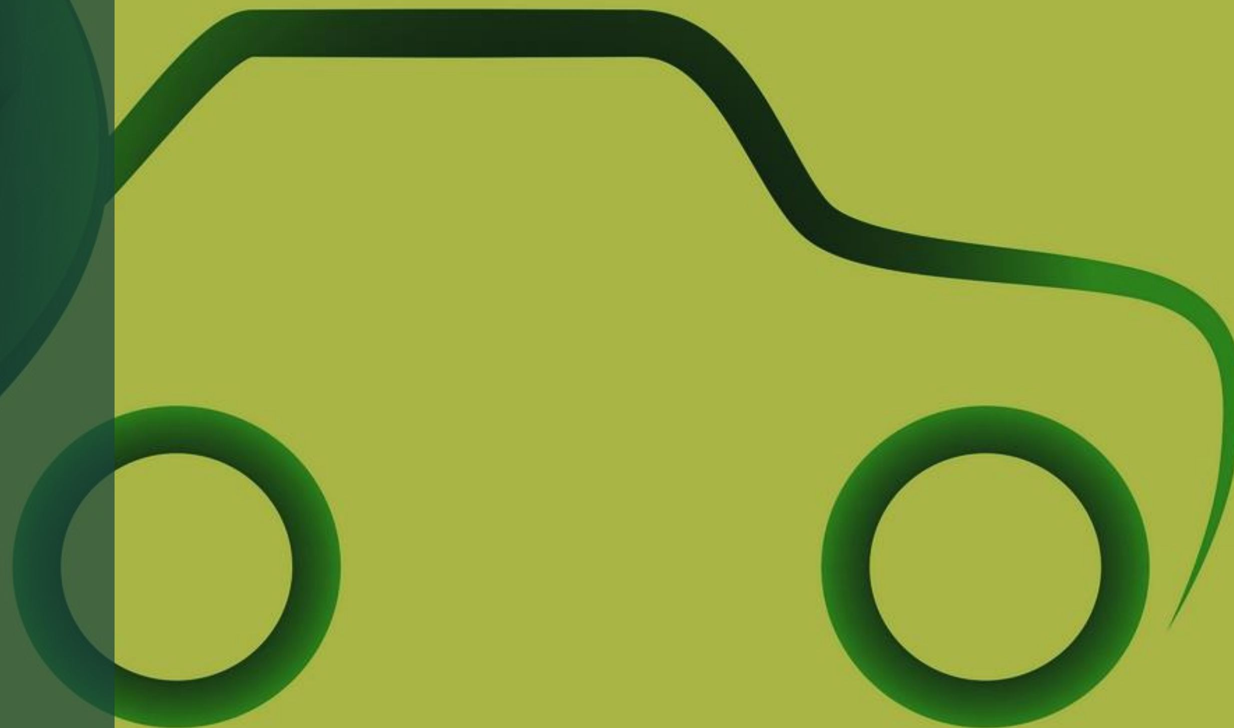
MRAC+

Emerging Biofuels Market in India and Outlook Till 2025

Assessing New Business Opportunities for Fuel Suppliers, Feedstock Suppliers, FBOs Oil Marketing Companies, Auto Players and Other Value Chain Players



