



DATE: 29th November, 2023
REF. : PIL/DVN/L-124/2023-24

Security Code No.: 522205	Company Code- PRAJIND
BSE LIMITED PHIROZE JEEJEEBHoy TOWERS, 25TH FLOOR, DALAL STREET, MUMBAI - 400 001 Fax: 022- 2723121/3719/2037/2039/2041/2061	NATIONAL STOCK EXCHANGE OF INDIA LTD. EXCHANGE PLAZA, 5TH FLOOR, PLOT NO. C/1, G BLOCK, BANDRA-KURLA COMPLEX, BANDRA (EAST), MUMBAI - 400 051 Fax: 022 – 66418124/25/26, 2659 8237 / 38.

Dear Sir / Madam,

Kindly put the enclosed “Investor Meet Presentation” on your bulletin board for sharing with Investors.

Thanking you,

Yours faithfully,

For PRAJ INDUSTRIES LIMITED

**DATTATRAYA
VISHWANATH
NIMBOLKAR**

Digital signature details:
Digitally signed by DATTATRAYA VISHWANATH NIMBOLKAR
DN: c=IN, o=Personal, postalCode=411038, l=Pune,
st=Maharashtra, street=FLAT NO A-101, MEHGDOOT CO-OP
HOUSING SOCIETY, 101, BLDG NO 101, Sector 10, Pimpri Chinchwad, India - 411038
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2.5.4.20>c=IN, o=Personal, postalCode=411038, l=Pune,
st=Maharashtra, street=FLAT NO A-101, MEHGDOOT CO-OP
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st=Maharashtra, street=FLAT NO A-101, MEHGDOOT CO-OP
HOUSING SOCIETY, 101, BLDG NO 101, Sector 10, Pimpri Chinchwad, India - 411038
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6881909a11e25421ed4c43008,
certifyingAuthority=prajnet, cn=DATTATRAYA
VISHWANATH NIMBOLKAR
Date: 2023.11.29 17:08:40 +05'30'

**DATTATRAYA NIMBOLKAR
CHIEF INTERNAL AUDITOR
& COMPANY SECRETARY
(M. No. 4660)**

BUILDING A SUSTAINABLE FUTURE

29th Nov 2023





Celebrating
completion of 40
Years



Our journey- Decade #1



Focus on R&D
since inception



Founded as an
Agri Processing
venture



R&D



Among the firsts
to receive ICICI
venture funding

Launched
continuous
fermentation
technology



1989



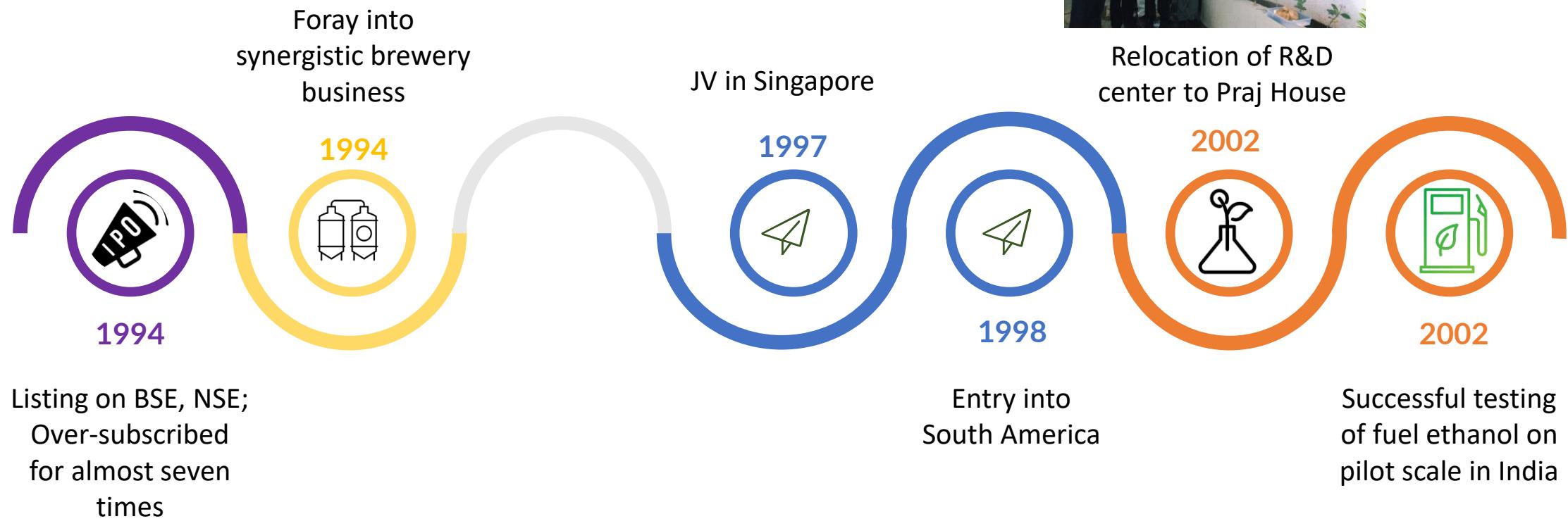
Entry into
South East Asia



Deployed
Innovative Starch
based ethanol
technology.



Our journey- Decade #2



Our journey- Decade #3



praj | HiPurity Systems

Our journey- Decade #4



Launch of RCM
portfolio of technology



Successful
commissioning of
2G demo plant

2020



2020

Demo plant for
CBG at Praj Matrix

Inauguration of 2G plant
at hands of Hon. Prime
Minister

2022



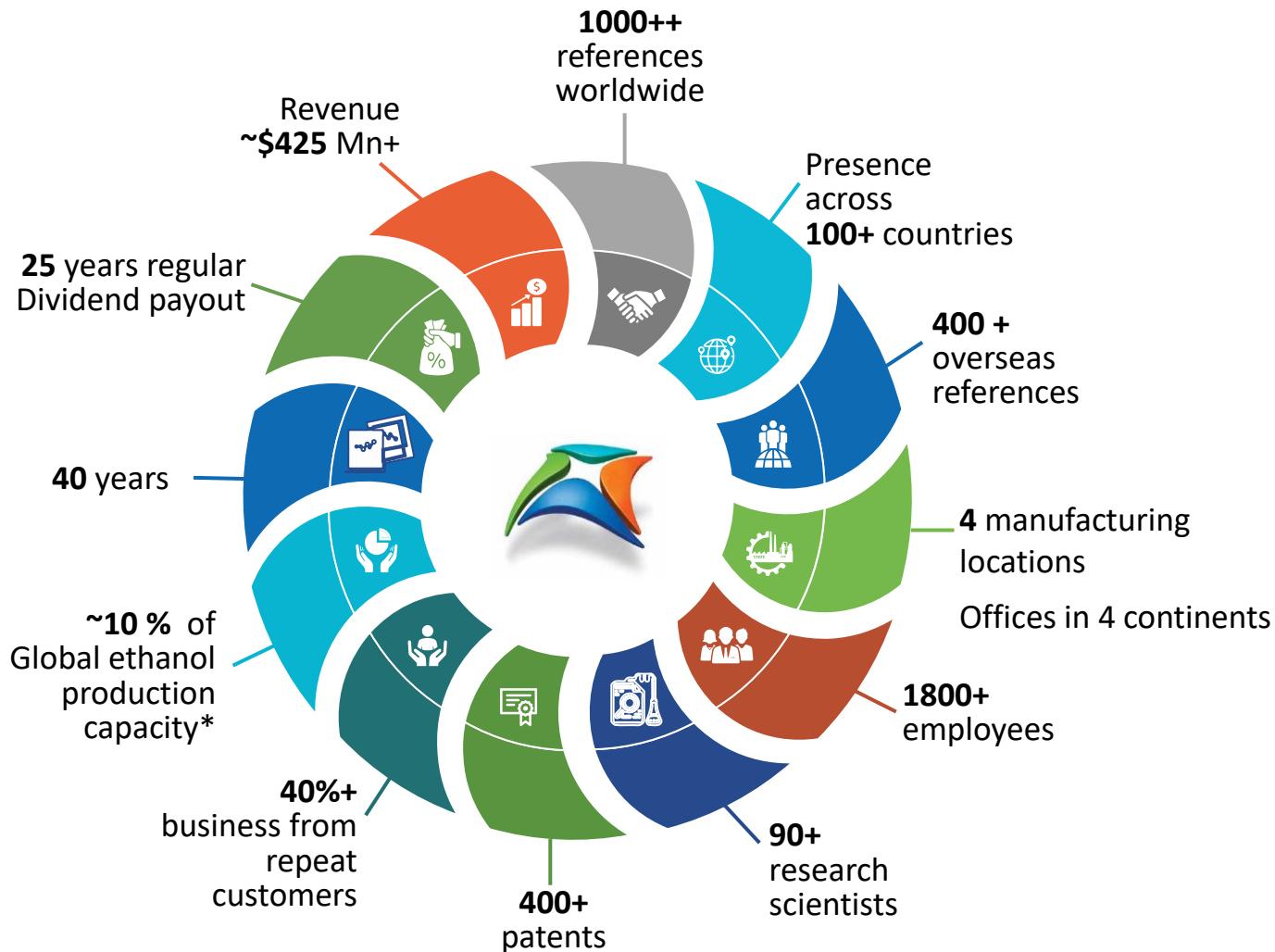
SAF- Successful testing of
commercial passenger
flight

