

GOWA Submission to the COP 30 Presidency Roadmap on the Transition Away from Fossil Fuels in a Just, Orderly and Equitable Manner

Offshore wind is one of the most powerful and scalable clean energy solutions available today, with unmatched potential to deliver reliable, secure electricity while generating significant economic and climate benefits. GOWA is a multi-stakeholder alliance that unites governments, industry leaders, civil society, and international organisations to raise ambition and accelerate the deployment of offshore wind through facilitation of international cooperation, knowledge exchange and the development and sharing of principles, tools, and best practices for responsible implementation. GOWA welcomes the opportunity to submit this input to spotlight the significant role of offshore wind in creating a successful and just roadmap on transitioning away from fossil fuels.

How offshore wind relates to a successful and just roadmap on TAFF

A successful energy transition requires viable alternatives to fossil fuels that ensure affordability and support for households and workers. Offshore wind provides a clear strategic solution, as one of the most scalable clean energy technologies available, capable of delivering reliable, secure electricity while generating significant economic and climate benefits. As demonstrated by the recent ‘energy crisis’ triggered by the conflict in the Middle East, import-dependent economies are increasingly looking to accelerate deployment to strengthen energy security.

Offshore wind provides a tangible and deployable solution for inclusion in TAFF roadmaps. It is a proven, large-scale energy source based on mature technologies ready for immediate deployment, with 83 GW already in operation, powering 73 million households¹. The economic and investment case is well established: costs have fallen by 62% since 2010²; in Europe, each additional GW contributes approximately €2.8–3.2 billion in gross value added and around 17,500 jobs³; and global investment reached a record US\$39 billion in the first half of 2025⁴.

¹ Global Offshore Wind Report, GWEC, (2025)

² Renewable Power Generation Costs in 2024, IRENA, (2025)

³ Global Offshore Wind Report 2025, GWEC, (2025)

⁴ Renewable Energy Investment Still Reaches New Record as Investors Reassess Risks, Bloomberg NEF (2025)

Key benefits of offshore wind related to TAFF

Energy Security: The International Energy Agency (IEA) describes offshore wind as the only “variable baseload” renewable technology, with new projects typically achieving high-capacity factors of 40%–50%⁵. Offshore wind is therefore a key component in reinforcing national energy security.

Once deployed, offshore wind generates electricity independently of oil and gas price fluctuations. This helps to reduce exposure to global market disruptions. Building offshore wind, reduces a country's dependence on gas for power generation, by lowering the average cost of electricity and decoupling from where expensive gas dictates the price for all energy. For instance, meeting the EU's 45% renewables target would halve gas imports and save €43 billion a year by 2030⁶. Similarly, achieving Japan's 10 GW target for offshore wind deployment could save the country \$27.8 billion in gas import costs based on 2022 prices⁷.

Cost competitive and stable: Wind is consistently cheaper than new gas-fired generation. When gas prices are at their regular levels without price spikes, onshore wind is half the cost of new gas turbines, while offshore wind is 40% cheaper. With the current record high gas prices, new gas generation would be more than double the cost of new offshore wind⁸. As an example, at the latest offshore wind auction round, the UK secured the price of power generated by offshore wind at £59.90/MWh, while the price of gas power has risen to £150–£180/MWh once fuel, carbon, and capital costs are included⁹.

Offshore wind plays a key role in reducing bills for households In the UK during the 2021–22 gas crisis, offshore wind farms operating under two-sided Contracts for Difference protected households from the surging fossil-fuel prices and returned around £1 billion to consumers¹⁰.

Creating jobs: Offshore wind investment also supports significant job creation. Analysis by the World Bank has shown that offshore wind delivers 25 jobs per US\$ million invested, which is more than five times higher than the job creation from fossil fuels¹¹. In Europe, each offshore wind GW supports 17 500 full-time equivalent jobs¹².

⁵ Offshore Wind Outlook 2019, IEA, (2019)

⁶ Small Step Up for Renewables, Giant Fall for Gas, EMBER (2022)

⁷ Offshore wind in Japan: The untapped potential', Zero Carbon Analytics, (2023)

⁸ The value of renewables, Renewable UK, 2026

⁹ Modelling the long-term financial benefits of UK investment in wind energy generation, UCL Press (2025)

¹⁰ Modelling the long-term financial benefits of UK investment in wind energy generation, UCL Press (2025)

¹¹ Making Offshore Wind Work, World Bank, (2025)

¹² Global Offshore Wind Report 2025, GWEC, (2025)

Diversification and system resilience: Offshore wind complements solar and onshore renewables in delivering round-the-clock clean power. With strong, steady sea winds, modern offshore turbines achieve 40–50% capacity factors, roughly double onshore wind and several times that of solar¹³. Offshore wind generation typically rises at night and peaks in winter, precisely when solar output is weakest. The benefits of renewable energy diversification can be seen in Brazil, where energy delivery is vulnerable to seasonal fluctuations due to its reliance on hydropower. Here, offshore wind generation patterns can align with hydropower's seasonal variations, providing energy security and reliable delivery¹⁴. Similarly in Chinese Taipei, Google has signed a 495 MW offshore wind power purchase agreement that combines wind, solar, and battery storage to provide continuous, carbon-free power to its data centres, demonstrating the benefits and reliability of renewable energy¹⁵.

