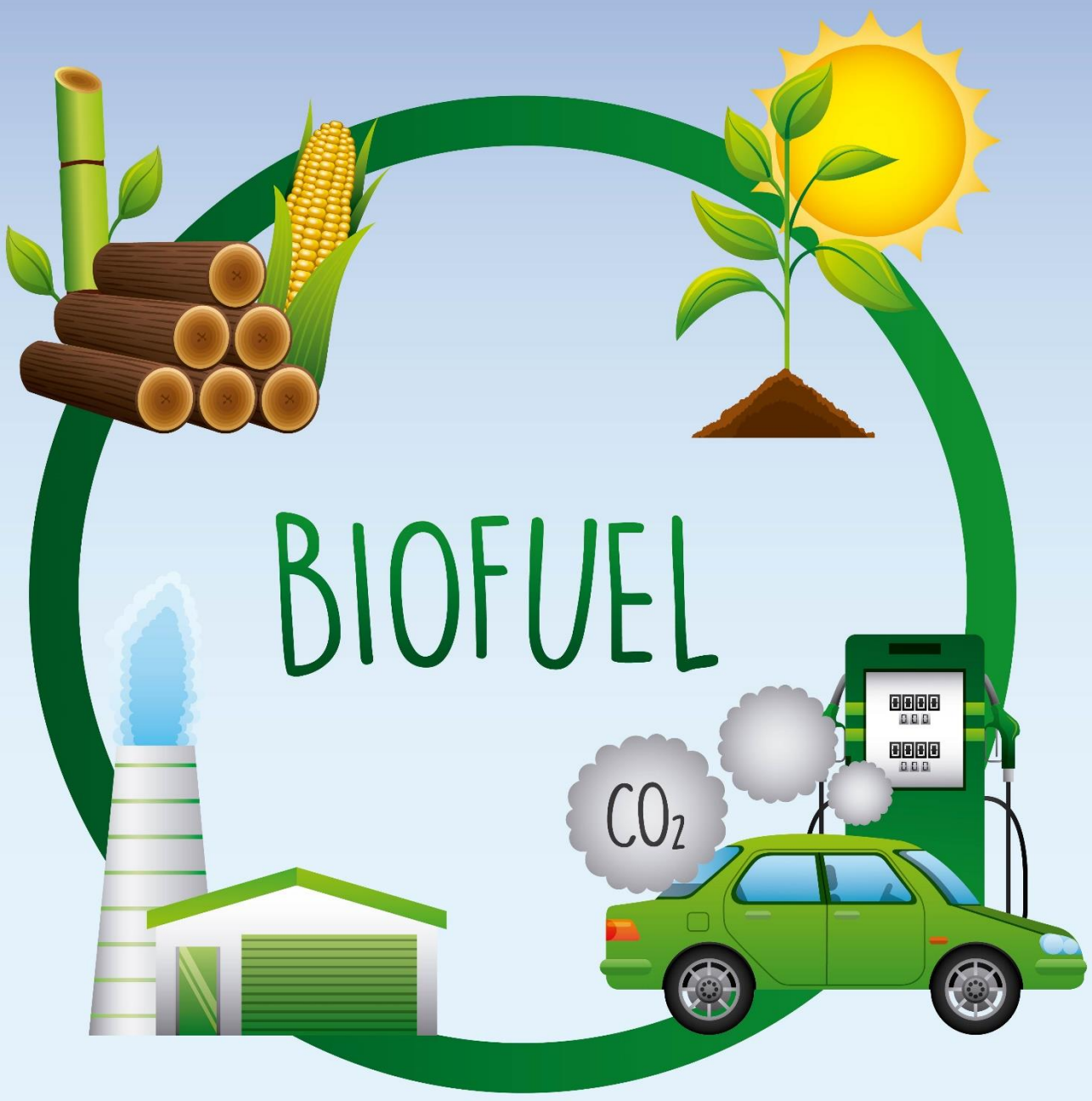
Praj Industries (PRJ IN)

Rating: BUY | CMP: Rs390 | TP: Rs507



A perfect blend of Bioenergy businesses

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Company Initiation

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We initiate coverage on Praj Industries (PRAJ) with 'BUY' rating at target price of Rs.507 valuing it at PE of 30x FY24E. PRAJ is well poised for growth in the coming years given 1) its strong leadership in domestic ethanol plants (~60-65% market share), 2) prominent global presence in more than 100 countries and 3) significant focus on future-ready technologies like 2G ethanol (orders for three 2G based ethanol plants), Compressed Bio Gas (CBG) (opportunity of 5,000 CBG plants) & Sustainable Aviation Fuel (SAF) and 6) diversification in Wastewater Treatment (ZLD), Critical Process Equipment's & System (CPES) & HiPurity business. We anticipate PRAJ's Revenue/PAT CAGR at 17.4%/29.3% over FY2022-25E led by robust order book, healthy tender pipeline, strong market leadership, pickup in execution, better operational efficiencies and well managed working capital cycle. The stock is currently trading at a P/E of 31.5x/23.1x on FY23/24E earnings. Initiate 'BUY'.

E20 blending mandate to expand addressable market by ~Rs70bn: PRAJ has ~60-65% share in development of Ethanol plants in India and will likely see order inflows of ~Rs40-50bn over next couple of years from Govt. mandate to prepone blending to 20% from 2030 to 2025. It has an expertise in wide variety of feedstock such as sugar and starch with focus on developing technologies that can offer ethanol plants with high alcohol yields, good profitability and low consumption of water & power. E20 will require an incremental capacity of ~10.2bn litre (~5bn already tendered out) which will expand addressable market by ~Rs70bn with combination of green field & brown field expansion and sustain growth in coming years.

Diversifying into emerging opportunities across business verticals: With an eye to de-risk itself from ethanol segments and utilizing its technical & knowledge expertise, PRAJ has successfully ventured into emerging business verticals such as HiPurity systems and Engineering business (which includes Brewery plant, Critical Process Equipment & Systems and Wastewater Treatment). As on FY22, HiPurity systems/Emerging business segment contributes 9%/20% of total sales.

Opportunities beyond 1G ethanol blending: PRAJ is developing technologies beyond E20 ethanol blending. It has successfully developed 1) 2G ethanol plant capable of processing multiple feedstock (orders for three 2G based ethanol plants) 2) RENGAS that produces cost effective Compressed Biogas (CBG) (Govt. of India plans to set up 5,000 CBG plants with a capex of ~Rs2trn, in future) 3) PRAJ is also developing technologies for Biodiesel, SAF and Marine fuel. We believe, any favorable development on financial assistance for CBG plants, improvement in project viability on 2G plants, will aid PRAJ gain further traction in Bioenergy space.

Export opportunities in Brazil and Europe: Europe offers growth opportunity as it will likely add ~50 2G ethanol plants (~2.8bn liter capacity by 2030) using forest and agriculture residue as a feedstock. PRAJ is amongst a few companies globally with this 2G technology. Brazil also decided to install 1G corn based ethanol plants, which provides an opportunity size of ~5bn liters over next 5 years. We believe PRAJ being a leading player in Bioenergy space is well poised to tap these opportunities.

Key Financials - Consolidated

Y/e Mar	FY22	FY23E	FY24E	FY25E
Sales (Rs. m)	23,333	32,754	37,054	37,772
EBITDA (Rs. m)	1,938	2,953	4,061	4,246
Margin (%)	*8.3*	*9.0*	*11.0*	*11.2*
PAT (Rs. m)	1,502	2,272	3,095	3,247
EPS (Rs.)	8.2	12.4	16.9	17.7
Gr. (%)	*84.9*	*51.2*	*36.3*	*4.9*
DPS (Rs.)	4.2	5.9	8.1	8.5
Yield (%)	*1.1*	*1.5*	*2.1*	*2.2*
RoE (%)	*17.5*	*23.3*	*27.8*	*25.4*
RoCE (%)	*19.9*	*27.6*	*33.9*	*30.8*
EV/Sales (x)	2.8	2.0	1.8	1.7
EV/EBITDA (x)	34.1	22.2	16.0	15.2
PE (x)	47.7	31.5	23.1	22.1
P/BV (x)	7.8	6.9	6.0	5.3

Key Data	PRAJ.BO | PRJ IN
52-W High / Low	Rs. 447 / Rs. 288
Sensex / Nifty	58,834 / 17,559
Market Cap	Rs. 72 bn/ $ 897 m
Shares Outstanding	184m
3M Avg. Daily Value	Rs. 284.05m

Shareholding Pattern (%)

Promoter's	32.83
Foreign	15.93
Domestic Institution	10.01
Public & Others	41.23
Promoter Pledge (Rs bn)	-

Stock Performance (%)

	1M	6M	12M
Absolute	-	17.4	16.5
Relative	(6.0)	11.5	10.8

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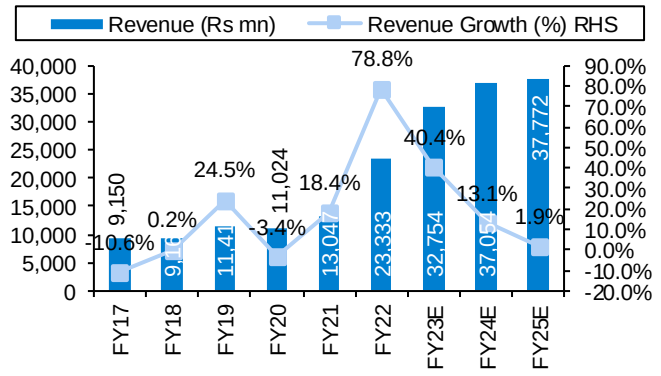
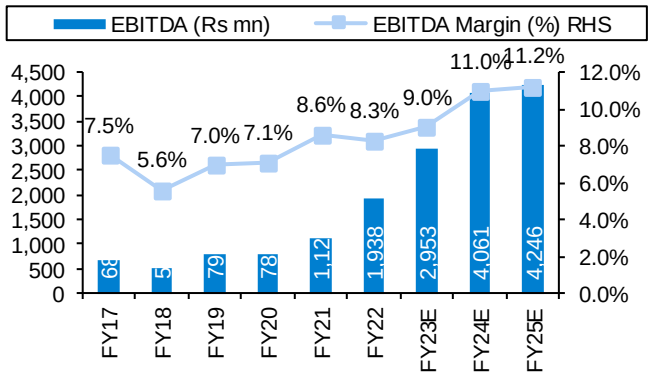
Story in Charts

