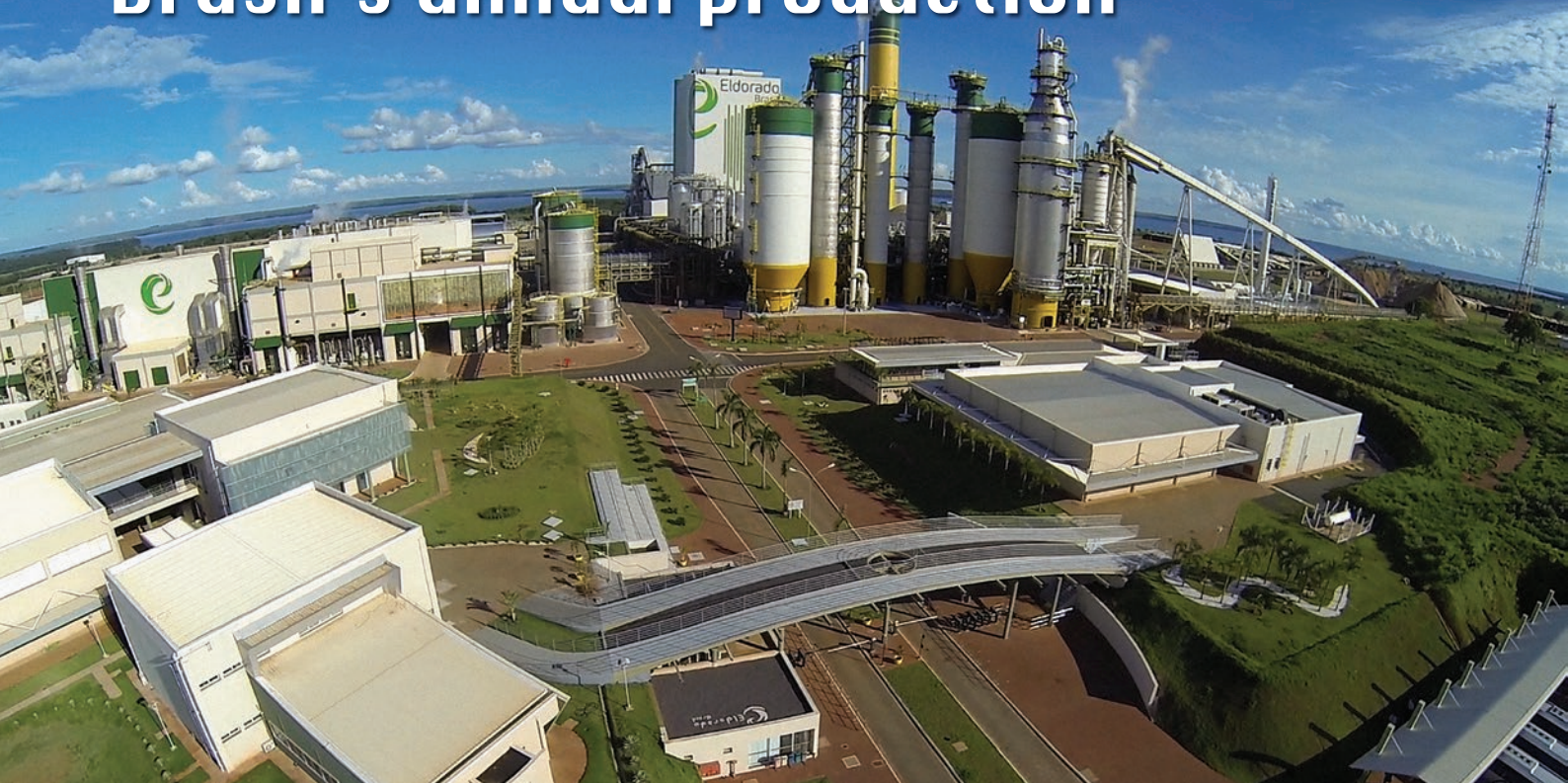


Project Vanguarda 2.0 to add a 2.3 million tons to Eldorado Brasil's annual production



Line 2 of the production complex in Três Lagoas (MS) will combine exclusive technologies and different practices from those commonly adopted in the market

By Caroline Martin
Special for *O Papel*

In the first quarter of this year, Project Vanguarda 2.0, which contemplates the construction of a second pulp production line at Eldorado Brasil in Três Lagoas (MS), concluded the earthmoving phase and started its infrastructure works. In order to reach a production capacity of 2.3 million tons/year at the new plant, the next stages of the project include start-up of civil construction and contracting of the technologies and equipment to be installed.

