

# Evaluation of offshore wind energy diffusion in long-term scenarios in the Colombian Caribbean

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## Offshore Wind Energy in Colombia

- ✓ Potential in the Colombian Caribbean: aprox 50 GW, considering social and environmental restrictions<sup>[1]</sup>.
- ✓ Aprox. capacity factor 70% <sup>[1]</sup>.

### Goals

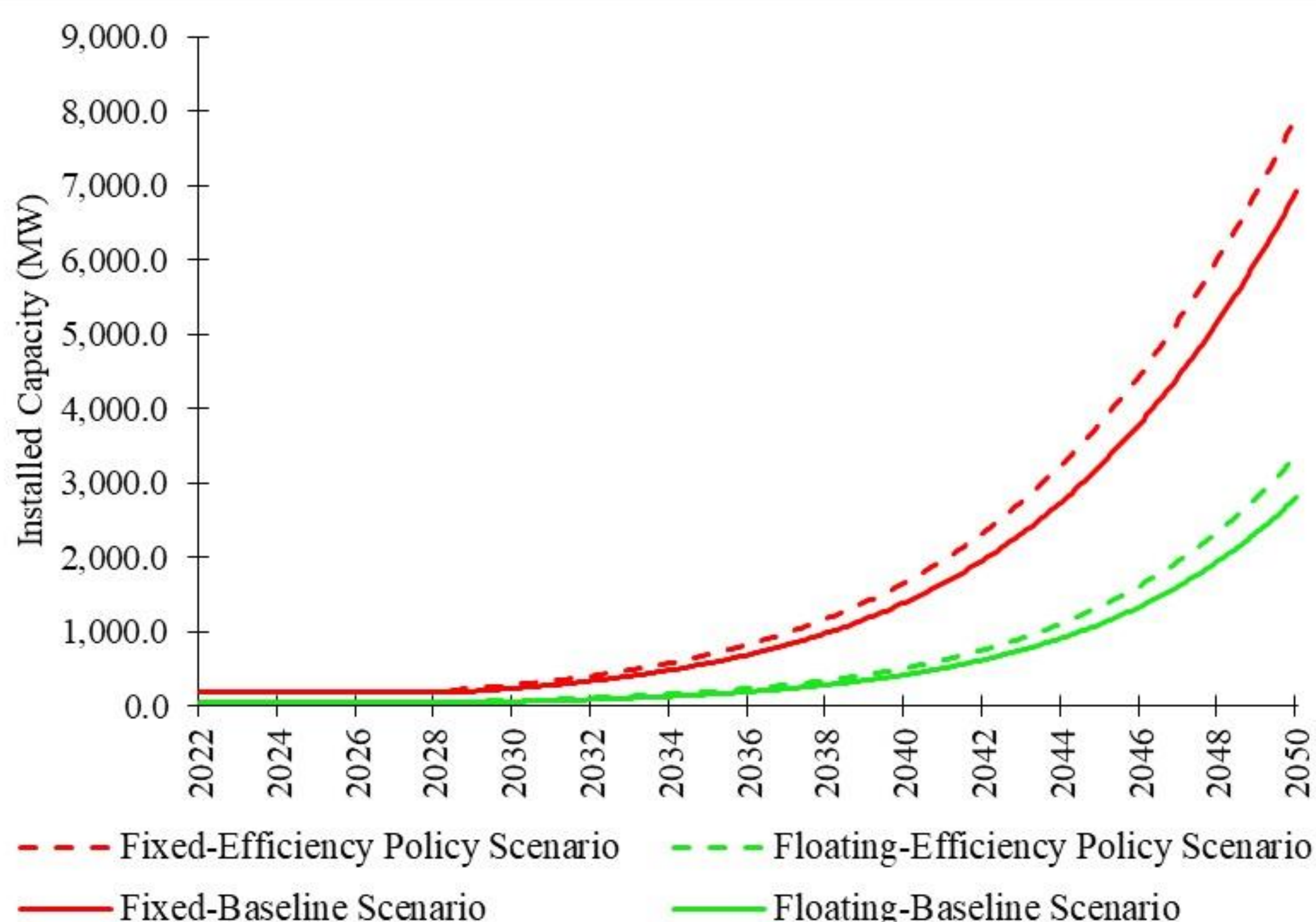
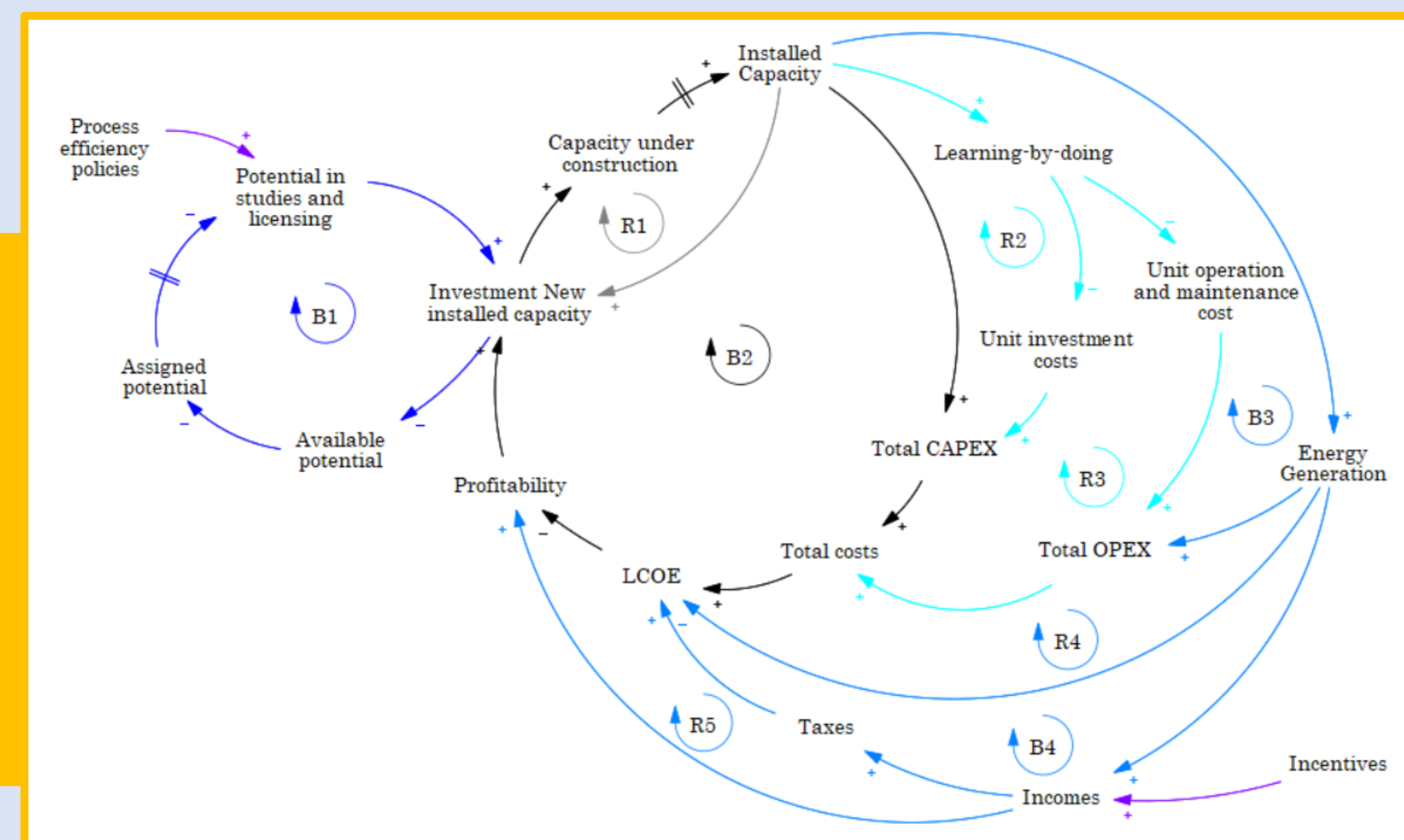
- ✓ Establish policies and incentives related to possible investment scenarios.
- ✓ Complementarity to the matrix with hydraulic predominance with a new technology <sup>[2]</sup>.
- ✓ Obtain stable and affordable prices, which are guaranteed with the non-overexposure of few types of

