Bill set to green-light maiden Brazil tender

Brasilia roadmap travels from 2024 auction to first power by 2031, writes **Daniel Dawson**

ATTRACTING INVESTMENT: ABEEólica chief executive Elbia Gannoum Photo: ABEEólica

Momentum is building in Brazil's offshore wind sector, with officials optimistic the country's first fixed-bottom turbines will generate power by the beginning of the next decade.

After passing Brazil's Senate, the key PL 576/2021 Bill, which will lay the policy blueprint for development, is currently in the Chamber of Deputies.

Developers, consultants and wind energy officials all believe the Bill will pass and be signed by President Luis Inacio Lula da Silva before he visits the United Arab Emirates for the COP28 climate summit at the end of November.

Once signed, officials in the executive branch will have 270 days to prepare for the country's first seabed lease auction, originally scheduled for the second half of 2023.

The delay resulted from the Da Silva government's decision to abandon Decree 10,946/2022 in favour of a bill of law, which insiders have all hailed as the right move.

"The government decided to replace the decree with a bill of law because they believe it is better to attract investment for new technologies in offshore wind and green hydrogen," Brazilian wind energy association ABEEólica chief executive Elbia Gannoum told reNEWS.

Offshore Wind Consultants country manager for Brazil Luany Dantas added that while some developers and investors were frustrated by the decision to delay the seabed lease auction, she also believes the legislative move will provide long-term security for the sector.

"The next government could always change a decree. Only the congress can change the law," Dantas said.

Once passed, the executive branch will draft a new set of decrees for the first half of 2024, streamlining the bureaucratic process and creating a framework for developers.

According to Gannoum, the executive branch is already working with the necessary institutions to prepare the decrees as quickly as possible. "They are not waiting for the law. They are working to have everything ready," she said.

Some are keen for the government to take the time to get it right, despite the eagerness of many in the sector to keep the process moving.

Wind consultancy Aquilon Renewables chief executive Julio Cesar Pinheiro Goes said it is critical for congress and government to get the legislation and decrees spot on to achieve long-term sustainability.

"At the end of the day, if the rules are not clear, the risk is extremely high," he said. "I see that people are waiting for something that can give them some confidence before they begin to make major investments."

The government will hold the auction after the law is passed and decrees are published. "The idea for the first auction is to get developers to choose their (seabed development area)," said Dantas. "The idea is to use areas developers have already studied and measured."

If there is any overlap, the government will decide who to award the lease to based on criteria that the legislative documents should define.

"The second stage would involve the government mapping out all the possible offshore wind options, defining (lease areas) and accepting bids," Dantas added.

However, there are still no plans for a second lease auction.

Once leases are approved, developers can commission the necessary environmental studies and prepare to apply for the environmental licence, which will take three to four years.

"Construction then begins in 2027 and 2028, so Brazil's first offshore wind turbines will be ready for 2030 or 2031," said Gannoum.

Before construction completion developers must establish a route to market for the power. Gannoum said there was some concern about this since Brazil's economy – and therefore its power consumption – has not increased much in recent years.

However, developers are expected to crack on and will tackle the route to market conundrum after the passage of the legislation and the first auction takes place.

Many companies plan to use offshore wind energy to produce green hydrogen, which can be used to manufacture fertiliser and power heavy industries that cannot be electrified. ■

VIEW POINT: Brazil's first seabed lease auction will use areas developers have already studied and measured Photo: Raphael Nogueira/Unsplash

Conditions ripe for long line of suitors

Brazil's shallow waters and high velocity wind attract would-be developers

Developers have filed dozens of licensing requests with the Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA) for wind farms totalling 183GW. Overall, officials estimate Brazil has an offshore potential of 700GW on sites with water depths of up to 50 metres.

Oil and gas majors, international offshore wind developers and local energy companies make up most of the applications filed.

Among the most notable requests are seven projects from BlueFloat Energy for almost 15GW, six from Equinor at 14GW, six from Shell totalling 17GW and three projects equalling 9GW from TotalEnergies.

Brazil's state-owned oil and gas major Petrobras also has plans to develop 10 offshore wind projects. Jean Paul Prates, a former senator and the company's new chief executive, co-authored the bill of law currently awaiting passage in the Chamber of Deputies.

Eight of the company's 10 projects would be focused off north-east Brazil, with plans to use the energy to produce green hydrogen.

Another company keen to begin developing offshore wind projects in Brazil is Shizen Energy, which has six proposed projects off north-east and southern Brazil.

Its offshore wind development manager in Brazil, Edisiene Correia, told reNEWS the company is anxiously waiting for the bill to pass.

"The regulation launched last year was insufficient to complete regulation of the sector," she said.

"We are studying the bill that congress is discussing, and for us it is better than the previous regulation because it downsizes the risk for developers."

