 2010).

A Sensitivity Analysis is then constructed to identify the main variables that could have a significant impact on NPV of investment.

Summary		
	Price	NPV
Mean	101.0709366	10,869,780,141.65
Median	101.0953813	10,534,950,103.94
90th Percentile	106.2274172	14,396,265,682.81
10th Percentile	95.93538081	7,686,463,276.87
Maximum	117.0456711	22,025,382,746.96
Minimum	89.39078561	4,105,326,938.29
Prob Loss		0.00
Sample Size	1000	1000
No Bins/Classes	20	20
Bin Size	1.45552029	943,160,832.04