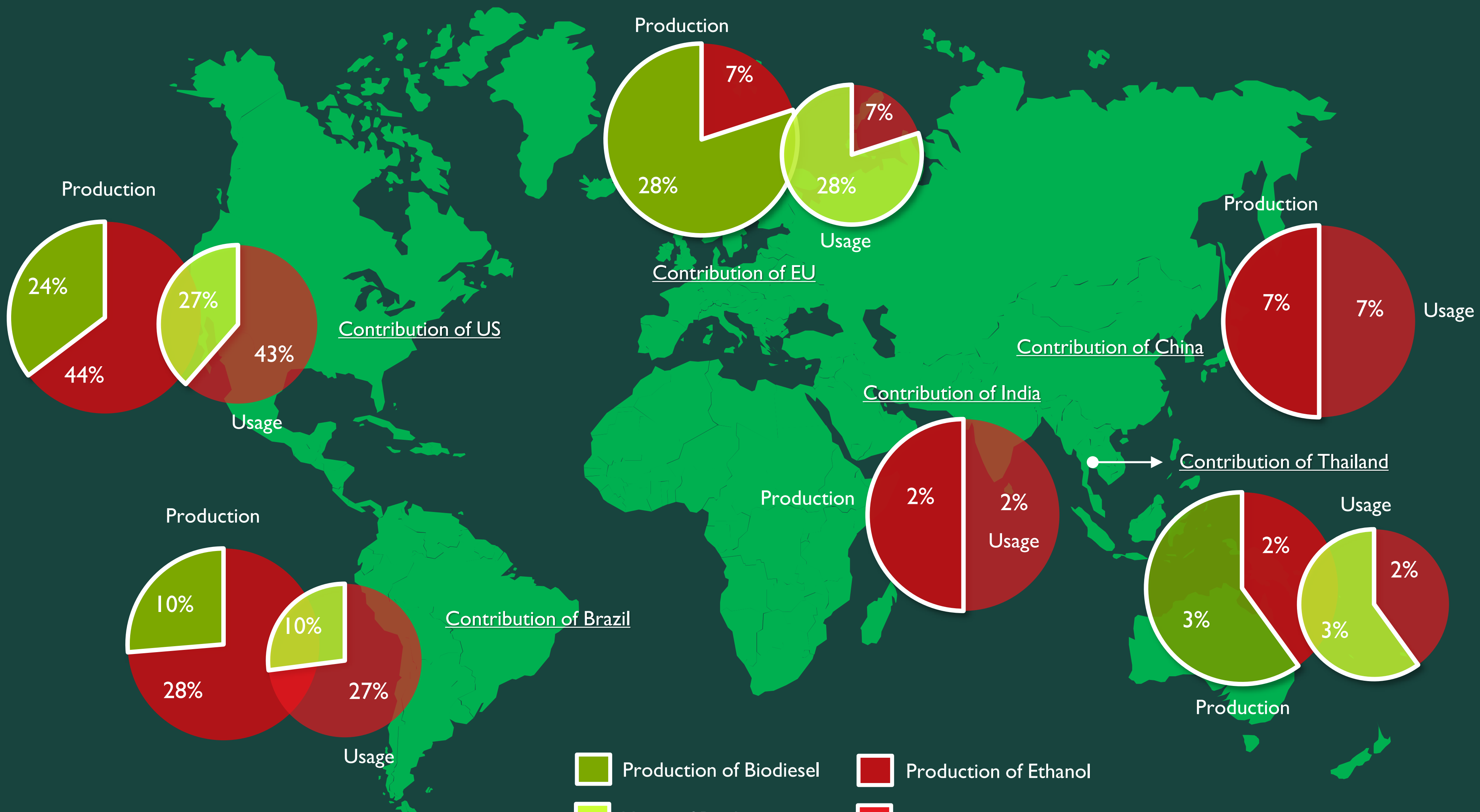
12 number of 2G Ethanol Biorefineries are planned to be set up in India by 2024. Pradhan Mantri Jivan Yojana supports 12 Commercial Scale and 10 demonstration scale Second Generation (2G) ethanol Projects with a Viability Gap Funding with a total financial outlay of INR 1969.50 crore for the period 2018-19 to 2023-24.

The National Biofuel policy 2018 seeks to achieve a national average of 20% blending of ethanol in gasoline and indicative target of 5% blending of biodiesel in diesel by 2030.

Becoming carbon neutral is one of the most acute challenges that countries across the globe are currently dealing with. The global movement to reduce greenhouse gas emissions continues to gain momentum across the auto industry as well and is adding pressures to the automakers and suppliers to switch to a cleaner mode of transportation by either going electric or adopting green fuels. In this lieu, significant impetus has been given on developing biofuels – ethanol, biodiesel and Bio CNG. The market for biofuels increased based primarily on demand from the transport sector, especially road vehicles, which use biofuels either in pure form or blended into conventional fossil fuels (example. diesel or gasoline). Moreover, since 2006 alternative markets for biodiesel and bioethanol, beyond their core usage in road transport, have emerged globally. Several developed and developing countries have established (and continue to pursue) regulatory standards for biofuels since 2006, including blending targets and sustainability norms. India being no aberration has also initiated the development biofuels in the country. As per India's National Biofuel Policy 2018, the country aims to achieve national average of 20% blending of ethanol in gasoline and indicative target of 5% blending of biodiesel in diesel by 2030. Presently, the global biofuel production hovers around 143.9 Billion Litres, with US leading the overall availability. Currently, the Indian market is at very nascent stage in terms of producing both ethanol and biodiesel but the growth that has been witnessed over the last decade in the production of ethanol, India is likely to capture a global market share of 2% by 2025. It is significant to note that the total production capacity of alcohol and ethanol in India as on March 2021 stands to be 684 crore litres, of which the public sector oil marketing companies (OMCs) have allocated 325.5 crore litres which is to be procured during the ongoing Ethanol Supply Year (ESY) 2020-21 (December 2020 to November 2021) for Ethanol Blended Petrol (EBP) Programme. GoI has further allowed sugarcane and food grain based raw materials for ethanol production and in order to blend 10% ethanol in petrol by OMCs. Based on the offers received during ESY 2020-21, Public Sector OMCs have allocated 3.43 crore litre of ethanol to be procured from surplus rice sourced from Food Corporation of India (FCI) and 38.42 crore litre from Damaged Food Grains (DFG) unfit for human consumption and maize. The combined allocation from rice, DFG/maize is 12.86% of the total allocation for ESY 2020-21. Additionally, in order to encourage the production of ethanol in the country, government has allowed sugar mills/distilleries/private entrepreneurs to set up ethanol plants freely anywhere in India for production of ethanol after obtaining statutory clearances and has also notified an interest subvention scheme to assist setting up of these ethanol production plants in the country.

