

ACCELERATING INDIA'S SUSTAINABILITY
THROUGH BIOMASS

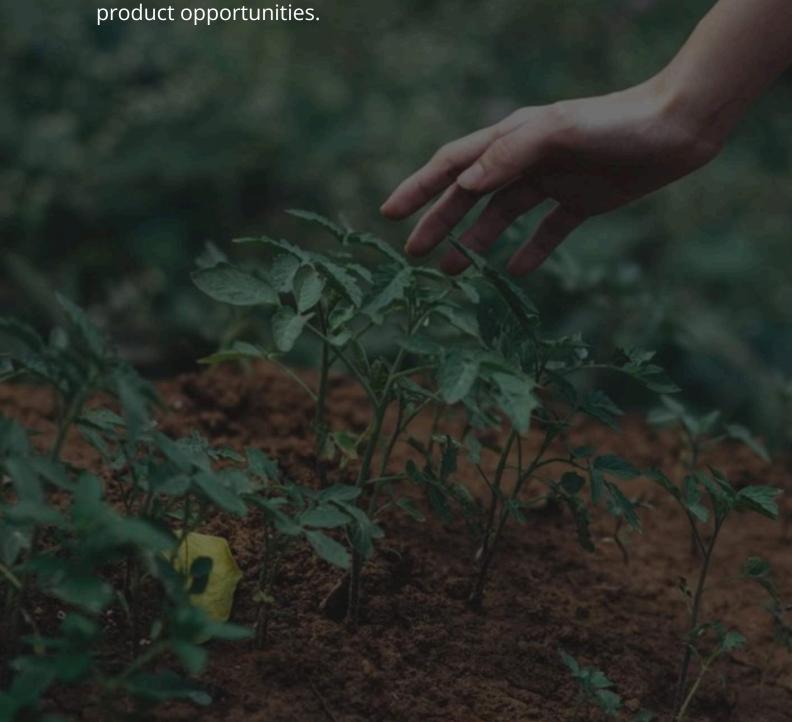
HIGHLIGHTS OF BIOBIZ'S STRATEGIC CONSULTING, MARKET RESEARCH & MARKET DEVELOPMENT ASSISTANCE FOR BIOMASS SECTOR

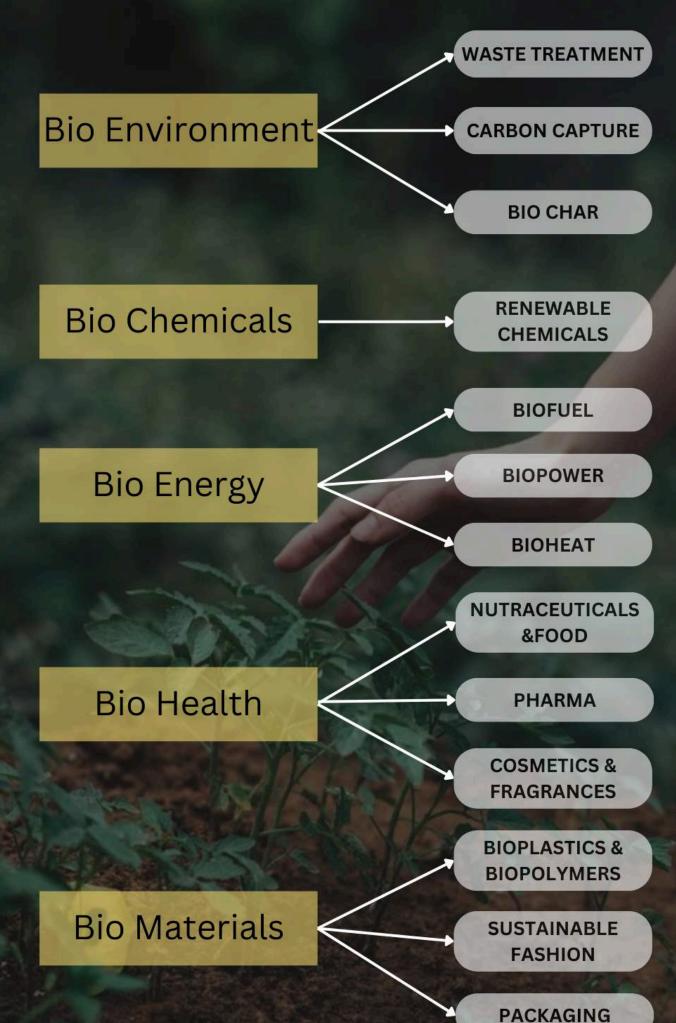
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www.biobiz.in

Introduction

BioBiz Consulting, a division of Energy Alternatives India (EAI) which is a leading renewable energy consulting and research firm in India assists with bio-based products and solutions. The services cater to companies and businesses in agriculture, food and dairy, chemicals, packaging, environmental services, renewable energy/power, and related sectors who are interested in exploring bio-based product opportunities.