Exhibit 1: Revenue to grow ~17% CAGR over FY22-25E



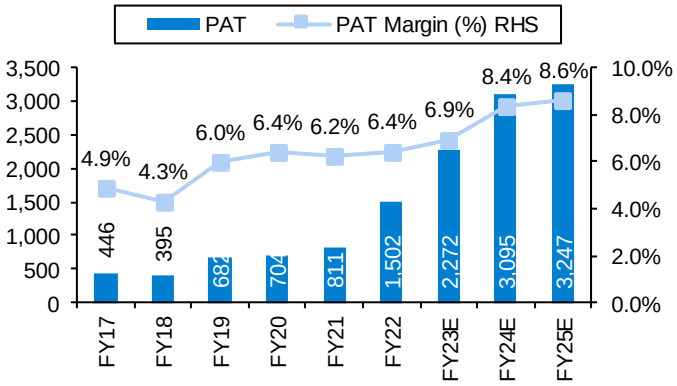
Source: Company, PL

Exhibit 2: EBITDAM to reach 11.2% by FY25E



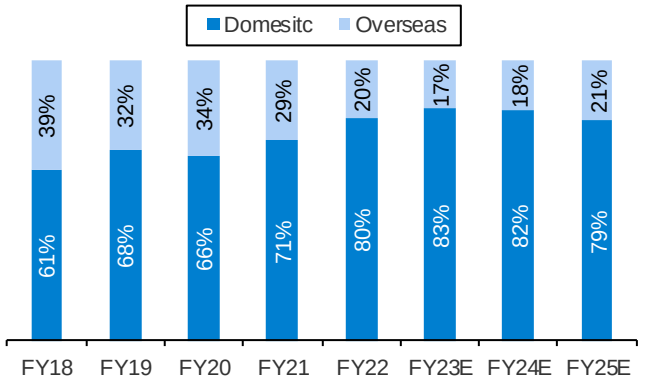
Source: Company, PL

Exhibit 3: PAT to grow at ~29% CAGR from FY22-25E



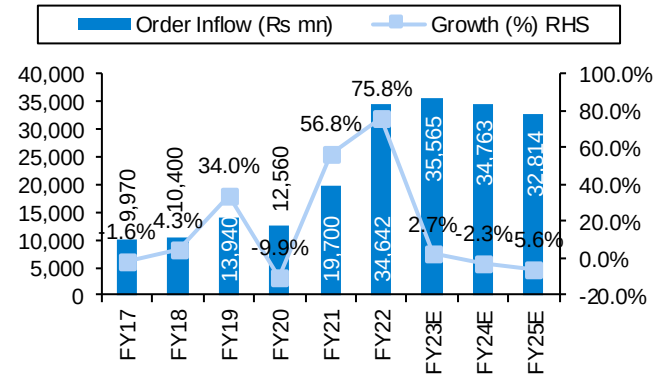
Source: Company, PL

Exhibit 4: Domestic to dominate revenue mix



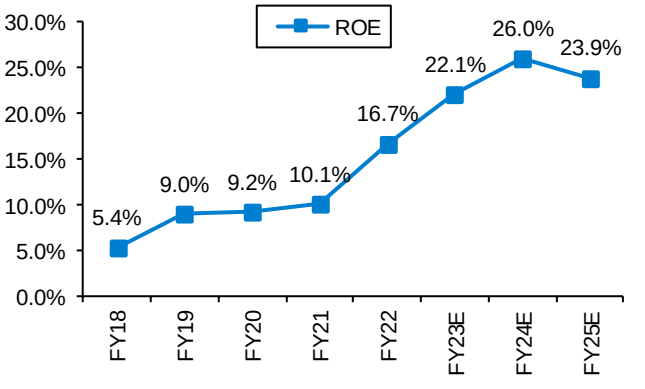
Source: Company, PL

Exhibit 5: Bioenergy segment to drive order inflows



Source: Company, PL

Exhibit 6: ROE to reach 23.9% by FY25E



Source: Company, PL

PRAJ – Leading industrial bio-technology player

Incorporated in 1985, PRAJ emerged itself as a global leader in providing bouquet of sustainable solutions. The company's business is mainly divided into three segments: 1) **Bio Energy segment -** 1G Bio Ethanol, 2G Bio Ethanol, CBG, Bio-diesel technology & Sustainable Aviation Fuel technology, 2) **Engineering Businesses -** Critical Process Equipments, Brewery plants & Wastewater treatment and 3) **HiPurity Business-** end-to-end integrated solutions such as, water treatment solutions, modular process systems etc.

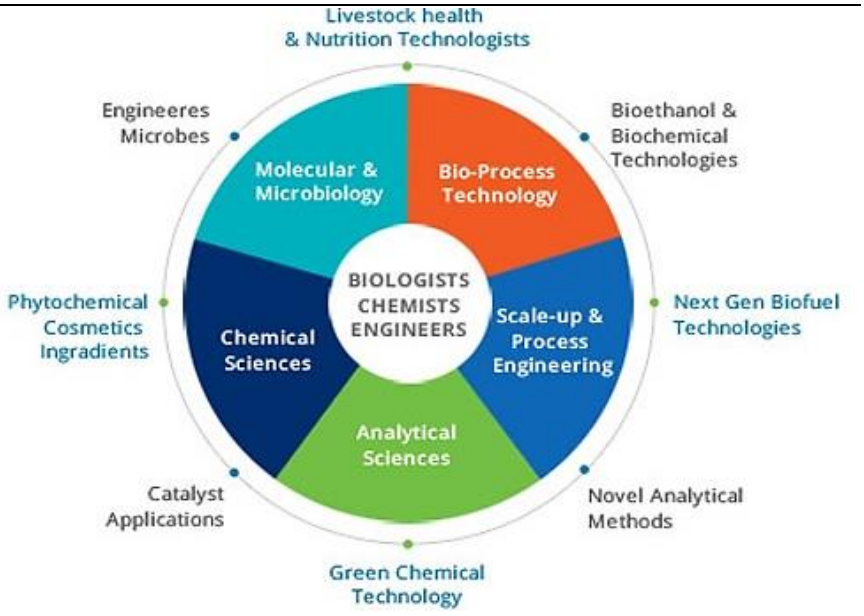
With more than 3 decades of experience in bio-processes, engineering and project development - PRAJ focuses on future technology to reduce carbon footprint, moreover is also known for its TEMPO capabilities (i.e. Technology, Engineering, Manufacturing, Project management, and Operations & Maintenance).

The company is a market leader in 1G ethanol plant with ~60-65% market share, also pioneering 2G ethanol production technology. It's well-equipped manufacturing facilities (1 at Pune, 2 at Kandla-Gujarat and 1 at Wada) consists of equipment engineering and fabrication in accordance to international standards and codes.

PRAJ also has a state-of-art R&D center in Pune named PRAJ Matrix (built on 5-acre land plot with an invested capital of ~US$25mn) having experienced workforce conducting research in area of Bioenergy, Bio-Chemicals, Health & Wellness. The center provides customized research and services solution to customers. Over years of constant R&D, PRAJ has been able to obtain 84 patents against its name in various area of biofuels.

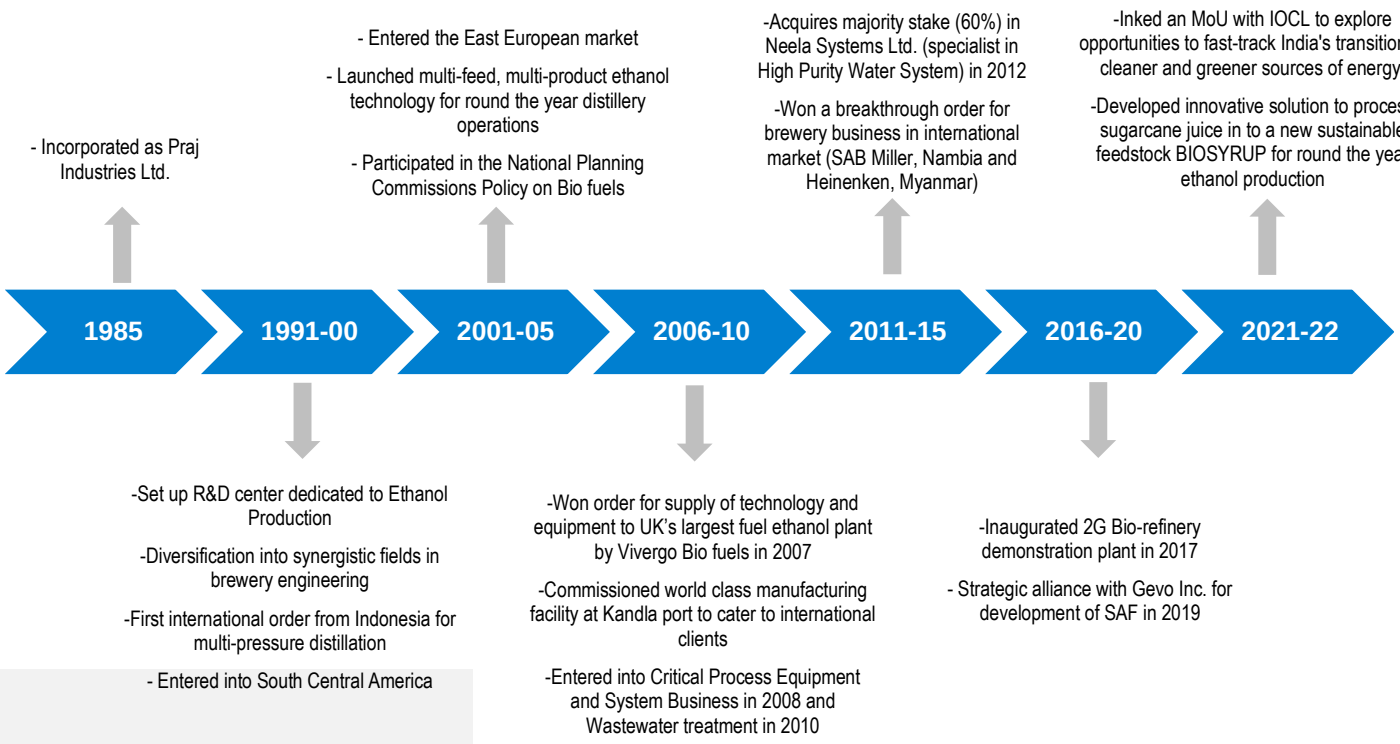
Overall PRAJ has been a trusted partner for process engineering, plant & critical equipment and systems with over 1,000 references in more than 100 countries across five continents. PRAJ's strong customer base includes players like Adani Solar, Indian Oil, Heneiken, Deepak Fertilizers, SAB Miller, Bajaj Hindustan, UB Group, Biocon, Procter & Gamble, Ranbaxy, Lupin, BASF etc.

