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Project Horizonte 2 advances and Fibria presents the technological features of packages already contracted

Energy efficiency and better environmental performance stand out as increments adopted for the second production line at the Três Lagoas Unit



Laying of the cornerstone of Project Horizonte 2, which will increase production capacity at Fibria's Três Lagoas Unit (MS), marked the official kickoff of construction work on October 30. With a total investment of R\$8.7 billion, expansion of the world's eucalyptus pulp production leader will make this production unit go from 1.3 million tons of pulp per year to 3.05 million, with the building a second production line with an annual capacity of 1.75 million tons.

"Expansion of the Três Lagoas unit is a milestone in Fibria's history, resuming its vocation of growing responsibly. Start-up of construction work is a consequence of a very well planned project, which already possesses its main supply agreements in force. We are very proud to be making this major investment in Brazil, improving the quality of life

and generating development for the city of Três Lagoas, Mato Grosso do Sul state and also for Brazil," said Marcelo Castelli, the company's CEO, during the ceremony.

Execution of Project Horizonte 2 will count on the participation of roughly 60 local suppliers and will have a positive impact on public finances, with a projected \$450 million in taxes to be collected during construction. Mayor Márcia Moura said that Fibria's presence in the city and the development of this expansion project provides invaluable positive impacts to the economy of Três Lagoas, such as job generation, income distribution, leases and partnerships with landowners, labor qualification, dissemination of technology, environmental respect and development of social projects. "We all win with this project and from its competitive positioning in the global market," said the mayor.



growth, generating jobs and ensuring environmental preservation,” said Kátia while reading the President’s speech. In her statement, Dilma reinforced that in a moment of fiscal adjustment and transition we are currently undergoing, “the expansion of Fibria’s unit becomes even more relevant and shows that our business community is not influenced by pessimistic analysis and is not putting their projects on hold. More than that, it demonstrates that our companies know that our country will begin to grow again.”

In her own speech, Kátia focused on the second stage of the Logistics Investment Program (PIL), estimated at R\$ 198.4 billion. One of the important pieces of news for the region is the North-South Railway, which intends to start in Maranhão, cross Tocantins, pass through Goiás, São Paulo and reach Mato Grosso do Sul. “This project is already underway and recently received 29 manifestations of interest on the part of project designers who determine the feasibility of given projects. The fact that there were 29 manifestations demonstrates that it is certainly a viable project,” she said. When talking about port logistics, the minister commented that nine terminals of private use were authorized in 2015, reaching a total of 47 authorized terminals since the legislation change in 2013. “These are examples that show that we are not just sitting back and doing nothing. On the contrary, we are executing very important concrete actions for the competitiveness of our companies and our economy,” she said.

Reinaldo Azambuja, Governor of Mato Grosso do Sul state, also acknowledged that the main challenge today is putting projects into practice that lend more competitiveness to the state’s productive sectors, particularly the viability of waterway transportation, since the Paraná River is fundamental for the region

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Also present at the event, Kátia Abreu, Minister of Agriculture, Livestock and Supply, represented Dilma Rousseff and read the speech written by the country’s President. “In 2009, when Fibria inaugurated its first industrial pulp mill in Três Lagoas, a new history in the region’s development began being written. In less than a decade, Três Lagoas became the world capital of pulp, growing business and job opportunities in the region. Today, in casting the cornerstone for the second line of this pioneer mill, we are witnessing the beginning of another important chapter in this successful story. I have immense pride having in Brazil a company of this relevance, producing wealth and economic





FIBRIA DISCLOSURE

Castelli: "Expansion of the Três Lagoas unit is a milestone in Fibria's history, resuming its vocation of growing responsibly"

and is experiencing difficulties due to the dry season. "We need to find paths for improving this equation. Nonetheless, we know that it is possible to promote several advancements in logistics and we are addressing these themes with the federal government to grow industry competitiveness."

The governor also said that the crisis Brazil is undergoing is not the first nor will it be the last. "Crises will always exist, but it is in moments like this that partnerships become even more important to be creative, to substitute taxes for jobs and create work opportunities," he said, saying that fiscal balance is the foundation for the country's development.

"Only through partnerships between municipality, state and federal government will we rid ourselves of this pessimistic climate we currently have. We will overcome this period through work, dedication and effective public policies, always seeking to satisfy private initiative needs," he said.

As example of this joint work, Azambuja mentioned the ICMS tax benefit, according to the production of companies present in the state. He said that the most important in this process of seeking perks that favor development is to create opportunities for generating economic movement. "The increase in property values, strengthening of the economy and the increase in regional economic movement end up compensating the benefit that the state offers in relation to the tax received. This is a logic adopted by the government and has been working out quite well," he said, justifying the launching of a recent program for recovering degraded pasture areas, which amounted to 9 million hectares in the state. "Given its vast territorial extension and

possibility of expanding productive areas, we have conditions to increase the forestry, grain, beef and the sugar-energy sectors. For the degraded areas, specifically, the government created this program that exempts part of the production generated. It's opportunities like these that enable young states like ours to become more competitive."

