Recommendations for Capitalising on Brazil's Offshore Wind Opportunities

Ocean Energy Pathway

National Mitigation Strategy

Offshore wind energy represents a strategic opportunity to accelerate Brazil's energy transition, with direct impacts on decarbonisation, energy security, industrial competitiveness and investment attraction.

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Foreword

Foreword

Brazil stands at a pivotal moment in its development — one in which climate action and economic transformation go hand in hand.

As a global clean energy leader with one of the greenest electricity grids in the world, the country has a significant opportunity to harness its natural advantages and industrial expertise to pioneer sustainable solutions for the energy transition and demonstrate its climate leadership as COP30 host. Among Brazil's abundant renewable energy resources, offshore wind power emerges as a key driver for both climate mitigation and green industrial growth.

With a technical potential exceeding 1,200 GW and a vast coastline, Brazil is well-positioned to lead in the development of offshore wind. The country also benefits from decades of experience in offshore oil and gas operations, a robust industrial base, and a growing political commitment to climate action. Initiatives such as the Plano Clima and recent legislative progress, including the passing of the Offshore Wind Bill, signal a shift in public policy towards a low-carbon, innovation-driven economy.

Diversifying energy sources also plays a key role in strengthening the resilience and flexibility of Brazil's power system. Offshore wind complements the country's hydro and solar resources—offering power during dry seasons and evening hours ensuring greater stability and reliability in electricity supply. This diversity is essential for meeting rising demand, decarbonising hard-to-abate sectors, and securing long-term energy security.

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This document presents a set of 10 insights and recommendations, developed alongside our partners Associação Brasileira de Energia Eólica (ABEEólica) and the Global Wind Energy Council (GWEC), acting as a guide to the sustainable development of offshore wind in Brazil. There is a strong focus on environmental responsibility, nature-positive outcomes, and collaboration with coastal communities.

These recommendations call for the Brazilian government to develop a signal of intent, by setting out clear targets for offshore wind in the energy mix by 2035, gradually moving away from fossil fuels, accelerating permitting and licensing regulations, committing to the Marine Spatial Planning process and other supportive actions. As Brazil enters this new economic and environmental opportunity, it needs to have an ambitious roadmap that provides regulatory stability with clear direction for policymakers, civil society, businesses, investors and local communities. This approach will help ensure that all key stakeholders, whether local fisherman, manufacturers or government legislators are aligned and working towards a shared goal of decarbonised electricity in Brazil.

Offshore wind can be the new cornerstone of Brazil's just energy transition—if developed with the foresight, inclusivity, and integrity that this moment demands.

Julia Paletta, Brazil Country Head, Ocean Energy Pathway

Recommendations for the Brazilian National Mitigation Strategy (Plano Clima):

Offshore wind energy represents a strategic opportunity to accelerate Brazil's energy transition, with direct impacts on decarbonisation, energy security, industrial competitiveness and investment attraction. In this context, the Climate Plan should adopt a set of structural measures to make this technology viable and scalable.

Strategic Vision and National Targets

1 Strategic Vision and National Targets

1.1 Definition of a minimum target for offshore wind generation by 2035

Recommendation:

Set a clear national target for installed offshore wind energy capacity in the main energy planning national guidelines such as Plano Clima, Ten-Year Energy Expansion Plan (PDE), National Energy Plan (PNE) and the revised NDC.

Justification:

The absence of a clear objective discourages planning and private investments. A minimum target provides public policy signalling, attracts manufacturers, reduces risks, and allows for the planning of port infrastructure, transmission networks, and local production chains.

1.2 Recognition of the scalable potential of offshore wind technology

Recommendation:

Include in the Climate Plan and other energy guiding documents, the recognition that offshore wind power has high scalability potential and could represent a significant portion of the future electricity matrix, with associated economic, and industrial benefits.

Justification:

The technical potential of Brazil's offshore wind is vast. Offshore wind generation can become competitive with other sources of energy and also enable the production of green hydrogen on a large scale, positioning the country as an export hub.

1.3 Promotion of electricity demand scenarios via the National Industrial Decarbonisation Strategy[1] (ENDI)

Recommendation:

Integrate the Climate Plan with the National Industrial Decarbonisation Strategy by promoting a cross-ministerial coordination and by setting demand scenarios for clean and competitive electricity, capable of anchoring investments in offshore wind, with an emphasis on strategic industrial sectors (steel, cement, fertilisers, aluminium, chemicals, among others).