Climate action: In addition to offering an energy alternative to oil and gas, offshore wind also supports closing the NDC ambition gap, delivering on the global pledge to triple renewables, and provide the bankable projects needed to operationalise the new climate finance goal (NCQG). According to forecasts by the International Energy Agency (IEA) and International Renewable Energy Agency (IRENA), 494 GW by 2030 and 2000 GW by 2050 of installed offshore wind capacity will be needed to keep the goals of limiting global warming to 1.5°C within reach¹⁶. Uptake in implementation of offshore wind projects is therefore crucial in keeping these climate goals achievable, while offering a clear pathway for climate action.

Clean air and health: The clean air co-benefits of offshore wind compared to fossil fuels are immediate and measurable. Existing and planned US East Coast projects are expected to prevent around 1600 premature deaths every year, while a national offshore build-out in China could avoid 16.5000 annual deaths by 2050. This prevention will be an effect of substituting sulphur-dioxide and nitrogen-oxide pollution generated by coal power plants¹⁷.

Responsible deployment: When developed with well-designed marine-spatial planning, offshore wind projects can enhance ecosystems and marine spaces. This requires mapping and engagement of stakeholders, who are using the marine and coastal areas including safeguarding shipping routes, and fisheries, and thorough environmental impact assessments of the marine area

¹³ Offshore Wind Outlook 2019, IEA, (2019)

¹⁴ Scenarios for Offshore Wind Development in Brazil, World Bank Group (2024)

¹⁵ We're adding to our carbon-free energy portfolio in Taiwan, with our first offshore wind deal in Asia Pacific, Google, (2025)

¹⁶ The Energy Progress Report, IRENA & IEA et al., (2025); "Tripling Renewable Power and Doubling Energy Efficiency by 2030: Crucial Steps Towards 1.5 °C.", COP28 Presidency, IRENA and Global Renewables Alliance (2023)

¹⁷ Offshore Wind Power Examined: Effects, Benefit, and Costs of Offshore Wind Farms Along the US Atlantic and Gulf Coasts, Resources for the Future, (Oct 2024) & The Environmental and Public Health Benefits of Offshore Wind Power Deployment in China, Li et al., (25 Nov 2024)

including sensitive habitats. Modern offshore wind projects are increasingly building ecological enhancement into the design of the farm. This is demonstrated in offshore wind farms in the Netherlands, where turbine foundations have been designed to host and reintroduce the Native European Oyster, which had been wiped out locally due to human overharvesting. Early results show the reefs can host up to 100 times more marine life than surrounding seabeds¹⁸. In Denmark, a similar project design is restoring the lost European flat oyster and horse-mussel reefs, using biogenic materials and seabed structures to rebuild marine habitats and enhance biodiversity¹⁹.

Coexistence and coastal communities: Offshore wind has created shared prosperity through designing offshore wind farms in close partnership with local communities, Indigenous Peoples and fisheries which is a key element to ensuring co-existence and co-benefits. Practical tools to obtain this include stakeholder early and frequent consultations and dialogues, community participation in marine spatial planning, environmental impact assessments, and structuring benefit sharing such as investing a portion of the wind farm's annual revenue directly into local projects chosen by the community²⁰.

To support fisheries and communities who are affected by the farms, local benefit schemes have started to be a key feature in the design of projects in several regions. South Korea's 2025 Offshore Wind Promotion Act channels developer fees into a Fisheries Development Fund, which is providing direct compensation and investment in local coastal livelihoods. The Act is also designed to improve coordination with the local government, communities, and fishermen²¹. Such a benefit model has also been demonstrated in the US, where more than \$50 million from the Coastal Virginia Offshore Wind farm has been donated to local organisations²².

Key supporting levers

Clear targets: Clear and credible targets play an important role in providing long-term visibility for investors and supporting cost reduction over time. A predictable project pipeline is a key factor in enabling investment, supply chain development, and market stability.