2023

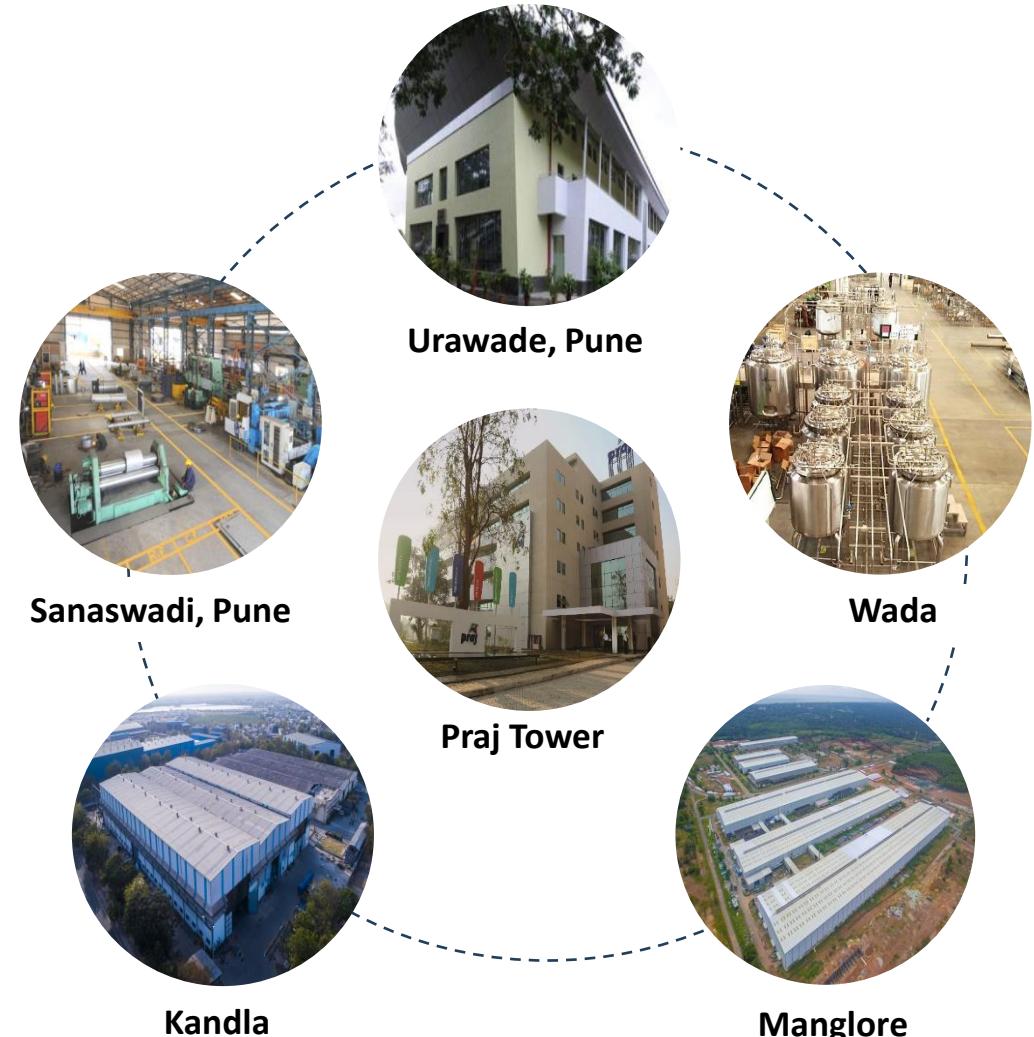


New Subsidiary Praj
GenX





*excluding China

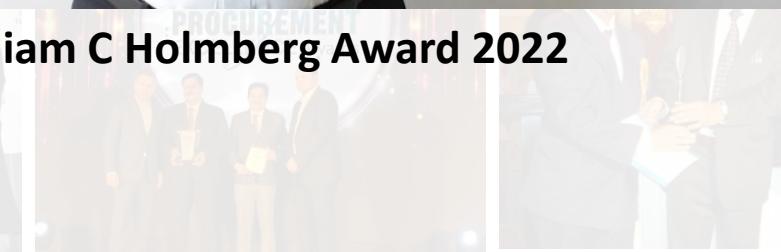
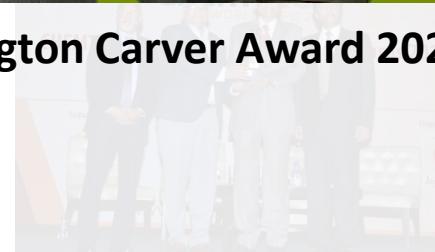