The pulp produced at Fibria's Três Lagoas unit is transported by highway to a warehouse located in the same town. From there, it travels by railway until the Port of Santos (SP), where it is exported to more than 40 countries that comprise the European, North American and Asian markets. The efficient flow of production is one of the company's priorities in this expansion project. "Even though investments in logistics are a need for those who produce, it is also an opportunity for those looking to develop new business. The model that prioritizes a clearer business environment, with concessions and public-private partnerships, is the ideal. I believe we are on the right track, since all government spheres are working in this direction to make the business environment more favorable for private investment," said Castelli.

Sustainability concepts and competitiveness define the expansion project

Considered one of the biggest private investments in the country with a focus on exports, Fibria's expansion project is projected to begin operating in the fourth quarter of 2017. Combining all production units, the company currently produces 5.3 million tons of pulp per year. Upon start-up of line two at Três Lagoas, this total will increase to 7.05 million tons/year of pulp. "We have growing global demand – greater in some regions, less in others, pursuant to the degree of maturity of each market, but growing overall. Statistics show that this growth will tend to continue over the next years. With this, Fibria decided to increase its production capacity to satisfy customer needs. We are leaders in this market and we need to grow to satisfy the demands of our customers," said Castelli about the commercial strategies behind the Três Lagoas expansion project.

Also according to Fibria's CEO, the project could have started at least two years ago. "In 2013, we had already established several wood contracts with local producers, in addition to having started accelerating our own planting process. We demonstrated discipline and patience to await the market window and put

Project Horizonte 2 into practice.” Castelli pointed out that Três Lagoas was the city selected for expansion due to the positive business environment, which not only involves the state government but also regional characteristics favorable to the planting of eucalyptus. “Here, we found the conditions and confidence necessary to consolidate the investment.”

Project Horizonte 2 works began even before casting of the cornerstone and are on schedule. During the two years projected for execution of the project, Fibria is expected to generate 40,000 direct and indirect jobs, whereby the company has oriented its suppliers to, whenever possible, prioritize the contracting of professionals from Três Lagoas (MS) and region. “The peak of the project is scheduled to occur in November or December of this year, at which time we shall have an average of 8,000 to 10,000 people working,” said Júlio César Rodrigues da Cunha, Engineering and Projects director. Once the underground and

rainwater runoff stages are concluded in the beginning this year, the project will move on to the road paving phase. “We may face some adversities during the rainy season, but we know the region and are confident that the plant will begin operating as scheduled.”

Among the contracts already signed so far is the package of temporary buildings entered into with Fortes Engenharia. The contract comprises the construction of buildings exclusive for use during construction, including social center, restaurant, in-house clinic, offices and work sites for construction companies. The management package of the administrative services center will be carried out by Meta Central de Serviços, which will be responsible for cleaning, lodging, transport, property security, restaurant and construction site services, among others.

Veolia will be the supplier of the water solutions package, which foresees the construction of three units: the first contemplates the

DIFFERENT SOURCES OF CREDIT, DEFINE THE PROJECT'S FINANCIAL



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In the beginning of November 2015, Fibria announced that the entire financing structure of the project had been defined. Even though the investment in Brazilian reais increased from R\$7.7 billion to R\$ 8.7 billion, in US dollars the CAPEX amount dropped from US\$2.5 billion down to US\$ 2.2 billion.

According to Guilherme Cavalcanti, Finance and Investor Relations director, the combination of financing and company capital allowed Fibria to arrive at an average cost of 2% in US dollars. The financial solution for the project will improve Fibria's credit quality, reducing the average interest rate from 3.3% down to 2.8%, with longer maturities.

Roughly 30% of the total amount financed (equivalent to R\$ 2.6 billion) will come from cash generated by Fibria, which has been posting consistent operational milestones. The National Bank for Economic and Social Development (BNDES) may finance R\$ 1.7 billion in the event the project currently being analyzed is approved, which would present roughly 20% of the total. For this loan, Fibria qualified for BNDES/ANBIMA's Incentive Program for the Fixed Income Market and has already issued Agribusiness Receivable Certificates (CRA), which will provide access to a greater portion of BNDES credit in TJLP (Long-Term Interest Rate). Issued for the first time by Fibria, the CRAs had high demand and helped stimulate the country's capital market, with record investors distributing the securities: 34 securities brokerage companies participated. The CRA issue amounted to R\$ 675 million, with the rate of 99% of CDI.

