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**Report Highlights:**

On January 20, 2021, Brazilian President Jair Bolsonaro sent newly inaugurated President Biden a letter noting that Brazil has demonstrated its commitment to the Paris Agreement. One example of this commitment is Brazil's recently implemented National Biofuels Policy, known as RenovaBio. The program is designed to support the country's commitments formulated at the United Nations Climate Change Conference (COP21). The USDA Mission in Brazil has made steady efforts to ensure the program's regulations provide fair treatment for corn-based ethanol, which is often imported from the United States.

## **Brazil's Commitments to Reduce Greenhouse Gas Emissions**

In December 2015, Brazil joined the 21<sup>st</sup> Conference of the Parties (COP21) of the United Nations Framework Convention on Climate Change (UNFCCC) in Paris. At COP21, each country submitted a plan to reduce domestic emissions of greenhouse gases (GHG), called an "Intended Nationally Determined Contribution (NDC)."

Brazil committed to reducing domestic emissions of GHG by 37 percent by 2025 and by 43 percent by 2030, both based on 2005 levels. On December 9, 2020, the country confirmed its commitment and reported that the country's NDC is compatible with an indicative long-term objective of reaching climate neutrality in 2060.

On January 20, 2021, Brazilian President Jair Bolsonaro sent newly inaugurated President Biden a letter noting that Brazil has demonstrated its commitment to the Paris Agreement and that it will be essential for success in combating climate change to deepen the dialogue in the energy area. During a recent press briefing at the White House, Press Secretary Jen Psaki said that Brazil would be a "key player" in negotiations on climate.

An important component to help Brazil reach its climate goals is the recently implemented National Biofuels Policy, known as RenovaBio. The program was designed to support the country's commitments formulated at COP21, with a focus on the promotion and development of biofuels.

## **RenovaBio's Legislative Framework**

The RenovaBio program's design was launched in December 2016 by the Ministry of Mines and Energy (MME). The program was formalized by the Brazilian congress on December 26, 2017, as the "National Biofuels Policy" through Bill #13,576.

The goals of RenovaBio include helping to meet Brazil's commitments under the COP21 Paris Agreement, as well as contributing to the reduction of GHG emissions in the production, commercialization, and use of biofuels. It also promotes the expansion of the production and use of biofuels in the national energy matrix, emphasizes the fuel supply's continuity, and contributes to the predictability of various biofuels in the national fuel market.

Annual carbon intensity reduction targets drive the program for a minimum period of 10 years. RenovaBio provides the framework to certify biofuel production by its efficiency in reducing GHG emissions and allows for the sale and trade of decarbonization credits (CBios). Each CBio represents one metric ton of carbon saved through the utilization of biofuels versus fossil fuels. By creating a market for CBios, RenovaBio aims to formalize recognition of the environmental benefits of biofuels and increase remuneration for producers enrolled in the program.

In November 2018, the Ministry of Mines and Energy (MME)/National Petroleum, Natural Gas, and Biofuels Agency (ANP) adopted Resolution #758/2018, which defines the following program standards:

- 1) The efficient production or importation of biofuels. It sets up the criteria to calculate the Energetic-Environment Efficiency Score/Rank for domestic biofuels producers as well as for imports.
- 2) It defines the requirements for accrediting certification inspectors and the certification of individual plants.
- 3) The program established RenovaCalc, the analytical tool to measure a biofuel's carbon intensity score, comparing biofuels to the equivalent fossil fuel.

Under RenovaBio, certified producers and importers of biofuels can sell CBios, which aids a producer's profitability. The program is voluntary for biofuel producers and importers but mandatory for fuel distributors, which are required to achieve individual decarbonization goals based on their market share. The number of CBios that each party can sell depends on the volume of biofuel sold and the party's environmental/energy efficiency rating, determined by RenovaCalc.

In June 2019, MME's National Council for Energy Policy (CNPE) approved the compulsory targets to be met by fuel distributors for the 2020-2029 cycle. The compulsory targets aim to reduce the carbon intensity (CI) of transportation fuels to 66.1 g CO<sub>2</sub>/MJ (a reduction of 10.2 percent) by 2029 from the 2018 base of CI of 73.6 g CO<sub>2</sub>/MJ. To guarantee the proposed targets, MME estimated that 95.5 million CBios would need to be traded in 2029. However, on September 10, 2020, MME's CNPE approved new CBios trading targets due to the impact of the COVID-19 pandemic (more details in the 2020: RenovaBio's First Year section).

For additional information, see GAIN reports "[Brazilian Biofuels Annual Gain Report 2018](#)", "[Brazilian Biofuels Annual Gain Report 2019](#)" and "[Brazilian Biofuels Annual Gain Report 2020](#)."

## **2020: RenovaBio's First Year**

The RenovaBio program was officially launched on December 24, 2019. The program provides the framework to certify biofuel production by its efficiency in reducing GHG emissions and allows for the sale and trade of decarbonization credits (CBios). The implementation of the program had a slow start, but it picked up momentum once Brazil's B3 stock exchange started to trade CBios on April 27, 2020. While fuel distributors are obligated to purchase CBios, producers and investors can also trade CBios on the B3 exchange.