Further, subsequent to the opening of alternate route i.e. Second Generation (2G) route for Ethanol production Public Sector OMCs – IOCL, HPCL, BPCL, NRL and MRPL have planned to set up 12 number of 2G Ethanol Biorefineries in 11 States across the country. To incentivize 2G Ethanol sector and support this nascent industry by creating a suitable ecosystem for setting up commercial projects and increasing Research & Development, GoI in 2019 launched "Pradhan Mantri DIVAN (Jaiv Indhan- Vatavaran Anukool fasal awashesh Nivaran) Yojana" as a tool to create 2G Ethanol capacity in the country and attract investments in this new sector.

Exhibit 01: Anticipated Country Wise Global Distributors of Biofuel Production and Usage by 2025



Source – FAO,IEA, Eninrac Research

Key Signpost – Government is encouraging FBOs to increase the supply of UCOs to increase the production of Biodiesel in India. It is anticipated that by 2022, the biodiesel production is likely to increase upto 450-500 crore Litres by 2022

To encourage production of Biodiesel in the country, GoI has mandated the OMCs to purchase Biodiesel (B 100), meeting the fuel quality standard prescribed by BIS for blending with HSD to the extent of 5% at identified purchase centres across the country. During a period from 2016-19 a growth of over 500% has been seen the procurement of biodiesel by OMCs for blending, which has increased from 1.19 Crore Litres in 2016 to 8.21 Crore Litres in 2019. Further, it is also noticeable that The current consumption of High-Speed Diesel (HSD) in the country is 84 MMT or 102 MKL, and it is projected to increase to 132.3 MKL by 2022. At 5% blending level, 660 crore litres of biodiesel would be needed. About 225 crore litres of waste-edible oil-based feedstock (188 crore litres UCO and 36 crore litres acid oil / fatty acids) could be available for biodiesel processors. Used Cooking Oil based biodiesel has a potential to contribute to over 10% of the target of Rs. 100,000 crore of import substation on petroleum products by 2024. It can potentially replace or supplement palm stearin as feedstock in 3 years and in 5 years' time the biodiesel manufactured can be equivalent to ethanol produced. With the incentives that government is offering to the FBOs for generating and supplying UCOs many of them are working on forefront to increase the distribution volumes of the same. Hardcastle Restaurants (HRPL), the master franchisee of McDonald's in west and south India is one such FBO. The company has started to run its delivery trucks in Mumbai with biodiesel made from its own used cooking oil. The company plans to link all its 270 outlets to produce around 7 lakh tonnes of biodiesel in the next couple of years. Further, it is significant to note that company is the company is looking at expanding its restaurant footprint to 450-500 and will generate around 15 lakh litres of used oil to make biodiesel to run its refrigerated delivery trucks by 2023.

What's our difference margin for market research?

