



Bio Trend Energy

Pvt. Ltd.

Creating Sustainable Energy of Tomorrow



Company Profile

INTRODUCING BIO TREND ENERGY PVT LTD

Bio Trend Energy Private Limited (BTE) is one of the pioneering and leading company in India that has been working on advanced biomass/waste clean energy solutions/innovations that aims to reduce GHG emissions and improve environment. Our long-term goal is to achieve a cleaner environment by replacing fossil fuel in industrial and other sectors.

BTE is a leading bioenergy company in India, with technical expertise in the aggregation, storage, and processing of agricultural and forestry residues into pellets, with operational and technical expertise in decentralized biomass pelletising technologies. BTE is a specialist in developing technological capabilities to process a range of agricultural and other biomass residues year-round, through working directly with farmers and rural entrepreneurs across India and the onward supply of pellets into Thermal Power Stations (TPSS) and other markets.



Vision

To be an innovative leader in promoting environmentally sustainable biomass-based products and processes with a focus on sustainable development and jobs creation.

Mission

To develop partnership for sustainable biomass production and promote biomass based clean energy solutions and innovative business models involving community (farmers and women). To Achieve a cleaner environment by replacing fossil fuel in industrial & other sectors & to create sustainable livelihood.

OUR THURST AREAS

Focus Technologies

- Densification (Briquetting and Pelletization)
- Torrefaction and Gasification
- Anaerobic Digestion (biogas, CBG)
- Decentralized Renewable Energy system design (Cookstoves, Irrigation pump set, Charcoal plant, pellet burners etc.)

Focus Biomass/Waste

- Agro-residues (Paddy straw, Rice husk, Sugarcane, Cotton, Groundnut shells,
- Soya stalks, Mustard stalk, jute, coffee, & Horticulture waste etc.)
- Forestry (Pine Needle & Lantana etc.)
- Bamboo residue
- Municipal Solid Waste

Consultancy & Advisory Services

- Technical, Financial and Market Assessment Studies
- Technical Due Diligence
- Renewable Energy Planning Activities
- Contributes to an increasing role of biomass and waste utilization in the energy transition and the circular economy

Skill Development

- Training of farmers for Biomass Aggregation & Collection.
- Training of youth in pellet manufacturing.
- Skill development of youth/women/farmers

Manufacturer/Supplier

- Manufacturer of pellet/briquette in renewable energy sector.
- We are supplier of pellet for use in Household, Industry, Boilers.
- Supplier to Thermal Power Plants.



