

# FS

## Green Bond Framework

March 2020

### **1. INTRODUCTION**

We were born from the long-term vision and entrepreneurship of two groups that resulted in a joint venture: the Summit Agricultural Group, an investment fund that is based in the United States and the proximity to the production of ethanol from American corn, and Tapajós Participações S/A, with extensive experience in Brazilian agribusiness.

Our company creates sustainable values on the new agricultural frontier in Brazil with renewable energy and products for animal nutrition that feed responsible production chains. We integrate a new value chain: from the destination of local corn, in incentives for sustainable forest cultivation, in the sale of high-quality products for animal nutrition and ethanol, to the generation of bioenergy and steam.

In August 2017, an audacious plan came to light. We opened Brazil's first corn-based ethanol plant in Mato Grosso State in the country's Midwest region. Through this sustainable and innovative business model, we at FS Bioenergia are now adding value and cutting-edge technology to the domestic production of corn ethanol, a biofuel which traditionally was based on sugarcane culture.

Brazil has finally begun to break through the corn ethanol industry. We believe that biofuels will play a relevant role for the future of the planet and this involves balancing sustainable energy and food production. With its thriving agribusiness and natural vocation to produce biofuels, Brazil is bound to meet a relevant part of the demand arising from the growing world population, while helping to mitigate climate-related risks. Our plant in the municipality of Lucas do Rio Verde, Mato Grosso State, is the first in the country to produce 100% biofuel from corn with state-of-the-art technology and in large scale. In the first quarter of 2020, we will open our second unit in the municipality of Sorriso, totaling an investment of BRL 2.7 billion since the company's foundation in 2016.



Therefore, we have consolidated a company that aims to help build a low carbon future by providing society with renewable energy and animal nutrition products.

In just a few years of operation, our business has made a significant impact on adding value to corn growers in Mato Grosso. Historically, due to increasing production and low consumption in the local market, corn was negatively impacted by high transportation cost to ports, placing a considerable burden on farmers due to low prices and liquidity. It also burdened the country that was required to invest public funds to subsidize freight to the ports. Today, these subsidies no longer exist, and corn ensures high profitability for farmers, who have increasingly adopted the latest technology to obtain productivity gains in the field.

We also produced new types of wet and dried distillers' grains, known as DDGs. These protein- and fiber-rich products are obtained through the FST™ technology that we brought to Brazil and are used for animal nutrition in cattle, hog, poultry and fish farming. This innovative technology was introduced in Brazil exclusively by our company and has increasingly gained the confidence of local producers, bringing productivity and profitability gains. In the last year, we reached almost 250 thousand tons of DDGs sold.

In our plant, we use biomass in our boilers and generate enough electricity to supply operations and export surplus to energy consumers in the free market, thus benefiting the country with a new renewable source in its energy matrix. Through partnerships with farmers, we reforested 4 thousand hectares of marginal land with low grain yield potential, with eucalyptus trees that will supply our energy co-generation plants. Our program provides for the planting of 30 thousand hectares of eucalyptus by 2023.

By producing ethanol, bioenergy and animal nutrition products, we have strengthened the entire agribusiness chain and broadened local positive economic impacts, while maximizing the yield of existing crops and contributing to environmental preservation.

Our activities are underpinned by our Code of Ethics and are in full compliance with the Brazilian Anti-Corruption Law and its US equivalent, the Foreign Corrupt Practices Act (FCPA). All our employees undergo training as soon as they are hired and then they go through periodic recycling programs to combat fraud and corruption cases across our value chain.

To ensure the safety of our employees and third parties working in our plants and minimize the risk of accidents, we have adopted several tools and controls. Since 2017, safety training has exceeded 20

thousand hours and involved hundreds of employees and suppliers. In the last crop year, we identified an increase of 18 percentage points in the Safe Practice Index, one of our key indicators to assess the teams' adherence to our safety culture.

The number of FS Bioenergia employees grew more than 50% in the last crop year, with a focus on promoting internal employees and the development of professionals for new challenges. We also conducted our first organizational climate survey during that period, where we achieved an 88% satisfaction rating and the Great Place to Work (GPTW) certification, which recognizes companies with outstanding workplace culture.