As of Nov 2023

Awards and Accolades



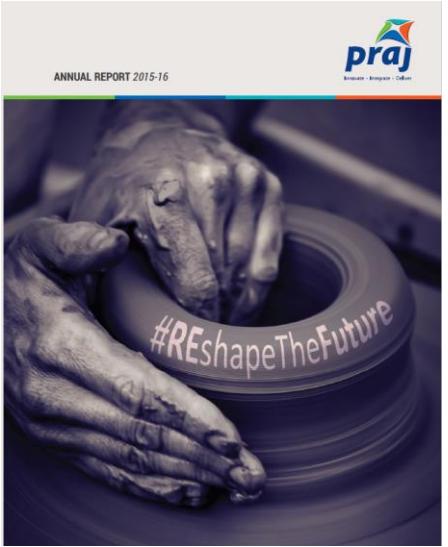
Awards and Accolades





Leadership in Bioeconomy





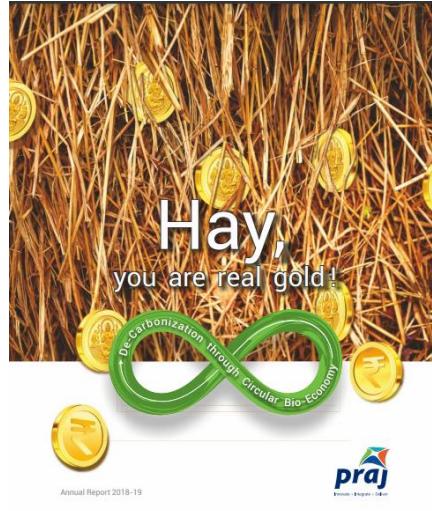
FY 16



FY 17



FY 18



FY 19



Annual Report 19-20



Annual Report 20-21



Annual Report 21-22



Annual Report 2022-23



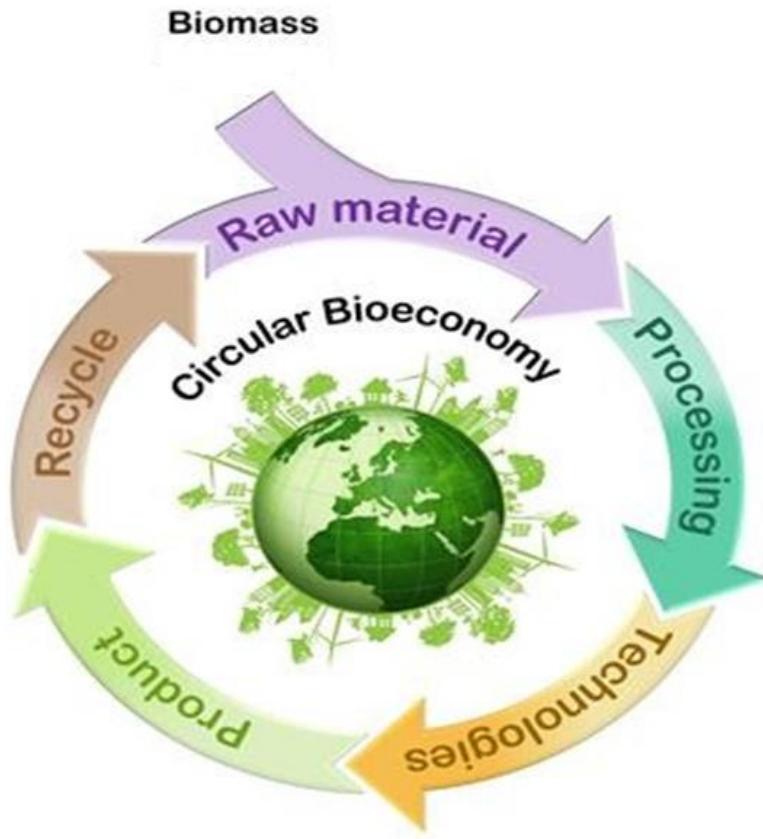
FY 20

FY 21

FY 22

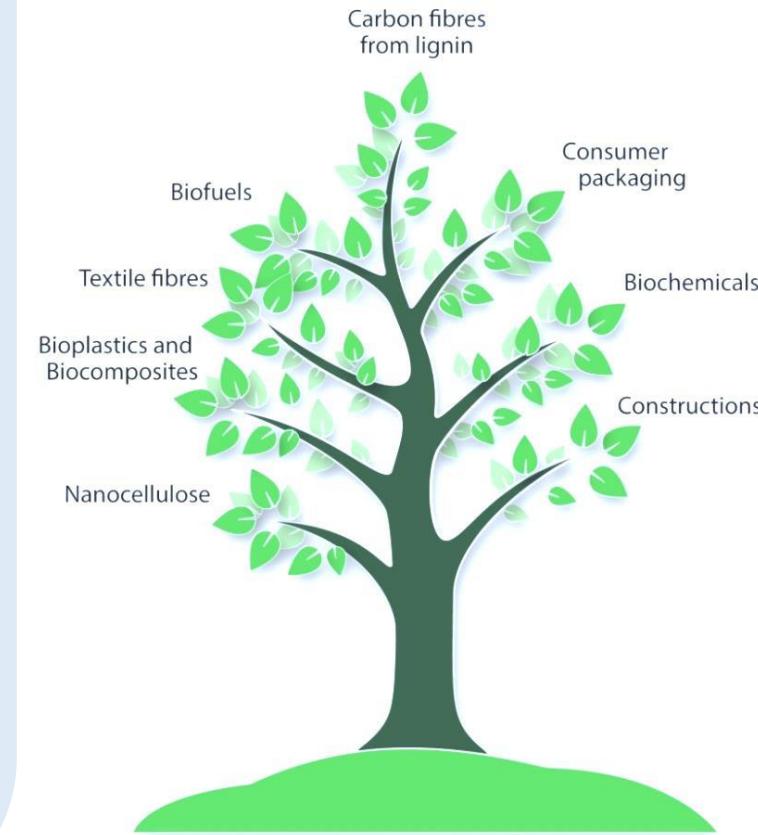
FY 23

Bioeconomy- A promising pathway for Sustainable Climate Action

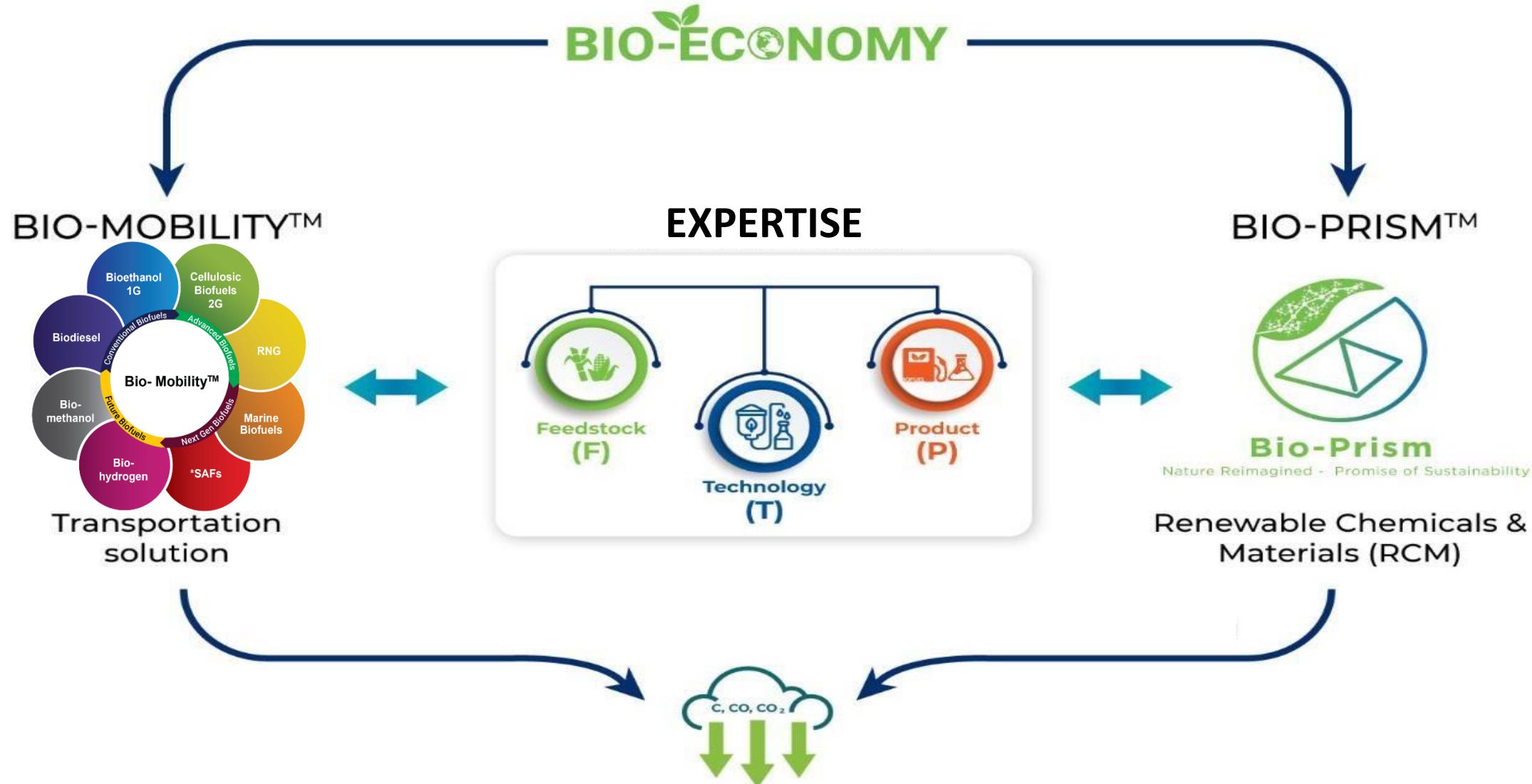


Bioeconomy is knowledge-based production and use of biological resources to provide products, processes services & energy in all economic sectors within the frame of a sustainable economic system.

1. Renewable source
2. Sustainable decarbonisation
3. Less Toxic
4. Environment friendly



Two-pronged strategy in Bioeconomy



Driving Sustainable Climate Action through Bioeconomy

FTP- Bedrock of Praj strategy

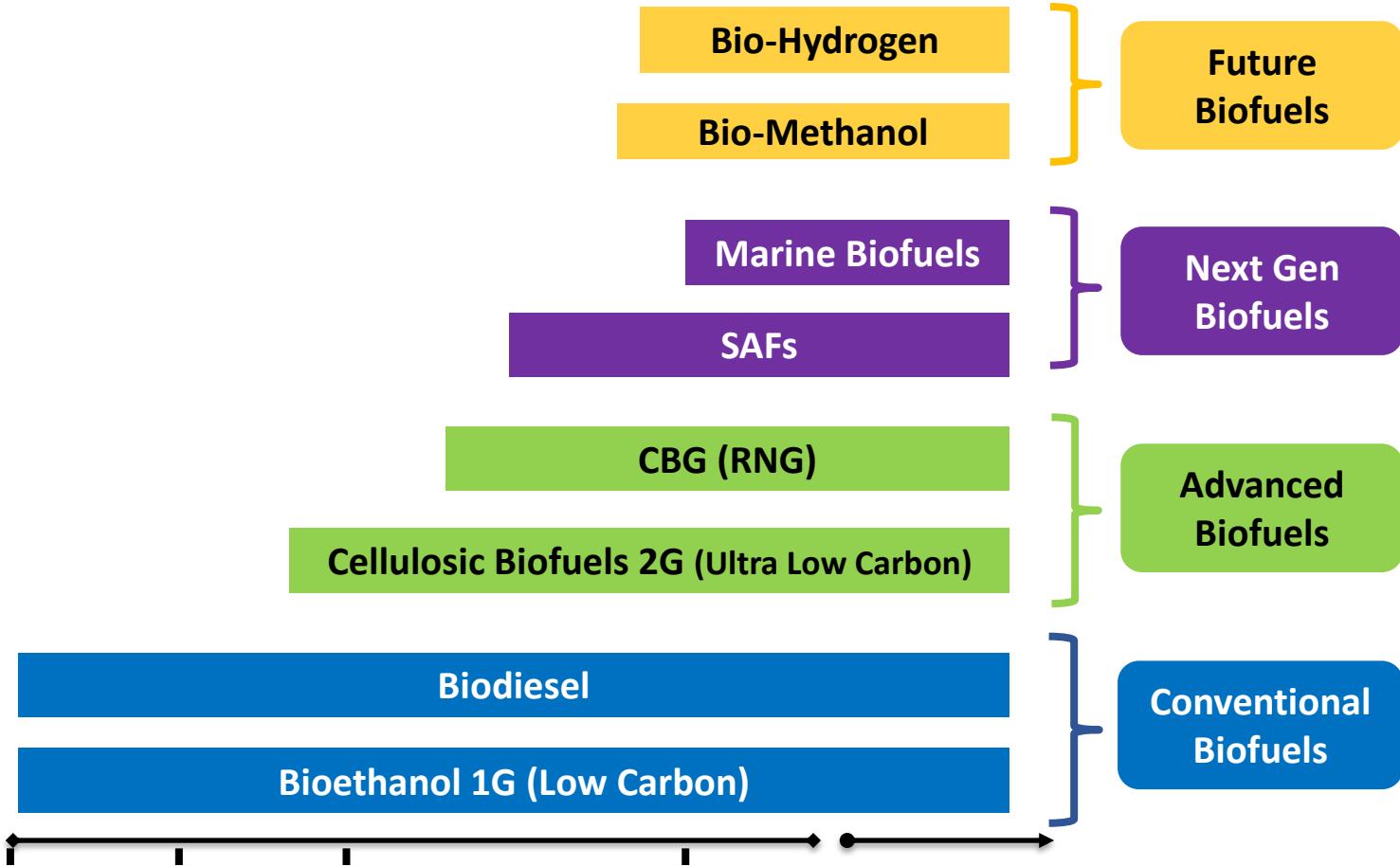
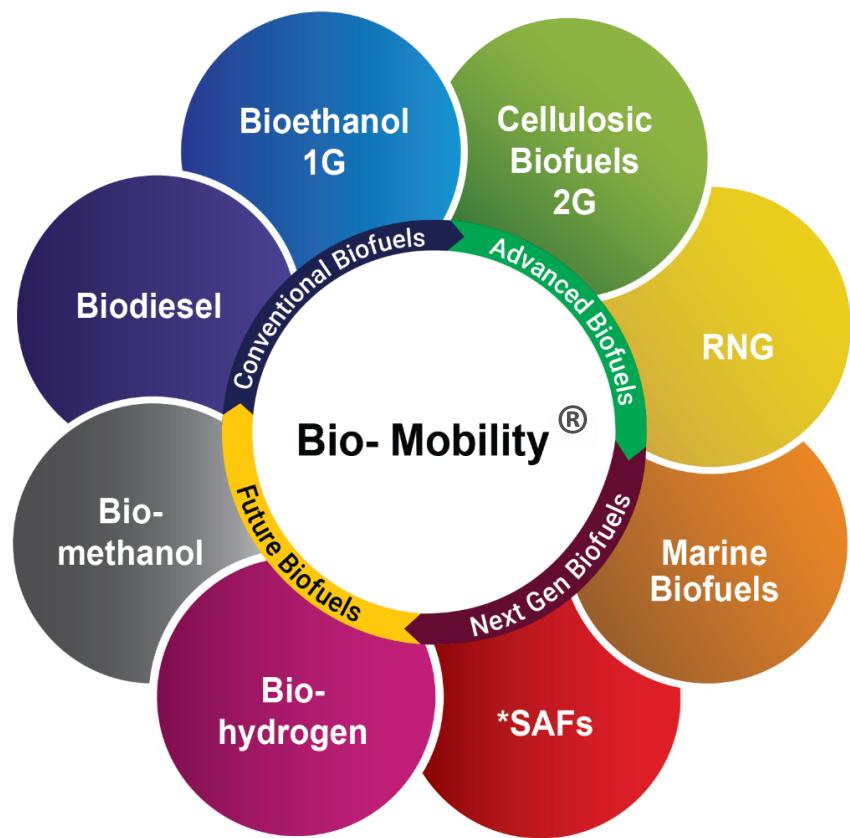
Feedstock (F)	Technology (T)	Product (P)
Sugary C-molasses, B-heavy molasses, Sugarcane syrup/Biosyrup	1 st Generation (1G)	Conventional Bioethanol, RCM*
Starchy Damaged/Surplus Grain like Rice, Wheat, maize (corn), Tuber, etc.		
Lignocellulosic Agri bio-mass like bagasse, paddy straw, wheat straw, etc.	2 nd Generation (2G)	Advanced & NextGen Biofuels, RCM*
Industrial & Other Waste Industrial waste such Press mud, spent wash, Municipal waste	Anaerobic Digestion	Advanced Biofuels - CBG

Feedstock Expertise



*RCM: Renewable Chemicals & Materials

Bio-Mobility® : Decarbonizing the transportation Industry



*SAFs- Sustainable Aviation Fuels



Global Footprint



Cilon Inc. USA



Triveni Engineering, India



Manuelita, South America



Kakira Sugars, Africa



Biowanze, Europe



Progreen, South-East Asia



- Watershed moment for the biofuels industry
- Anchored by India, the United States, and Brazil.
- 19 Countries & 12 International organizations have already agreed to be part of it, many more to follow

- Committed to facilitate access to technology, fostering an ecosystem and initiating policy interventions & alterations
- India has a huge role to play in technology transfer, policy support, expertise in project life cycle management



Carbon footprint
reduction



Water footprint
reduction



Energy footprint
reduction

Low Carbon Ethanol – Praj's unique approach

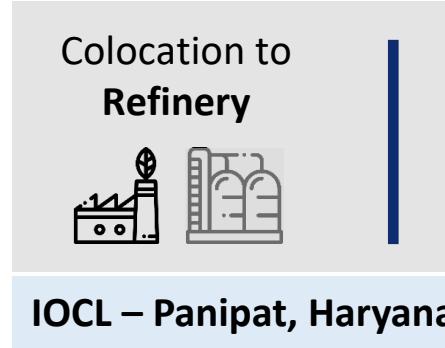


Lowering the carbon intensity for existing

corn ethanol through –

- Energy integration
- Process integration &
- Process optimization solutions

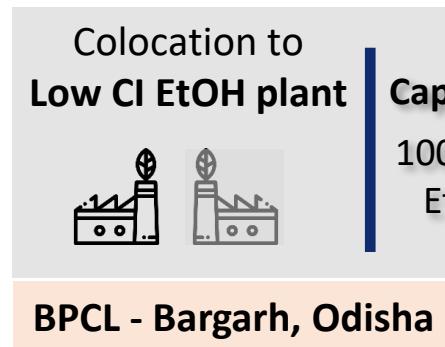
Praj Ultra Low Carbon Ethanol Plant



Capacity
100 klpd EtOH



Cellulosic(2G) enfinity® Technology



Capacity
100 klpd EtOH



enfinity™

BPCL



Capacity
100 klpd EtOH



HPCL

Praj Ultra Low Carbon Ethanol Plant



- No. of farmers to be benefited: ~100,000
- Rural Job Creation: ~1,500
- No. of cars to be displaced annually: ~63,000
- CO₂ Emission reduction/year: ~320,000 MT