"The investment is in alignment with the company's sustainable growth plan, considering the rising demand for pulp worldwide. Project Vanguarda 2.0 reinforces

Eldorado's pioneering and innovative position. The company will have the biggest industrial pulp production complex in the world. With the two lines operating, Eldorado will have an annual production capacity of 4 million tons," said José Carlos Grubisich, CEO of Eldorado.

When considering investments in the industrial and logistics areas, the project totals R\$10 billion. Even though the financial structure of Vanguarda 2.0 is still being defined, the company projects that 30% of the investment will come from own capital and 70% through debt. The forecast is that the two processes

that comprise the project's financial structure will be concluded by the second semester of this year.

"The amount referent to own capital includes a few alternatives: it may come from current shareholders, as well as from new potential shareholders," said Camila Anker, investor relations manager at Eldorado. Regarding the amount to be financed, Camila reveals that the possibilities underway include a financing line with FI-FGTS, which amount may vary between R\$1.2 billion and R\$1.5 billion, earmarked to finance the entire part associated to infrastructure, logistics, sanitation, and energy. The company is also in contact with Export Credit Agencies (ECAs) to finance imported equipment. "Right now, we are defining what the equipment will be and contacting the respective suppliers," said the executive. She points out that in building the first line, Eldorado used financing from ECAs in Finland, Sweden and Austria. "For Vanguarda 2.0, these three agencies are again a possibility, whereby we are also considering bringing equipment from Germany and China totaling between US\$600 million and US\$700 million," said Camila. The Midwest Development Fund (FDCO), which counts on resources from the treasury and is earmarked for financing structural projects in Brazil's Midwest region, shall also participate with an average investment of R\$1.5 billion. The remaining amount contemplating the 70% of debt shall come from the BNDES, informed the investor relations manager.

In projects of this magnitude, with all the positive effects for the region, benefits granted by the state will also come into play, informed Camila. "The state's master plan divided Mato Grosso do Sul into three parts, each one with an investment focus, and elected the Northeast region, where Três Lagoas is located, for eucalyptus development. The industries are subsequent from this and it is in this context that Eldorado is inserted."

Exclusive technologies will make-up the second production line

Maximum reduction of installation cost is the main goal assumed by Eldorado in executing Project Vanguarda 2.0. "Our challenge is to make this project have a ratio of US\$ 1 thousand per ton of pulp, whereas projects today average around US\$ 1,400 per ton," said the company's industrial director Carlos Monteiro.

To satisfy this objective within the projected budget, the company has been adopting different practices from those usually adopted in the market. The first refers to the Engineering, Procurement and Construction (EPC) purchasing model. "Different from what is practiced in the market so far, and from what we did to build our first line, when contracting the first and most important suppliers for the project, we intend to free them from executing the executive engineering part. The idea of not having partners execute the civil construction is for us to execute this stage. With this, we will have more work in the management part, but we expect to obtain better prices when going to the market with all the detailing, especially for civil construction activities. We have experience

in choosing this alternative in order to reduce project implementation costs," said Monteiro.

According to him, Eldorado is also considering expanding the purchase of frames. "We have a series of standardized purchases like pumps, control valves, and motors. We are considering increasing this type of purchase to other areas," he said as an example for lowering installation cost.

The current phase of the project includes negotiations with potential suppliers that will be part of line 2, like Andritz, Valmet, CBC, Confab, Contern, Veolia, Centroprojekt and Demuth. "We already have some confidential conversations for the development of what we call 'Eldorado Technology'. This means that some of the areas that will form Project Vanguarda will be developed specifically for the company," said Monteiro.

In terms of market differentials that Eldorado intends to adopt, starting with the development in partnership with suppliers in the sector, is high kappa cooking, a process that allows extracting more fiber from wood. "We already are a benchmark in terms of wood consumption per ton of pulp produced, with an average value of 3.18 m³/ton of pulp. However, roughly 60% of our cash cost still comes from wood, our main input at the mill. Therefore, our objective is to optimize this consumption even more. We're also a benchmark in the industrial area and aim to reduce these such too. For this reason we have been working hard on these matters, executing several tests with two big suppliers in the project in order to arrive at the development of specific technologies for Vanguarda 2.0," said the industrial director.

The bleaching and effluents areas are other stages of the production process that have received special attention by the company. "In the bleaching stage, we want to reduce the use of chemical products as much as possible. In the effluents area, we are projecting a series of changes in relation to the current model. The idea is not only to reduce waste production, but also use it in the best manner possible, through recycling," said Monteiro, pointing out that the objective of reducing installation costs in the area is also part of the list of Eldorado's intentions.