1 Our Market Research Coverage Range

- Evaluating opportunity for value chain players – UCO, FBOs, OMCs, palm oil suppliers, auto players etc.
- Evaluating demand of biofuel by auto segment in India till 2030
- Examining the opportunity for waste treatment and municipal solid waste management players in lieu of bio CNG in India
- Comparative Analysis of Biofuel vehicles with that of purely conventional fuel based and other clean source. Potential opportunity track for auto makers

2 Our Market Research DNA & Team of Domain Specialists

- We boast a highly qualified and experienced team of market research professionals having experience of working in top companies across different domains
- Our focus on nurturing industry connect is paramount which helps us generate high quality robust market feed which is filtered and sourced through from different levels
- Any market research report follows strict turn-around-time procedures with cross-vetting from our Knowledge Grid Experts which adds immense value to our research credentials for the deemed subject

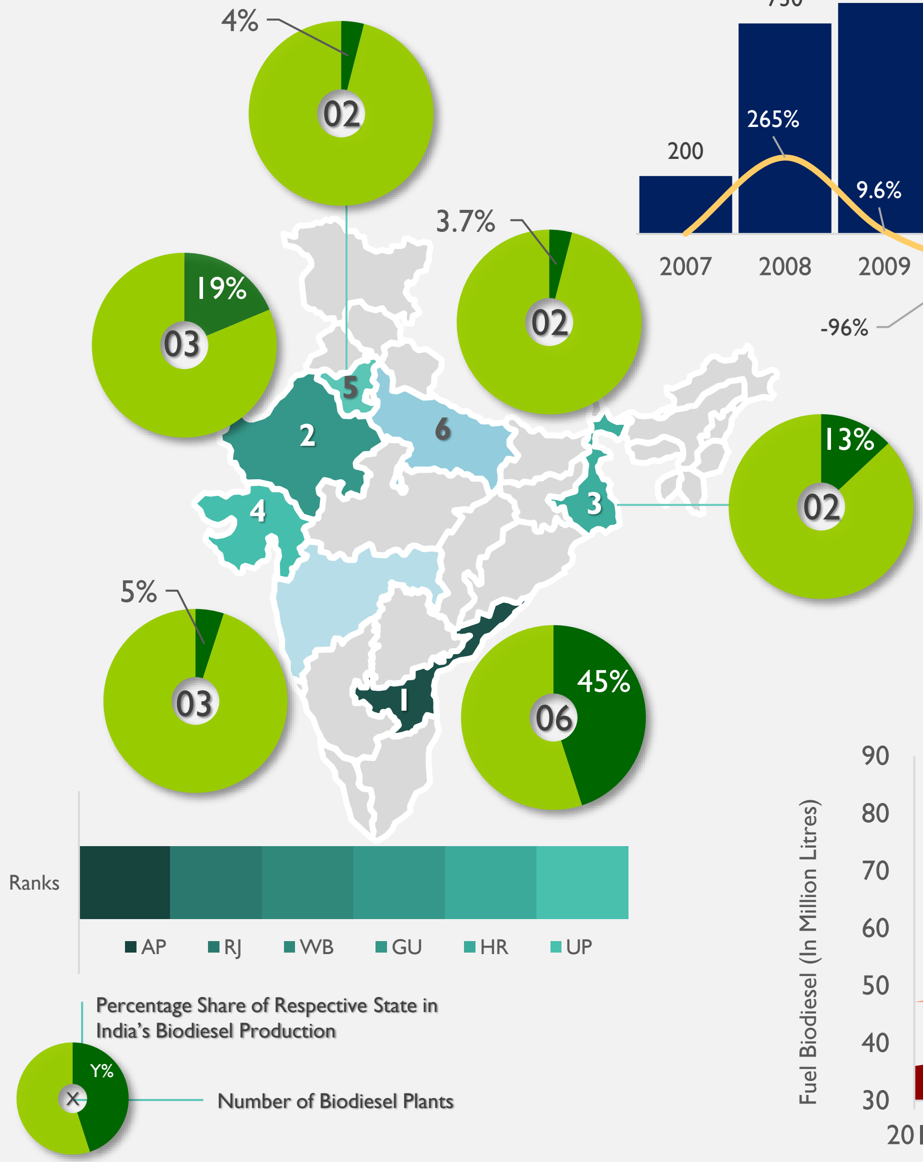
MARKET RESPONSE
eninrac consulting

3 Our Satisfied Patrons and Retention rate of over 97.6% on yoy basis

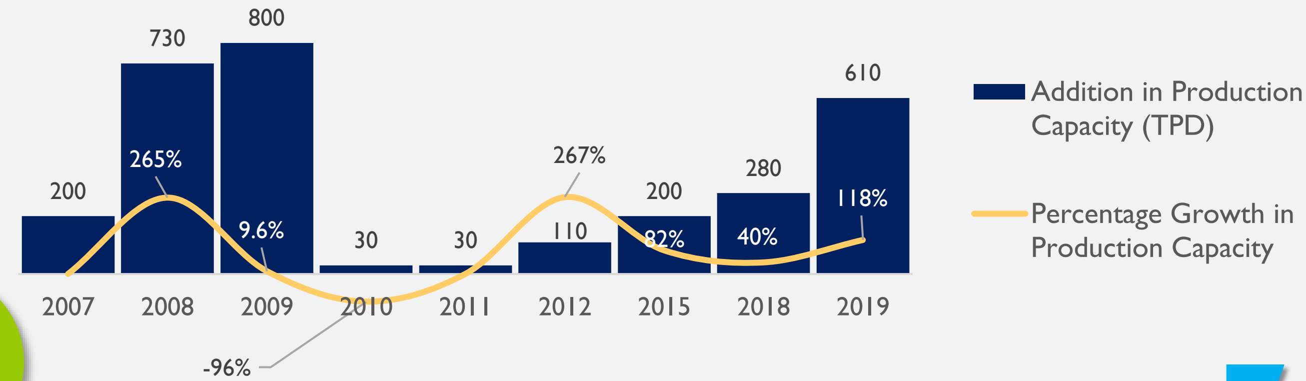
We have been bestowed with a phenomenal client retention rate and many satisfied clientele. Our client's have been from wide variety of industry domains and from different geographic locations across the globe. Eninrac consulting is a trusted market research partner and an objective resource augmenting value for more than 257+ Group companies & 1000+ organization across 40+ countries.

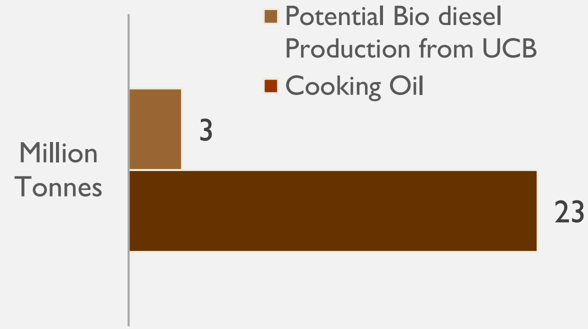
Exhibit 02 : Biodiesel Availability in India – Status Track 2020

Leading states driving India's Biodiesel Production



Historic Trends in the Year Wise Production of Biodiesel in India (TPD)