Correia said Brazil is an attractive destination for

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BRAZILIAN LICENSING REQUEST QUEUE

Project	MW	Developer
Água Marinha	1700	Bluefloat Energy do Brasil
Águas Claras	3000	Neoenergia Renováveis
Alísios Potiguares	1845	Bosford Participações
Alpha	6000	Alpha Wind Morro Branco Projeto
Amazonita	3000	Bluefloat Energy do Brasil
Aracatu	3840	Equinor Brasil Energia
Araras Geração Eólica Offshore	3000	Shizen Energia do Brasil
Asa Branca I	1080	Eólica Brasil
Asa Branca II	1080	Eólica Brasil
Asa Branca III	4320	Eólica Brasil
Asa Branca IV	4320	Eólica Brasil
Barra do Chuí Geração Eólica Offshore	3000	Shizen Energia do Brasil
Beta	3000	Beta Wind Energias
Bravo Vento	1155	SPE Bravo Vento
Bromélia	1700	Bluefloat Energy do Brasil
Camocim	1200	Camocim Eirelli
Cassino Offshore	1920	Geradora Eólica Brigadeiro IV
Cattleya	1180	Bluefloat Energy do Brasil
Caucaia	576	BI Energia
Costa Nordeste Offshore	3840	Geradora Eólica Brigadeiro I
Dragão do Mar	1216	Qair Marine Brasil
Farol de Mostardas Geração Eólica Offshore	3000	Shizen Energia do Brasil
Farol Wind Power	5700	SPE Bravo Vento
Guarita Offshore	1680	Geradora Eólica Brigadeiro III
H2GPCEA	3000	H2 Green Power
Humberto de Campos	720	Com. Energia Humberto de Campos
Ibi Offshore	1960	Chiri Renovables
Itapipoca	720	Energia Itapipoca
Jangada	3000	Neoenergia Renováveis
Mar de Minas I	1500	CEMIG Geração e Transmissão
Mar de Minas II	3000	CEMIG Geração e Transmissão
Maral	2011	Ventos do Atlântico
Maravilha	3000	Neoenergia Renováveis
Marine Vortice WOS	5220	SPE Bravo Vento
Palmas do Mar	1395	Bosford Participações
Pedra Grande	624	Pedra Grande
Península Wind Offshore	2700	SPE Bravo Vento
Projeto Açu	3010	Shell Brasil Petróleo

Project	MW	Developer
Projeto Atobá	2490	Equinor Brasil Energia
Projeto Colibri	2010	Equinor Brasil Energia
Projeto Galinhos	3010	Shell Brasil Petróleo
Projeto Ibituassu	2010	Equinor Brasil Energia
Projeto Ibitucatu	2010	Equinor Brasil Energia
Projeto Mangará	2010	Equinor Brasil Energia
Projeto Pecém	3010	Shell Brasil Petróleo
Projeto Piauí	2520	Shell Brasil Petróleo
Projeto Ubu	2520	Shell Brasil Petróleo
Projeto White Shark	3010	Shell Brasil Petróleo
Quaresmeira	2960	Bluefloat Energy do Brasil
Querência Geração Eólica Offshore	3000	Shizen Energia do Brasil
Quesnelia	1240	Bluefloat Energy do Brasil
Rio Grande Offshore	1200	Geradora Eólica Brigadeiro V
Sítio de Testes	22	SENAI/RN
Sopros do Ceará	3000	TotalEnergies Petróleo & Gas Brasil
Sopros do Rio de Janeiro	3000	TotalEnergies Petróleo & Gas Brasil
Sopros do Rio Grande do Sul	3000	TotalEnergies Petróleo & Gas Brasil
Taim Geração Eólica Offshore	3000	Shizen Energia do Brasil
Tatajuba Geração Eólica Offshore	3000	Shizen Energia do Brasil
Tecnoluft Wind Offshore	2700	SPE Bravo Vento
Tramandaí Offshore	702	Ventos do Atlântico
Turmalina	3180	Bluefloat Energy do Brasil
Vento Tupi	999	Ventos do Atlântico
Ventos de São Francisco	2955	Monex Geração de Energia
Ventos do Açu	2160	Prumo Logística
Ventos do Atlântico	5008	Ventos do Atlântico
Ventos do Caiçara	1965	Monex Geração de Energia
Ventos do Delta	2640	Kaanda R.M. Cunha
Ventos do Sul	6507	Ventos do Atlântico
Ventos dos Bandeirantes	2748	Kaanda R.M. Cunha
Ventos Fluminenses	2820	Bosford Participações
Ventos Litorâneos	1245	Bosford Participações
Ventos Potiguar	2484	Internacional Energias
Vitória Offshore	1200	Geradora Eólica Brigadeiro II
Votu Winds	1440	Votu Winds

Total 183GW

Colombian strategy raises expectations

Delayed blueprint elevates country's ambitions to new heights, writes **Daniel Dawson**

Following months of delay, officials in Colombia have published draft documentation for the country's first seabed lease auction.

"(The National Hydrocarbons Agency) has developed a comprehensive suite of documents and a timeline which would see the winners of the competition being selected by November 2024," said World Bank offshore wind program lead Mark Leybourne.

