'Innovation is the Key to Sustainability and Lasting Competitiveness'

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What are the key aspects & priorities for sustainability strategy & low carbon technologies on the radar of your organization?

Sustainability is about environmental, social and financial sustainability. Godavari Biorefineries has always been at the forefront of sustainability strategy and implementation. We have the Biopreferred certification from the USDA, the Bonsucro certification, Responsible Care and many others.

Biorefining is the business of converting biomass into Foods, Energy, Biochemicals, Biomaterials and more. Godavari Biorefineries makes sugar, ethanol, electricity, bulk and specialty chemicals, and other products. 30% of the company's business is foods (sugar etc), the rest is chemicals, electricity, ethanol and other products.

- **Supply Chain:** Godavari Biorefineries works with more than 20,000 farmers to source its key raw material which is Sugarcane. In our drive for more sustainable sugarcane sourcing, we have signed an MOU with KIAAR to work with farmers to research and demonstrate to them - intercropping of other crops with cane, use of drip to reduce water consumption, use of remote sensing and satellite imagery for better information, use of soil testing to better understand soil input needs, and use of traditional inputs

such as Jivamruth and Panchagavya. The combination of all these techniques will result in higher yields, more than one crop as a source of income, lower input costs (per value of output), reduced water consumption, and finally better soil health to be fertile not only in this year, but for the future. Overall, these technologies will reduce the Carbon footprint of the farm as well. It is important to understand this, since using renewable resources is fundamentally different from using fossil resources. By definition, there will be less fossil resources once extracted. This is not the same for biomass. If grown well, there can be equal or more biomass every year, from the same piece of land.

- **Raw Materials:** Sugarcane and ethanol are the primary raw materials of the company. Most of the ethanol we source is also from renewable resources. More than 75% of Godavari's raw materials are renewable. When we compare this with targets set by many international companies, we see that we are achieving a high degree of renewable chemicals in our supply chain.
- **Electricity:** Godavari exports more than 75 million units of renewable derived power annually. All this electricity is derived from sugarcane bagasse. The production of power from sugarcane bagasse generates atmospheric Carbon Dioxide that is once again absorbed by sugarcane as it grows. Godavari also purchases more than 9.5 million units of power in Maharashtra. From a company viewpoint, Godavari Biorefineries produces 7 times more green power than its purchase of power.
- **Biofuels:** The Government of India announced a large ethanol blending programme a couple of years ago. This programme has the triple goals of meeting India's energy security, addressing climate change and ensuring farmer income security. The sugarcane surplus in the country was finally seen as an 'energy' asset. We at Godavari Biorefineries pioneered the conversion of Heavy molasses and later sugarcane juice/syrup to ethanol to meet the large demand and expanded our ethanol facility from 200 klpd to 400 klpd, and are currently expanding further to 600 klpd. This will be one of the largest ethanol facilities in the country.
- **Biochemicals and Co-Creation with Customers:** We at Godavari Biorefineries believe that innovation is the key to sustainability and lasting competitiveness. Many of our customers are making commitments to lower their carbon footprint. We

have skills in the physical, chemical and biological conversion of biomass, to make products that could be 'drop-ins' (direct substitute of a fossil chemical) that our customers purchase. Sometimes, the customer would like to work with us, to co-create a product that could have superior properties than the fossil product we aim to substitute. The chemicals are often specialty in nature and have to address a specific performance or have a particular property for an end use application. The development of these products needs research and development in our own labs and collaboration with our customers. In this manner, we are working to co-create greener products with many customers in India and overseas.

- **Social Responsibility and The Somaiya Group:** The Somaiya Group has long stood for social commitment and giving back to society. Somaiya Vidyavihar is an Education Society working with more than 39,000 students. Many of these students study in schools in rural Karnataka and Maharashtra. Somaiya Vidyavihar University is located in Mumbai. The K J Somaiya Hospital and Research Centre is a 550 bed teaching hospital in Mumbai. The Girivanvasi Pragati Mandal works for the upliftment of tribal communities. KitabKhana is a bookshop, a place to open our minds and be a window to different worlds and different times.

Tell us about your company's goals and how it plans to implement low carbon technologies across the portfolio to handle Scope 1, Scope 2 & Scope 3 emissions till 2030?

We are doing a study currently to analyse our carbon footprint. Once the baseline is understood, we will better understand what goals to set for ourselves and where we should draw our boundary. We have two manufacturing facilities, and as I mentioned earlier, in one of the sites (in Karnataka), most of the electricity we produce is from Biomass and therefore we have very low Scope 1 emissions. Similarly, we mainly purchase electricity in Maharashtra. We are currently installing a new boiler and turbine there that will reduce our scope 2 emissions there. ■