OUR PRODUCTS

Agro Waste



Paddy Straw



Pine Needle



Bamboo Residue



Mustard Straw

Pellets



BIOMASS PELLETS



Lantana Sticks



Agro Waste



Bagasse



Soya Husk



Pine wood waste



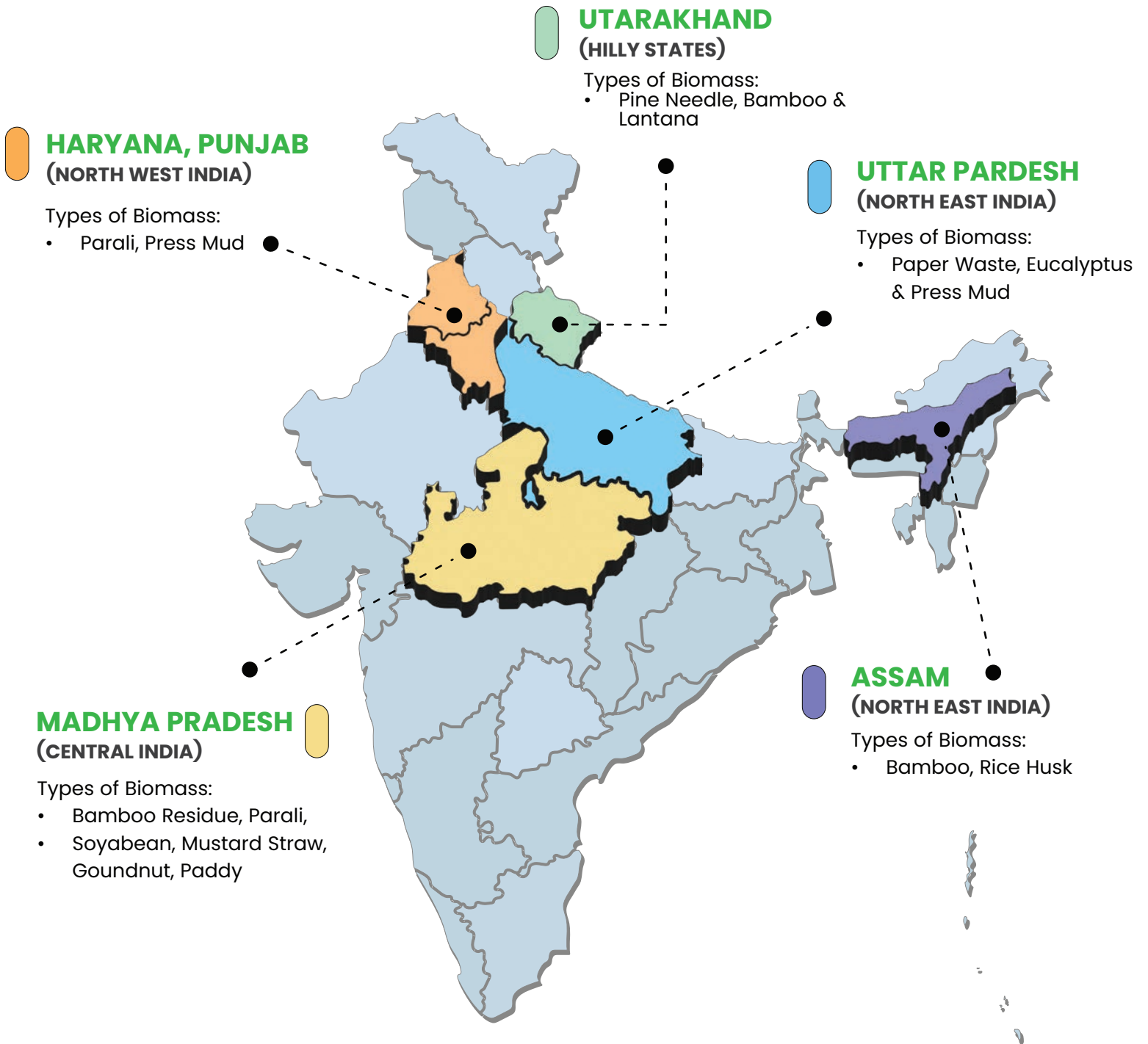
Groundnut Shell

Pellets



BIOMASS AGGREGATION & COLLECTION MODELS

IN VARIOUS STATE OF INDIA



THERMAL POWER PLANT PELLET DEMAND

India's push to cut coal reliance

NTPC's efforts are part of India's broader goal of cutting emissions as the country aims to trim reliance on coal in the coming years and attain net zero by 2070.

Thermal Power Plants: The Ministry of Power, Government of India (GoI) has initiated National Mission on use of biomass in coal based thermal power stations (SAMARTH) through co-firing in pulverized coal-fired boilers and mandated all the coal-based power plants to use 5% blend of biomass pellets along with coal. To meet 5% co-firing target, there is annual requirement of 50 million tons of biomass pellets in TPPs across States.

NTPC has awarded biomass supply contracts totalling about 5.2mn t for 20 power plants operated by NTPC. Out of which, it has so far co-fired 316,657t of biomass pellets at 13 NTPC power plants. BTE is one of the leading supplier of agro-pellets to NTPC stations in NCR and in State of MP.

INNOVATIVE BUSINESS MODEL

Working with women's and FPO in Business aggregation, collection, storage, processing & overall management of biomass enterprise.



Research Inputs

Sustainable & Commercial approach, prolonged field experience & data



Awareness Generation

Spread knowledge & awareness about utilization of crop residue & pellet production opportunities.