Exhibit 7: PRAJ Matrix- Centre of Excellence (COE) model



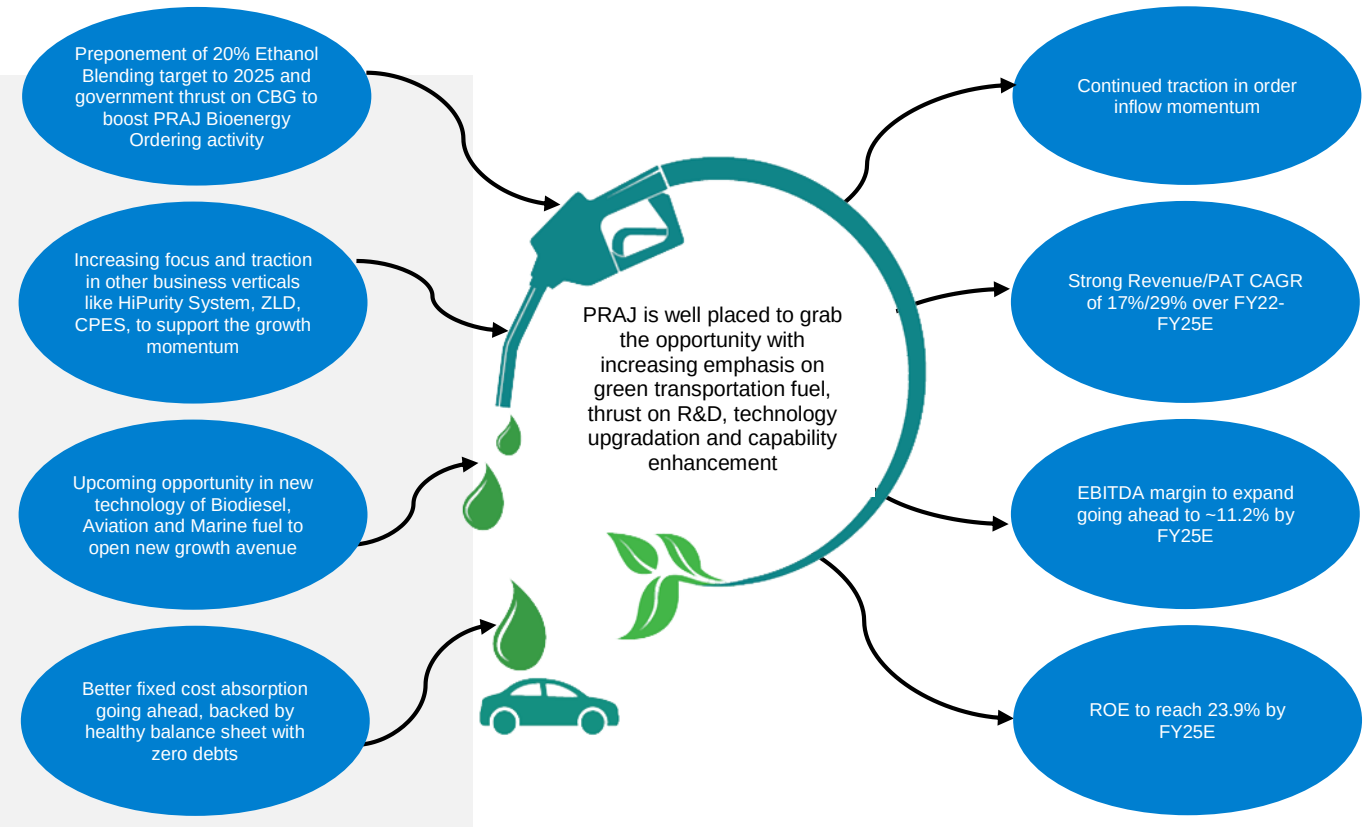
Source: Company, PL

Exhibit 8: Key Milestones



Source: Company, PL

Exhibit 9: PRAJ growth story in nutshell



Source: Company, PL

Investment Rationale

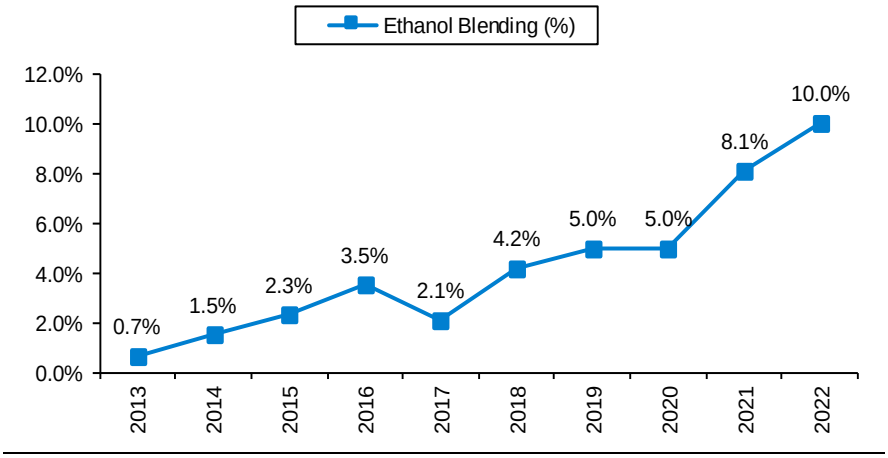
Well placed to benefit from Ethanol blending mandate

Currently Bioenergy segment contributes ~71% of total revenue as on FY22. PRAJ is considered to be a market leader in bio-fuel technology (~60-65% of market share in domestic ethanol market) with vast experience in setting up ethanol plants globally based on variety of feedstock such as sugary & starchy; also offering modernization of existing plants. PRAJ has been continuously focusing on developing technologies to offer high alcohol yields, higher profitability and lower water & power consumption. Accordingly, it has developed technologies such as 1) EcoCool (Water conservation for distilleries), 2) MAXIMOL (Increasing capacity of ethanol dehydration plants by 30%) and 3) Profiit (Process Optimized Flexible Integrated Incineration Technology, which helps distilleries create sustainable and profitable processes).

While government of India accelerated its 20% ethanol blending target (EBP20) to 2025 from 2030 earlier, an additional capacity of ~10.2bn liters is still required to meet EBP20, off which, ~5bn liters of capacity is yet to be tendered out. Consequently, we believe PRAJ is likely to witness addressable market worth ~Rs70bn with combination of green field and brown field expansion, translating into likely order inflows worth ~Rs40-50bn (~60-65% market share) for over next couple of years.

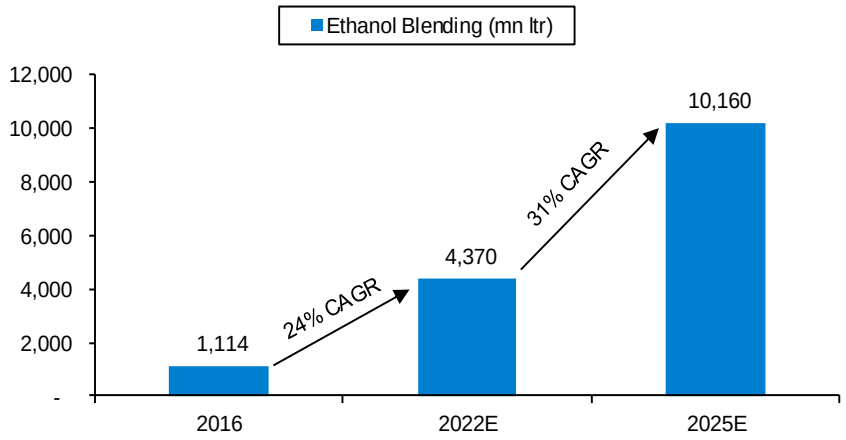
Likewise, India's ethanol blending rate has also increased from 0.7% in 2013 to 10% in 2022 because of 1) demand & supply side mechanism, 3) enhanced scope of feedstock for ethanol production, 4) remunerative prices from different feedstock, 5) interest subvention scheme, 6) long term procurement policy and 7) reduction in GST rate from 18% to 5%. It is estimated that ethanol demand is likely to grow at ~31% CAGR between 2022-2025.

Exhibit 10: Ethanol blending inching from 0.7% in 2013 to 10% in 2022



Source: Industry, PL

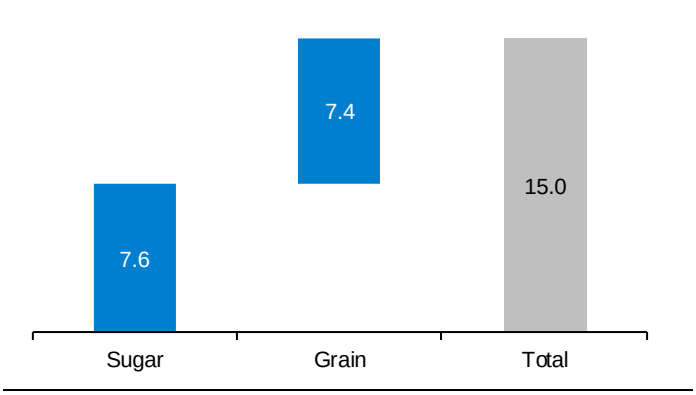
Exhibit 11: Ethanol blending to grow at ~31% CAGR between 2022-2025



Source: Industry, PL

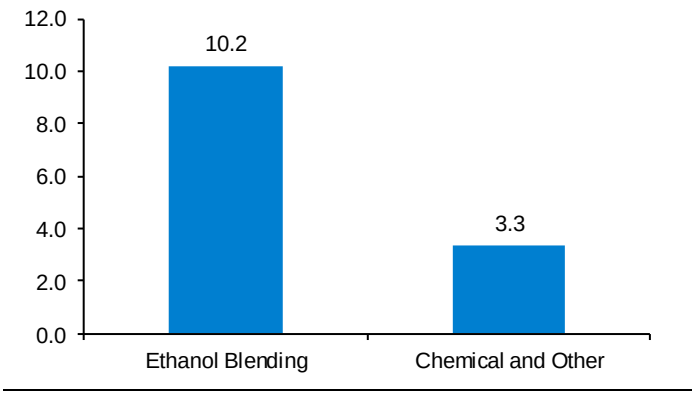
The Indian cumulative ethanol demand is expected to be ~13.5bn liters by 2025 including EBP20 blending target (~10bn liters) and rising demand from chemicals & other industries (3.3bn liters). Consequently, to meet this demand, India would require total installed capacity of ~15bn liters for ethanol by 2025. Of this, sugar based capacity is expected to be 7.6bn liter while grain based capacity is expected to be 7.4bn liters.

Exhibit 12: Feedstock-wise ethanol capacity requirement



Source: Industry, PL

Exhibit 13: Industry-wise ethanol requirement by 2025



Source: Industry, PL

Diversifying across business verticals

Currently, HiPurity systems and Emerging business segment contributes 9% and 20% respectively of total sales.

With an eye to de-risk itself from ethanol segments and utilizing its technical & knowledge expertise, PRAJ has successfully ventured into emerging business verticals such as **HiPurity Systems and Engineering business (which includes Brewery plant, Critical Process Equipment & Systems and Wastewater Treatment) to diversify from Bioenergy.**

HiPurity Systems

PRAJ through its 100% owned subsidiary HiPurity Systems ltd. provides value added and end-to-end solutions to Pharma, Biotech and Wellness industry. It offers end-to-end integrated solutions such as 1) water treatment solutions, 2) modular process systems, 3) ozone systems & combi test kits, 4) special services like electro polishing, on-site training & Riboflavin test at site and 5) spares & consumables like membranes, chemicals, tubes & fittings, valves, instruments and pumps. We observed good progress in Complex injectable - a niche low volume high cost product segment that gained good traction across the globe. We expect segment to report ~19% revenue CAGR between FY22-25E.

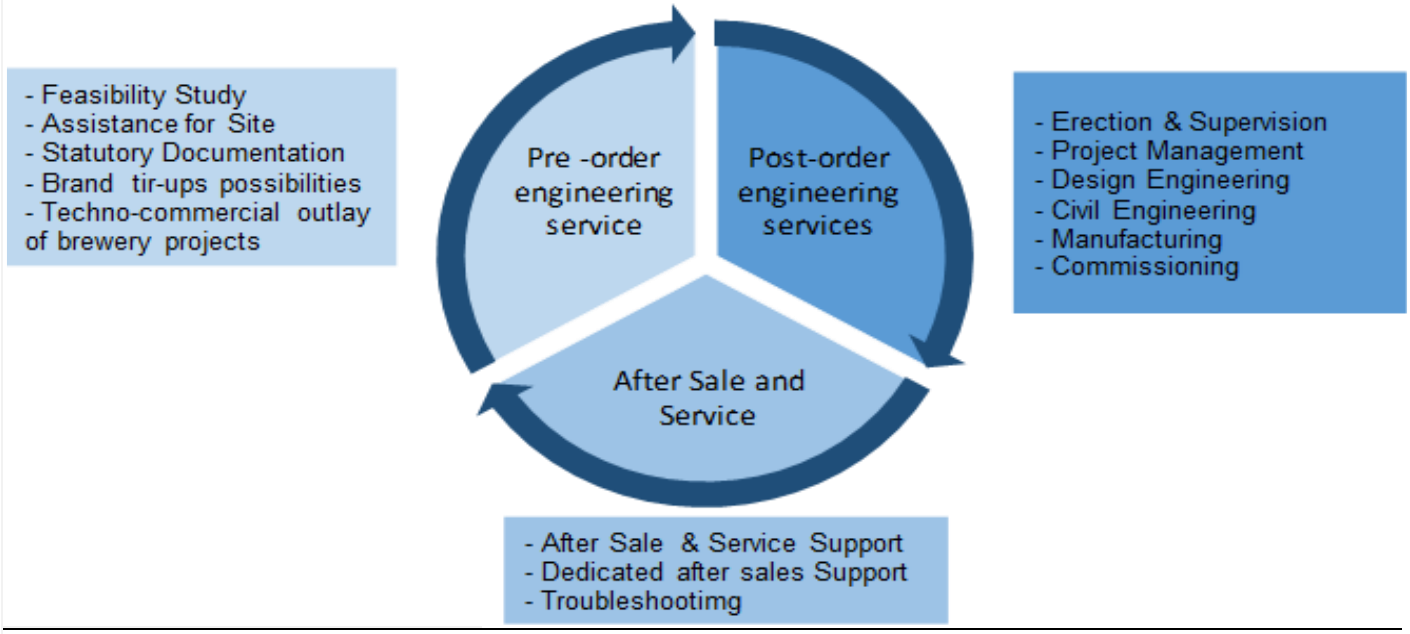
Engineering Segment:

Segment comprises of Brewery Plants & Equipment's, CPES and Water and Wastewater Treatment Solution. The segment contributed 20% of revenue as on FY22 and we expect segment to report a ~18% revenue CAGR between FY22-25E.