Fibria also has \$1 billion in financing that complies with project SUDECO (Midwest Development Superintendence) of the Midwest Development Fund (FDCO). This line was approved in October 2015 and the expectation is to conclude the transaction in the near future.

In the external market, Fibria accessed two lines: a US\$400 million syndicated loan, via export prepayment, with an average cost of Libor + 1.43% and an average term of five years; and another US\$ 300 million from Finnvera export credit agency (Finland), which finances equipment in this country. “Since we possess investment grade from the three risk-rating agencies, Fibria was able to access the best market opportunities when structuring the financing for the Horizonte 2 project, with lines in accordance with the company's cash flow profile from the best international credit institutions,” said Marcelo Habibe, Treasury, general manager.



TRÊS LAGOAS CITY HALL DISCLOSURE

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production of demineralized water for the recovery boiler; the second, treatment of raw water and converting it into treated industrial water; the third, effluent treatment. Also part of the Veolia contract scope is a unit for condensate polishing and a unit for producing sealing water.

Andritz is also another supplier already contracted and will be responsible for supplying the package that encompasses the chip yard, pulp line (cooking, washing and bleaching), pulp dryer machine, recovery boiler, evaporation, caustification and lime kiln. AkzoNobel was the company chosen to supply the chemical plant package, besides construction of a chlorine dioxide production plant with a 60t/d capacity and tanking of chemical products, all used in the pulp bleaching process.

For infrastructure, Siemens was selected to supply the turbogenerators, while Time Now will be responsible for managing works, Flowserve will supply automatic valves and Sulzer will provide centrifuge pumps. In turn, Asea Brown Boveri (ABB) will be responsible for the entire energy transmission and distribution system, which includes primary substation, motors, motor control center (CCM) and transformers, while Pöyry will be responsible for Balance of Plant (BOP).

With White Martins, Fibria closed a contract to install an oxygen generation unit. The unit will have a capacity to produce 130 tons of oxygen per day, and will be interconnected to the already existing unit that supplies the current production line, providing an additional 30

tons per day to the production capacity projected for the line. "The use of oxygen is fundamental for our pulp pre-bleaching process, ensuring the oxidation of lignin, which is responsible for the dark pulp color of cellulose," said Cunha, pointing out that the new oxygen production unit will be managed, operated and maintained by White Martins.

Like other projects spearheaded by Fibria, Horizonte 2 will have sustainability as business principle. The new industrial unit will have even cleaner productive processes, with all energy consumed being generated by the plant itself from biomass resulting from the industrial process. In practice, in addition to generating and consuming its own energy, the new unit will produce an excess 120 MWh, contributing to Brazil's energy balance. For comparison purposes, Industry and Engineering executive director, Paulo Silveira, informed that the current Três Lagoas unit is capable of producing and supplying the national energy system an excess of 50 MWh. This more than double amount to be generated by the second line will be the result of greater energy efficiency of equipment utilized, particularly the recovery boiler.

"The new equipment will also consume less chemical products and, consequently, reduce environmental impact. Additionally, technologies today are incorporating the concept of bio-oil. The unit is being designed to utilize biogas as fuel sometime down the road," said Silveira, mentioning other technological advancements that promise to have positive effects on the environment.

The average distance between forests and production lines at Três Lagoas will be 95 km

Another source of competitiveness regarding Project Horizonte 2 refers to wood access. "The average radius between forests and Fibria's production unit is currently 91 km, standing out as one of the major factors of competitiveness of our forests. With the capacity expansion, we expect to reach an average radius of 95 km, which continues being a small radius, lending a very favorable position in terms of wood cost," said Tomás Dandrea Balistiero, Fibria's Forestry general manager in Mato Grosso do Sul.

In addition to the small average radius, the cost of wood practiced by Fibria is among the lowest in the world, due to the cost of flat land and availability of land in the region. According to Balistiero, the 9 million

hectares of degraded pasture land in Mato Grosso do Sul constitute an important expansion opportunity for Fibria's forestry base.

At present, the company possesses a total area of 342 thousand hectares, when combining eucalyptus plantations (120 thousand hectares) and native forests (222 thousand hectares). In the expansion plan, the goal is to add another 164 thousand hectares of planted forests. The Forestry general manager informed that the beginning of investments in forest base for this expansion project began in 2010 and contributed to the decision that the company announced in May 2015. "We already have an additional 105 thousand hectares to service the new line of 1.75 million tons/year of pulp. The remaining 59 thousand hectares necessary to satisfy the demand of line 2 will be leased," he said.