Scope of BioBiz

BioBiz consulting focuses on providing strategic and market focused suggestions and recommendations to entrepreneurs and businesses keen on venturing into bio-based business opportunities.

With our extensive network and contacts with different stakeholders across various bio-based sectors, BioBiz can also further assist entrepreneurs in collaborating with the right stakeholder in select industries.

Market Potential

In-depth understanding of the current and emerging markets for select biobased business opportunities.

- Market Size & Growth
- Attractive Market Segments
 Demand-supply Analysis

Drivers and Challenges

Key drivers and challenges that are shaping the market trends for select biobased product market world wide.

Market based Drivers & Challenge
 Policy & Regulatory Drivers
 Technology & Process Drivers
 Economics & other Challenges

Product Possibilities

A clear understanding of various product possibilities in the select sector, their properties and their end use applications/markets.

Current Product Portfolio
 Emerging Products and Features
 Emerging End Use Markets

Technology & Processes

Overview of technologies and production processes for the various production processes for the various products & solutions, the key companies / solution providers for the same.

Technology & Process Overview
Emerging Innovations
Key Technology Stakeholders
Value Chain

HIGHLIGHTS -

Of Biomass Assignments

GE - Market Potential for Biomass Gasification in India



Sector: Biomass gasification

Client Profile & Business: A global leader in the energy & power sectors

Type of Work: Assessing the Indian market potential for biomass gasifiers & producer gas engines

Locations: Delhi, Mumbai, Coimbatore, Bengaluru.

www.ge.com

Technip Energies – Techno-economic feasibility evaluation for the biomass supply chains

Sector: Biomass

Client Profile & Business: One of the world leaders in engineering services with a special focus on green hydrogen projects.

Type of work: Evaluation of technological & economic feasibility for the biomass supply chains.



Location: Delhi

www.ten.com

Lohiya Group - Market Potential Study & Strategic Analysis of the Indian Biodiesel Sector



Sector: Biodiesel

Client Profile & Business: A leading edible oil refiner and supplier in south India

Type of work: Evaluating the market potential for biodiesel and providing strategic recommendations on market entry

Location: Hyderabad

www.lohiyagroup.in

GSK – Evaluating Sustainability of Biomass Supply Chain

Sector: Biomass supply chain

Client Profile & Business: A global leader in food, health and pharma

Type of work: Evaluation of the reliability of biomass supply chain and estimation of sustainability benefits from biomass use

Locations: Rajahmundry (Andhra Pradesh), Nabha (Punjab), Sonepat (Haryana)

www.gsk.com



Reliance - Evaluating Feasibility of 3rd Generation Biofuel

Sector: Third generation biofuel



Client Profile & Business: India's largest private company and a global leader in petrochemicals.

Type of work: Providing the client a clear understanding of the algae fuel market, identifying algae fuel companies globally for investments, and identifying top-tier talent for setting up a pilot facility for producing algae Biofuels.

Location: Gujarat.

www.reliance.com

JM Huber - Evaluating the feasibility of shifting to biomass-based heating from natural gas heating

Sector: Bioenergy.

Client Profile & Business: A leading global producer of specialty chemicals.

Type of work: Evaluated alternative technologies that can be used for heating with biomass and the feasibility of the biomass supply chain.

Location: Jhagadia, Gujarat

www.huber.com



Pepsi – Evaluating Innovations to Sustainably Convert Fruit Waste to Value



Sector: Fruit waste to energy

Client Profile & Business: A leading global beverages company

Type of work: Identifying and evaluating innovative solutions from India for converting fruit waste to value.

Location: The work was for Pepsi's head office in the US, and the results were to be used for their global operations

www.pepsi.com

Tamil Nadu Industry Development Corp (TIDCO) - Techno-economic potential analysis for lignite to liquid fuels

Sector: Liquid fuels including biofuels

Client Profile & Business: Tamil Nadu state's industrial development arm.

Type of work: Analysis of a technology that transformed low-grade lignite into methanol, with the help of a technical partner experienced in advanced biofuels.

Location: Tamil Nadu.

www.tidco.com

Jaini chemicals & Pharmaceuticals - Third generation ethanol production from cellulosic biomass



Sector: Bioethanol production

Client Profile & Business: A leading company manufacturing renewable & sustainable Chemicals & Energy sources.

Type of work: Assessed the feasibility of a next-gen ethanol plant in Assam, involving consultations with various international experts on the innovative production method

Location: Assam

www.jainichemicals.com

Aban Offshores - Assessment of a state-specific municipal solid waste to energy project proposal

Sector: Waste to energy

Client Profile & Business: A company that provides offshore drilling and services to the oil and gas industry.

