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Rainer Hoefling

CEO
BOROUGE PTE

What are the recent milestones and developments over the last year at Borouge?
Borouge produced a resilient set of financial results in 2023, reporting a net profit of US$1 billion. Our targeted Value Enhancement Programme also delivered US$607 million in positive impact to our EBITDA through various revenue and cost optimisation initiatives in the face of challenging global market conditions for the polyolefins industry.

Central to our growth plans is the Borouge 4 plant. We are making excellent progress on the project, which will make us the world's largest single-site polyolefin complex when it is completed in 2025, and increase our annual production capacity by 28% to 6.4 million t/y.

We have also opened new offices in South Korea and Kenya, expanding our global footprint to 14 international key markets.

On the Circular Economy front, we are expanding our portfolio of recycled products, leveraging partnerships with local recycling companies, testing feasibility on high-quality recyclates for various applications, and investing in opportunities that will allow Borouge to produce value-added solutions for the industry. For example, Borouge signed memorandums of understanding (MOU) in December 2023 to partner with two Chinese companies in a year-long study on improving waste management on a national level and reducing municipal solid waste.

What areas of application/verticals provide the best growth opportunities for Borouge's differentiated products?
Borouge is well-placed to capitalise on several global megatrends such as expanding populations, food waste and scarcity, water access and sanitation, circular economies and energy transition.

Borouge's high-value energy and infrastructure solutions accounted for 45% of our total sales volume in the first quarter of 2024. Our innovative pipe solutions, such as our PE100RC and PP-R product portfolio, help to ensure durability of pipe networks across the globe, delivering clean and safe content for a long time.

In the energy sector, our differentiated wire and cable solutions help our customers eliminate wastage, which allows them to transport energy from renewable sources over a longer distance more efficiently.

Borouge is continuously developing its suite of electrification solutions ranging from lithium-ion battery applications to high-density polyethylene for solar system components. Borouge has a meaningful role to play in providing the materials needed to build renewable and clean energy infrastructure.

Can you share more about Borouge's latest sustainability initiatives?
We are helping customers achieve their sustainability goals. This includes working with brand owners to develop value-add solutions with recycling content; design packaging for recyclability by standardizing and simplifying packaging structures to mono-material structures; and instilling the importance of circular economy through various education and corporate social responsibility programmes. One such educational programme is Polymers on The Move, which aims to help students understand the circular economy and discover the importance of plastics and proper waste management.

We are also increasing investments that encourage the reduction of carbon footprint. Borouge strives for sustainable mobility by innovating to enhance EV's energy efficiency, such as using light weight polypropylene solutions that will reduce the EV's weight, thereby prolonging battery mileage. We collaborate with OEMs and China's EV car brands to deliver tangible benefits to the industry, drivers, passengers and the environment. In 2023, we launched our first mobility compounds that incorporate post-consumer recycled content, which can achieve up to 32% reduction in carbon footprint compared to virgin grades.

What are Borouge's strategic priorities for 2024?
Our circular economy business is a priority, which continues to complement our virgin resin business and provide innovative recycled resin solutions to fulfill our customer needs. Health, Safety and Environment (HSE) is always on top of our agenda, and we have various campaigns to sustain our best-in-class industry standards in safety records.

On people, we are focused on nurturing Borouge's talented, diverse, and dedicated workforce.

On profitable growth, our Borouge 4 project is under construction with over 60% milestone completion. We are also working on a new expansion project – our second ethylene unit (EU2), to enhance the production of olefin and polyolefin by 230,000 t/y upon the project's completion in 2028. Together with Borouge 4, this will boost Borouge's polyolefin production capacity to approximately 6.5 million t/y.

To support these priorities, we are investing in our people, innovation and technologies. This includes areas such as artificial intelligence and digitalisation, which are integral drivers of innovation, efficiency, and value creation across Borouge's operations. Looking ahead, I am confident that Borouge is well positioned for our next phase of growth. ■

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Roger Marchioni

Business Director **BRASKEM ASIA &**
Managing Director **BRASKEM SIAM (JV)**

Braskem announced a JV with SCG Chemicals to produce bio-PE in Thailand. Could you comment on the company's strategy in Asia?
Braskem has a strong presence in the Western Hemisphere, with production sites in Brazil, Mexico, the US, and Europe. The opening of the Singapore office in 2020 marked our first step toward a bolder presence on the eastern side of the world, by leveraging our strengths in chemicals and polymers, and more recently in biopolymers. With the world economy shifting away from fossil fuels to bio-alternatives, Braskem invested in 2010 in a plant to convert bioethanol from sugarcane into bio-ethylene and further into bio-polyethylene (bio-PE), represented in our I'm Green world-leading portfolio. Whereas traditional petrochemical markets have somewhat stalled in recent years, the opposite is true for biopolymers, which continue to grow at speedy pace. Driving this demand in Asia are countries like Japan, Korea, Australia, and New Zealand, as well as some countries in Southeast Asia. Braskem found an opportunity to bring our expertise to Asia through the JV with SCG Chemicals. This would be our first bio-PE plant in Asia and a huge step in our global expansion strategy.

What led you to Thailand, specifically, and at what stage is the JV in terms of reaching a final investment decision?
Thailand is a natural location for the first plant in Asia due to the availability of biomass (sugarcane) and the presence of important market peers that share same values as us, which is what we identified in SCG Chemicals, one of the top players in the Southeast Asian market by market share, capacity and innovation. Regarding biomass availability, the feedstock (bioethanol) security is critical for a future investment approval. Likewise regulations to unleash the ethanol use for bioplastic and develop regular and competitive supply are key for a long term venture. We are now at the engineering phase, which will take us through to the end of this year.

The new plant in Rayong, Thailand, would bring Braskem closer to its goal of producing 1 million t/y of biopolymers by 2030. Could you elaborate on the company's progress towards this goal and the local impact of the investment?
Adding our plant in Brazil plus the Thai project, and another recently announced study in the US to produce bio-PP, Braskem is on the way to reach 750,000 t/y, with room to pursue further opportunities elsewhere in the region to reach out target. We are running an assessment of all companies interested in supplying the raw materials to develop a Thai Responsible Ethanol Sourcing that respects the local context and the requirements from the end customers. The beauty of the project is that it can impact the whole chain, passing by the ethanol mills and several farmers across the country.

How scalable do you think the sugar-to-bioethanol business is in the long run?
The market is only going up. Compared to other feedstocks, ethanol is abundantly available, and with the existing overcapacity in PE production, the investments might be focused only in the ethylene side. Brand owners, especially in the food and beverage, cosmetics, and household products industries, are reacting to consumers' demand for greener, more natural products. Packaging serves the double role of both protecting a product and communicating its contents; if the product itself is sustainable, the packaging should convey the same value proposition. After a post-pandemic hangover, projects that were on hold or at slow pace, are now picking up speed.

What is your outlook for traditional PE and PP markets?
The polyolefins space has been very slow, forcing the industry to do some serious homework in marking out profitable assets from those that are not and making difficult decisions accordingly to rationalize production. This happened before but in a shy kind of way, yet today, we see firm action across Europe, Northeast Asia, and even Southeast Asia. On the other hand, the US and the Middle East remain quite competitive. By turning from an importer to an exporter, China has shifted global product flows. That, coupled with logistics constraints, will drive more regionalization, with producers playing more in their own backyards. ■