Justification:

The predictability of future demand is essential to unlock investments in offshore generation infrastructure and ensure the economic and financial viability of projects. The ENDI can play a strategic role by signalling paths for industrial decarbonisation and electrification of production processes, creating synergies with the expansion of the supply of clean and renewable energy.

1 ENDI - Estratégia Nacional de Descarbonização Industrial

Governance and Regulatory Framework

2 Governance and Regulatory Framework

2.1 Regulation of the first auction for the assignment of areas for offshore wind power

Recommendation:

Speed up the regulation of Law 15.097/2025 with a clear schedule of regulatory milestones to enable the announcement of the first government seabed lease auction, with a transparent, environmental and technical criteria.

Justification:

Regulation is a precondition for unlocking the initial stage of projects and starting environmental licensing. A clear regulatory model allows greater predictability for investors, de-risking investment, and is essential for competitiveness with other countries developing offshore wind power.

2.2 Institutional strengthening of IBAMA for environmental licensing of offshore projects

Recommendation:

Technically train and institutionally structure IBAMA to conduct environmental licensing of offshore wind energy projects in a fast, transparent and qualified manner, focusing on the creation of specialised teams, technical protocols adapted to the maritime reality and inter-institutional dialogue with the Navy, ICMBio and MMA.

Justification:

Environmental licensing is currently one of the main bottlenecks in the implementation of offshore projects in Brazil. Without a dedicated and qualified structure, the process tends to be slow and unpredictable, generating legal uncertainty. At the same time, it is essential to ensure technical rigour, socio-environmental safeguards and predictability for the sector. Strengthening IBAMA is a key condition for aligning agility and sustainability in the advancement of the offshore wind industry.

Infrastructure, Investment, and Innovation

3 Infrastructure, Investment, and Innovation

3.1 Development of regional port hubs specialising in offshore wind power

Recommendation:

Include in the sectoral strategy of the Climate Plan the establishment of a transparent and clear criteria-based process for selecting regional port hubs focused on the manufacturing, assembly, logistics and installation of offshore wind farms, based on technical criteria such as: proximity to areas with high generation potential, local industrial vocation, existing logistics infrastructure and favourable maritime conditions (e.g. adequate bathymetry).

Justification:

The offshore wind industry requires large-scale infrastructure, such as marshalling ports, assembly yards, heavy cranes, reinforced docks and deep navigation channels. Planning port hubs in advance is essential to avoid logistical bottlenecks, attract manufacturers and distribute economic benefits across different regions of the country. The creation of dedicated hubs also favours the development of local content and production chains, boosting industrial jobs and technological innovation.

3.2 Organisation of the fiscal transition from fossil fuels

Recommendation:

Include guidelines for the progressive restructuring of the fossil fuel industry, with reallocation of incentives for emerging renewable energies, such as offshore wind.

Justification:

Brazil still has significant tax incentives for the fossil fuel sector. A gradual and predictable fiscal transition will allow for the rebalancing of public support instruments and the creation of a fairer environment for renewable sources, enabling the competitiveness of the new industry.

3.3 Promotion of Research, Development and Innovation in the offshore wind chain

Recommendation:

Establish guidelines in the Climate Plan for the strategic allocation of R&D resources to the development of technologies for offshore wind, including environmental studies, project modelling, new materials, logistics solutions, digitalisation and automation. Also encourage the creation of centres of excellence and partnerships between universities, technology institutes and industry, with a focus on strengthening national technological and production chains.

Justification:

Offshore wind is an industry that is intensive in technology and innovation. Directing R&D investments in a coordinated manner allows for accelerating the learning curve, reducing costs, internalising skills and generating opportunities for qualified local content. This is essential for Brazil to not only implement projects, but also act as a competitive player in the global supply chain, especially in turbines, foundations, anchors, submarine cables and monitoring systems.

3.4 Integration of offshore wind power into decarbonisation strategies for electro-intensive industries via green hydrogen, ammonia and methanol

Recommendation:

Include in the Climate Plan guidelines for the strategic integration of offshore wind power into the production of low-carbon energy carriers, such as green hydrogen (H_2V), green ammonia (NH_3) and green methanol (CH_3OH), especially aimed at decarbonising sectors such as steel, fertilisers, maritime transport, chemicals and petrochemicals. Encourage pilot projects, green industrial hubs near offshore generation hubs and facilitate licensing and cross-financing between generation and industrial use.