¹⁸ Ørsted and Van Oord to Install Droppable Oyster Structures at Borssele 1 & 2 Offshore Wind Farm, Offshore Wind Biz, (12 June 2024)

¹⁹ Accelerating offshore wind and nature protection in Denmark, Renewables Grid Initiative, (2024)

²⁰ United Nations Declaration on the Rights of Indigenous Peoples, United Nations, (2007); Performance Standards on Environmental and Social Sustainability, IFC, (2012); The Strategic Value of Community Benefits in Offshore Wind Development, ESMAP, (2024)

²¹ Offshore wind developments in Korea under new president Lee Jae-myung - legal update and outlook, Dentons/Lee Legal Update (2025)

²² Community Contributions, Dominion Energy, Coastal Virginia Offshore Wind, (2025)

Currently, 27 countries have set national offshore wind targets, alongside a further 27 subnational targets. In addition, eight countries have referenced offshore wind in their Nationally Determined Contributions (NDCs), reflecting its growing role in national energy and climate strategies²³.

Cross Border and Multi-stakeholder Collaboration: The accelerated deployment of offshore wind depends on a global approach—one that fosters shared learning across regions, aligns policy signals, and enables coordinated supply chain planning. Collaboration at both global and regional levels sends a clear, unified signal of long-term policy alignment and collective ambition. The pledge by European nations to deploy 300GW of offshore wind in the North Sea by 2050 shows collective ambition and has been widely welcomed by industry for its clarity and scale of ambition²⁴.

Finance: Mobilising sufficient and appropriately structured finance is critical to scaling offshore wind, particularly in emerging markets where upfront capital requirements and perceived risks remain high. A combination of public, private, and international financial support will be needed to enable early-stage market development, including enabling infrastructure such as ports and grids. Here, targeted use of concessional and blended finance can play a catalytic role in unlocking private capital.²⁵ For example, 2023 analysis by the World Bank Group and International Finance Corporation (via its ESMAP programme) estimated that investing US\$15.6 billion in concessional climate finance (grants and loans) could catalyse offshore wind deployment across ten emerging market countries, providing a clear pathway for scaling climate finance²⁶.

Enabling legal and policy frameworks: Clear, stable, and well-designed legal and regulatory frameworks are essential to facilitate investment and project delivery. Streamlined permitting processes can reduce complexity, timelines, and uncertainty for developers while providing greater visibility to investors. For example, countries such as the Philippines and South Korea have introduced “one-stop shop” approaches to simplify permitting, while Brazil has established a foundational legal framework to support offshore wind deployment^{27 28}.

Well-designed auctions: Auction design is a critical enabler of accelerated offshore wind deployment. Beyond pricing, well-structured and predictable auction frameworks provide long-term pipeline visibility, strengthen investor confidence, and support balanced risk-sharing between governments and developers. Clear auction schedules, transparent criteria, and

²³ Offshore Wind Targets Underpin Acceleration to 2030 and Beyond, Ember and GOWA (2025)

²⁴ The North Seas Energy Cooperation, European Commission (2023)

²⁵ Offshore Wind Finance - how effective financing models mitigate risk and accelerate deployment GOWA (2025)

²⁶ Building a Better Future, Annual Report, World Bank and IFC (2023)

²⁷ Offshore wind developments in Korea under new president Lee Jae-myung - legal update and outlook, Dentons/Lee Legal Update (2025)

²⁸ State of the Offshore Wind Market in the Philippines, Carbon Trust, (2024)

appropriately calibrated strike prices reduce uncertainty and enable supply chain planning at scale. Experience across markets demonstrates the importance of adaptive design. The recently UK adjusted their Contracts for Difference to strike prices reflecting inflation, which led to an auction securing 5.3 GW of capacity. Denmark has similarly revised its tender approach to enable larger-scale awards²⁹. Applying these lessons, well-designed auctions can de-risk investment, improve participation, and ensure long-term project viability ultimately accelerating deployment through stronger market confidence and more resilient project economics.

Marine spatial planning and EIA requirements: Legal frameworks and guidance on Marine Spatial Planning and Environmental Impact Assessments can heighten the use of such tools, leading to better site selection, biodiversity enhancement, community engagement, and social licensing. An example of such a framework can be found in the EU Offshore Renewable Energy Strategy, which explicitly requires all new offshore wind developments to apply “nature-inclusive design” and “no-net-loss” in marine spatial planning³⁰.

Best practices: In addition to the examples shared under each topic, GOWA has created an offshore wind solutions bank, drawing on replicable best practices and lessons from successful projects: <https://gowa-energy.org/solutions-bank>. The solutions bank provides insights on delivering offshore wind projects that enhance energy security, create jobs, drive climate action, and are nature positive. The solutions Bank was delivered as part of our work under the COP30 Action Agenda under Axis 1 Transitioning Energy, Industry, and Transport aiming to promote Objective 1 of Tripling renewables and doubling energy efficiency.

For any questions related to this submission including questions from governments and stakeholders seeking more information or collaboration, please contact: Dorte Nita Simonsen, Policy and Programmes Officer, GOWA at dsimonsen@gowa-energy.org

²⁹ Europe doubles down on offshore wind to drive industrial competitiveness, WindEurope, (2025)

³⁰ Offshore Renewable Energy, European Commission