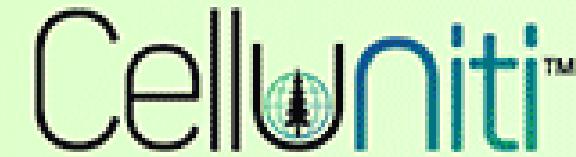


- First ethanol is out of the plant
- Plant under recommissioning now
- Will be operational @60% capacity by March 2024

Agricultural Residues as feedstock



Forest Residues as feedstock



- Enfinity: Praj's proprietary technology
- Praj & Sekab, Sweden have jointly developed Celluniti™
- Europe, as per RED III mandate to move to 2nd Generation ethanol

Compressed Bio Gas (CBG)

- Industry ecosystem gradually building up
- Bold plans announced by both Public sector companies as well as large business conglomerates
- International Opportunity: RNG
- Unique solutions- rich understanding of biotechnology
- Strong references of commercial scale plants based on Press Mud, Rice Straw and Industry effluent



- Plant Audit & Integration engineering
- Remote Bridge: Leveraging Digitalization for plant performance monitoring
- Operations and Maintenances of Plants
- Performance Enhancers for ethanol plants





**India's First Commercial Passenger Flight,
Powered By Indigenously Produced Sustainable Aviation Fuel (SAF)
From Sugarcane Molasses Using ATJ Pathway.**



19.05.2023 T3, Indira Gandhi International Airport, New Delhi

Flight Details: AirAsia India I5 767 (Pune To New Delhi)

- CORSIA Agreement for use of SAF
- India has set target of blending SAF:
 - 1% by 2027
 - 2% by 2028
- Countries globally setting SAF mandates:
(USA - ~10% by 2030 & EU 6% by 2030)
- Global leaders as technology partners GEVO and Axens

- Energy giants investing in Blue and Green Hydrogen
Green Ammonia, Waste-To-Energy projects
- Increasing demand for Modularization

- \$300+ Bn investment in clean energy by 2030
- Traditional O&G market: Investment of \$250 Bn per year for the next 7 to 10 years
- \$ 150+ Bn in LNG infrastructure to be around

- Strong capabilities in modularization
- New manufacturing facility at Mangalore





- Comprehensive range of solutions for industrial effluent treatment, recycling and ZLD systems
 - Strong references in metals, industrial waste, refinery sector
-
- Growing awareness of Water Management
-
- Specialized microbes for difficult to treat industrial effluent
 - Solar based evaporation
 - Modularization approach

- Strong leadership in domestic market
 - Working with all three major global beer makers
 - Market bouncing back after subdued performance in last three years
-
- Hygienic manufacturing and process expertise to expand its offerings for other beverages



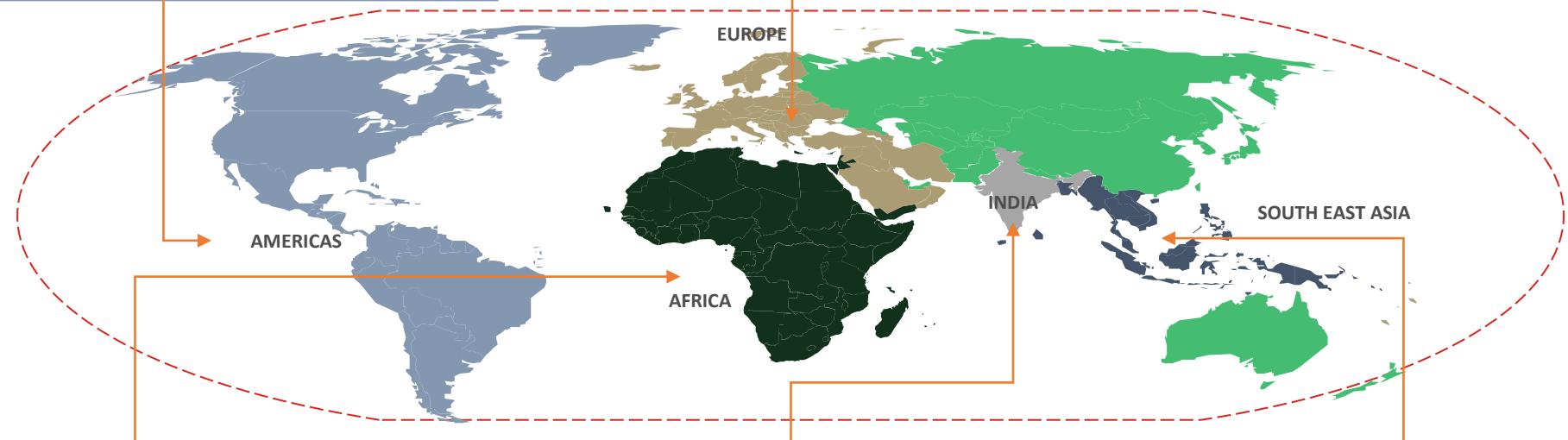
- Offerings across Pharma- Hi Purity Water, Modular Process solutions (MPS) and VAS
- Semiconductor capacity creation to drive demand for high-purity water solutions

- Growing demand for High-Capacity fermenters for biopharma
- Leverage the fermentation capability of parent

- Focused Internationalization
- Innovation across the product value chain



Customers References



1000 ++ references in 100+ countries across all 5 continents. And still counting...