Brewery Plants & Equipment

In brewing industry, PRAJ offers a complete range of solutions in conceptualization, technology, design, plant engineering, project installation and commissioning. It has setup world class brewery plants capable of producing best quality beers with minimum water & energy utilization, besides also generates low carbon footprint. As on date the company enjoys ~70% market share in India with repeated orders from marquee clients, thereby strengthening its leadership position. Further, there is established presence in international markets of Africa and South East Asia too. PRAJ has also developed a novel process and product technology for processing spent Yeast and Grain from beer manufacturing plants to produce Nutritional Performance Enhancer (NPE), thereby adding new revenue stream for beer manufacturers. Beer consumption is inching towards pre covid level, which is likely to drive the demand for Brewery plant going forward.

Exhibit 14: Product and solution offerings under Brewery Plants & Equipments segment



Source: Company, PL

Critical Process Equipment & Systems

Established in 2008, Critical Process Equipment & Systems (CPES) offers range of static equipment's like pressure vessels, reactors, shell & tube heat exchangers, columns and other proprietary equipment's built to process industries such as Oil & Gas, Refining, Petrochemicals, Fertilizers, Chemicals, F&B, Pharma and Biotech. PRAJ also undertakes end-to-end projects for 1) modular process Skids & packages, supports clients with finite element analysis, process, thermal & piping Design & Stress Analysis, and 2) designing skids using software's like Plant 4D and PDMS. The division has a dedicated state-of-art manufacturing unit with ~25,000ton/annum capacity. Going forward, given strong customer focus and delivery capabilities, the business is poised for robust growth.

Exhibit 15: PRAJ's CPES offerings

Source: Company, PL

Water and Wastewater Treatment Solution

Govt.'s focus to eliminate wasteful liquid discharge, control water pollution and stringent environment norms have resulted in increased focus of corporates towards this segment. Indian wastewater treatment market is expected to reach US$4.3bn by 2025 from US$2.4bn in 2019. PRAJ offers comprehensive range of solutions for Industrial Effluent Treatment, Recycling and Zero Liquid Discharge (ZLD) with > 98% water and resource recovery to customers across various sectors such as Steel, Power, Chemicals, Fertilizers, F&B, Textile, Tannery, Dairy, Pharma, etc. Over last few years this segment received various orders from key customers such as Toyo Engineering, Grasim, Tata Steel, JSW, Vedanta, EIL, NOCIL, Vardman etc. PRAJ offers various services such as a) Treatment and Disposal, b) 3R's of Reduce, Recycle and Reuse c) ZLD and recovery d) Operation & Maintenance Service and e) Value added Services.

Further, the company also has its largest contract of Rs2.3bn from IOCL in FY21 for execution of water and wastewater treatment system including ZLD for Acrylic/Oxo-Alcohol Project. We believe, overall healthy enquiry levels from Metals, Chemical, F&B etc. to drive medium to long term growth in this vertical.

Opportunities beyond 1G ethanol blending

2G Bio refineries – Revolution in Ethanol Production

PRAJ's has successfully developed 2G cellulosic ethanol technology called "Enfinity" that is capable of processing multiple feedstock with effective bio-products such as Bio Ethanol, Bio Chemical, Bio CNG, Liquid CO2 etc. which can be used for various purposes. PRAJ had recently commissioned, first of its kind & Asia's First 2G Ethanol Bio-Refinery of IOCL at Panipat Haryana, which is capable of processing 2 lakh tonnes of rice straw annually to generate ~30mn litres of Ethanol.

Public Sector Oil Marketing Companies under administrative control of Ministry of Petroleum and Natural Gas are in the process of setting up 12, 2G bio-refineries with an investment of Rs.140bn (HPCL – 4 plants, IOCL & BPCL – 3 plant each, and MRPL and Numaligarh Refinery – 1 Plant each). PRAJ has already bagged orders to setup three, 2G ethanol plants from oil marketing companies.

CBG – an emerging opportunity

PRAJ has developed a unique technology called RENGAS that produces cost effective Compressed Biogas for automotive application from multi feedstock including agri waste such as Rice straw, Wheat Straw, corn stover, cotton stock, grass and other organic waste. The company has also successfully inaugurated CBG demonstration facility in its R&D centre, Pune in 3QFY21. The CBG plant also produces co-products, such as high value organic manure for farmers. It has already commissioned two CBG plants and expects third one to be commissioned by Dec-22. This includes prestigious order from HPCL in Mar'21 for setting up CBG plant at Badaun in UP with capacity of 5,250 tons/annum of CBG. The plant is expected to produce 23,000 tons of solid bio-manure and 3,50,000 tons of liquid bio-manure, that would result in saving 15,000 tons/annum of CO2 emission.

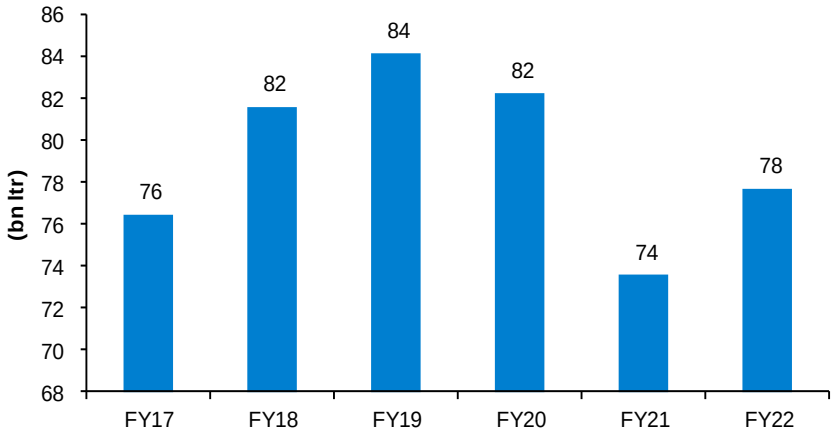
Further, the Indian government has launched Sustainable Alternative Towards Affordable Transportation (SATAT) in October 2018, in order to promote 1) Compressed Bio Gas (CBG) as an alternative green transport fuel & to reduce dependence on natural gas imports, 2) reduce carbon emission, 3) increase rural household incomes and 4) efficient waste from biomass and organic. Cabinet committee took significant steps in moving towards gas-based economy by approving Natural Gas Marketing Reforms. Under this scheme, Govt. proposed to setup 5,000 CBG plants with target production of 15 MMT/annum (CNG consumption is 44MMT/annum) and an estimated investment of ~Rs2trn over a period of 5-7years. Additionally, the government also revised CBG prices from Rs46/kg to Rs54/kg to enhance financial viability of projects. Going forward, favorable policies ecosystem to increase project viability in CBG space and boost ordering activity.

We believe PRAJ is well placed to capitalize on emerging opportunities in this space given 1) robust opportunity size, 2) competitive edge over its peers, 3) focus on technological advancement, 4) excellent execution track record and 5) experienced management.

Bio-diesel opportunity can be equivalent to EBP20

PRAJ in collaboration with Automotive Research Association of India (ARAI) is working towards blending Ethanol with diesel and is developing binder that will help this blend. Diesel consumption in India stood at ~82bn liter pre-covid era (considering 5-7% ethanol blending with diesel). We believe it will likely create capacity of ~5-6bn liters, once the opportunity arrives.

Exhibit 16: Diesel consumption trend in India

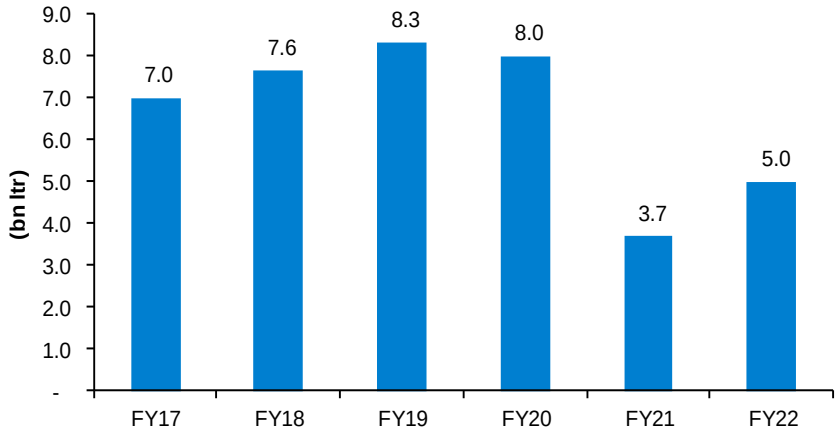


Source: Industry, PL

Sustainable Aviation Fuel (SAF)

PRAJ in collaboration with Gevo is set to commercialize SAF. It has received approval from Indian Air force for its aviation fuel. Gevo, Inc. will license its technology and PRAJ will provide technology, plant equipment and EPC services to refineries for converting renewable iso-butanol into Sustainable Aviation Fuel and premium gasoline through ASTM-approved pathway of Alcohol-to-Jet (ATJ). Jet fuel consumption in India stood at ~8bn liter pre covid era. Considering ~5-7% blending opportunity for SAF, we expect requirement of ~400mn liter capacity for the same.

Exhibit 17: Jet Fuel consumption trend in India



Source: PL

Opportunities in Europe and Brazil to drive exports

PRAJ is a leading trusted player in global Bioenergy market for three decades with presence in 100+ countries. It has experience in setting up ethanol plant for more than two decades within European regions such as UK, Poland, Belgium etc.

Europe currently has 57 1G ethanol plants having ~8.2bn capacity and will set up ~50 units of 2G ethanol plants with total ~2.8bn liter capacity by 2030 (31mn liter in 2017), using forest and agriculture residue as a feedstock. PRAJ is one amongst few companies in the world that has demonstrated 2G technology. It has also tied up with Sekab E-Technology AB (Sweden) for treating forest waste and soft wood along with mandate in Europe to make Ethanol out of 2nd Generation Ethanol, which will boost demand for PRAJ's technology.

Brazil is another country which is 2nd largest producer of ethanol, using sugar cane as feed stock. Recently it decided to install starchy based feedstock (Corn based), thereby translating into an opportunity size of ~5bn liters over next 5 years.

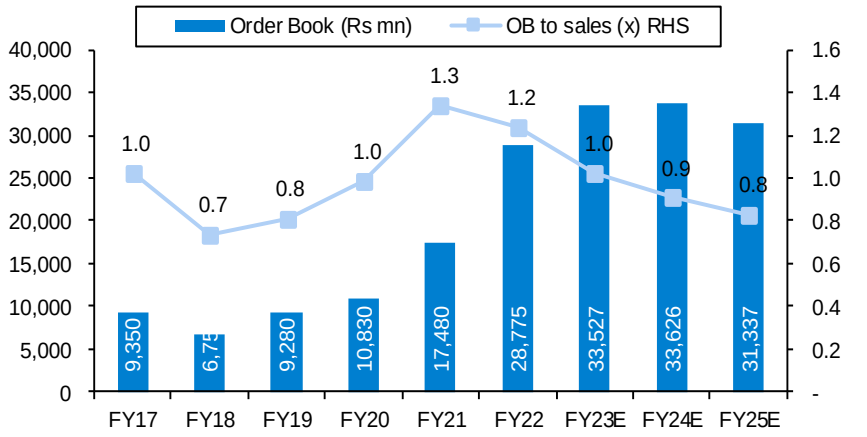
We believe PRAJ being one of the prominent player in Bioenergy space backed by excellent technological advantage and global reach, is well poised to tap these opportunities.