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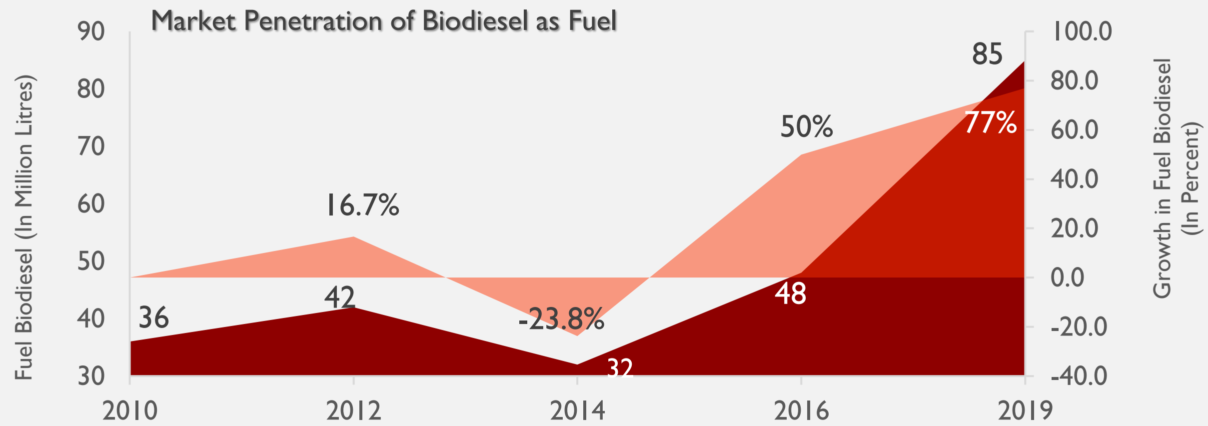
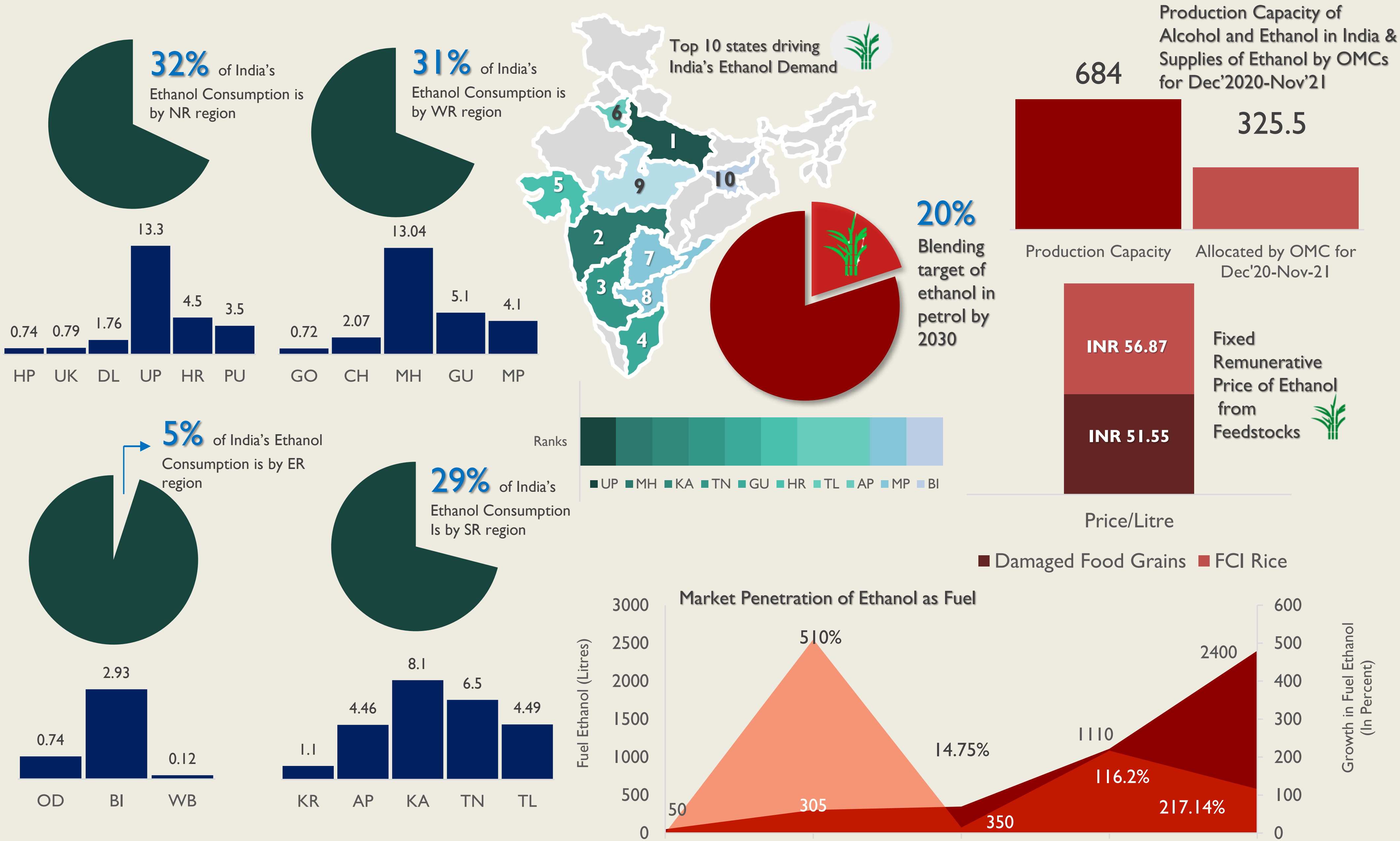
Lakh Tonnes

of biodiesel production is targeted by HRPL, master franchisee of McDonald's in west & south India in upcoming years



Source MoPNG, FCI, EBP, Eninrac Research

Exhibit 03: State Wise Consumption and Availability of Ethanol in India during 2020-21



Source MoPNG, FCI, EBP, Eninrac Research

Contents & Coverage – On Biofuel Market Research

01 Biofuel Market in India – Understanding the emerging need for a clean fuel

This section shall cover the current scenario of biofuels market. Understanding the existing infra of Oil Expelling / Extraction & Processing Units for the Production Biofuel and Storage. Additionally, identifying key growth enablers

02 Government policies and environment for promoting biofuels in India

This section shall track the policies implemented by the central government for promoting usage of biofuels in India