Exploring the maximum of the boiler recovery's potential is another plan of Eldorado in executing Project Vanguarda 2.0. "Our expectation is to export 210 MW to the grid," said Monteiro about the excess portion of the total 390 MW to be produced by the equipment. At present, of the 180 MW produced by line 1, Eldorado sends 30 MW to the national electrical system.

Current mill breaks record and produces 5 million tons of pulp

After three years and four months of operation, the Eldorado unit reached a production of 5 million tons of pulp. As the fifth biggest producer of hardwood pulp in the world, the company achieved this important milestone on April 21, signaling its industrial stability.

The company's industrial director credits this milestone to the mill's high-performance and to the experience of its professionals. "The result reinforces the key position that Eldorado holds in the sector, thanks to its successive gains in competitiveness and constant production rhythm. To gain a perspective, we reached our first million tons produced in 314 days, while the fifth million occurred in 214 days – that's 100 less days," said Monteiro, explaining the evolution conquered. "Performance is higher than projected," he said about the line that was designed to produce 1.5 million tons annually and is currently capable of reaching a total volume of 1.7 million tons.

Another example of the mill's efficiency are the production records posted by Eldorado in March: 5,420 tons day, 154,634 tons month and 428,840 tons of eucalyptus bleached pulp in the first quarter of the year. "Technology was an important aspect from the very beginning of the project's implementation and equipment selection, but the management model and expertise of people that operate and maintain the unit is what truly makes a difference to the productivity Eldorado has been currently registering, said Monteiro about the management model based on business units, which prioritizes everyone's spirit and accountability in the constant pursuit of operational excellence.

The dedication towards training the team that now works with expertise began back in the recruitment phase. "Eldorado is the youngest in the sector. So, when we began looking for people to build our team, we started out with the perspective of bringing professionals who fit the profile of assuming responsibilities and aspiring new challenges," said Monteiro, pointing out that such characteristics continue to this day. "In these 3 ½ years of operation, we have made 129 internal promotions. The current general manager of the mill was the maintenance manager; the maintenance manager was the coordinator; the recovery and utilities manager was coordinator of the area; and the wood patio manager, who is now responsible for the inflow of wood at the mill until delivery to another business unit, was responsible only for the chipping area," he said, mentioning a few examples. "We've been able to move internally this entire chain and create space for people to grow professionally. This is a very big motivational factor in our operational routine," said the industrial director.

Eldorado currently has 700 employees working in the operation and maintenance areas. Since the company is totally insourced, the total industrial staff amounts to 900 professionals, which includes restaurant, security, cleaning, landscaping personnel and other areas. With the expansion, new fronts and opportunities open up. "For Project Vanguarda 2.0, we've already kicked off our Young Apprentice Programs, with emphasis on the mechanical, electrical, chemical and pulp technical areas, and also our 'Super Talent' Internship Program, earmarked for technical and undergraduate-level students. These programs aim to prepare youngsters through hands-on experience of content acquired at teaching institutions.

Based on our drivers of sustainability, innovation, competitiveness and people valorization, these youngsters will be prepared for future job openings (in or outside Eldorado) with the assurance of having received solid and competitive development for the job market," said Elcio Trajano Jr., HR director at Eldorado.

The other stages of the training program will begin after the technology suppliers are defined for the second line. Monteiro says that, however, there will be an exchange between people working on the current line and those who will comprise the new line. "Since we have a single technical-industrial department, there will be no difference between people working on the project and the current operational part. We intend to use all the efforts and interactions in the existing mill for the new project." This joint work will probably result in the staff of the new line being more streamlined, totaling roughly 180 employees.

Commercial strategies focus on the Chinese market's growth, but do not discard the potential of Eastern Europe

Historically, the global pulp market has grown an average of 1.5 million tons per year, which fact mainly occurs due to the increase in demand for paper and the closing down of less competitive capacities around the world.

According to Luis Felli, commercial operations director at Eldorado, China continues ranking among the top growing markets, on account of reasons such as urbanization, higher income and growing use of facilities and commodities in their day-to-day. "Urbanization and higher income lead to a higher consumption of hygiene and disposable products. Additionally, Chinese use Internet services on a wide scale to purchase products, which trend leads to a significant increase in the packaging segment. This sum of factors causes the tissue, specialty and packaging paper segments to grow at good levels in China" he said about aspects that boost the pulp segment. "The printing and writing paper segment is more stable. Not even in China does it grow, but nonetheless it is still a market with significant volume. And, since the printing and writing paper segment does not grow, there is consequently less paper for recycling, which factor favors the use of virgin fiber," he said about the Chinese market's growth potential.