Financial Analysis

Order book to remain healthy driven by EBP20

PRAJ's order book grew at ~3x to Rs28.8bn in FY22 v/s Rs9.4bn in FY17, driven by pick up in ordering momentum within ethanol/bioenergy segment. On the back of healthy order pipeline from both- domestic and international market, PRAJ secured orders worth Rs34.6bn (Domestic:82%, Exports:18%) in FY22. Management indicated that tender pipeline remains healthy across bioenergy (driven by EBP20) and other segments such as HiPurity, Water treatment, etc.

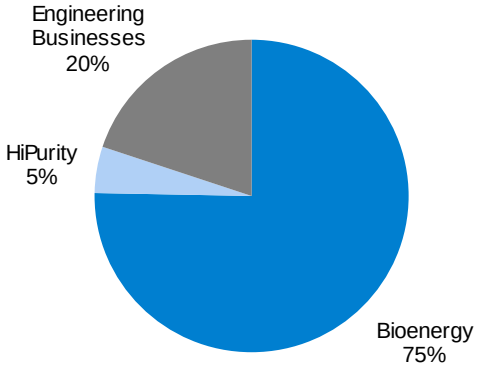
Exhibit 18: Order book to sales is at 1.2x FY22 revenue



Source: Company, PL

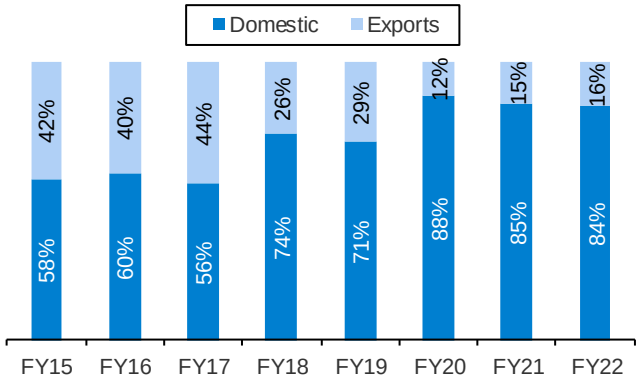
Order Book (OB) mix: Of the total OB - core segment of Bioenergy constitutes 75%, while HiPurity accounts for 5% and Engineering business accounts for 20%. Of total OB, domestic constitutes 84% while 16% comes from International market.

Exhibit 19: Bioenergy constitutes 75% of the total OB



Source: Company, PL

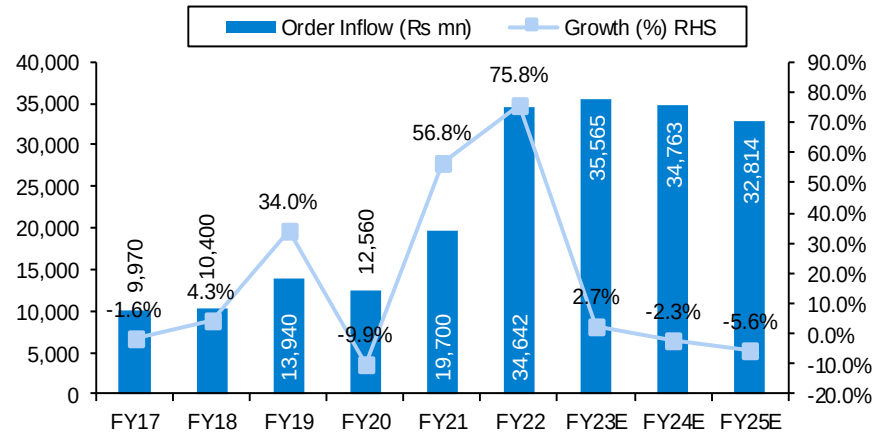
Exhibit 20: Share of overseas OB fallen to 16% in FY22



Source: Company, PL

Strong order inflows in FY22: After muted ordering activity during FY13-20, PRAJ reported strong order inflow growth of 75.8% in FY22, backed by strong traction in Bioenergy segment with 119% growth, while EPC segment reported decent growth of 4%. Factors like 1) governments push to achieve 20% Ethanol blending target by 2025, 2) emphasis on setting up 2G Bio-refinery plant, 3) focus on alternate green transportation fuel (CBG) and 4) gaining traction in other Emerging business like Water and Wastewater Treatment, Brewery Plants, CPES augur well for PRAJ.

Exhibit 21: Order inflows to be driven by Bioenergy segment

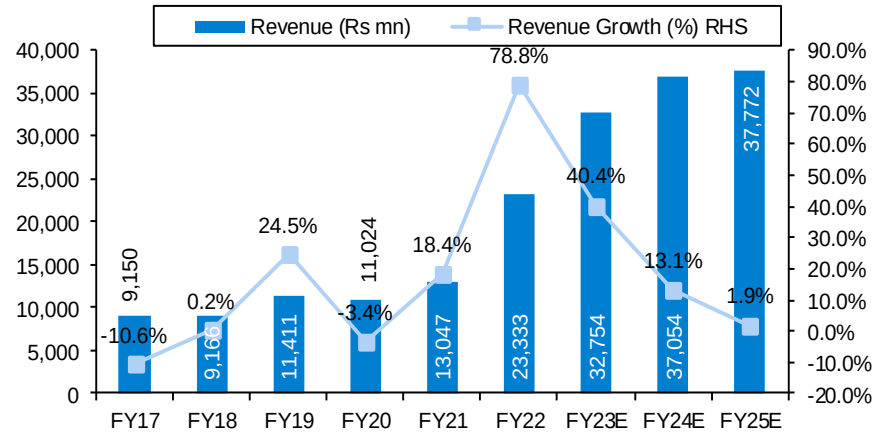


Source: Company, PL

Revenues expected to grow ~17% CAGR over FY22-25E

PRAJ reported robust revenue growth of ~79% in FY22 owing to healthy order inflows of 24% CAGR over FY18-21, as compared to muted growth of 5% CAGR witnessed between FY17-20. We believe that this execution momentum would continue given 1) healthy order inflows of Rs34.6bn in FY22, 2) robust outlook in Bioenergy segments and 3) traction in other business verticals. We expect revenues to grow at a CAGR of 17% over FY22-25.

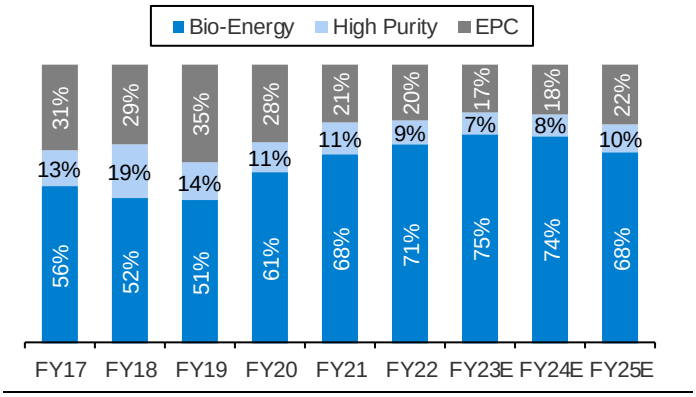
Exhibit 22: Revenue to grow ~17% CAGR over FY22-25E



Source: Company, PL

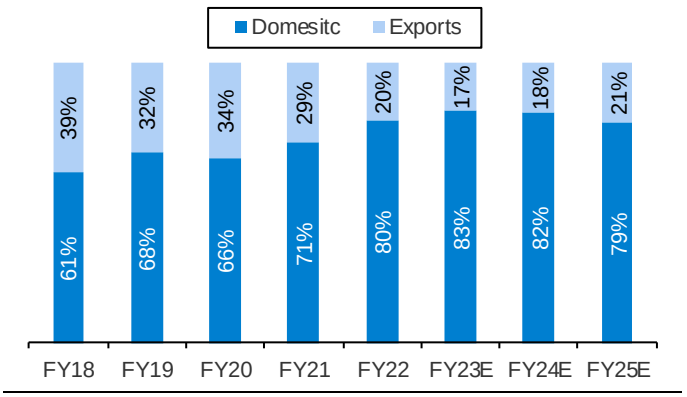
As government's commitment of moving towards alternate energy fuels such biofuels continues, we expect Bioenergy segment to dominate revenue (~68% in FY25 vs ~71% in FY22) for PRAJ going forward. Further, domestic business accounts for 80% of FY22 revenues, expected to remain in similar range in medium term.

Exhibit 23: Bioenergy will continue to dominate revenue mix



Source: Company, PL

Exhibit 24: Domestic will continue to dominate revenue mix

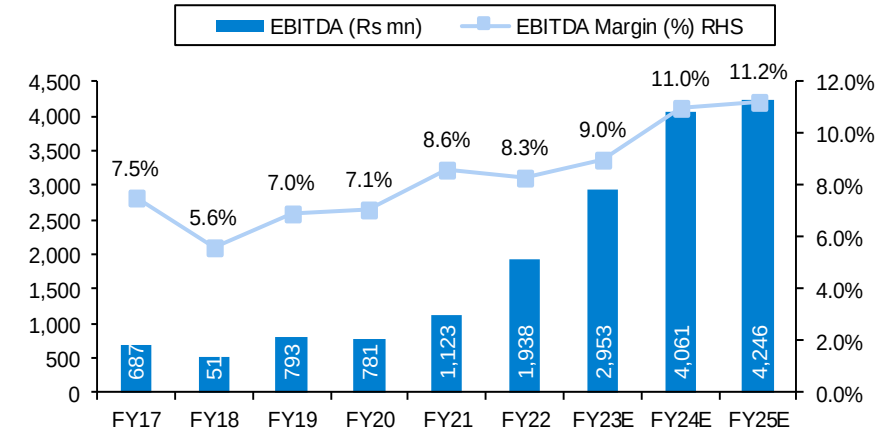


Source: Company, PL

EBITDAM to reach 11.2% by FY25E

The company's EBITDA improved from Rs687mn in FY17 to Rs1,938mn in FY22, owing strong traction in domestic business and better operational efficiencies. EBITDAM came in at 8.3% in FY22 vs 8.6% in FY21, due to commodity inflation, supply chain disruption and change in business mix. Going forward, we expect margins to expand to 11.2% by FY25E factoring in strong revenue growth driving operational leverage despite higher contribution from domestic business. Typically, exports business commands higher margins compared to domestic business.

Exhibit 25: EBITDAM to reach 11.2% by FY25E



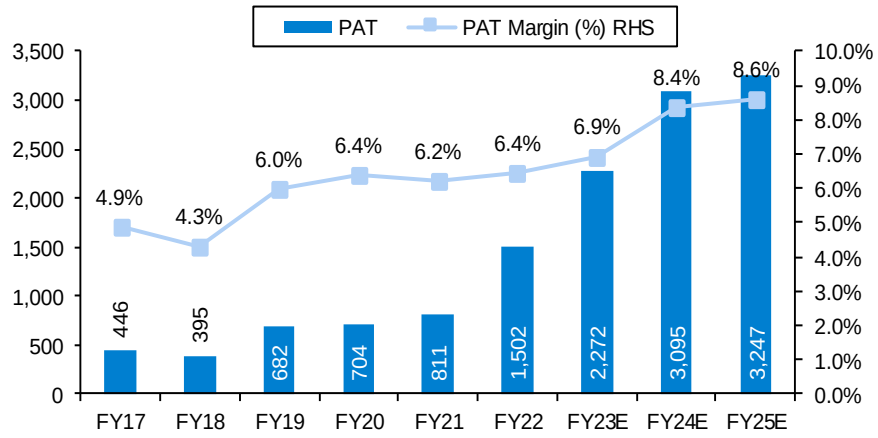
Source: Company, PL

PAT to report ~29% CAGR from FY22-25E

The company reported a healthy CAGR of ~27% over FY17-22, driven by pick up in execution and better operational performances. PAT margins were in the range of 6-6.5% during the same period.

