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# REM

## Renewable Energy Monitor

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### Running up that Hill

Hill International's Marcelo Herrmann expects Brazil to return to economic growth, spurring further development in the country's wind sector.



### Europe Endless

The European Commission has upheld Germany's decision to exempt some heavy industries from its green energy taxes.



### Holiday in Cambodia

Singapore's Sunseap is to develop Cambodia's first large-scale solar project, a 10-MW scheme outside Bavet City.





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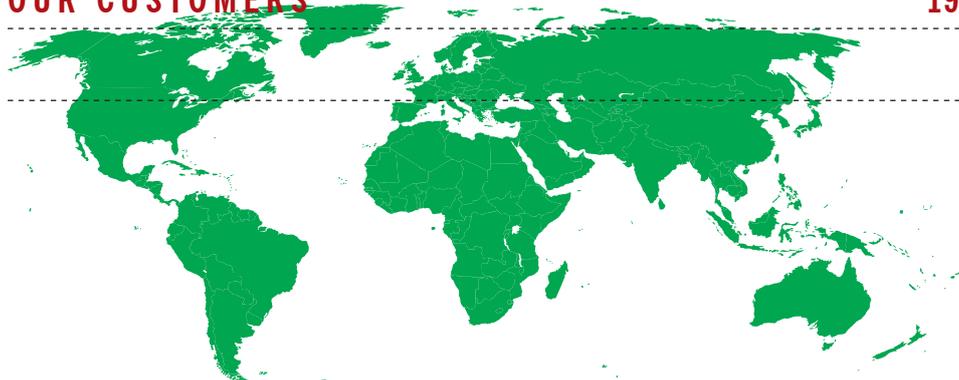
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Have a question or comment? Contact the editor – Andrew Dykes ([andrewd@newsbase.com](mailto:andrewd@newsbase.com))

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# Brazilian wind sector looks for green shoots

There are wind power generation opportunities in Brazil despite the country's economic headwinds, Hill's Marcelo Herrmann tells Ed Reed

## LATIN AMERICA

### WHAT:

Brazil should expect a rebound in growth by the end of the year, and the wind power sector will feel the benefit, according to Hill International's Marcelo Herrmann.

### WHY:

Strong policy support from government through energy auctions, and low-interest finance from BNDES is likely to spur development.

### WHAT NEXT:

The government is tackling the current hurdles – issues such as slow permitting and transmission access problems are largely being addressed.

Yet with wind development so closely intertwined with policy and state incentives, if economic growth and electricity demand do not recover as planned, a lack of project finance may hinder future capacity development.

THERE is substantial potential for Brazil to increase the share of wind power in its energy mix, although pitfalls exist both in concerns on the country's economic outlook and in the slow speed at which transmission investments are being made.

Brazil has suffered as a result of the commodity downturn, with global investor interest turning against emerging market economies in 2013. Consequently, the government increased interest rates and cut subsidies, which acted to slow growth – with GDP down by around 4% in 2015 and continuing at that level into the first half of the year. This bleak economic picture has also suffered as a result of a spiralling political scandal, which has led to the impeachment of presidents and scrutiny of high-level politicians.

There are some signs of light, though, with the recent Olympic Games doing much to remind the world of Brazil's appeal.

"We have faced many problems down over the last 30 years and here in Brazil," said Hill International's director in Brazil, Marcelo Herrmann. "We strongly believe that in two to three months the economy will begin to grow again. As such, the government will continue with its [support] for renewable energy here in Brazil."

Once the economy begins to grow once more, the need for more power generation will become apparent. Renewables in particular should benefit.

### Tailwinds

Wind makes up 6.4% of Brazil's electricity mix, Herrmann told *NewsBase*, the second largest source of renewable power after hydro. "The government intends to reach 10% [for wind power] by 2019 and 12% in 2024 – that's still the plan and that's achievable," he continued, even despite pressure from low oil prices on balancing the government's books and the country's other economic woes.

As of June, the country had installed 9,023 MW of wind capacity. However, the recession has also hit electricity demand; recent figures from state Energy Research Agency (EPE) show that power consumption during the first half of the year fell 1.7% on the same period in 2015, while industrial use in particular dropped by over 5%.

That is beginning to have effects on future projects. A planned auction – the A-3, for power delivered in 2019 – now looks as though it will be cancelled (*See: Brazil likely to cancel A-3 auction on insufficient demand page 7*), although two others are set to continue.