Type of work: Evaluated the feasibility of a waste-to-energy project in Kerala, based on the policies, the terms, and the economic viability.

Location: Kerala

www.abanoffshore.com



IGPL - Identification of green chemical opportunities with attractive short and medium-term potential in India and global markets

Sector: Green Chemicals

Client Profile & Business: A company that provides offshore drilling and production services to the oil and gas industry.

Type of Work: Evaluated the feasibility of a waste-to-energy project in Kerala, based on the policies, the terms, and the economic viability.

Location: Kerala

www.igpetro.com

Bain - Strategic Analysis of the Castor Oil Derivatives Sector

Sector: Bio-chemicals

Client Profile & Business: A global leader in top

management consulting

Type of work: Providing strategic inputs to the Bain team on the castor oil sector, its challenges, and our recommended roadmap for industry growth

BAIN & COMPAN'

Locations: Global

www.bain.com

Shaivaa Algaetech - Market potential for algae-based nutraceuticals

Sector/Category: Nutraceuticals



Client Profile & Business: A leading company in producing micro-algae-based ingredients for nutrition markets

Type of work: Providing the client with consulting and market development assistance to this startup to produce algae-based nutraceuticals and chemicals that will replace synthetic alternatives.

Location: Surat, Gujarat.

www.shaivaa.com

Bill & Melinda Gates Foundation - Human Waste to Energy

Sector/Category: Waste to Energy

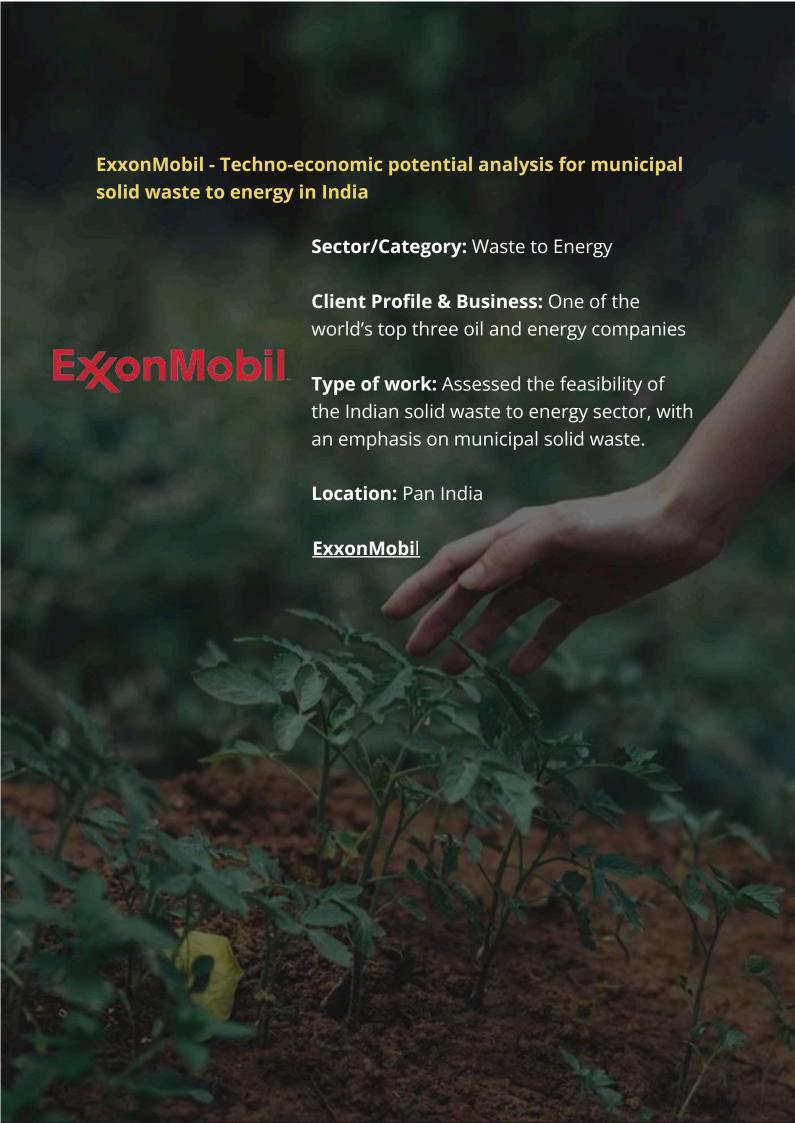
Client Profile & Business: World's largest private foundation

Type of work: Providing the client with detailed inputs on the innovative technologies being developed by Indian companies, organisations and research institutes for sustainably managing human waste to energy.