We expect PRAJ to report a healthy CAGR of ~29% over FY22-25E led by 1) strong execution, 2) efficient working capital management and 3) better operating matrix, as other segments start contributing to profitability.

Exhibit 26: PAT to grow at ~29% CAGR from FY22-25E

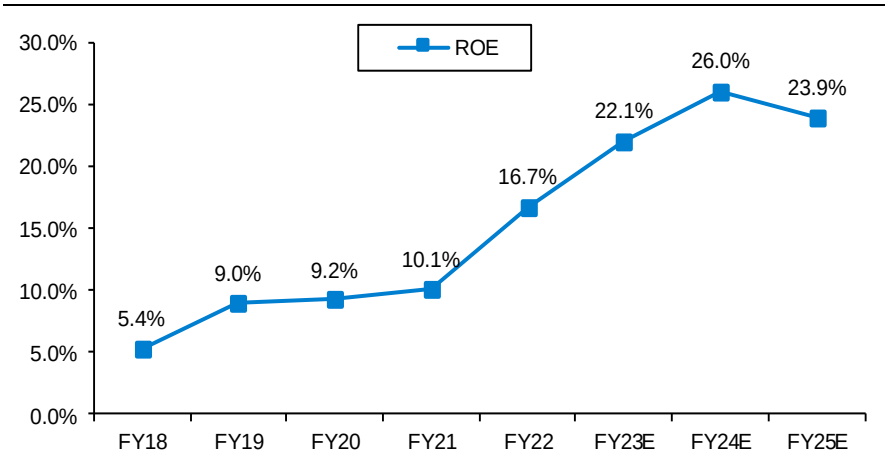


Source: Company, PL

ROE is likely to expand to 23.9% by FY25E.

ROE stood in range of ~9-10% between FY19-21 but expanded to 16.7% in FY22, led by strong execution pickup. Going forward with continued execution momentum and operational leverage kicking-in, we expect ROE to expand ~23.9% by FY25E.

Exhibit 27: ROE to continue its upward trajectory



Source: Company, PL

Exhibit 28: Key management personnel

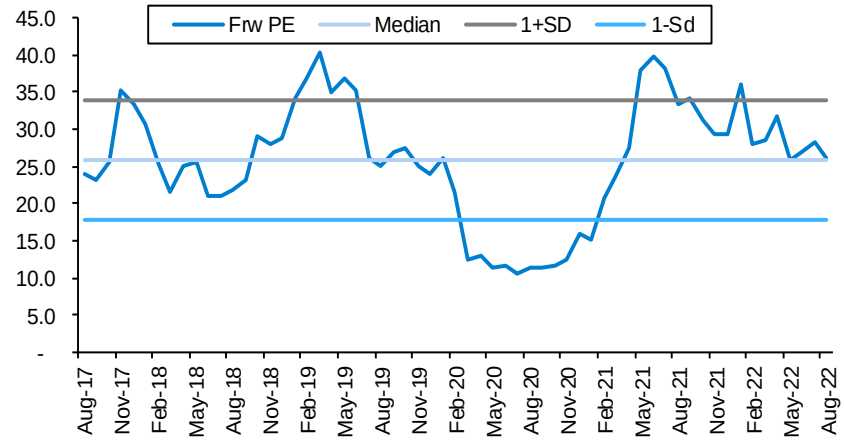
Pramod Chaudhari	Executive Chairman	An alumnus of IIT Bombay (1971) and Harvard Business School (1995), he is the first generation techno entrepreneur and founder of PRAJ Industries. Deeply passionate about Bio-economy and Environment, he is committed to develop clean and green technologies. He developed PRAJ into a world-class engineering company specialized in Agri-processing opportunities.
Shishir Joshipura	CEO & Managing Director	A Mechanical Engineer from prestigious Birla Institute of Technology & Science (BITS) Pilani and an Advanced Management Graduate from Harvard Business School has over 35 years of rich experience in varied fields of engineering. He began his career with Thermax and held several key positions to rise through the ranks to become Executive Vice President and Global Head of Cooling & Heating business. He was also the Director of overseas subsidiaries of Thermax in USA, Europe & South America and successfully set up a manufacturing subsidiary in China. Before joining PRAJ, he served as MD of SKF India from 2009 to 2018.
Sachin Raole	CFO & Director - Resources	A cost accountant and chartered accountant with 22 years of experience in varied fields of finance and accounts. He worked in the areas of divestment, mergers & acquisitions, financial restructuring, treasury, accounts and taxation. He has very rich experience in the wide spectrum of finance across industries; manufacturing, project, financial services and pharmaceutical. Additionally, he also has an experience in heading Human Resources, materials, IT, legal & secretarial.

Source: Company, PL

Outlook and Valuations

We believe, PRAJ is well poised for growth in the coming years given 1) its strong leadership in domestic ethanol plants (~60-65% market share), 2) prominent global presence in more than 100 countries and 3) significant focus on future-ready technologies like 2G ethanol (orders for three 2G based ethanol plants), Compressed Bio Gas (CBG) (opportunity of 5,000 CBG plant) & Sustainable Aviation Fuel (SAF) and 6) diversification in Wastewater Treatment (ZLD), Critical Process Equipment's & System (CPES) & HiPurity business. The stock is currently trading at a P/E of 31.5x/23.1x on FY23/24E earnings. We initiate coverage on PRAJ with **'Buy'** rating at target price of Rs.507 valuing it at PE of 30x FY24E.

Exhibit 29: PRAJ is trading near its 5-year average 1 year forward PE



Source: Company, PL

Key Risks

Changes in government policies: Any changes in government policies on pricing and procurement for Ethanol production could impact profitability of the company. It could also hamper estimated capex addition in the industry.

Delay in awarding activities in EPC business: Delay in pickup of tendering activities in its EPC business owing to pandemic related disruption, could result in lower order inflow for the segment.

Slowdown/Policy change in export market: Export market contributes ~20% of revenue in FY22, any slowdown or policy change in exports markets could affect company's overall performance.

Foreign exchange volatility: A sizeable portion of order book comes from export market which are typically fixed cost in nature and any major fluctuations in exchange rates could impact profitability of the company.

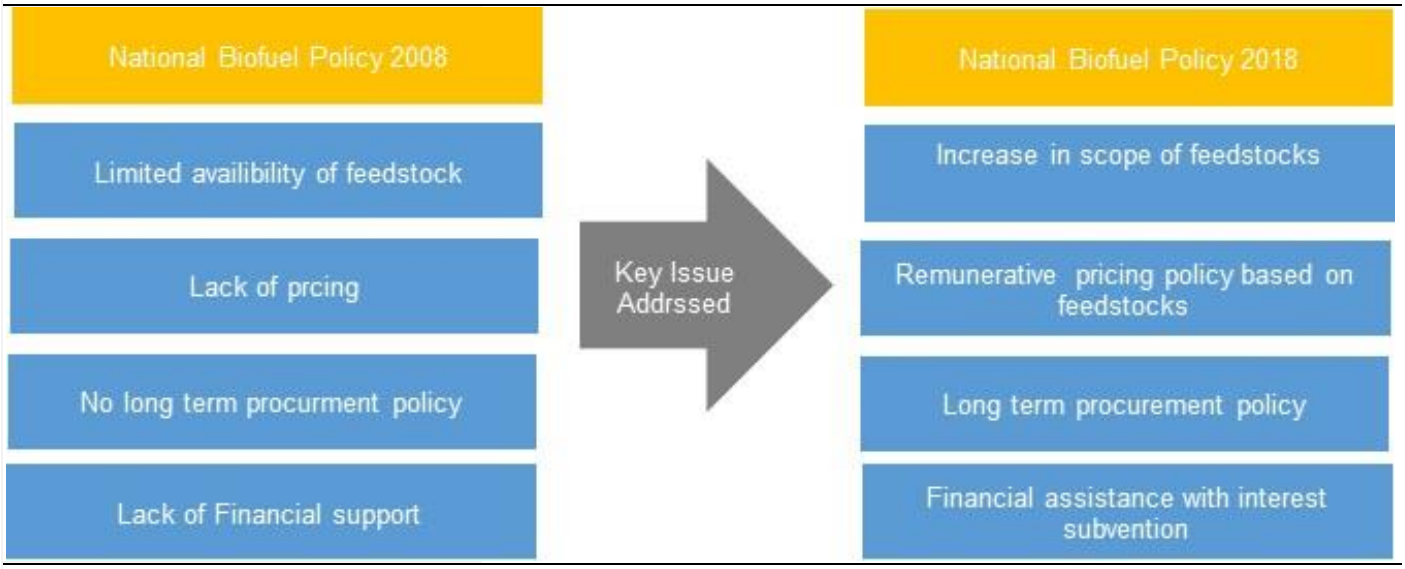
Annexure – Ethanol Blending

1G gaining good traction post National Biofuel Policy'18

With a view to reduce Green House Gas (GHG) emissions, increasing usage of carbon neutral fuels and cutting sugar export subsidy (putting it in an effective use), government accelerated Ethanol Blending Programme (EBP) to 20% in 2025 from 2030 earlier. The EBP programme had initially started in 2003, but had limited success despite introduction of National Biofuel Policy in 2009 owing to supply side issues such as a) limited feedstock availability, b) clarity of pricing and long term purchase agreements, c) stress balance sheet of sugar industry players, etc. Due to this, ethanol blending had mostly been in 2-5% range v/s target of reaching 10% over last 10 years.

However, the new National Biofuel Policy'18 addressed most of these supply- side constraints by a) increasing usage of various other feedstock like Agri-waste, B-Molasses, Sugarcane juice, damaged food grain, etc. for blending, b) bringing clarity on pricing for ethanol procurement, c) presenting long term purchase agreements and d) introducing financial assistance with interest subvention.

Exhibit 30: Issues addressed in National Biofuel Policy 2018



Source: Industry, PL

Government Initiatives to boost Ethanol production

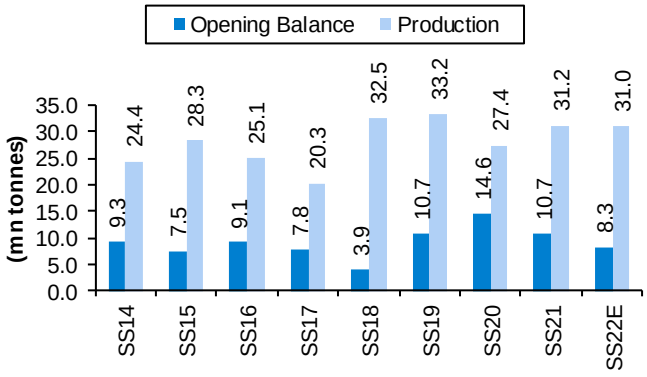
In recent past government has taken various steps to fast track ethanol production, such as increased scope of feedstock, enhanced pricing and procurement policy and long term financing with interest subvention scheme.

Increased scope of feedstocks to drive ethanol production

Expansion of Sugary feedstock

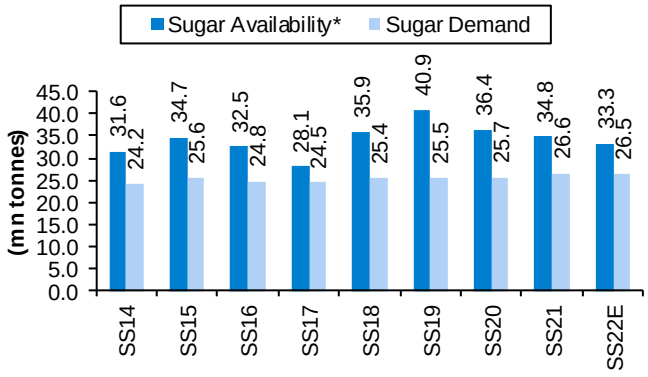
Various scientific studies have proven that usage of B-Molasses and Sugar syrup as feedstock for ethanol production will be an effective solution. India's issue of excess sugar availability is prevailing since a long time, thereby increasing burden on sugar mills and finally sugar cane farmers. For instance, in 2020-21 sugar consumption in India was 26.6mn ton, as compared to annual availability of 41.9mn ton (opening balance 10.7mn ton, production 31.2mn ton). Hence in order to support sugar producers and sugar cane farmers, government allowed ethanol production from B-Molasses, sugar cane juice, sugar syrup and sugar as feedstock. Further, it set differentiated pricing policy based on raw material used for ethanol production, to increase profitability of sugar players. We understand, this move augurs well for sugar mills to divert excess sugarcane and produce ethanol.