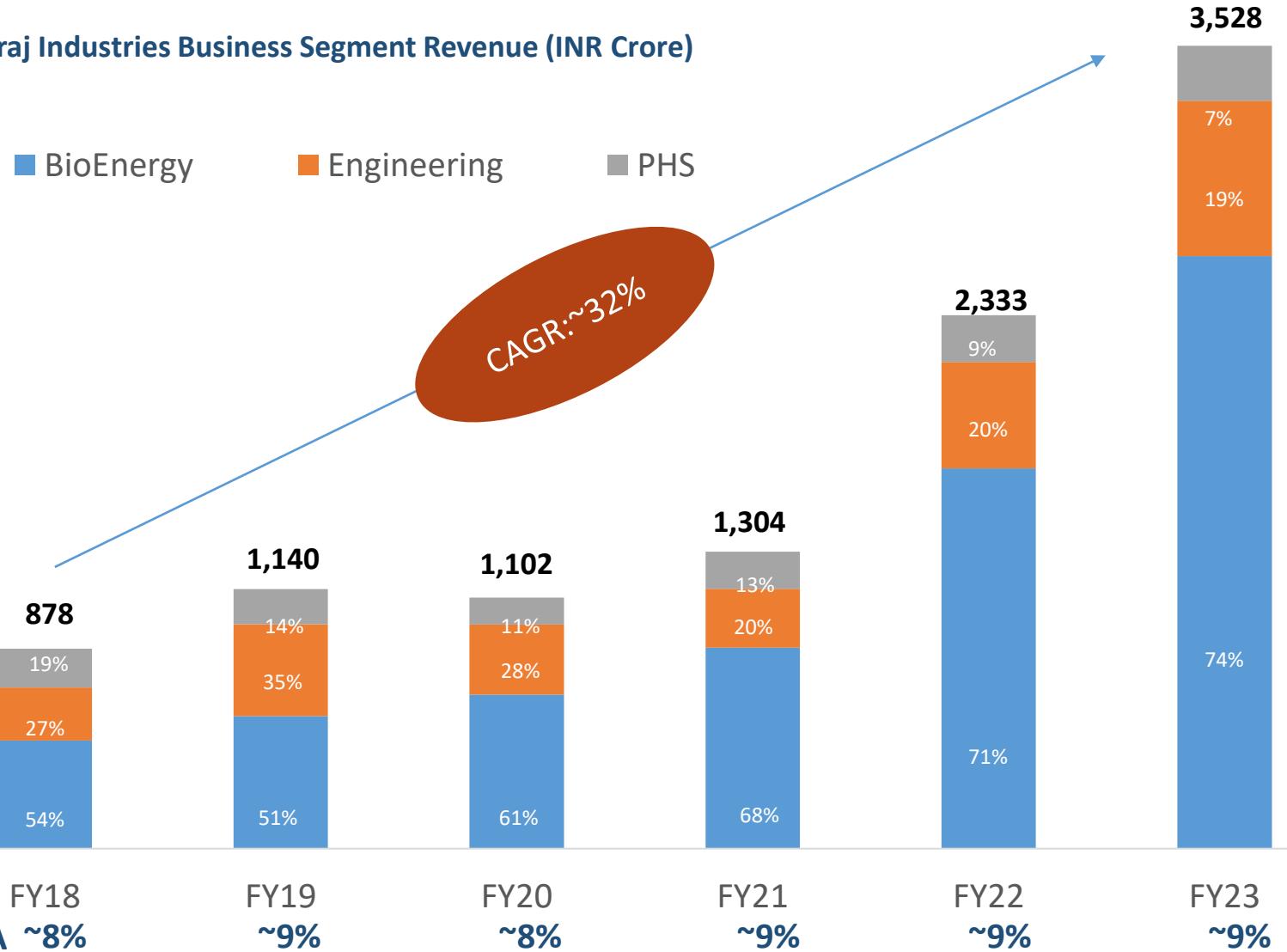
Financial Performance



Financial Highlights



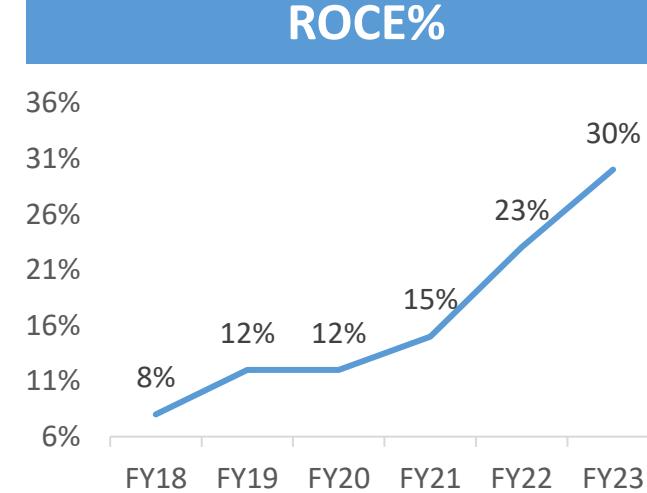
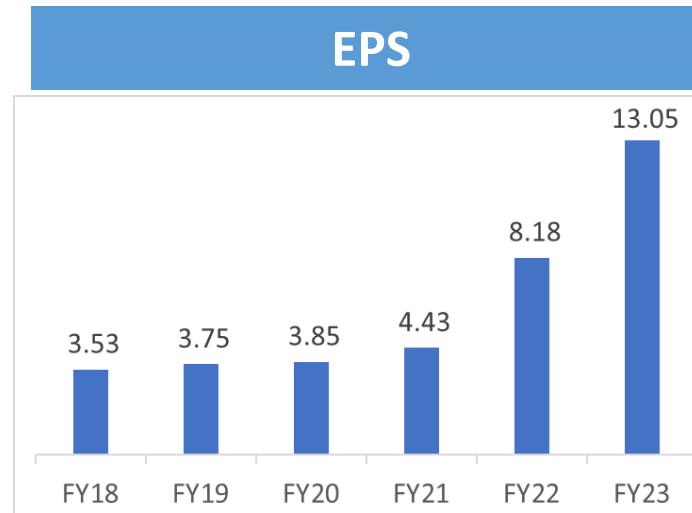
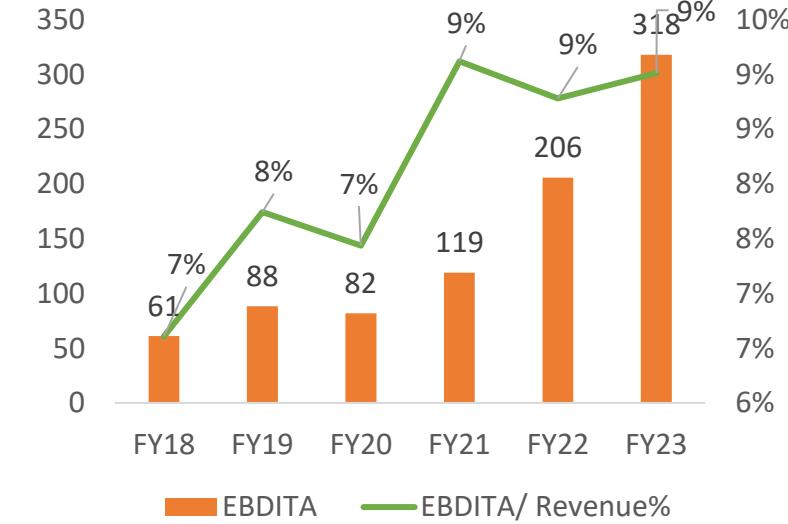
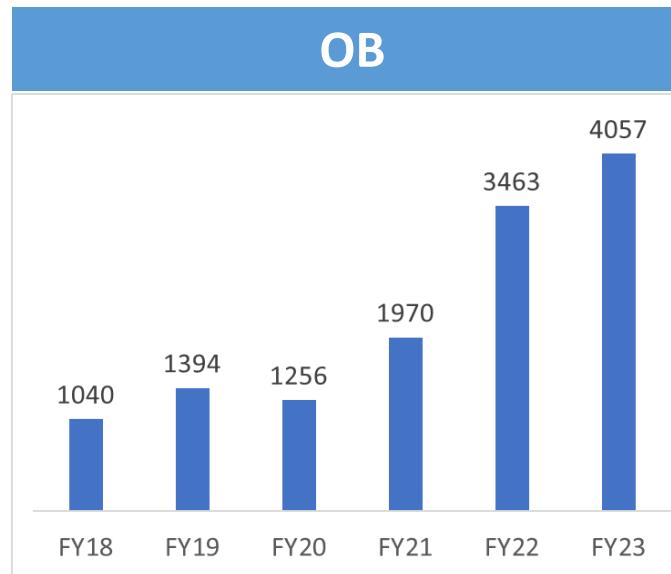
Praj Industries Business Segment Revenue (INR Crore)



1. Bioenergy demonstrated healthy growth (~40% CAGR) with increasing market share in India and overseas
2. ETCA focused CPES has showcased promising growth (~40% CAGR)
3. Export revenue growing at 15% CAGR
4. ROCE has grown from 8% to 30%

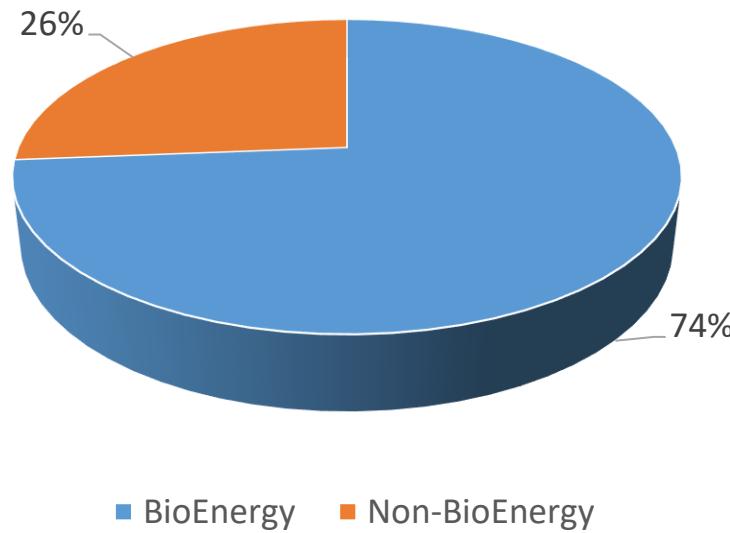
Financial Highlights

In INR crore

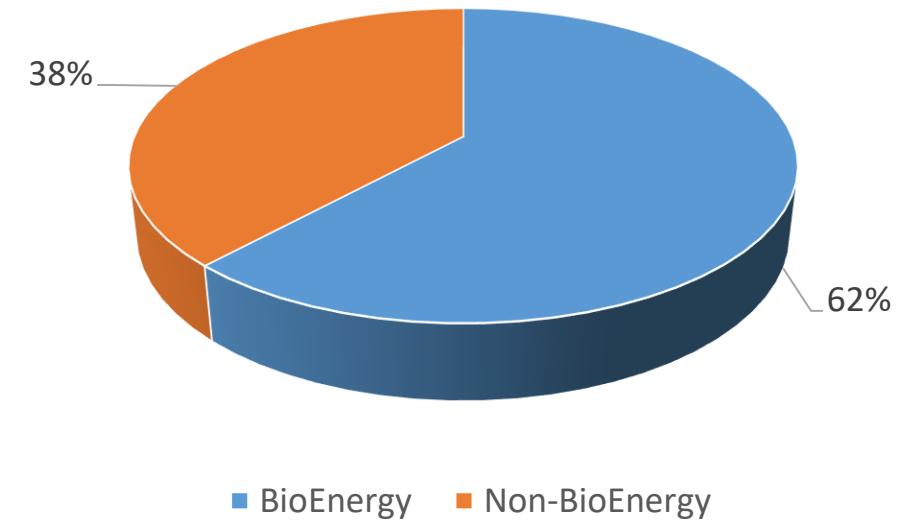


Growing share of Non-Bioenergy business segment

Revenue Mix FY23

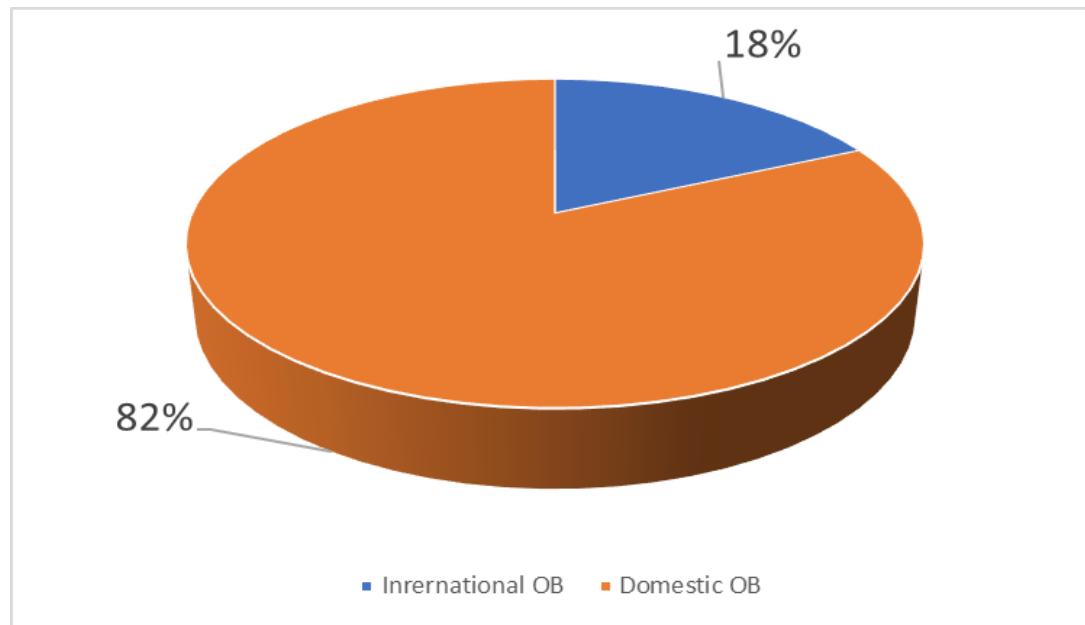


Targeted Revenue Mix

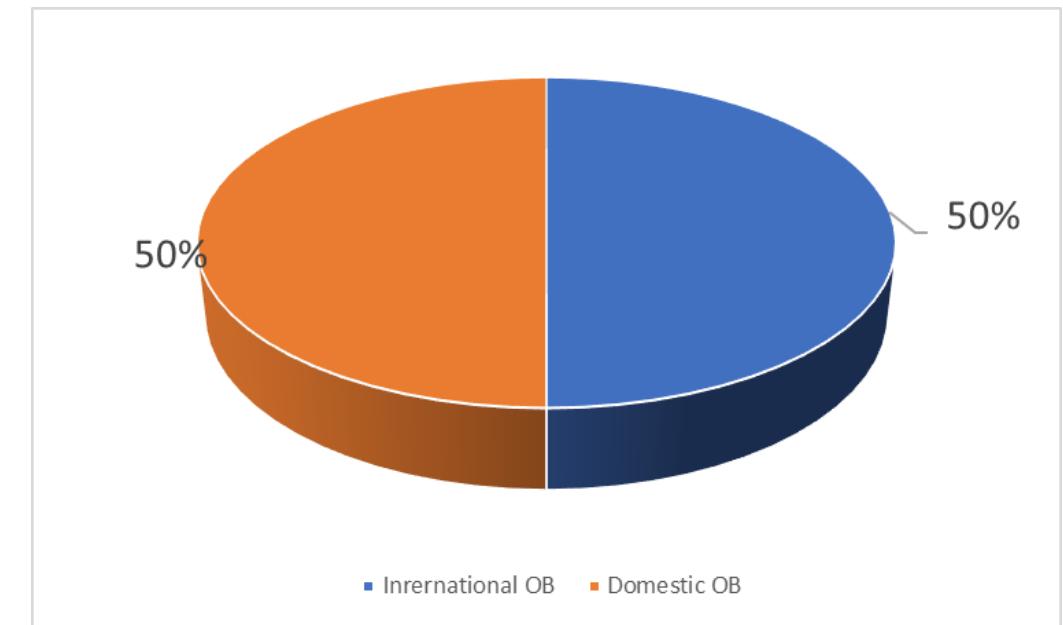


Growing share of International Business

Dom vs Inter. FY23



Targeted International Business



Corporate Social Responsibility



Social

- Diversity and Inclusion initiatives
- Health & Safety, Manpower skilling
- Betterment of Society through Social initiatives in the field of Youth skilling, Health & Environment



**Bioeconomy-
Sustainability Assured!**

Environment

- GHG Emission reduction, Waste reduction, Zero Liquid Discharge
- Green Procurement Initiative to enhance Sustainability among supply chain
- Technology innovation in Bio-economy to accelerate Climate Action