With regards to the reduction in China's economic growth, Felli recognizes that it exists, but it should not impact the pulp segment all that much. "In the beginning of the year, the Chinese government demonstrated that it will support the country's economic growth, even if it is at a reduced pace. Nonetheless, the segments impacted the most by the reduction in growth are those associated to infrastructure, which involve the civil construction area and the housing market. We are quite sure that pulp demand in China will continue growing at around 1 million tons per year."

The director also considers Eastern Europe a potential growth market

for products that require hardwood pulp. "We have monitored several announcements of new tissue plants in the region, and even in Western Europe with the objective of exporting to this market," he said about the region, which still posts of growth in paper consumption.

Pursuant this context of consistent average growth, Eldorado made the decision to invest in its second production unit. Felli says that the company started the first production unit already with plans of building other production lines. "Eldorado's commercial strategy has always been to create significant market capillarity, have a highly fragmented customer base – preferably of clients looking to grow and expand business in the markets where they are located," he said, pointing out that the expectation is for 70% of the new unit's volume to be sold to current customers, while the remaining 30% will be earmarked for new customers.

Focusing on the logistics plan for moving this additional production, Felli says that the pursuit of competitive costs is the word of order at the company. He guarantees that from an economy of scale perspective, the Eldorado site is already extremely competitive. For this to extend to the new line, "it is necessary to have a low wood production cost, a low industrial production cost and, of course, a low logistics costs".

The company's current logistics is composed of highway and railway, whereby the final production leaves from Três Lagoas. The Tietê-Paraná waterway is another alternative for moving production. After the drought that lasted last two years and led to closing down the waterway, the company can now reconsider this type of operation. "The waterway began operating again this year and could become another option. Before starting to use it again, however, we need to certify its reliability," said Felli.

With the objective of optimizing logistics costs, Eldorado is now working with four different ports in Brazil – one being the Port of Santos (SP), where the company's own terminal began operating last June. The export model using containers and different ports will probably be replicated for moving the new line's production. "We will probably make investments in our port terminal and increase the volume of containers, building on the way we work today," said Felli.

Forestry program foresees self-sufficiency in wood by start-up

Investments in silviculture are being made since 2012 using company capital. Eldorado currently has 217 thousand hectares planted. Of this total, approximately 150 thousand hectares are earmarked for satisfying demand of the current production line. "We had a wood deficit for several years. Today, the situation is different: we still buy a certain amount of wood from third parties, but it's on a descending curve that should disappear by 2018, at which time we expect to not depend on any external wood," said Germano Vieira, Eldorado's forestry director.

With regards to the plan to become self-sufficient in wood

production, Vieira informs that supply strategies include three visions: one contemplates periods of 12 months, another contemplates 4 years and the third up to 40 years, considering 3 to 5 forest cycles. This year, Eldorado plans to plant 55 thousand hectares, already focusing on satisfying the second production line. The planting of eucalyptus projected for this year is divided between municipalities in Mato Grosso do Sul state, with emphasis on Três Lagoas, Selvíria, Inocência and Água Clara. "Planting continues very strong and will satisfy all our demand for wood with own forests, blending plantations on lands we own and others that are leased, which contracts vary between 14 and 21 years. By 2018, we shall reach 350 thousand hectares planted, an amount sufficient to satisfy both lines," said the forestry director. "Considering our supply volume, we already have a very competitive radius. However, it should drop even more, reaching 100 km by the end of the planting program in 2018," said Vieira.

Also according to him, climate characteristics of Mato Grosso do Sul, considering both soil and climate, are favorable for growing eucalyptus. Rainfall in the region, in excess of 1,300 mm per year, exceeds the minimum recommendation of 800 mm per year for planting eucalyptus. The soil in the *cerrado* region, in spite of very sandy, is deep and very adequate for planting trees. "Another interesting aspect is what we call water deficit, a period of the year characterized by serious droughts. The state's water deficit amounts to around 50 mm and occurs in the middle of the year. For comparison purposes, it's important to point out that in other regions of the country, like Tocantins, the water deficit reaches 250 mm," said the forestry director about the environmental advantages of Mato Grosso do Sul.

The genetic improvement program spearheaded by Eldorado aims to achieve even higher forestry gains. One of the program's lines of work comprises more than 1,400 clones planted all over Brazil, including experiments in Mato Grosso do Sul. "We have already tested these clones and today we use the best basket of them in the region. Even so, we still plant an average of 10 different clones annually," said Vieira about the continuous improvement, process.