Exhibit 31: Sugar availability in India



Source: Industry, PL

Exhibit 32: Excess sugar availability in India



Source: Industry, PL

Between Sept 2021-22 ~3.5mn MT of sugar is expected to be diverted. In order to reach 20% blending target (~10.2bn liter) and demand from chemical & other sectors (~3.3bn liter), India would require ~13.5bn liter of ethanol production by 2025. Of this, ~6.8bn liter is expected to be met by Sugar industries, resulting in ~5-6mn MT of surplus sugar to be used for ethanol production.

Extended scope of feedstock for 1G ethanol production such as cereals (rice, wheat, barley, corn & sorghum), sugarcane, sugar beet etc.

Encouraging grain based ethanol production capacities:

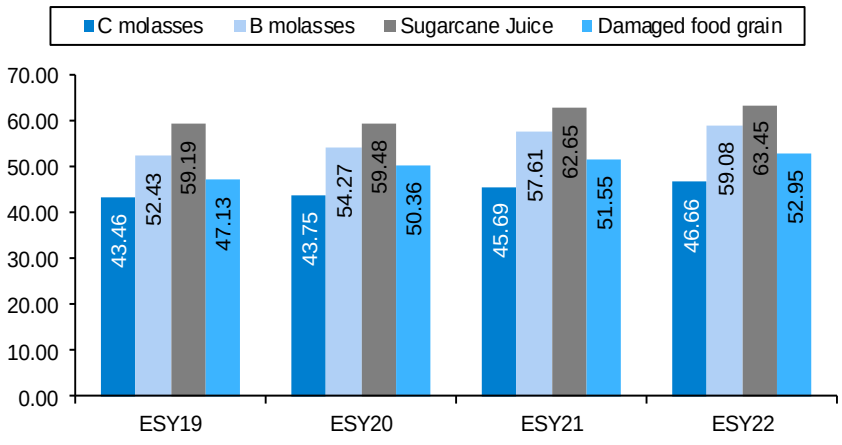
Diverting sugarcane and sugar for ethanol production alone, would not be able to meet ~20% blending target by 2025. Hence the government extended its scope of producing 1G ethanol from feed stocks such as cereals (rice, wheat, barley, corn & sorghum), sugarcane, sugar beet etc. Unlike sugar based ethanol plant, which is limited to sugarcane producing states like UP, Maharashtra and Karnataka, grain based ethanol plant can be setup across the country with FCI warehouse acting as feedstock provider. Transportation of sugar related feedstock from UP, Maharashtra and Karnataka to other states involves huge transportation cost, making it unavailable for settling up ethanol production plant. Hence, with grain based acting as a feedstock for ethanol production, various plants can be established across the country.

As per estimate, grain based distilleries are expected to supply 6.7bn liters of ethanol to meet total ethanol requirement of 13.5bn liters by 2025 resulting into ~16.5mn MT of surplus/waste food grains that will be diverted for ethanol production.

Well established pricing and procurement policy to encourage capacity expansion:

Ethanol pricing depends on various factors such as raw material cost, conversion cost, efficiency of distillery plants, transportation cost, etc. varying from distillery to distillery. In order to encourage ethanol blending, government raised prices by 1-3% for different raw materials in 2021-22. For instance, procurement price through a) C-Molasses increased from Rs45.69/ltr to Rs46.66/ltr, b) B-Molasses increased from Rs57.61/ltr to Rs59.08/ltr, c) sugar cane juice increased from Rs62.65/ltr to Rs63.45/ltr and d) damaged food grain/Maize increased from Rs50.36/ltr to Rs52.95/ltr. Additionally, transportation cost and GST will be payable by OMC. We believe this will improve profitability and better cash conversion cycle for Sugar manufacturers.

Exhibit 33: Attractive pricing (Rs/Liter) for ethanol procurement from different feedstock



Source: Industry, PL (ESY –Ethanol Supply Year)

OMC's determined transportation cost for its suppliers, based on distance travelled (as per google maps). It further expects to revise cost on quarterly basis.

Exhibit 34: Transportation cost payable to supplier

One way distance (km)	Transportation Rates (Rs./kl)
0 to 75	168
>75 to 200	391
>200 to 400	833
>400 to 600	1,394
>600 to 800	1,956
>800 to 1,000	2,751
>1,000 to 1,200	3,596
>1,200	Per kl rate shall be Rs 3,596/KL + Rs2.72 for additional KM beyond 1,200 KM

Source: Industry, PL

In order to ensure committed procurement of ethanol, Ministry of Petroleum and Natural Gas (MoP&NG) published Ethanol Procurement Policy on a long term basis under EBP Programme. Under this policy, OMC's have committed procurement of annual ethanol quantity for a period of five years.

Salient Features

- Estimated by OMCs in expression of interest (EOI) shall remain firm for period of five years.
- Detailed quarter-wise and location-wise procurement by OMC's to be provided.
- OMCs to make provisions for long term supply of ethanol quantities.
- Change in fuel price resulting in increasing transportation cost to be compensated.
- FCI to provide surplus rice at Rs2,000/quintal for manufacturing ethanol to distilleries.

Long term financing backed with interest subvention scheme will boost the ethanol capacity addition in the country

Long term financing with interest subvention scheme:

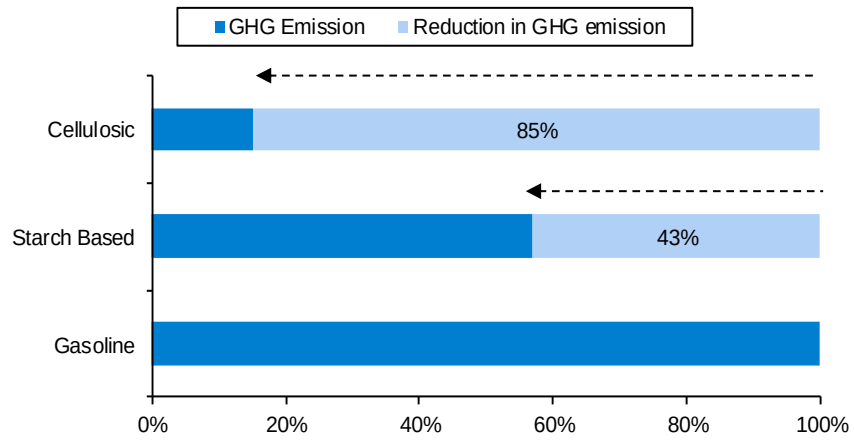
Under the scheme, Govt. would be bearing interest for 5 years (including 1 year of moratorium) from banks at 6% p.a. or 50% interest rate charged by banks whichever is lower for 1) setting up new distilleries or 2) expansion of existing distilleries or 3) converting molasses based distilleries to dual feedstock. This comes as big belief, given majority sugar mills were facing delays in getting financial approval from banks for funding of new capacity. Further, OMC's sugar mills and banks have agreed to enter into tripartite financing mechanism with escrow accounts, in order to boost ethanol capacity of sugar mills.

2G Bio refineries – Revolution in Ethanol Production

Globally, biofuels are considered as an effective tool for rural development, generating employment and additional income for farmers apart from addressing environmental concerns. In India, in order to meet surge of ethanol demand and enhance rural economy, government is promoting ethanol procurement from other non-food feedstocks such as Agri-residues like rice & wheat straw, cane trash, corn cobs & stover, cotton stalk, bagasse, Empty Fruit bunches (EFB), etc. and biodegradable fractions of municipal & industrial waste. This process is referred to as Second generation (2G), different from 1G in term of feedstock and production process. Further, 2G process produces huge quantities of bio-products such as Bio-gas, Bio CNG, Liquid CO2, Bio-Fertilizers, etc. which have wide range of industrial applications.

Currently in Northern India, owing to huge wastage of Agri-residue and its burning (most effective way for farmers) there are lot of pollution problems across many states. With 2G technology, GHG emissions can be reduced significantly and farmers could generate additional income from disposal of this waste. Various studies state that Starch based Biofuel can reduce GHG by ~43%, while Cellulosic based can reduce GHG by ~85-95%.

Exhibit 35: Reduction in GHG emission using starch based Biofuel



Source: Industry, PL

Adopting 2G bio ethanol will help boost rural economy, by providing remunerative income to farmer for waste agriculture residues, which are otherwise burnt by farmers.

Exhibit 36: Surplus Biomass Availability in India

Biomass	Generation (MMT)	Surplus (MMT)
Rice Straw	112	8.5
Rice Husk	22.4	0.4
Wheat Straw	109.9	9.1
Sugar Cane Tops	97.8	79.5
Sugar Cane Bagasse	101.3	6.4
Maize Stover	22.7	1.1
Maize Cob	4.2	1.7
Maize Husk	2.7	1.1
Sorghum Stover	15.6	1.6
Bajra Stalk	12.2	1.2
Cotton Stalk	18.9	11.4
Chillies Stalk	0.6	0.5
Ragi Stalk	4.6	0.5
Pulses Wastes	18.9	5.7
Oil Seed Wastes	57.7	17.3
Bamboo (Top, Root and Leaves)	5.4	3.3
Pine needles	1.6	1.2
Water Hyacith (Whole)	15	14
Total	**623.4**	**164.5**

Source: Industry, PL

With a view to boost investment in this sector, in FY17, Govt. came up with plan, to setup 12 commercial scale 2G Bioethanol plants for ~Rs100bn spread over 4-5 years. Further, it would provide financial support of Rs19.7bn in phase manner, of these Rs18bn would be allocated towards 12 projects, Rs1.5bn for demonstration projects, while remaining ~Rs195mn would be for Centre for High Technology (CHT) as administrative charges. The project is entitled to get VGF upto 20% of project cost from State Govt./PSUs/Other Agencies.

Exhibit 37: Allocation of financial support (Rs mn)

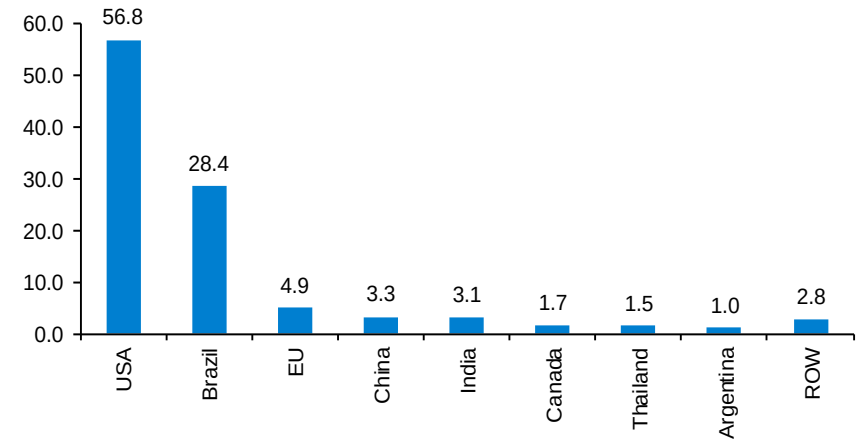
Year	Phase- I (2018-19 to 2022-23)		Phase- II (2020-21 to 2023-24)		Administrative charges to CHT	Total
	Commercial Project	Demo. Project	Commercial Project	Demo. Project		
2018-19	-	-	-	-	-	-
2019-20	-	375	-	-	4	379
2020-21	2,250	375	-	375	30	3,030
2021-22	4,500	-	2,250	375	71	7,196
2022-23	2,250	-	4,500	-	68	6,818
2023-24	-	-	2,250	-	23	2,273
Total	**9,000**	**750**	**9,000**	**750**	**195**	**19,695**

Source: Industry, PL

Globally, Ethanol can act as good alternative of renewable energy:

Globally, world is moving towards clean and renewable energy in order to tackle global warming issues and rising fossil fuel prices. Biofuels such as bioethanol has emerged as a good alternative of renewable energy as it is sustainable energy source, efficient, safe and reduces GHG emissions. Countries like USA and Brazil which account for ~83% of ethanol production have successful implemented it on a large scale. Global ethanol production stands at 103bn liters in 2021 and is expected to continue its growth momentum, mainly on account of increasing mandatory blending policies across countries.