Location: Pan India (specifically Delhi, Mumbai, Bangalore, Pune, Chennai)

www.gatesfoundation.org



Assistance to the Biomass sector through White papers

Biomass-based Power

EAI has published a white paper that deep dives into biomass-based power to present a strategic framework for top management of various sectors to evaluate diverse opportunities in the emerging Indian biomass sector.

EAI's BioMetric Optimising the Biomass Value Chain

This whitepaper delivers the idea of biometric optimising the biomass value chain. The key takeaways are optimal biomass feedstock selection, identifying best vendors, logistics optimization, fine-tuning commercials, and optimising boiler/ gasifier/ hot air generator design for better performance.

Biomass Gasification Market Intelligence Report

One of the most comprehensive business & market reports for the biomass sector, the **Biomass Gasification Market Intelligence Report** published by EAI is a rich source of inputs, data, and insights for all aspects of the biomass gasification value chain.

Power from Biomass

Biomass has been used as a source of energy right since mankind started its existence. One of the predominant energy sources today is biomass. Biomass-based power generation holds immense potential and this white paper intends to unveil the basic strategies and technologies that are in need while commissioning a biomass-based power plant.

Why BioBiz?



Leader in Bio Sector Consulting

EAI is one of the very few cleantech consulting and research companies with a specialized focus on biomass-based business opportunities sectors. Our decade long consulting

Contacts & Network

Owing to our early mover status and pioneering work in renewable energy, we have exceptional contacts across the entire cleantech and biomass value chain, all across India.





Exceptional Professional Background

BioBiz Consulting is run by a team of professionals from IITs and IIMs, and having a team of specialised professionals in energy and environment.

Summary

BioBiz is a specialised offering that provides comprehensive marketing intelligence tailored for the bio-based industries. The focus of this service is on delivering highly specialised and targeted insights to businesses operating in the bio-based sector.

Specialized Marketing Intelligence

BioBiz is dedicated to providing specialised marketing intelligence exclusively for the bio-based industries. The service offers insights that are finely tuned to the specific needs and dynamics of the bio-based sector.

Highly Focused Insights

The service provided is highly focused, ensuring that businesses receive information relevant to their particular niche within the bio-based industries. BioBiz tailors its approach to address the unique challenges and opportunities faced by each client in the bio-based sector.

Hands-On Guidance

BioBiz not only provides intelligence but also offers hands-on guidance to clients. The service assists businesses in translating the acquired insights into actionable strategies, helping them make informed decisions. The service provides a roadmap and actionable steps to ensure that businesses can navigate the challenges of bringing bio-based products to market effectively.

Analytical Benefits:

BioBiz goes beyond surface-level information, offering a deep dive into the intricacies of the bio-based industries.

Clients can expect to gain in-depth knowledge about market



About EAI

BioBiz is a division of EAI.

EAI is a boutique management and market consulting firm with a focus on clean energy & sustainability sectors. It has a special emphasis on three sustainability sectors:

- Solar Energy,
- Bio-energy &
- E-mobility.

Founded by professionals from the IITs and IIMs, EAI's consulting has assisted Indian and global firms with market intelligence and management strategic support since its inception in 2008. Our work has spanned:

 Strategy consulting & market intelligence - Assistance that has benefitted over 250 firms - including global leaders (GE, Exxon Mobil, GSK, Amway, Toyota, Bill & Melinda Gates Foundation...) as well as dozens of small, innovative startups.

More details of our consulting practice

- ◆ E Mobility https://www.eai.in/consulting/strategy/e-mobility
- ◆ Solar Energy https://www.eai.in/consulting/strategy/solar
- ♦ Bio-energy https://www.eai.in/consulting/strategy/bio-biz
- ◆ Green Hydrogen https://www.eai.in/consulting/strategy/gh2
 - In-depth market reports Over 2500 companies, Indian as well as international, have benefitted from our industry research reports in the fields of solar power, biofuels, bio-based materials and electric mobility

• Diverse events and workshops - 30+ events organised by EAI in climate tech in the past decade across India - comprising national & international conferences, workshops, and networking events. These events were organized either by EAI on its own or in partnership with state governments (Tamil Nadu, Uttar Pradesh, Kerala), or with corporates, organizations & institutes (UL, IITs, InterSolar...)

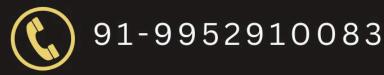
In addition to our deep knowledge of specific climate tech verticals, EAI has one of the largest professional networks for climate tech in India. Our network of over 5000 professional and industrial contacts across India comprises:

- 1500+ solution providers
- 500+ large end-users & corporates
- 1000+ startups
- 200+ investors
- 1000+ research & academic professionals
- 100+ government officials & bureaucrats

More about EAI from www.eai.in

Interested?

If you wish EAI to help your company in the Indian Bio-Energy Sector, talk to us by:







www.eai.in