FSBio activities are aligned with the 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, that provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. We create value for 5 Sustainable Development Goals (SDGs):

## SDGs



On the strategic pillars, the Group plans the following:

- a. Industrial growth:** FS Bioenergia aims at a total capex spend of BRL R\$454MM in the 2020-2021 period, resulting in forecast of BRL R\$1.125MM total ordinary EBITDA.

FS Bioenergia has reclassified its capex plan according to the following categories that are more reflective of the nature of its current and future business. In terms of investments and growth in ordinary EBITDA, the three categories will contribute as follows over the plan period:

- Total capex expenditure of BRL R\$351MM on ethanol production;
- Total capex expenditure of BRL R\$103MM to increase forestry development (eucalyptus and bamboo biomass);
- Production goal of 1.229.000.000 liters of corn ethanol.

- b. Human capital:** FS Bioenergia's strategy relates to management of human capital, fostering the economic and social

growth of the local communities we engage and enhancing the roles and skills of the people within the organization.

In terms of targets, FS Bioenergia confirms and accelerates its specific commitment, undertaken in December 2019, on the following Sustainable Development Goals:

### **Engaging local communities**

- SDG 7 (access to affordable and clean energy): For the LRV power grid in 2019, it was exported enough energy to supply an average of 18 thousand homes per month (3,93MWm). For 2020, the forecast is to supply 37 thousand homes with (8.0 MWm) per month. In Sorriso, the plant will export enough energy to supply an average of 40 thousand homes per month (8.7 MWm).
- SDG 8 (employment and sustainable and inclusive economic growth):

One of FS goals is to constantly invest in the development of its employees; hence, it currently offers Educational Studies Assistance to support a continuous learning process. This benefit is part of the FS working proposal, from 04/2019 to 02/2020, 123 employees on average have been served. When it's requested by the employee, 50% of the monthly fees, materials and enrollments are paid through the company, including University Graduation, MBA, Postgraduation and Language courses. Enabling that way, a constant technical training within FS Bioenergia.

In terms of leisure time, FS offers an agreement with a club located in every city where the company has a branch. Currently in Lucas do Rio Verde our agreement with the AABB Club attends 63 employees and in the Sorriso unit, the Castellus Club attends 59 employees, providing leisure and sports practices adding a better quality of life for all employees and their families out of the working hours.

The Physical Activity Assistance is a benefit that helps the employees to keep a regular physical exercise practices, being able to choose the sport which fits them so they can request a refund of 50% of the amount paid in the monthly fee, by now, this benefit includes an average of 60 employees.

Another important benefit that FS recently joined was the Citizen Company Program, which aims to extend the Maternity Leave up to 6 months also the Paternity Leave up to 20 days, thus, emphasizing the

importance of supporting the families in the first months of their baby's life.

We recently introduced an important update to our hiring policy, with the aim of guaranteeing the right of women candidates to be finalists in all selection processes for leadership positions, unconditionally supporting women in their professional careers.

The Employee Support Program (OPTUM) is also an ally of the employee, a free call service is available 24 hours to help the employees and their families in several topics such as: Anxiety, alcohol and drug abuse, workplace conflicts and financial issues. Currently, this service is performed by a specialized consultant and attend 593 people. FS pays 100% of this service, thus, making sure that our employees and their families can have the necessary support to perform their duties in the best possible way.

### **Climate change**

- SDG 13 (climate action): FS was certified in the RenovaBio program in March 2019 with a carbon footprint of 16,3gCO<sub>2</sub>eq/MJ for anhydrous ethanol and 16,7gCO<sub>2</sub>eq/MJ for hydrated ethanol. By achieving these values of low carbon footprint, FS currently holds the lowest emission of all fuels in Brazil for Anhydrous ethanol and #2 position in hydrous ethanol. These numbers can change as, roughly, 80% of all the Brazilians ethanol plants are under public certification process currently.

### **Innovation and infrastructure/Sustainable cities**

- SDG 12 (Sustainable consumption and production patterns): Corn and biomass from direct suppliers purchased have undergone a socio-environmental check list since December 2019. The areas of origination are assessed for the presence of recent deforestation (PRODES) and SEMA, IBAMA e ICMBio embargoes, overlap with conservation units, indigenous or quilombola lands and whether the supplier is present on the "dirty list" of slave labor.