Justification:

The competitiveness of large-scale offshore wind power makes it economically viable to produce green hydrogen and its derivatives, promoting sectoral synergies with high added value. This favours the energy transition of industrial chains that are critical to the Brazilian economy, generates opportunities for exporting green products, and positions Brazil as a global leader in low-carbon solutions for heavy industry and maritime transport. Mapping these vectors and aligning them with energy and industrial planning is essential to maximise positive externalities from offshore expansion.

Sustainable Siting and Environmental Licensing

4 Sustainable Siting and Environmental Licensing

4.1 Commitment to accelerating Marine Spatial Planning

Recommendation:

Establish institutional commitment, short-term goals and a clear regional schedule for completing high quality Marine Spatial Planning plans, with inter-ministerial participation and integration with environmental and port licensing.

Justification:

Spatial planning is essential to ensure the environmental and social sustainability of offshore wind expansion, in addition to avoiding conflicts with sectors such as fishing, tourism and shipping. It also allows for the prioritisation of areas with high wind resources and low environmental sensitivity.

About Ocean Energy Pathway

Ocean Energy Pathway fast-tracks the development of a sustainable, high ambition, global offshore wind sector, as part of a thriving blue economy. As a not-for-profit organisation, Ocean Energy Pathway delivers expert, independent technical assistance to governments and stakeholders and works with policymakers, industry, conservation leaders, and other stakeholders to build strategies to sustainable scale for the sector. Ocean Energy Pathway is scaling in diverse markets around the world and has launched operations in Brazil, India, Japan, the Philippines, and South Korea.

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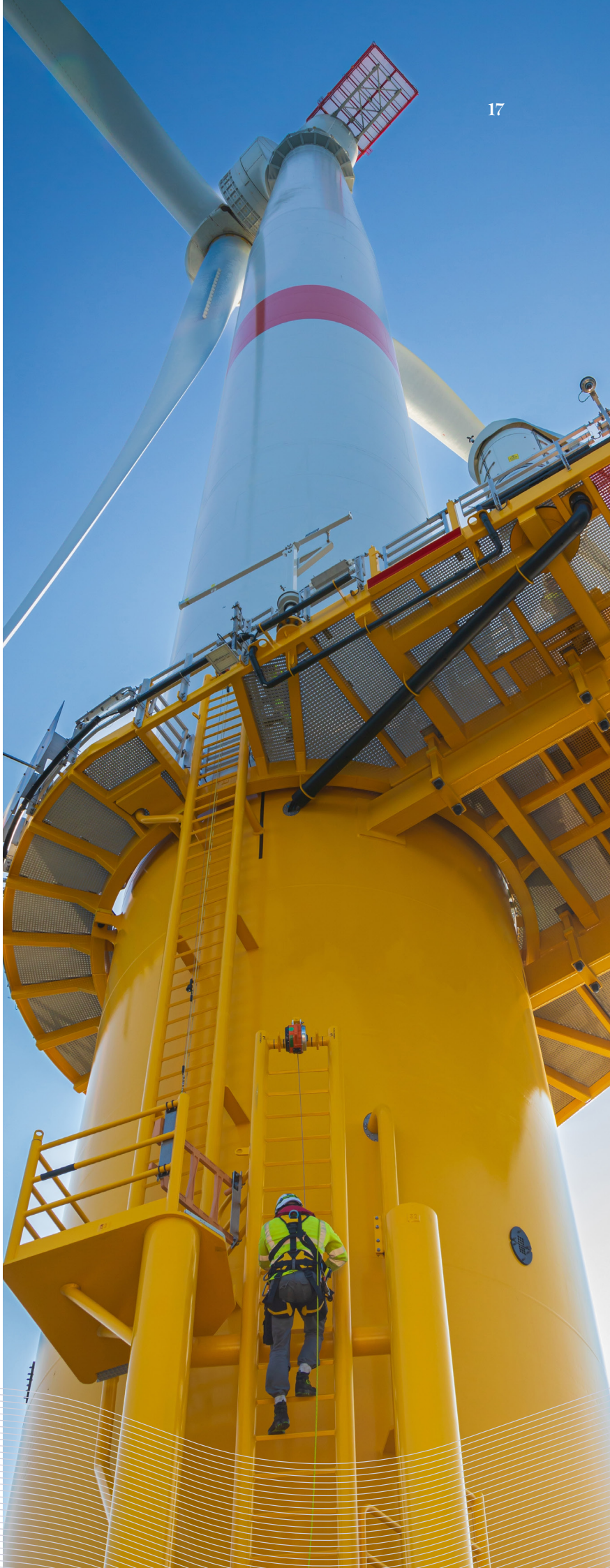