With regard to the lease model adopted, Balistiero explained that this is a trend that should prevail in the industry over the next years. Even though the conventional model that's been used for several years is represented by company-owned areas in their entirety, today, the reality is already another: the leasing of land, with production of own resources appears as a good option. Development stands as another alternative, represented by a model in which the land and wood are not company property, which only has the option to purchase. Another possibility – also adopted by Fibria at present – refers to leased areas that remain suspended for a period and receive partner investors to use these forests during the period and then offer the wood produced. "We had leased areas for the project that remained suspended for a period. While the project did not kick off, we received investors to use these forests. They will give us the option to purchase the wood," he said. "What should become consolidated over the next years is the leasing with Fibria planting, coupled with the purchase of wood in the market and the forest lease with production model through partners," said Fibria's Forestry general manager regarding the company's long-term planning.

Until the end of last year, Fibria contracted more than 400 people to accelerate the forest-building program. The teams were designated to do planting and maintenance on the 59 thousand hectares remaining to fully service the second production line at Três Lagoas. This year, the company will begin training operators and mechanics for the harvesting strategy earmarked for Horizonte 2. "We have our own technical training center for operators and mechanics. We also count on Senai's

infrastructure to train these professionals who normally are people from the region," said Balistiero, highlighting another aspect that lends competitiveness to the company. "A few years ago, we didn't have this know-how consolidated for the harvesting stage, which raised a series of difficulties for training these professionals. Today, with our own expertise, this aspect has been completely resolved. Our training model for operators includes theory classes, classes with simulators and field training with the equipment, comprising an average period of six months," he said.

Investments in Project Horizonte 2 also include a new nursery. While the current nursery produces 12 million seedlings per year, the new one will have a production capacity of 43 million. "The nursery, which we call the 'Seedlings Factory', is totally modern, composed of flower production technology imported from Holland. It is expected to be adopted by the end of 2017 and begin operating effectively in 2018," said the Forestry general manager.

The genetic material planted by Fibria is appropriate to the region's characteristics, including soil and climate conditions. "This is a region that rains a lot, but in a lesser amount than other rainier states like São Paulo. Therefore, the materials used at the unit are more resistant to water deficits," said Balistiero. The conventional genetic improvement program resulted in an average productivity of 42 m³ per hectare/year and 11 tons of pulp per hectare/year. However, he pointed out that the program is continuous and foresees even better material as the years go by. "Our research models

Legend: Works began even before casting of the cornerstone and are on schedule

FIBRIA DISCLOSURE





LARIANA JACOB

While the current nursery produces 12 million seedlings per year, the new one will have a production capacity of 43 million

work with conventional genetic improvement and with the experimental biotechnology base. The goal for all Fibria units is to reach 15 tons of pulp per hectare/year by 2025, using only conventional genetic improvement.”

Also focusing on the principle of continuous improvement in its processes, Fibria utilizes best management practices in the sector, respecting the environment and its biodiversity, and contributing to the sustainable development of neighboring communities and the sector itself. Fibria’s forest management of eucalyptus plantations in Mato Grosso do Sul is certified by FSC®, license code (FSC-C100704) and by CERFLOR. Both certifications ensure that the wood used by Fibria comes from a forest where management occurs in a conscious and sustainable manner, socially beneficial, economically viable and complies with all applicable laws in effect for forestry activities. ■

CURRENT OPERATIONAL ROUTINE ALREADY STANDS AS ONE OF THE MOST COMPETITIVE IN THE GLOBAL MARKET

On the verge of completing seven years of operation, Fibria’s current production line in Três Lagoas possesses modern equipment and ranks as one of the most advanced in technology worldwide. “The design of the first production lines, baptized as project Horizonte 1, was of an annual production of 1.25 million tons. However, the unit already contemplated equipment with a

certain excess capacity to pursue an even better production level. Together with the improvements to be made to equipment that did not have this investment to ramp up production, we reached an annual production level of 1.3 million tons,” said Renato Ottoni, general manager of the Três Lagoas industrial unit.

To satisfy the new production, the level of customer service and maintenance for equipment that comprises the production unit was increased, which factor, according to Ottoni, is one of the main aspects for debottlenecking the plant. “As we expand production, we need to have an even better trained team, since professionals need to be qualified to deal with the technological increments adopted,” pointing out another indispensable factor. “To reach the production of 1.3 million tons, we also had to optimize processes, including the consumption of inputs. The more we work to optimize them, reaching a lower specific consumption, the more competitive becomes our cash cost level,” said Ottoni, highlighting another positive aspect for the unit’s competitiveness, which possesses a production scale with the lowest cost in the market, of US\$ 100 per ton of pulp.

FIBRIA DISCLOSURE



Project Horizonte 1 contemplated an annual production of 1.25 million tons. After undergoing increments, the current unit produces 1.3 million tons