Exhibit 38: Country-wise ethanol production (bn liters/annum)



Source: Industry, PL, Data as on 2021

CBG – Governments thrust on green transport fuel

In order to promote Compressed Bio Gas (CBG) as an alternative green transport fuel and to reduce dependence on natural gas imports, reduce carbon emission, increase rural household incomes and efficient waste from biomass and organic, Indian government has launched Sustainable Alternative Towards Affordable Transportation (SATAT). Further, cabinet committee took significant steps in moving towards gas-based economy by approving Natural Gas Marketing Reforms.

Government initiatives:

- To avoid delays relating to pollution control board, Govt. categorized CBG plants under the White Category.
- Government has revised CBG price from Rs46/kg to Rs54/kg and commitment for 100% offtake with a long term agreement.
- Ministry of agriculture included Bi-product of CBG plant such as 'Fermented Organic Manure' under Fertilizer Control Order, thus facilitating marketing of manure throughout India.

Additional benefit for setting up plant: Further, additional income for farmers and problem of access agricultural, cattle and municipal waste could be addressed by setting up CBG plants. Apart from this, manufacturer will also be able to sell the other by-product from these plants, including bio-manure, etc., and enhance returns on investment. OMC's, some of private equity funds and entrepreneurs have shown keen interest in setting up CBG plants.

Financials

Income Statement (Rs m)

Y/e Mar	FY22	FY23E	FY24E	FY25E
Net Revenues	**23,333**	**32,754**	**37,054**	**37,772**
YoY gr. (%)	*78.8*	*40.4*	*13.1*	*1.9*
Cost of Goods Sold	14,538	19,576	21,143	21,327
Gross Profit	8,796	13,178	15,911	16,444
Margin (%)	*37.7*	*40.2*	*42.9*	*43.5*
Employee Cost	2,176	2,907	3,350	3,534
Other Expenses	1,142	2,162	2,594	2,682
EBITDA	**1,938**	**2,953**	**4,061**	**4,246**
YoY gr. (%)	*72.5*	*52.4*	*37.5*	*4.5*
Margin (%)	*8.3*	*9.0*	*11.0*	*11.2*
Depreciation and Amortization	226	261	287	303
EBIT	**1,712**	**2,692**	**3,774**	**3,943**
Margin (%)	*7.3*	*8.2*	*10.2*	*10.4*
Net Interest	25	33	37	42
Other Income	362	378	401	440
Profit Before Tax	**2,049**	**3,037**	**4,138**	**4,341**
Margin (%)	*8.8*	*9.3*	*11.2*	*11.5*
Total Tax	546	765	1,043	1,094
Effective tax rate (%)	*26.7*	*25.2*	*25.2*	*25.2*
Profit after tax	**1,502**	**2,272**	**3,095**	**3,247**
Minority interest	-	-	-	-
Share Profit from Associate	-	-	-	-
Adjusted PAT	**1,502**	**2,272**	**3,095**	**3,247**
YoY gr. (%)	*85.4*	*51.2*	*36.3*	*4.9*
Margin (%)	*6.4*	*6.9*	*8.4*	*8.6*
Extra Ord. Income / (Exp)	-	-	-	-
Reported PAT	**1,502**	**2,272**	**3,095**	**3,247**
YoY gr. (%)	*85.4*	*51.2*	*36.3*	*4.9*
Margin (%)	*6.4*	*6.9*	*8.4*	*8.6*
Other Comprehensive Income	-	-	-	-
Total Comprehensive Income	1,502	2,272	3,095	3,247
Equity Shares O/s (m)	**184**	**184**	**184**	**184**
EPS (Rs)	**8.2**	**12.4**	**16.9**	**17.7**

Source: Company Data, PL Research

Balance Sheet Abstract (Rs m)

Y/e Mar	FY22	FY23E	FY24E	FY25E
Non-Current Assets				
Gross Block	**4,817**	**5,117**	**5,417**	**5,717**
Tangibles	4,817	5,117	5,417	5,717
Intangibles	-	-	-	-
Acc: Dep / Amortization	**2,731**	**2,992**	**3,279**	**3,582**
Tangibles	2,731	2,992	3,279	3,582
Intangibles	-	-	-	-
Net fixed assets	**2,085**	**2,124**	**2,137**	**2,134**
Tangibles	2,085	2,124	2,137	2,134
Intangibles	-	-	-	-
Capital Work In Progress	659	659	659	659
Goodwill	-	-	-	-
Non-Current Investments	928	937	974	940
Net Deferred tax assets	19	19	19	19
Other Non-Current Assets	31	66	74	76
Current Assets				
Investments	3,979	4,422	4,539	4,910
Inventories	3,450	4,038	4,467	4,760
Trade receivables	5,118	7,000	7,918	8,279
Cash & Bank Balance	1,551	1,672	1,910	2,046
Other Current Assets	4,233	4,422	5,188	5,855
Total Assets	**22,108**	**25,421**	**27,959**	**29,791**
Equity				
Equity Share Capital	367	367	367	367
Other Equity	8,790	9,971	11,581	13,269
Total Networth	**9,157**	**10,338**	**11,948**	**13,636**
Non-Current Liabilities				
Long Term borrowings	-	-	-	-
Provisions	-	-	-	-
Other non current liabilities	-	-	-	-
Current Liabilities				
ST Debt / Current of LT Debt	-	-	-	-
Trade payables	4,248	5,923	6,599	6,726
Other current liabilities	8,715	9,172	9,425	9,441
Total Equity & Liabilities	**22,108**	**25,421**	**27,959**	**29,791**

Source: Company Data, PL Research

Cash Flow (Rs m)

Y/e Mar	FY22	FY23E	FY24E	FY25E
PBT	2,049	3,037	4,138	4,341
Add. Depreciation	0	-	-	-
Add. Interest	-	-	-	-
Less Financial Other Income	362	378	401	440
Add. Other	56	294	324	345
Op. profit before WC changes	2,104	3,331	4,462	4,685
Net Changes-WC	93	(578)	(1,241)	(1,184)
Direct tax	(450)	(765)	(1,043)	(1,094)
Net cash from Op. activities	**1,747**	**1,987**	**2,178**	**2,408**
Capital expenditures	(184)	(300)	(300)	(300)
Interest / Dividend Income	87	-	-	-
Others	(1,171)	(443)	(117)	(371)
Net Cash from Invt. activities	**(1,268)**	**(743)**	**(417)**	**(671)**
Issue of share cap. / premium	26	-	-	-
Debt changes	-	-	-	-
Dividend paid	(397)	(1,090)	(1,486)	(1,559)
Interest paid	(19)	(33)	(37)	(42)
Others	(54)	-	-	-
Net cash from Fin. activities	**(444)**	**(1,123)**	**(1,523)**	**(1,600)**
Net change in cash	**36**	**121**	**238**	**136**
Free Cash Flow	1,562	1,687	1,878	2,108

Source: Company Data, PL Research

Quarterly Financials (Rs m)

Y/e Mar	Q2FY22	Q3FY22	Q4FY22	Q1FY23
Net Revenue	**5,324**	**5,856**	**8,290**	**7,299**
YoY gr. (%)	*104.6*	*68.4*	*46.2*	*89.0*
Raw Material Expenses	3,345	3,590	5,235	4,719
Gross Profit	1,979	2,266	3,055	2,580
Margin (%)	*37.2*	*38.7*	*36.8*	*35.3*
EBITDA	**461**	**510**	**780**	**559**
YoY gr. (%)	*163.1*	*28.2*	*4.1*	*82.2*
Margin (%)	*8.7*	*8.7*	*9.4*	*7.7*
Depreciation / Depletion	54	52	67	64
EBIT	**408**	**458**	**714**	**495**
Margin (%)	*7.7*	*7.8*	*8.6*	*6.8*
Net Interest	6	5	8	7
Other Income	66	50	75	55
Profit before Tax	**468**	**502**	**781**	**542**
Margin (%)	*8.8*	*8.6*	*9.4*	*7.4*
Total Tax	134	132	204	130
Effective tax rate (%)	*28.7*	*26.3*	*26.1*	*23.9*
Profit after Tax	**334**	**370**	**577**	**413**
Minority interest	-	-	-	-
Share Profit from Associates	-	-	-	-
Adjusted PAT	**334**	**370**	**577**	**413**
YoY gr. (%)	*192.8*	*31.6*	*10.8*	*85.9*
Margin (%)	*6.3*	*6.3*	*7.0*	*5.7*
Extra Ord. Income / (Exp)	-	-	-	-
Reported PAT	**334**	**370**	**577**	**413**
YoY gr. (%)	*192.8*	*31.6*	*10.8*	*85.9*
Margin (%)	*6.3*	*6.3*	*7.0*	*5.7*
Other Comprehensive Income	**-**	**-**	**-**	**-**
Total Comprehensive Income	**334**	**370**	**577**	**413**
Avg. Shares O/s (m)	**183**	**183**	**183**	**183**
EPS (Rs)	**1.8**	**2.0**	**3.1**	**2.3**

Source: Company Data, PL Research

Key Financial Metrics

Y/e Mar	FY22	FY23E	FY24E	FY25E
Per Share(Rs)				
EPS	8.2	12.4	16.9	17.7
CEPS	9.4	13.8	18.4	19.3
BVPS	49.9	56.3	65.0	74.2
FCF	8.5	9.2	10.2	11.5
DPS	4.2	5.9	8.1	8.5
Return Ratio(%)				
RoCE	19.9	27.6	33.9	30.8
ROIC	41.1	55.1	60.1	50.5
RoE	17.5	23.3	27.8	25.4
Balance Sheet				
Net Debt : Equity (x)	(0.6)	(0.6)	(0.5)	(0.5)
Net Working Capital (Days)	68	57	57	61
Valuation(x)				
PER	47.7	31.5	23.1	22.1
P/B	7.8	6.9	6.0	5.3
P/CEPS	41.4	28.3	21.2	20.2
EV/EBITDA	34.1	22.2	16.0	15.2
EV/Sales	2.8	2.0	1.8	1.7
Dividend Yield (%)	1.1	1.5	2.1	2.2

Source: Company Data, PL Research

Notes

Notes

Price Chart

Analyst Coverage Universe

Sr. No.	Company Name	Rating	TP (Rs)	Share Price (Rs)
1	ABB India	Accumulate	3,115	2,799
2	Apar Industries	Accumulate	1,194	1,124
3	Bharat Electronics	BUY	295	269
4	BHEL	Sell	36	46
5	Cummins India	Accumulate	1,296	1,238
6	Engineers India	BUY	89	60
7	GE T&D India	Hold	102	101
8	Kalpataru Power Transmission	BUY	442	373
9	KEC International	Accumulate	473	444
10	Larsen & Toubro	BUY	2,030	1,751
11	Siemens	Accumulate	2,815	2,615
12	Thermax	Accumulate	2,190	2,019
13	Triveni Turbine	BUY	240	192
14	Voltamp Transformers	UR	-	2,972

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Buy : >15%
Accumulate : 5% to 15%
Hold : +5% to -5%
Reduce : -5% to -15%
Sell : < -15%
Not Rated (NR) : No specific call on the stock
Under Review (UR) : Rating likely to change shortly

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