## **2. RATIONALE**

Our company aims to create sustainable value within Brazil's new agricultural frontier, with renewable energy and animal nutrition products that feed responsible supply chains. At FS Bioenergia, we work to add high technology and develop the Brazilian agribusiness production chain. We are the first plant in the country to produce 100% corn ethanol through a sustainable business model and connected to the global demand for renewable energy sources and lower greenhouse gas emissions.

Our plants are in the state of Mato Grosso, in Brazil's Midwest region, the country's main corn producing area. Our first plant opened in August 2017 in the municipality of Lucas do Rio Verde, where our corporate headquarters are located. In the 2018/2019 crop year, we completed the expansion of this industrial plant, which now has the capacity to produce 530 million liters of biofuel a year.

FS Bioenergia's second factory was inaugurated in February 2020 in the municipality of Sorriso. We invested BRL 1.63 billion to build this new unit, which will increase our production capacity to 1.33 billion liters of ethanol a year. We also anticipate the installation of four more plants in Mato Grosso State.

The expansion of our operations is in line with the expectation of growing demand for this biofuel. Currently, Brazil consumes about 28 billion liters of anhydrous and hydrous ethanol per year, according to data from the National Agency of Oil, Natural Gas and Biofuels (ANP). This volume could reach about 45 billion liters if driven by programs such as RenovaBio and other incentive programs for a less carbon-intensive energy matrix, according to expert consultants. With a pioneer and innovative work in the Brazilian Midwest, FS Bioenergia believes that the transition to a low carbon economy can be led by the issuance of Green Bonds.

## **3. APPLICATION OF GREEN BOND PRINCIPLES**

The Green Bond Principles (GBP) promote integrity in the Green Bond Market through guidelines that recommend transparency, disclosure and reporting. GBP (2018), published by International Capital Markets Association are voluntary process for broad use when issuing Green Bonds as well as in the development of the Green Bond market.

### **3.1 Use of Proceeds**

The proceeds to be raised through green bond issuances will be used to finance projects in the following categories:

**Bioenergy:** Projects related to production of hydrous and anhydrous corn-ethanol biofuel, including:

- i. capital expenditures for development, construction, operation and maintenance of biofuel production facilities; or
- ii. operational expenditures for purchase of corn feedstock for biofuel production.

**Forestry:** Projects related to the purchase, development and maintenance of forests and biomass from forests, including:

- i. capital expenditures for development, purchase, planting and maintenance of forests and bamboo plantations to produce biomass feedstock for co-generation of steam and electricity primarily dedicated to biofuel production facilities; or
- ii. operational expenditures for purchase of forest biomass feedstock for co-generation of steam and electricity primarily dedicated to biofuel production facilities that seeks to promote sustainable forest management through forward contracts with small producers.

### Examples of Eligible Green Projects

As example of Eligible Green Projects, FS Bioenergia has selected forest conservation/restoration (Forest Promotion Program: [http://fsbioenergia.com.br/wp-content/uploads/2020/01/FOMENTO-FLORESTAL\\_Revista-Biomassa\\_OneOne\\_2019-1.pdf](http://fsbioenergia.com.br/wp-content/uploads/2020/01/FOMENTO-FLORESTAL_Revista-Biomassa_OneOne_2019-1.pdf)) and the production of bioethanol (<http://fsbioenergia.com.br/negocios-e-atividades/bioenergia/>).

### 3.2 Process for project evaluation and selection

In addition to defining a robust verification protocol for potential corn purchases, FS Bioenergia expanded the interaction between the sustainability department and the commercial area, defining strict rules and an approval flow for purchases involving the company's senior management.

The socioenvironmental analysis currently verifies each intention to purchase corn in terms of its origin, and for all direct purchase cases from producers a CAR request procedure is applied. The integrity (not deforestation) of the remaining native vegetation is verified since 2008 for Amazon biome and 2018 for Cerrado biome, as well as whether the



agricultural production areas are free of embargoes and or recent deforestation.

Once the contracts have deadlines (period) for the delivery of the products (corn), after the approval of the purchase, it follows with the monitoring, using the interpretation of satellite images during the delivery period, as well as a socio-environmental statement (with date and time) is generated for each new corn receiving.