Governance

- Good governance through detailed out Corporate policies
- Compliance to applicable statutory requirements
- Stakeholder engagement & transparency
- Risk management

Environment



Sustainable water resources development

Key Initiatives

- Widening and deepening of Streams in 37 drought prone Villages
- 18.99 lakh cu metres of Silt removed from streams

Positive Impact

- 1253 open wells and 660 bore wells Recharged
- 12,360 acres hectares Agricultural land brought under irrigation

Health



Preventive Healthcare for rural women

- Preventive healthcare program implemented in 33 Villages in Pune
- Promoting “Food as Medicine” concept through nutrition garden

Education



Hands on life skills education through Rural schools

- Infrastructure upgraded in 16 schools from 8 districts of Maharashtra
- Rural entrepreneurship programs

- Life skills education covering 6500 students and more than 50 instructors
- 22 entrepreneurs are being mentored



Initiatives in 6 thematic areas



Water



Energy



Waste



Agriculture



Nature



Social



Investing for Future



New Manufacturing Facility for Energy Transition & Climate Action (ETCA)



Pilot Plant for Bioplastics



Catalysis lab

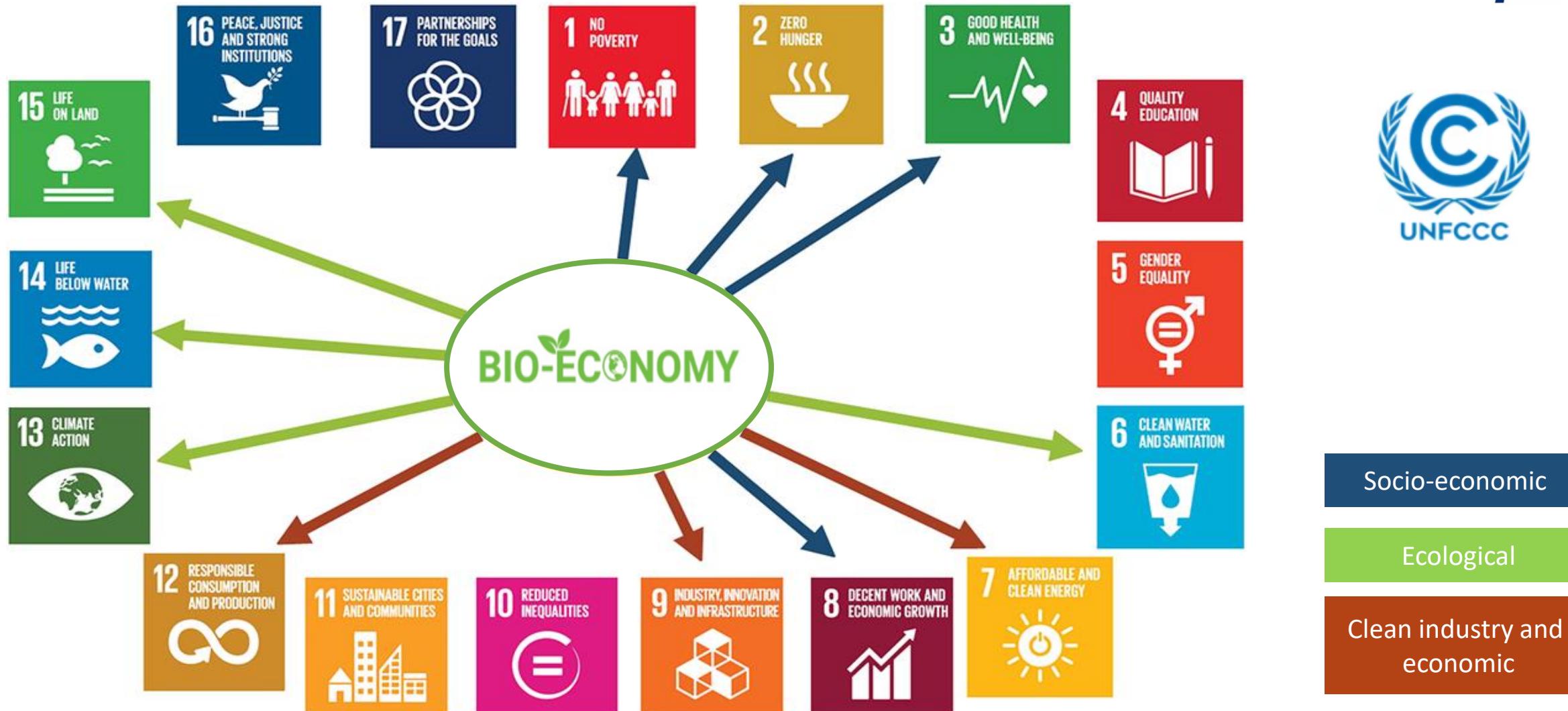
	Total Area (Acres)	Covered Area (Sq ft)	Open Area (Acres)
Plot-A	72	711,000	30
Plot-B	51	674,000	11
Total	123	1,385,000	41



Arise 2030 : Future Horizons

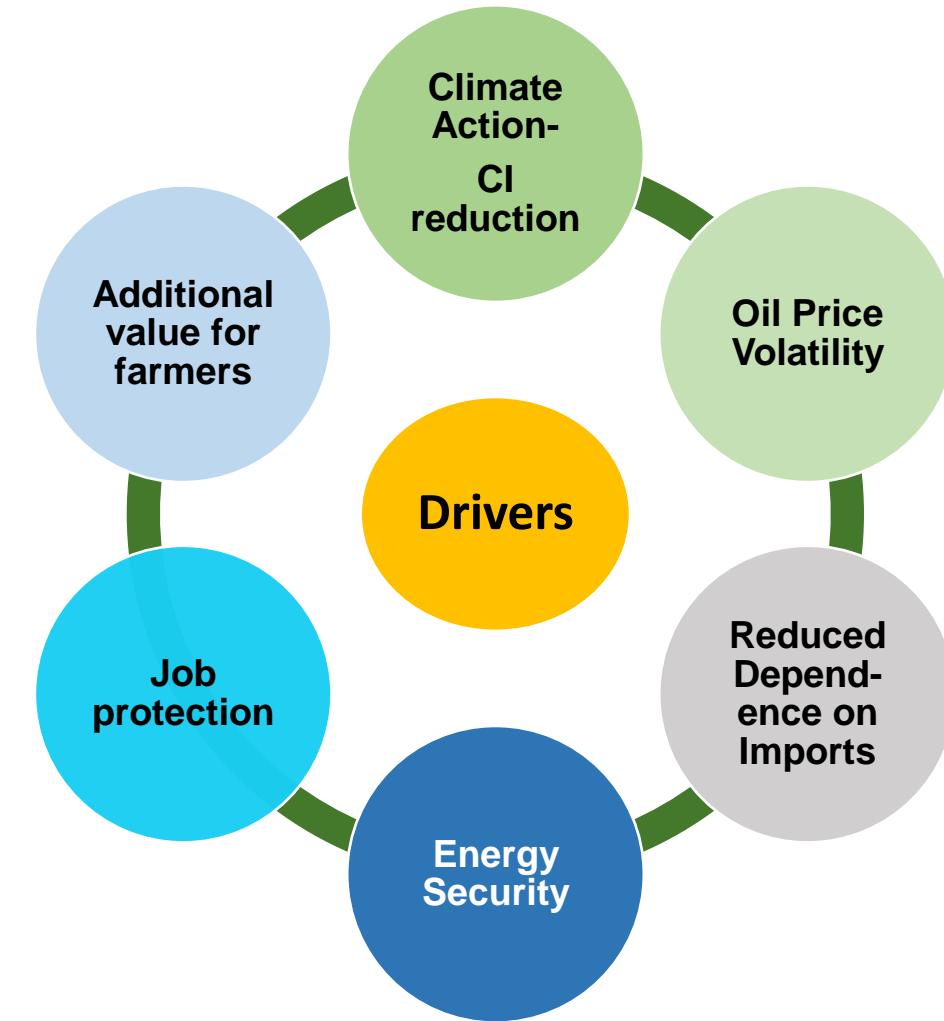
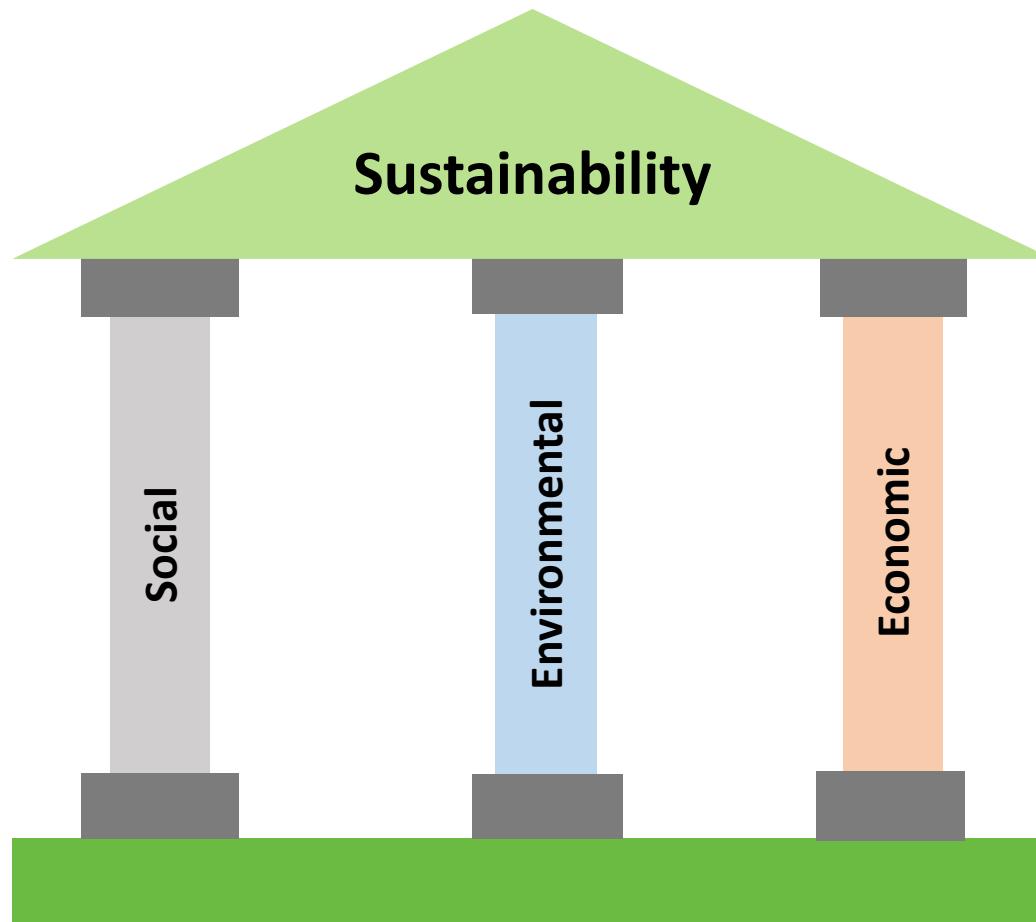