Due to the outbreak of the COVID-19 pandemic and the negative impact on the Brazilian Otto-cycle fuel consumption (gasoline and ethanol), MME was forced to review the program's compulsory targets in the program's first year. These targets aim to reduce the carbon intensity (CI) of transportation fuels. MME reduced by 18 percent the targeted number of CBios to be sold between 2020 through 2030, from a total of approximately 759 million CBios (set initially in June 2019) to approximately 620 million CBios. MME also reduced by nearly 50 percent the targeted number of CBios to be sold in 2020 (from 28.7 million to 14.53 million CBios). The target for 2021 was reduced by 40 percent, from 41 million to 24.86 million CBios.

By the end of 2020, there were 241 biofuels plants (representing 59 percent of the total plants in Brazil) certified to issue CBios. Most of them are sugarcane-based ethanol plants, which are treated as

the most efficient biofuel source under the program. Out of the 241 biofuels plants, 22 are biodiesel plants. RenovaBio recognizes approximately 10 companies to certify plants aiming to issue CBios. The companies are Green Domus, SGS, Instituto Totum, Fundacao Vanzolini, KPMG, Benri, Verifit, Intertek, ABNT, and PricewaterhouseCoopers (PwC).

Brazil's decarbonization credit market met the program's combined goals for 2019 and 2020, with a total of 18.87 million CBios credits traded at B3 exchange as of December 30, 2020. That is 26.7 percent above the combined targets for 2019 and 2020. Fuel distributors purchased 15.096 million CBios as of December 30, one percent above the aggregated target for 2019 and 2020. Trading levels ranged from R\$15 to R\$65/mt of carbon or about US\$2.88 to US\$12.5/mt of carbon which with the current exchange rate.

However, according to ANP, 35 out of the 141 fuel distributors did not reach their mandatory targets for 2020, or 2.4 percent of the program's total target. According to the legislation, fuel distributors who do not meet their given targets are subject to a penalty and must aggregate their unmet 2020 quota with their 2021 target.

### **What to Expect in 2021**

As mandated by Resolution #8 of the National Council for Energy Policy, ANP set the aggregate 2021 target for reducing greenhouse gas emissions at 24.86 mt of CO<sub>2</sub> equivalent. ANP also established the initial 2021 individual targets that must be met by fuel distributors, listed below:

- Petrobras Distribuidora (6.54 million CBios, equal to 26.3 percent of the total)
- Ipiranga (4.75 million CBios, equal to 19.1 percent of the total)
- Raizen (4.38 million CBios, equal to 17.6 percent of the total)
- Alesat (916,317 CBios, equal to 3.7 percent of the total)
- Petroleo Sabbá (672,281 CBios, equal to 2.7 percent of the total)

Together, these five distributors represent roughly 70 percent of the total combined target for 2021. The final individual annual target for each fuel distributor will be published by March 31, 2021.

ANP expects that approximately 60 percent of Brazil's biofuels plants (or 246 plants) will be certified to issue CBios by mid-2021. A total stock of 6.13 million CBios or roughly 25 percent of the compulsory target for 2021, were available for trade on the B3 exchange as of late January. The agency estimates that between 30.9 and 32.4 million CBios are likely to be issued during the year, roughly 27 percent over the 2021 target set for trading on the B3.

ANP hosted a public audience on December 21, 2020, to discuss several topics that should be addressed in 2021, including the automatic reduction of the RenovaBio targets whenever non-obligated parties retire CBios from the market. Currently, only CBios traded by obligated parties (fuel distributors) are subject to retirement under the program to meet the compulsory target. ANP also considered a proposal to reduce current RenovaBio targets based on CBios traded in long-term forward contracts.

In addition, the Brazilian state-owned oil refinery (Petroleo Brasileiro S.A., better known as Petrobras) has shown interest in joining the RenovaBio program as a biofuel producer through its recently launched renewable diesel (“green diesel”), also known as hydrotreated vegetable oil (HVO). ANP has analyzed the issue and its decision is pending.

### **Corn-Based Ethanol Plants under RenovaBio**

According to Post contacts, there are already several large Brazilian corn ethanol plants certified to issue CBios. The certification process is onerous, requiring an ethanol producer to supply comprehensive data about every corn supplier to an ethanol plant. Many corn ethanol producers in the Center-West make direct contracts with corn producers, making the certification process relatively easy compared to the United States, where corn supplies are commonly mixed at grain elevators. Thus, U.S. ethanol producers are unable to meet the RenovaBio certification requirements to make them eligible for CBios for ethanol exported to Brazil.

Under RenovaCalc, the analytical tool to rank biofuels plants in terms of energetic-environment efficiency, Brazilian sugarcane-based ethanol producers generally receive the best scores, while Brazilian corn-based ethanol producers are not considered quite as efficient. Notably, Brazilian corn ethanol plants are likely to score better than U.S. plants due to biomass use to generate power, as well as corn being a second crop grown on the same land in one season (much of the corn grown in Brazil’s corn ethanol production region is a second crop grown after a producer’s soybean harvest).

The Brazilian Corn Ethanol Union (UNEM) recognizes that although RenovaBio was initially tailored toward sugarcane ethanol producers, which represents the vast majority of biofuels production in Brazil, changes to the regulations are needed to reflect the growing role of corn-based ethanol in the national fuel mix. UNEM has been working closely with the Brazilian government to make changes to the criteria for corn-based ethanol under RenovaCalc.

### **Attachments:**

No Attachments.