In this way, FS Bioenergia maintains strict risk management and socio-environmental monitoring processes applied to the field's origination operations, using tools based on geoprocessing. FS also monitors all consultation and monitoring management through the Agrottools SAFE tool, which guarantees the quality of analysis and independent storage of evidence from consultations, necessary for an MRV process (measurable, reportable and verifiable).

The following criteria will be applied for sourcing of corn feedstock:

- From 2020, the suppliers included in the RenovaCalc program will be monitored for their annual productivity (tons per hectare), generating greater control over the area size used for FS Bioenergia's bioethanol production.
- FS Bioenergia produces first generation hydrated and anhydrous bioethanol fuel from corn with a high sustainable standard. Its bioethanol production is already qualified and certified to generate CBIOS, emission reduction credits for the Brazilian RenovaBio Program, with a carbon intensity of 16.7 gCO<sub>2</sub>e/MJ (hydrated bioethanol) and 16.3 gCO<sub>2</sub>e/MJ (hydrated bioethanol).
- The corn used for the bioethanol production is from second-crop, so it is not necessary to expand new areas for its cultivation.
- The vulnerability conditions to climate changes are made through socio-environmental assessments (Agrottools SAFE tool) on the territories originating corn and biomass (eucalyptus forests). In these evaluations, the conversion of land use is evaluated and used in making purchase decisions, acting strongly in inhibiting deforestation, especially in sensitive Brazilian biomes, such as Amazon and Cerrado.
- FS Bioenergia also evaluates the cultivation of corn and biomass producers in protected areas in compliance with Brazilian national environmental laws. FS does not originate corn and biomass from farms that overlap with protected areas, establishing careful limits during the socio-environmental assessment of suppliers.
- All suppliers that participate in the RenovaCalc program present data on fertilizer consumption.
- We negotiate only with those suppliers that are not included on the slave labor lists, in order to preserve the best working conditions in the field.



The following criteria will be applied for sourcing of biomass feedstock:

The investment selection process was adjusted at the end of 2019 for direct suppliers of corn and biomass (producers), including a broad decision flow that includes in summary:

- Analysis of the territory (farm) in relation to its location and application of the sustainability protocol for corn or biomass (January 2020 version);
- Issuing evidence of socio-environmental assessment through the Agrotools SAFE tool;
- All cases that are not approved will have the contracts canceled.
- FS Bioenergia has a socio-environmental assessment protocol of not originating corn and biomass in Amazon areas that have been deforested since 2008 and for the Cerrado biome since 2018, using the tool Agrotools SAFE for this.
- The overlapping of planted forest farms with indigenous lands is assessed before any negotiation, so that FS Bioenergia does not make purchases from suppliers that have invaded protected lands.

In case of any detection of non-compliance with the established criteria above, the problem will be qualified, following a thorough analysis of the producer's documents, technical and legal evaluation (if necessary) and approval by the FS Bioenergia Sustainability Committee.

### **3.3 Management of Proceeds**

The proceeds will be used up to 12 months after each green bond issuance. Until complete disbursement, these funds will be 100% invested in CDB / low risk commitments or used to repay outstanding debt. However, it should note that future issues may be allocate to CAPEX.

In order to ensure that the proceeds will not be used for non-green actions, the corn purchased contracts that served as ballast to the CDCA and that was the instrument used to back up the issuance of the CRA will prove that the funds will be used in a sustainable way. Debenture will also be used as an instrument for future green issuance.

### **3.4 Reporting**

Annually, and until the maturity of the FS Bioenergia Green Bond issued, FS will provide to investors and general public on its website <http://fsbioenergia.com.br/> with all the pertinent information available in the annual Sustainability Report. The Report will include the taxonomy proposed by the Climate Bond Initiative. Some of the KPIs that will be monitored and disclosed are listed below:

- Share of proceeds allocated in each eligible category;
- Proceeds allocated to eligible assets vs total amount of proceeds raised from green bond issuances;
- Carbon intensity of ethanol production;
- Volume of biofuel produced;

All KPIs disclosed in the Sustainability Report, the allocation of financial resources and the respective projects will be audited by a third part, in order to give more transparency to the process.