

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^[1].
- ✓ Aprox. capacity factor 70% ^[1].

Goals

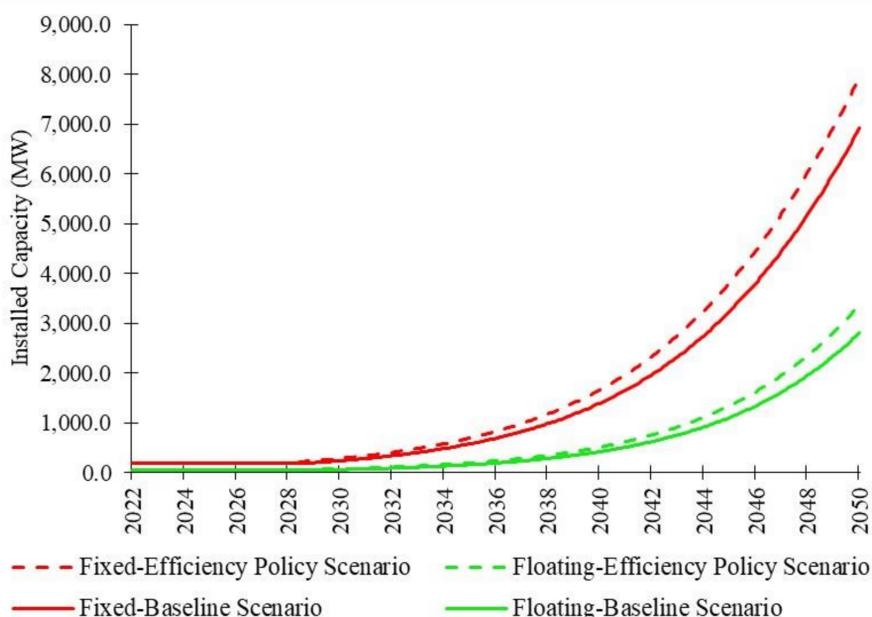
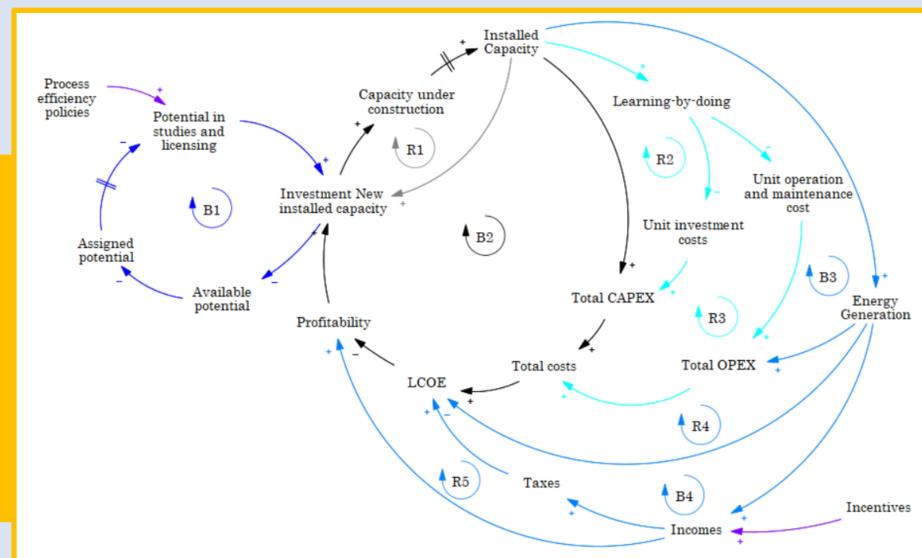
- ✓ Establish policies and incentives related to possible investment scenarios.
- ✓ Complementarity to the matrix with hydraulic predominance with a new technology ^[2].
- ✓ Obtain stable and affordable prices, which are guaranteed with the non-overexposure of few types of

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) ^[4].
- ✓ 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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