Bioeconomy for sustainable development

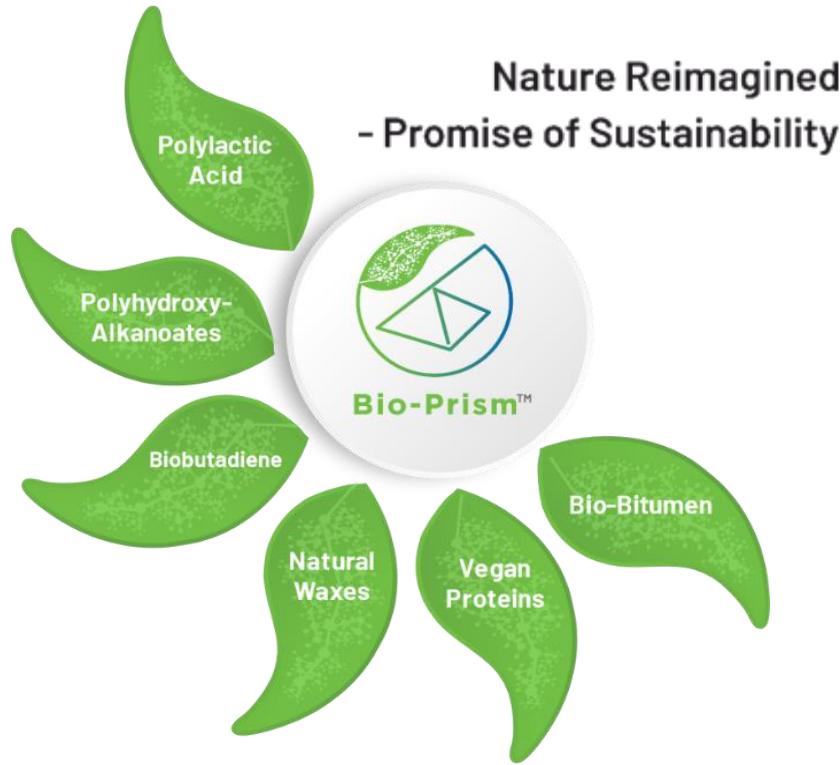


Bioeconomy positively impacts 11 of the 17 Sustainable Development Goals

Benefits of Bioeconomy to mankind



Bioeconomy facilitates holistic development of mankind



Bio-Prism® portfolio comprises of technologies for production of Renewable Chemicals and Materials (RCM).

RCM produced from bio-based feed stocks are sustainable alternatives to products made from fossil resources.

PROCESS



APPLICATION





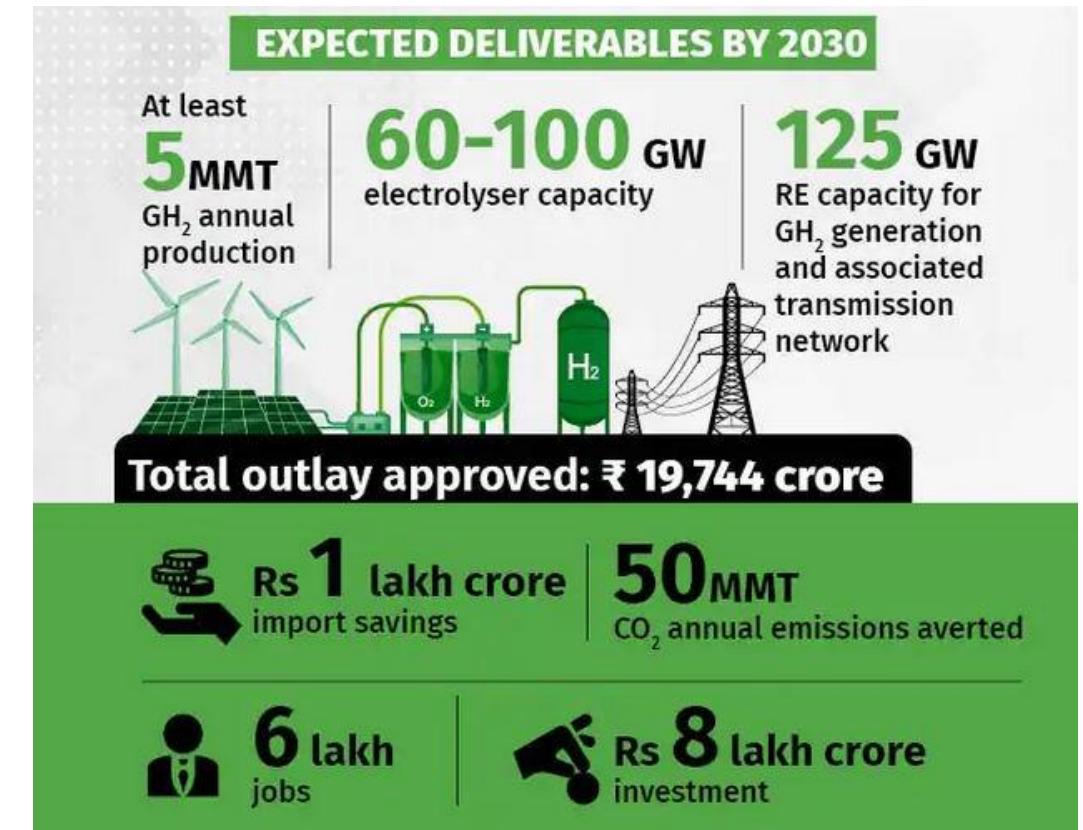
- First-of-kind pilot cum demo plant for Polylactic Acid (PLA) being set up in the outskirts of Pune
- Capex of around Rs. 60 crores
- Multipurpose facility to be used for PLA, PHA and other products

Phases

- 
- Phase 1: Lactic acid
 - Phase 2: Lactide & Protein
 - Phase 3: PHB , Biobutadiene



- Green hydrogen from agri feedstock for maximum CI reduction
- Hydrogen as future source for energy security
- India's vision as hub for green hydrogen





50+

Stakeholders
across the aviation
value chain



10%

Sustainable aviation
fuel by 2030



Clean Skies
for Tomorrow



WORLD
ECONOMIC
FORUM

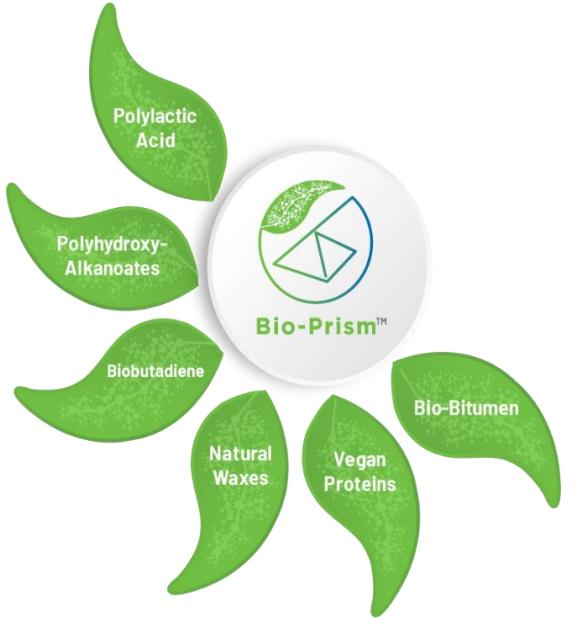
- Decarbonization of hard to abate aviation sector
- CORSIA guidelines coming into effect from 2027
- India; potential hub for production of SAF

Changing business models (Partnerships)

- Mainstreaming of bioeconomy- participation from global energy majors
- Joint venture approach for leveraging synergies
- Industry landscape evolving
- Partnerships and collaborations; order of the day
- Asset light business models
- Life cycle management

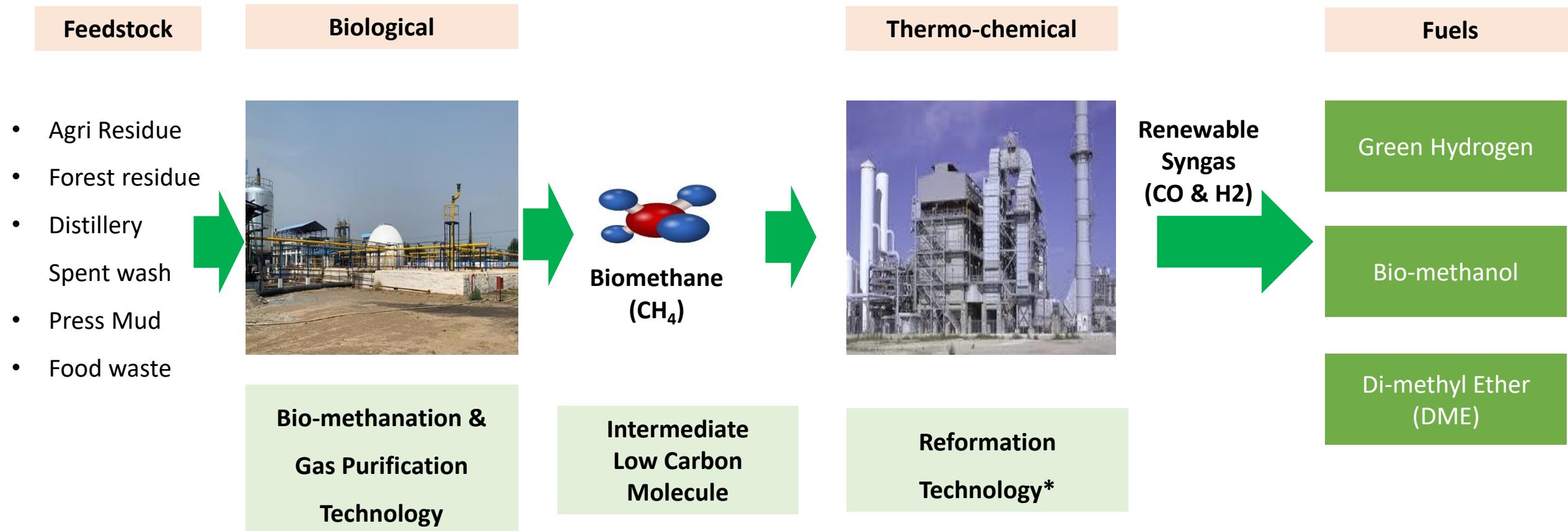


Praj signed a term sheet with IndianOil to advance plans to strengthen biofuels production capacities in India.