03 Biodiesel Market in India – tracking the performance trends

Tracking the production & demand trends of biodiesel in India. Understanding storage & distribution of biodiesel in India . Track of major suppliers of biodiesel in India

04 Ethanol market in India – tracking the performance trends

Tracking the production & demand trends of ethanol in India. Understanding the storage and distribution infra of Ethanol in India. Track of major suppliers of ethanol in India

05 Bio CNG market in India – current scenario and tracking performance trends

Tracking the production & demand trends of Bio CNG in India. Understanding the existing infrastructure for Bio CNG , storage and distribution network of the same in India

06 Feedstock availability of biofuels in India

Feedstock availability of biodiesel, ethanol and bio CNG in India. Challenges witnessed in the feedstock availability for biofuels

07 Demand assessment of Biofuels in India till 2030

Assessing the overall demand outlook for biodiesel, Ethanol and Bio CNG. Estimating the demand outlook of biofuels in India's transportation mix. Biofuel type wise outlook till 2030. Region wise demand assessment till 2030.

08 Potential cost savings in using Biofuels

Cost benefit analysis of biofuels with conventional fuels, hydrogen fuel and electric vehicles

09 Market share analysis- key players prevalent in the biofuel market in India

Market share examination of feedstock suppliers for biodiesel, bio CNG and ethanol in India. Market share examination of UCO suppliers for biodiesel & the key suppliers of biofuels. Competitive profiling of key players

10 Vehicular penetration outlook

Assessing the vehicular penetration outlook for biodiesel, Bio CNG and ethanol till 2030

11 Upcoming Projects

Track of underconstruction, announced bio CNG stations in India, biodiesel and biorefineries

Key Highlights for Market Research on Biofuels Market in India

1. Examining business case for fuel suppliers , oil marketing companies and value chain players
2. Region wise demand assessment of ethanol, biodiesel and bio CNG in India by auto segment
3. Analyzing feedstock market factoring availability, collection of feedstocks and supply models
4. Track of regulatory regime and incentives offered by the government at concurrent levels for demand built up
5. Cost benefit analysis of biofuels with conventional fuel
6. Cost benefit analysis of biofuels with other clean fuel
7. Cost benefit analysis of biofuels with electric vehicles
8. Assessing the availability quantum of used cooking oil till 2030 and its likely potential for conversion into biodiesel
9. Market share examination of players active in the biofuel segment – competitive profiling of feedstock suppliers, UCO aggregators/ suppliers, biodiesel generators, ethanol & bio CNG producers

Differentiating Insights for Market Research on Biofuels Market in India

1. Examining the "National Biofuel Policy" and realistic assessment of the proposed blending targets for ethanol and biodiesel
2. Assessing the market penetration of ethanol as fuel and non-fuel use
3. Assessing the market penetration of biodiesel and its end user industry wise consumption track
4. Track of upcoming waste to energy and solid waste management projects – region wise assessment of opportunity
5. Examining challenges in the availability of feedstock for producing ethanol
6. Fuel consumption mix in India's transportation segment
7. Examining the collection process of used cooking oil (UCO) for biodiesel
8. Examining the supply network of Bio CNG in India
9. Understanding the Existing Infrastructure in terms of Oil Expelling / Extraction & Processing Units for the Production Biofuel and Storage

Must Buy For

- Oil Marketing Companies (OMCs)
- Automotive Players
- Feedstock producers/suppliers
- UCO suppliers
- Palm oil suppliers
- Ethanol Producers/Suppliers
- Waste to Energy (W2E) Players
- Municipal Solid Waste Management Players
- Food Business Operators (FBO)
- MNRE
- FSSAI
- FCI
- Investment Banks
- Funding Bodies

For Queries

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email – abhay.pathania@eninrac.com

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Companies Mentioned

- GAIL
- IOCL
- BPCL
- HPCL Biofuels Limited
- Kotiar Biofuels Limited
- Emami Biotech
- India Glycols Limited
- Bajaj Hindustan Sugar Limited
- Mawana Sugars Limited
- Shree Renuka Sugar Mills
- Triveni Engineering & Industries Limited
- Balrampur Chini Mills
- Bio Max
- Universal Biofuels
- Southern Biotech Limited
- Kaleesuwari Refinery Private Limited

> Truth is ever to be found in the simplicity, and not in the multiplicity and confusion of things
>
> **- Sir Isaac Newton**

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