According to UPME – the government body responsible for planning Colombia's green energy transition – the country aspires to install 18GW of capacity by 2052.

"This even exceeds the deployment capacities of the 'high growth' scenario in the World Bank's offshore wind roadmap for Colombia," said Leybourne. "It makes it clear that there is a role for offshore wind in Colombia's future energy mix and its contribution could be significant."

The government originally planned to hold a seabed lease auction in the second half of this year, but an abuse of power scandal that resulted in the resignation of Mines and Energy Minister Irene Velez resulted in months of delay.

As a consequence, initial expectations that steel would be in the water by 2030 now seem unlikely, with many analysts expecting this to be pushed back to 2032.

At first, the government intends to auction sites located in an area off the coast of the northern Atlantico and Bolivar departments, near the largest population centres with the most developed infrastructure.

Developers will submit their bids for sites smaller than 270 square kilometres to DIMAR, the national maritime authority. Government officials will then rate each entry and award areas based on highest ratings.

> *"This makes it clear that offshore wind in Colombia could be significant"*

Nevertheless, the delays and ministerial reshuffle have put Colombia's earliest mover at unease.

BlueFloat Energy had been in the vanguard of Colombian offshore wind development, having secured exclusivity on its Vientos Alisios site 32km north of Barranquilla, the country's largest coastal city.

It also announced plans to develop two floating wind sites off the north-eastern La Guajira peninsula.

"Currently, the situation regarding offshore wind farm developments is quite challenging,", BlueFloat Energy spokeswoman María Alejandra Dueñas told reNEWS.

"The government has not yet authorised the allocation of areas for these projects, and we are awaiting (confirmation of the auctions) that will determine which companies and projects can move forward in the coming years."

Together with BlueFloat Energy, eight other offshore wind projects are in early stage development, bringing the total pipeline to 5GW.

While the companies behind these developments have not been publicly disclosed, observers believe state-owned oil and gas outfit Ecopetrol and supermajor Shell are among them.

Miguel Lotero, a Colombia-based expert advisor for consultancy OWC, told reNEWS that an update to a state resolution requires developers to work with a government-run energy company.

"Ecopetrol will definitely enter the offshore wind sector," said Lotero. Furthermore, the company has been involved in offshore oil and gas for 20 years, making the move to wind a natural transition.

Neither Ecopetrol nor Shell responded to requests asking for comment. ■

COLOMBIA FIGURES

Project	MW	Developer
Bergantín	825	BlueFloat Energy
Goleta	825	BlueFloat Energy
OWF Astrolabio	825	OWF Astrolabio
OWF Barlovento	825	OWF Barlovento
OWF Barlovento I	50	OWF Barlovento
OWF Barlovento II	50	OWF Barlovento
OWF Barlovento III	50	OWF Barlovento
OWF Barlovento IV	50	OWF Barlovento
OWF Bitácora	510	OWF Bitácora
OWF Galeón	825	OWF Galeón
Vientos Alisios	200	BlueFloat Energy
Total	**5GW**	

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78 offshore wind developers. The Japanese company is developing offshore wind projects in 10 countries across Asia and selected Brazil for its first development in the Americas.

"Offshore wind presents a big window of opportunity because Brazil has special conditions that make projects very attractive, such as shallow waters, high wind velocities and constant wind," she said.

"So we have a perfect scenario for low capital expenditure and high capacity factors, which provide a good future scenario for us."

Correia added that the country's extensive offshore oil and gas supply chain could be adapted to offshore wind. However, she warned that developers face many challenges before projects come online, including improving transmission lines across the country and investing in the electrical grid.

Others have said that port and coastal infrastructure also need significant investments to adapt to offshore wind construction needs. ■

Further turbulence facing project hopefuls

Once seabed lease auctions are held and temporary permits granted, developers and Colombian officials will face various challenges.

Global Wind Energy Council president of Latin America Ramón Fiestas and OWC's Lotero agree that the route to market for offshore wind developments remains the most significant challenge.

"Policy and regulation to enable long-term power purchase agreements for offshore wind is probably going to be the next step to make these projects happen," said Fiestas.

Lotero added that the competitive process outlined in the resolution does not include a mechanism to allocate the offtake.

OFFTAKE CONCERNS: OWC advisor Miguel Lotero Photo: OWC

"This is a key point, even though we are far in advance of the commercial operation date of the project," he said.

University of Valle associate professor of natural resources and environmental engineering Juan Gabriel Rueda-Bayona has worked with the offshore wind sector and said significant investments in associated infrastructure also need to be made.

These include expanding ports to accommodate increasingly large turbines and blades, laying submarine power cables and increasing transmission capacity.

Fiestas is nevertheless sanguine that offshore wind projects will continue to progress.

"Colombia is being very transparent and open," he concluded. "There is fluent communication between the government and developers. The situation is much healthier for developers." ■