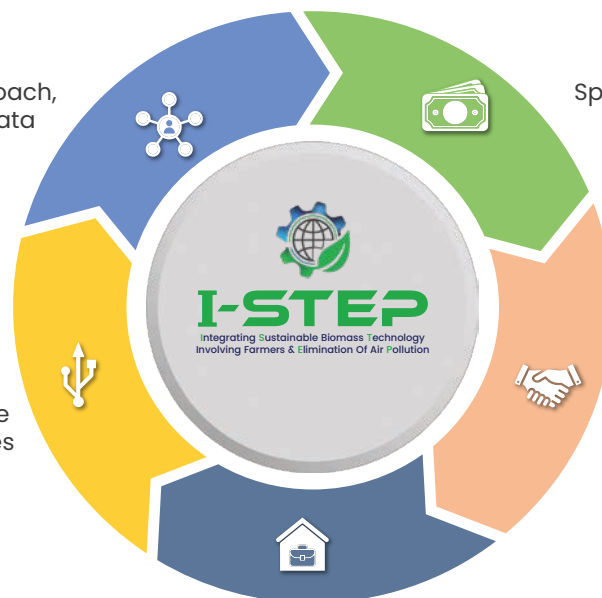
Tech Innovation

Accessible, affordable & innovative biomass conversion tech & services



Corporate Collaboration

Integrate stakeholders, scale up



Local Engagement

Engagement & Association with FPOs & women for development



TORREYFYER

Bio Trend Energy (BTE) has developed TorChar technology, a continuous torrefaction machine that turns unused agricultural residues into torrefied forms. All agricultural waste, including RDF, can also be torrefied in loose or compacted forms as pellets, with very high energy and mass recovery.



After torrefaction, the agro-residues comes out in the form of a **black material, which can directly be used in industrial boilers** as it is or along with coal as the case may be. The torrefaction **yield is between 70 to 80%** depending on the biomass used and its characteristics.



A powerful tool to fight climate change and address air pollution problems.



Clean Cooking Solution

Pellet Cookstove

- The objective is to promote use of efficient cook stove design & processed biomass fuels, sale, distribution, and its use that can transform lives.
- BTE collaborated with Mimi Moto BV on biomass pellet use for clean cooking application through their cooking stoves.
- BTE have well placed the spearhead to develop viable business models for decentralized pellet production and its use for cooking applications in rural areas.
- Improved Cookstove can also provide new sources of livelihood for women.
- Mimi Moto Stoves+ Biomass Pellets saves 3 to 4 Tons of CO2 emission annually to combat climate change.