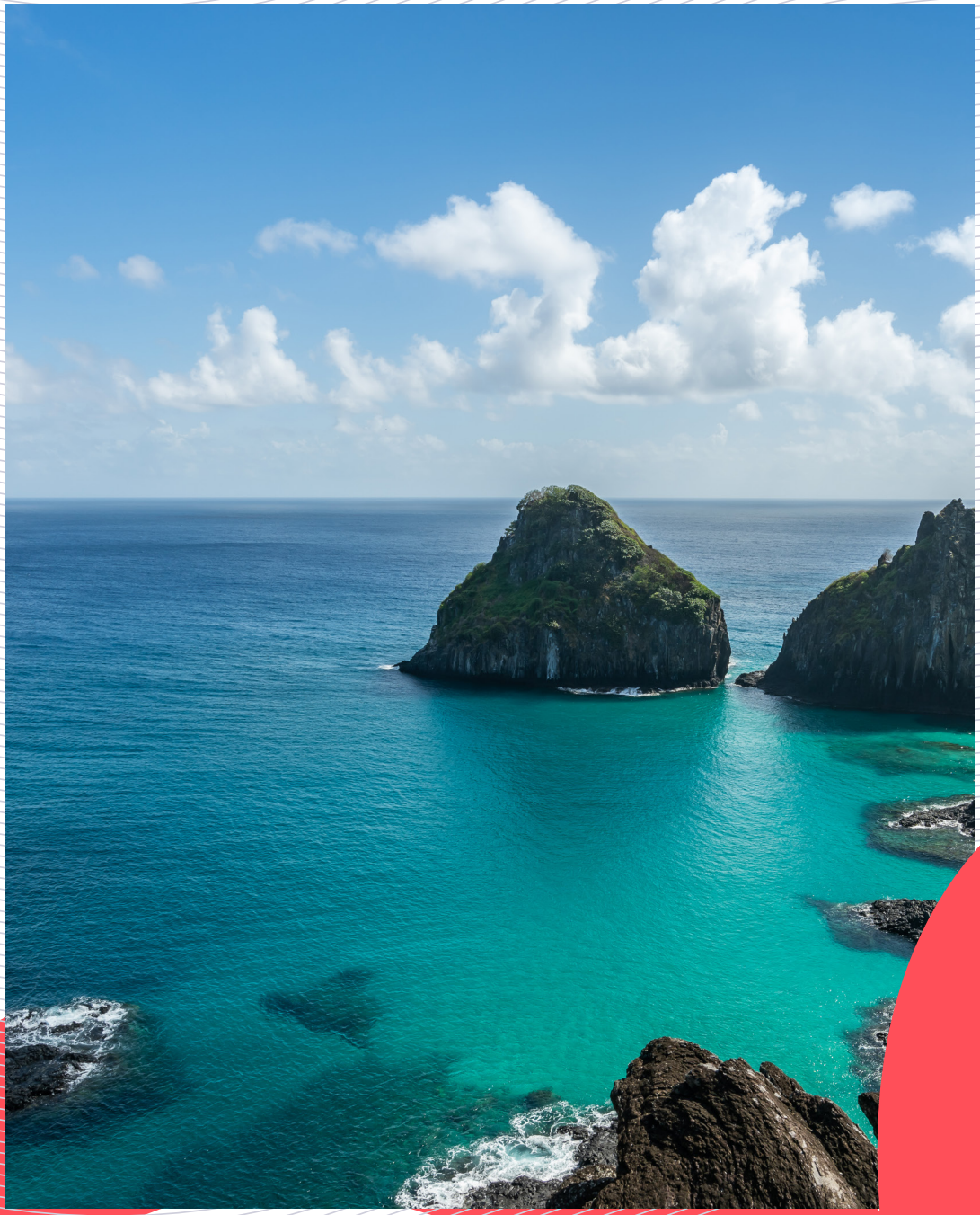

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