### Problem

- ✓ Need for more clean electricity generation: suppressed demand, growing demand, coal/gas phase-out.
- ✓ Lack of (direct/ indirect policies) for this new technology.
- ✓ Uncertainty in the penetration of wind technology in the long term and impacts.

## Current policies

- ✓ Reduction of taxes for renewable energy (Law 1715, 2014) <sup>[4]</sup>.
- ✓ Competitive processes for area concessions (Resolution 40284, 2022).
- ✓ Identification of areas through a government institution.

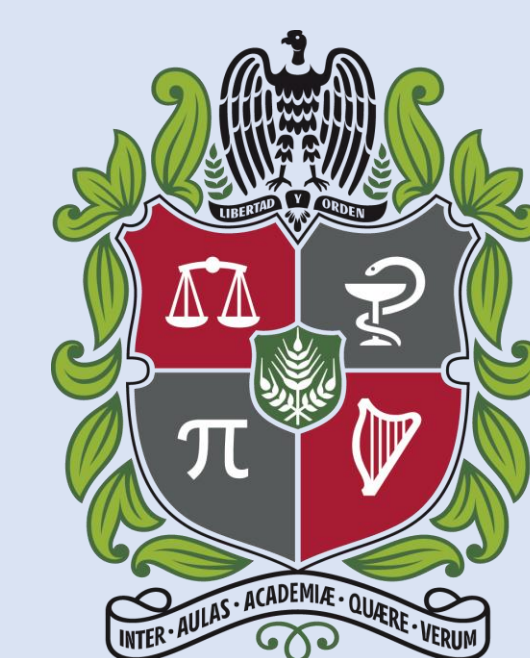


## Our results so far:

- ✓ Potential for exponential growth in the medium term, with an S-shape up to the potential.
- ✓ Expectations are for around 200 MW for the next decade.
- ✓ Although direct incentives do not have a great incidence on the amount of installed capacity, offshore wind energy manages to exceed 10 MW in long-term scenarios, this being a high percentage of the total proposed in the national strategic plan of 19 MW in renewable energy.
- ✓ Energy policies to promote wind technology entry times play a relevant role in the Caribbean region.

### References:

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- [4] Ministerio de Minas y Energía de Colombia, "Transición energética: un legado para el presente y el futuro de Colombia," [Online]. Available: [https://www.minenergia.gov.co/documents/5856/TRANSICION\\_ENERGETICA\\_COLOMBIA\\_BID-MINENERGIA-2403.pdf](https://www.minenergia.gov.co/documents/5856/TRANSICION_ENERGETICA_COLOMBIA_BID-MINENERGIA-2403.pdf)



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