In the last quarter, company forest advancements were marked by technological innovations aimed at automating the tilling lines and completing the electronics field installation project. Consolidation of the use of drones is one of the fronts amply dedicated to the development of forestry technologies and mechanization. "Eldorado was the first to use this equipment. They are capable of providing all sorts of information and outline the entire plan to be put into practice in forests," said Vieira, mentioning that information collected by drones includes contour line and planting line, and even the definition of native forest areas, which cannot be harvested. "Following the mapping done by drones, we analyze the information and planning proposed and, with a pen drive, we transfer all data to a soil-tilling tractor which, on its own, begins to work on the planting line indicated," he said.

Eldorado Brasil reports EBITDA of R\$ 483 million in 1st quarter, with EBITDA margin of 65%

Eldorado registered an EBITDA (earnings before interest, taxes, depreciation and amortization) of R\$ 2.1 billion in the last 12 months, with a 62% margin. This record performance in its trajectory proves the successful strategy of the competitiveness model adopted by the company. Eldorado ended the last quarter with an EBITDA of R\$ 483 million, and a 65% EBITDA margin. This result was 63% better than the same in 2015.

The improvement in operational performance is fruit of the cost reduction in pulp production – due to the reduced distance between forests and mill – inauguration of the company's own terminal at the Port of Santos and devaluation of the Brazilian real in relation to the US dollar.

"With this result, we are one of the top players in the global pulp sector. Our vision, based on the pillars of competitiveness, innovation, sustainability, and people valorization, proved to be right and reinforces our growth strategy to construct a new production line in Três Lagoas," said José Carlos Grubisich, CEO of Eldorado Brasil.

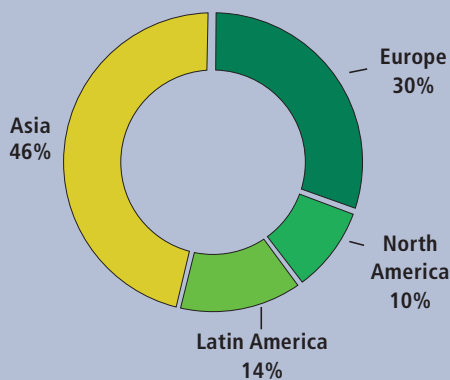
With a strong cash flow generation, the company maintained its deleveraging trend, measured by the net debt/EBITDA indicator of 4x in US dollar, in spite of inventory adjustments on the part of pulp consuming companies, which had a negative impact on prices.

Net income amounted to R\$ 740.9 million, 14% higher than the figure reported for the same three months in 2015. Sales volume totaled 354 thousand tons, in line with last year's figure. Asia, especially China, and Europe continue being the main destination for Eldorado's pulp, which was also able to tap the North American and Latin American markets.

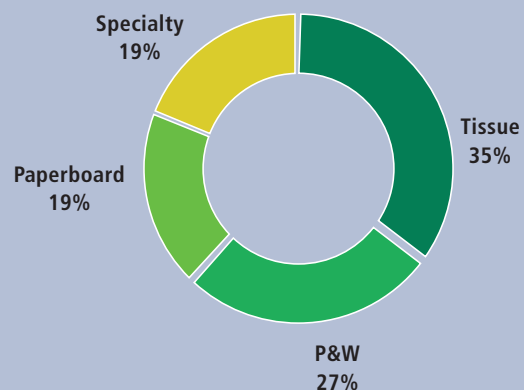
The tissue and printing & writing paper segments represented the biggest portion of volume sold by the company, 35% and 27%, respectively. During the period, the company was able to boost sales in profitable segments, such as specialty and packaging paper.

"Our portfolio of regionally diversified clients and composed of clients with high growth potential reduces dependence and the risk of concentration, putting us in a competitive position in relation to other companies," said Grubisich.

Sales Volume per Region – 1T16



Sales per Segment – 1Q16



The forestry director said that Eldorado invests in mechanizing different stages of the planting process, not only with the objective of increasing forestry productivity, but also minimize the need for labor. "Our staff includes three engineers specially dedicated to the development of new technologies and adapting equipment used in agriculture. In addition to seeking efficiency in forestry activities and

improving job positions of people already contracted, we also seek to satisfy the region's low demographic density. Since the state's original activity is cattle raising, there is little labor available," said Vieira. The company currently has more than 2,500 employees in the forestry area. "If it weren't for process mechanization, this number would be double, especially from a silviculture aspect," he said. ■