

Ref:
2025/CEC01

Date:

06.09.2025

To,

The Board of Directors
TruAlt Bioenergy Limited
Survey No. 166,
Kulali Cross, Jamkhandi Mudhol Road,
Bagalkot - 587313
Karnataka, India

(the "Company")

DAM Capital Advisors Limited
Altimus 2202, Level 22,
Pandurang Budhkar Marg
Worli, Mumbai - 400018
Maharashtra, India

SBI Capital Markets Limited
1501, 15th floor
A & B Wing, Parinee Crescenzo
Bandra Kurla Complex
Bandra (East), Mumbai- 400 051

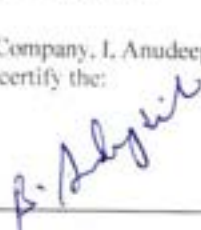
(DAM Capital Advisors Limited and SBI Capital Markets Limited with any other book running lead managers which may be appointed in relation to the Offer are collectively referred to as the "Book Running Lead Managers" or the "BRLMs")

Sub: Chartered Engineer Certification determining the capacity of Ethanol Plant of TruAlt Bioenergy Limited (the "Company")

Dear Sir/Ma'am,

I, the undersigned, confirm that I am duly registered as a Chartered Engineer (Certificate of registration enclosed herewith as **Annexure C**) with the Institution of Engineers (India) bearing membership number M-1712807, and that I am authorized, and have the required competence and technical knowledge, to issue this certificate. Further, we confirm that the aforesaid registration is valid as on date hereof, and as such, we are duly qualified to issue this certification. We represent that our execution, delivery and performance of this certificate has been duly authorized by all necessary actions (corporate or otherwise).

Pursuant to the engagement letter dated 12-02-2024, and at the request of the Company, I, Anudeep Krishna B, Chartered Engineer, am required to examine, review, verify, confirm and certify the:



+91 99020 96413 anudeep.bheemineni@gmail.com

4th floor, Site No: 5, Lalitha Nilayam, N Nagenahalli, Dr SRK Nagar
Post, Bangalore - 560077

(a) Company's installed capacity, actual production and capacity utilization of the distillery units TBL Unit 1, TBL Unit 2, TBL Unit 3, TBL Unit 4 and TBL Unit 5, owned and/or controlled by the Company ("**Distillery Units**"), material approvals/ licenses obtained by the Company in relation to its Distillery Units, and certain other matters, as appearing in **Annexure A**, and

(b) certain other particulars in relation to the Distillery Units/production infrastructure, details of which are appearing in **Annexure B** of this certificate.

Based on independent review of the information and explanations and representations provided to us by the Company, physical inspection of the machinery and equipment at the Distillery Units and production infrastructure, and our verification of the relevant records and documents of the Company, including approvals/submissions made to governmental authorities or regulatory authorities, review of actual manufacturing data at each of the manufacturing lines, etc. carried out by us, we confirm that the (a) that **Annexure A** contains the details of (i) the installed capacity, actual production and capacity utilization at the units for the year March 31, 2023, March 31, 2024 and March 31, 2025; (ii) material approvals/ licenses obtained by the Company in relation to its Distillery Units and (b) the statements mentioned in **Annexure B** regarding the Distillery Units/Production Infrastructure are true, complete, accurate and fair.

We further confirm that we are an independent organization with no direct or indirect interest in the Company, and are not related in any manner to the promoters, promoter group, directors, shareholders, officers, KMP, SMP, employees, agents, representatives of the Company and are not a related party of the Company, Subsidiary(s) or otherwise interested in the formation or management of the Company. We provide professional services in the ordinary course of our profession.

We consent to the inclusion (in part or full) of the information in this certificate and the annexures in the red herring prospectus ("**RHP**") and the prospectus ("**Prospectus**") intended to be filed by the Company with the Securities and Exchange Board of India (the "**SEBI**"), Registrar of Companies, Karnataka at Bangalore and any relevant stock exchange(s) where the Equity Shares are proposed to be listed (the "**Stock Exchanges**"), as the case may be, and as well as in addenda or supplements thereto, investor and roadshow presentations, research reports and other documents in relation to the Offer (the "**Offer Documents**") and any other material to be used in relation to the Offer.

We also consent to the inclusion of this letter as a part of "**Material Contracts and Documents for Inspection**" in connection with the Offer, which will be available for inspection at the Company's registered office or uploaded on the Company's website from date of the filing of the RHP until the Bid/Offer Closing Date.

We also consent to be named as an 'Expert' in terms of Section 2(38) and Section 26(5) of the Companies Act, 2013, as amended, with respect to this certificate. The following details with respect to us may be disclosed in the Offer Documents:

Name of Chartered Engineer: Anudeep Krishna, B
Telephone Number: +91 9902096413

Email: anudeep.bheemineni@gmail.com

Registration Number: M-1712807

This certificate may be relied upon (in part or in full) by the Company, the BRLMs and the legal counsels to the Company and the BRLMs, appointed pursuant to the Offer and may be submitted to the Stock Exchanges and any other regulatory or statutory or governmental authority. We hereby consent to this letter being disclosed by the BRLMs, if required (i) by reason of any law, regulation or order of a court or by any government or competent regulatory authority, or (ii) in seeking to establish a defence in connection with, or to avoid, any actual, potential or threatened legal, arbitral or regulatory proceeding or investigation.