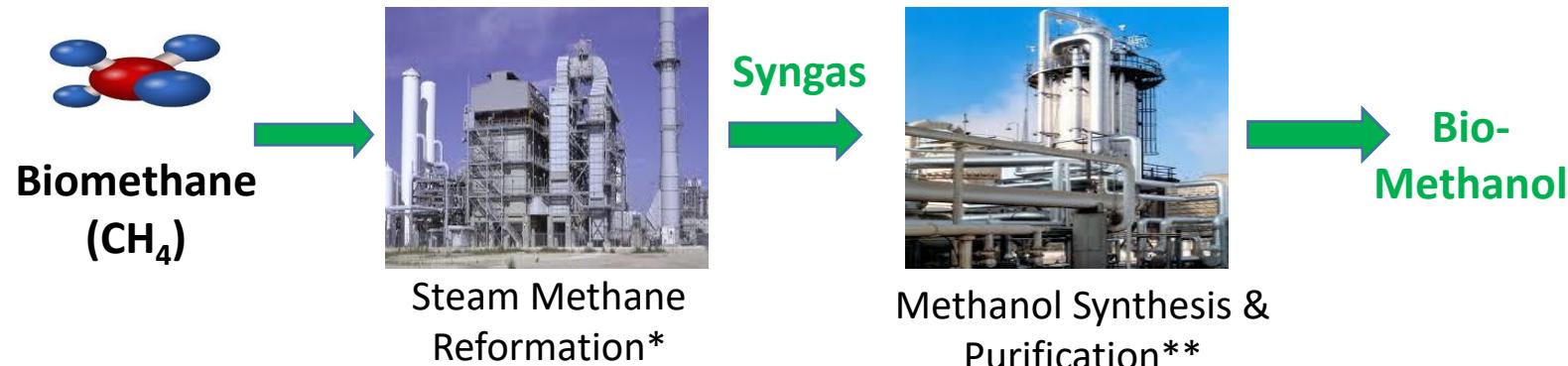
- Reduction in dependence on petrochemicals in multiple sectors
- Bio 3E Policy - (biotechnology for environment, economy and employment)
- INR 10,000 Crore investment envisaged
- Facilitate sustainable development
- Job creation for farming community
- Biopolymers and Biomaterials

Integrated Renewable Syngas Technology Platform



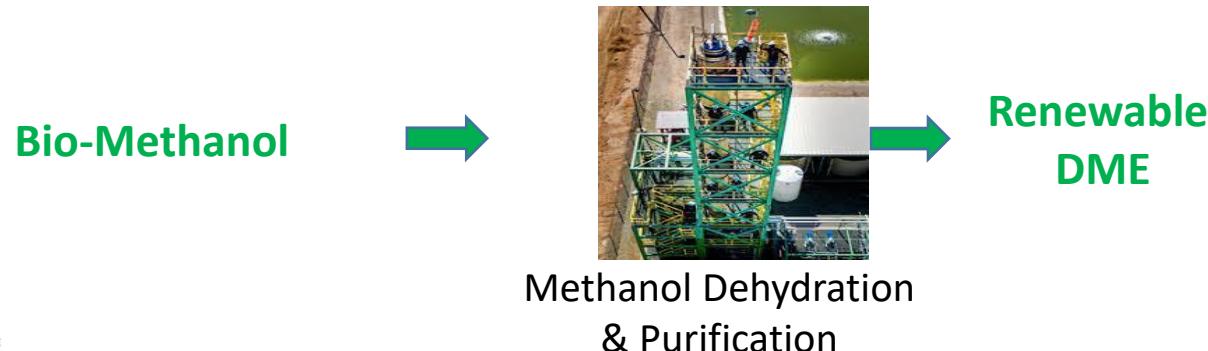
Renewable Syngas Production using Biocatalytic & Thermo-catalytic Processes

Bio-Methanol



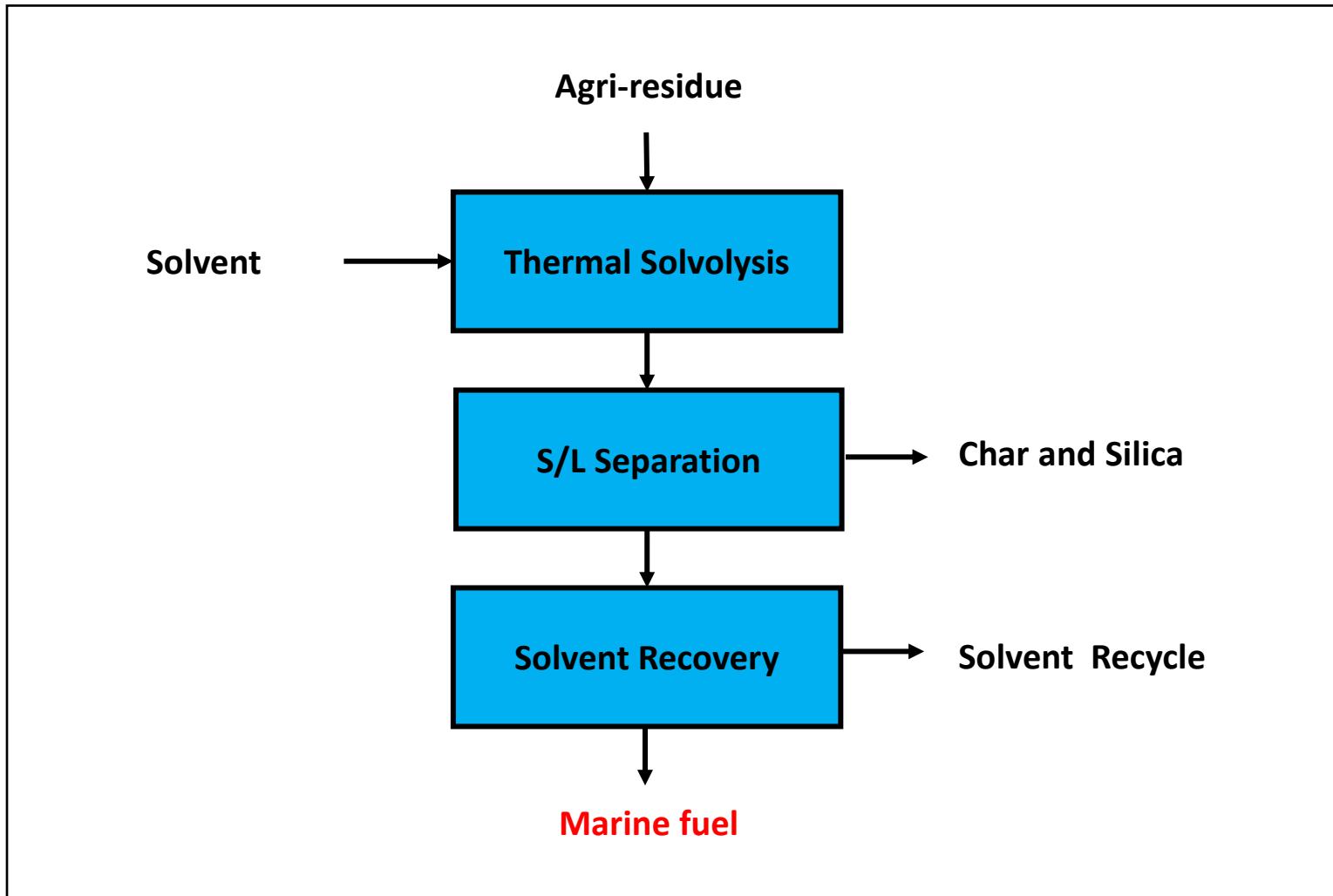
- Up to 70% CI reduction for Marine application
- Cost of production comparable to fossil based Methanol (< INR 40/kg) #

Renewable Di-methyl Ether (DME)



- High Cetane number (>55) and used as blend fuel with Diesel
- Can be blended upto 25% with LPG

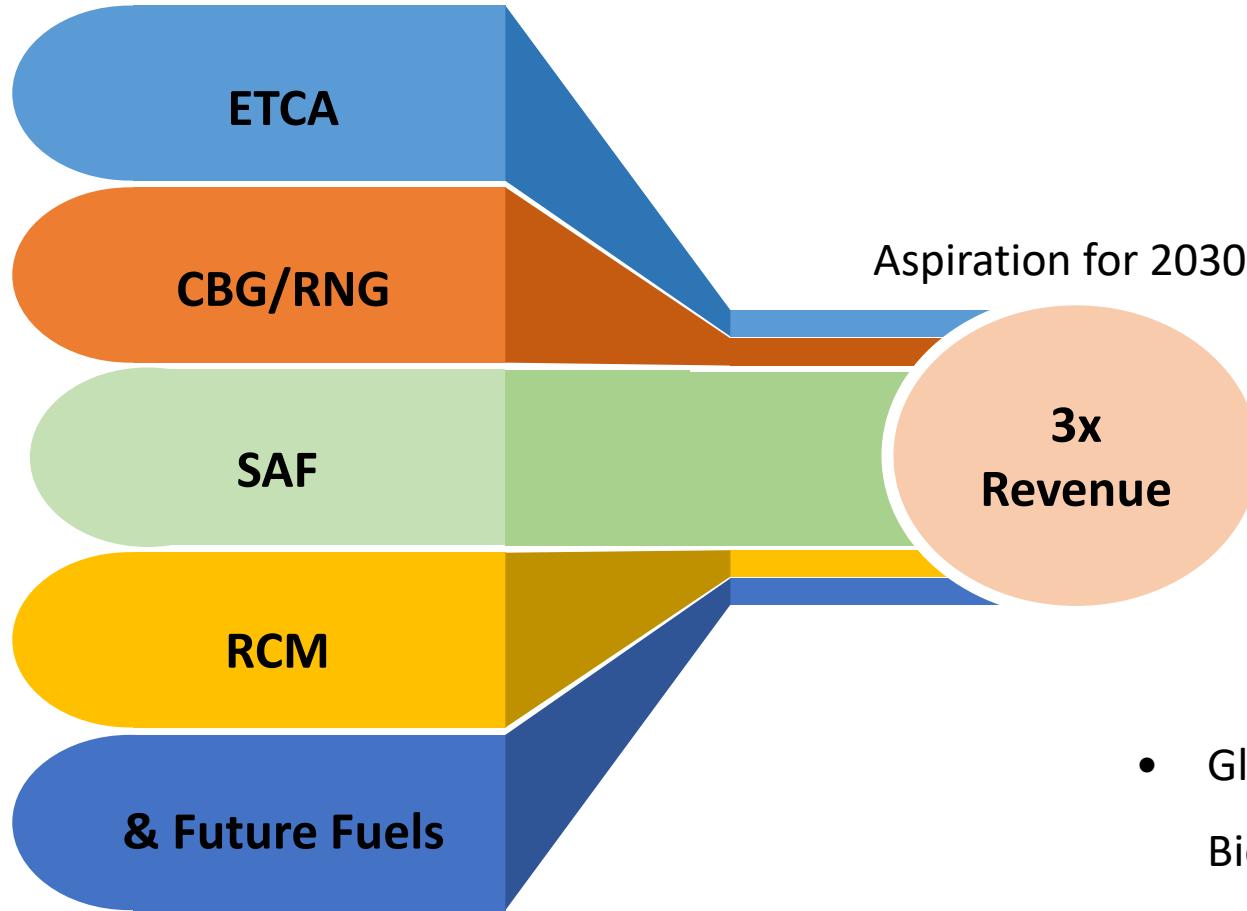
Future Fuels (BTL Technology): Marine Biofuels



Marine Biofuel Lab Sample



Building Sustainable Future; Together



To be the global leader in Bioeconomy

- Global Biofuel Alliance will open several new markets for Biofuel production across the globe
- Ever expanding canvas of bio economy is unfolding



Q&A