While the state has a role to play in wind farm construction, these developments are largely driven by private companies. State-backed investments take a long time to reach decisions, the Hill official said, and are less efficient in bidding. "Private companies are supporting around 80% of the wind farms," he noted, and will continue to lead these investments in Brazil.

Some sites are better than others for wind farm construction, he added. "Land is cheap and there is no need for offshore wind farms. As such, the northeast and the south are the best places for wind farms as the winds are stronger and constant and always from the same direction. The main states in the northeast are Ceará, Rio Grande do Norte, Piauí and Bahia. In Brazil's south, the main states are Rio Grande do Sul and Santa Catarina."

Hill has worked on 23% of Brazil's wind power capacity, which totals around 18 GW of power, including those in operation and under construction. "Our clients hire us to do three kinds of work. The main one is the hiring of the wind turbines. We participate on that in technical issues and we are at the side of the client doing all the contract discussions, including the technical specifications on how this works with the rest of the wind farm," he said.

The company also provides support in terms of balance of plant (BOP) for wind systems, under which technical aspects are connected together at a site and, thirdly, carrying out the technical inspection and time schedule supervision of how construction companies work together, from plans to commercial operation.

Part of the appeal of wind as a power source in Brazil – at least on a policy level – is the level of local participation. The Brazilian government launched its plans in 2005 and has consistently provided substantial incentives. As a result, around 80-85% of wind-power equipment needed is manufactured locally, Herrmann said, while the civil works and electrical components are 100% local.



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Marcelo Herrmann  
Director, Brazil  
Hill International

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►► The government has also exempts renewables projects from two taxes: the social contribution tax Programa de Integração Social (PIS) and a federal tax on gross sales revenue, the Contribuição para o Financiamento da Seguridade Social (COFINS).

#### Finance

Financial support for the wind industry comes from the Brazilian Development Bank (BNDES), with Herrmann estimating 95% of financing comes from this agency. “BNDES offers the lowest rates, but there are other private banks also that help our clients – during the time that they are expecting to have the BNDES financing and those private banks are responsible for bridge financing, [from the] beginning of the project until they receive BNDES financing.”

The business and revenue model for investors is based on taking part in the energy auctions and setting a rate that makes their bids competitive.

While there are still no definitive figures on the volume of total investment in the wind sector, the government’s energy auctions have driven the private sector and remain the main source of project activity so far. “We can say that the main player, which has a significant volume of investments, is one of our customers: CVER. The other players include Tractebel, ENEL, EDF, CER, RENOVA and EDP to name a few,” Herrmann said.

#### Headwinds

The main challenge facing wind power plans are the shortfalls in transmission lines. “Wind farms are mostly far from cities and sub-stations, so long transmission lines are needed. The government is trying to speed up work on this infrastructure but [this] is delayed and, as a result, around 1 GW of wind farms are ready to operate but cannot because they lack connections to the

national system,” Herrmann said.

The Hill official explained that construction of the power lines are the responsibility of private companies but the government controls the grid, once they are operational. The exception is the Amazon, because of the scale involved in such works.

“Constructing transmission lines through the rainforest requires a lot of money and is very complicated,” so the government handles work in the Amazon, he said. The Operador Nacional do Sistema Elétrico (ONS) is the operator of the system and is responsible for the integrated Brazilian system.

The second greatest challenge, the executive said, is securing environmental and archaeological permits. “It takes six to 12 months and there is too much bureaucracy. There is a government group working to reduce this time, because in some instances companies have only a little bit more than two years from winning an auction to beginning commercial operations. As such, timing is critical, given the scale of the projects.”

As the technology improves and developers’ scope expands, the scale of wind projects only looks to grow. RDS Energias Renováveis’ 568-MW project in Santa Catarina was awarded environmental approval and Ibama’s 482-MW Coxilha Negra wind farm near Santana do Livramento was granted an installation license, both in the past ten days.

Many developers will now be looking ahead to the country’s upcoming energy auctions on December 16. Given the volume of capacity and projects, and Brazil’s stated commitment to growing wind’s contribution, Hill has good reason to be bullish on the sector’s prospects. Yet the reliance on BNDES for early-stage funding and the state of the wider economy still present hurdles to further investment. Both must be addressed if development is to continue at the planned pace. ❖