Biomass Fired Industrial Burner

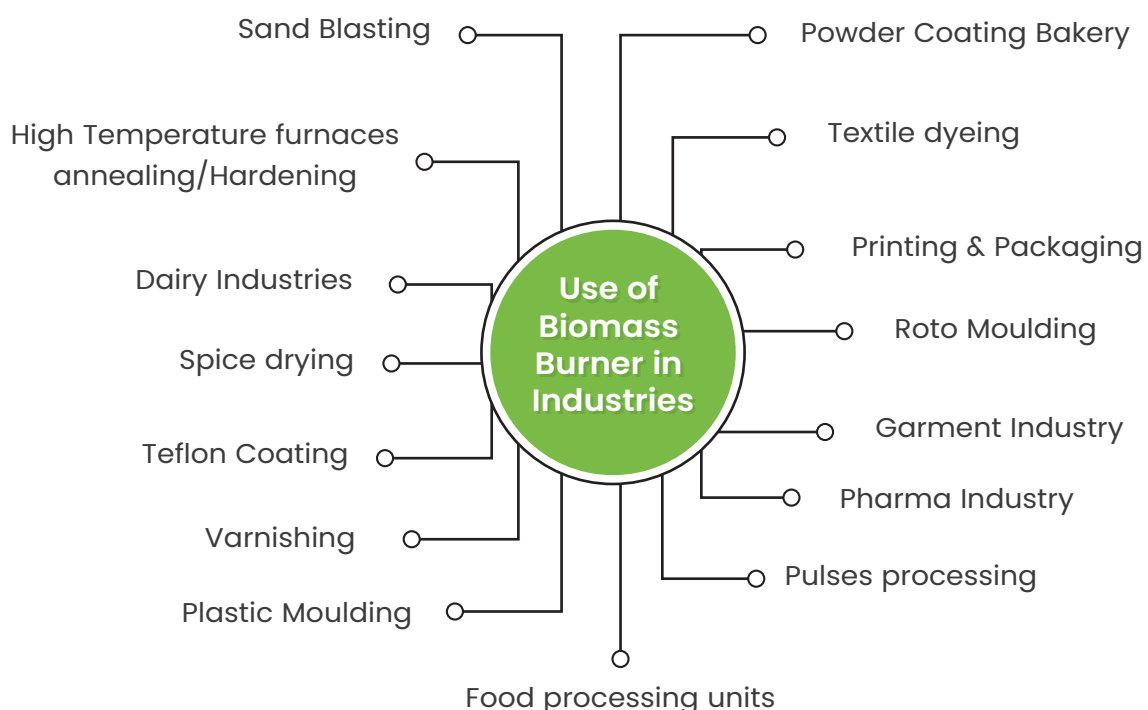
Introduction

- India has large number of MSMEs that consumes fossil fuels such as coal, LPG Natural gas, furnace oil meeting their energy requirement.
- Due to shortage and steep rise in fossil fuel prices many MSMEs units are becoming unviable in their operation.
- There is growing emphasis to reduce air pollution and reduction in GH emissions by shifting to cleaner fuels in industries.
- India has large amount of biomass in form of agricultural/forest residues that can be utilised for energy production.



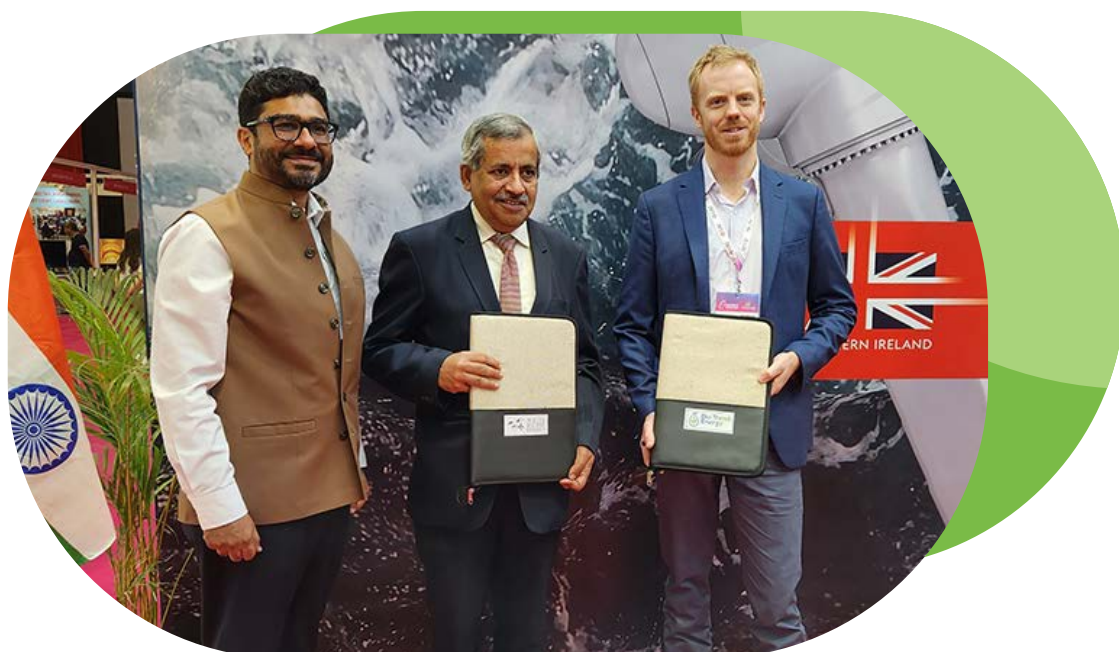
Key Feature of Industrial Burner

- High Combustion Efficiency- > 90%
- Automatic Ignition system with Proportional – Integral – Derivative (PID) controller.
- Process temperature controls with programmable thermostats
- Energy cost saving - 30-50% against Diesel /LPG.
- Designed specifically to handle multiple type of pellets and class leading ash handling capabilities.



BIO TREND ENERGY & WHITE HORSE ENERGY COLLABORATION

White Horse Energy (WHE) UK based bioenergy company and Bio Trend Energy India specialising in the decentralised aggregation and densification of agricultural residues, to develop and deploy decentralised biomass pelletisation technology in India, with the objective of processing a range of agricultural residues, including paddy straw for meeting growing sustainable biofuels demand in large industrial users and power generators. White Horse Energy & Bio Trend Energy are working jointly on innovative pelletisation technologies and aggregation-based commercialisation strategies to India's agriculture and bioenergy spaces.



BIOMASS PELLET PRODUCTION FACILITY

at Gandhidham, Gujarat & Raisen, Madhya Pradesh.

Bio Trend Energy has a biomass pellet production facility with European pellet mill with 6-8 mm diameter pellets with 40 TPD production capacity.





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