A handwritten signature in blue ink, appearing to read "Anudeep Krishna B", written over the circular stamp.

We undertake to immediately inform the BRLMs and legal counsels in case of any changes to the above until the date when the Equity Shares pursuant to the Offer commence trading on the Stock Exchanges. In the absence of any such communication from us until the date when the Equity Shares commence trading on the Stock Exchanges, the above information contained in the Material Contracts and Documents for Inspection and certified herein should be taken as true, correct, accurate and updated and you may assume that there is no change in respect of the matters covered in this certificate.

We agree to keep information regarding the Offer strictly confidential.

Sincerely,

For and on behalf of Anudeep Krishna B
Authorised Signatory
Name: Anudeep Krishna B
Designation: Chartered Engineer

B. Anudeep



Encl: As above.

Cc:

Domestic Legal Counsel to the BRLMs

Cyril Amarchand Mangaldas
3rd Floor, Prestige Falcon Towers
19, Branton Road
Bengaluru 560 025
Karnataka, India

Domestic Legal Counsel to the Company

Khaitan & Co
Embassy Quest, 3rd Floor,
45/1 Magrath Road, Bengaluru 560 025
Karnataka, India

International Legal Counsel to the BRLM

Hogan Lovells Lee & Lee
50 Collyer Quay
#10-01 OUE Bayfront
Singapore 049321

Annexure – A

Operational Capacity of the Ethanol Plant:

Trualt Bioenergy Limited			
Unit No	Location	Capacity as on March 31, 2025	Capacity as on March 31, 2024
Unit-1	Kulali Cross, Jamkhandi Road, Mudhol, District Bagalkot, Karnataka.	700 KLPD	700 KLPD
Unit-2	Hippargi-Maigur, Jamkhandi Taluk, Bagalkot District, Karnataka.	500 KLPD	500 KLPD
Unit-3	Kallapur- S. K. Post: Kulageri, Badami Taluk, Bagalkot District, Karnataka.	400 KLPD	200 KLPD
Unit 4	Jalageri and Gangasabodhihala , Taluka Badami , Bagalkot District , Karnataka	200 KLPD	

Leafiniti Bioenergy Private Limited			
Unit No	Location	Capacity as on March 31, 2025	Capacity as on March 31, 2024
CBG Unit	SY 152, Hippargi, Albal Road, Mygur, Jamkhandi, Karnataka 587119	34,17,000 Kg per annum	34,17,000 Kg per annum



R. Adhyak

Capacity Utilisation

In the period between April 2022 and August 2022 (i.e. in Fiscal 2023), while the aggregate capacity stood at 90,270 KL, Company was able to produce 57,506 KL, registering a utilization of 63.71%. However, in the period between April 2023 and August 2023 (i.e. in Fiscal 2024), while the aggregate capacity stood at 2,14,200 KL, the Company was able to produce only 59,477 KL, leading to underutilization equivalent to 27.77%, on account of non-availability of working capital facility leading to non-procurement of raw material.

The following table sets forth in detail, the capacity utilization data and the number of operational days on a monthly basis for Fiscals 2022, 2023 and 2024. The cells highlighted in grey in the below table are *as if the acquisition of the distillery units pursuant to the business transfer agreements, took place with effect from April 1, 2020*.

Month	Fiscal 2023					Fiscal 2024				
	No. of Days	Capacity in KLPD	Production (KL)	Capacity (KL)	Utilization (%)	No. of Days	Capacity in KLPD	Production (KL)	Capacity (KL)	Utilization (%)
Apr	30	590	12,739	17,700	71.97%	30	1,400	18,583	42,000	44.25%
May	31	590	13,029	18,290	71.24%	31	1,400	21,992	43,400	50.67%
June	30	590	10,237	17,700	57.84%	30	1,400	11,002	42,000	26.20%
July	31	590	12,299	18,290	67.24%	31	1,400	4,598	43,400	10.59%
Aug	31	590	9,202	18,290	50.31%	31	1,400	3,302	43,400	7.61%
Sep	30	150*	1,387	4,500	30.82%	-	-*	-	-	-
Oct	31	150*	1,044	4,650	22.46%	-	-*	-	-	-
Nov	30	850	12,861	25,500	50.44%	30	1,400	22,348	42,000	53.21%
Dec	31	850	23,543	26,350	89.35%	31	1,400	25,559	43,400	58.89%
Jan	31	850	26,516	26,350	100.63%	31	1,400	19,959	43,400	45.99%
Feb	28	1,400	30,623	39,200	78.12%	28	1,400	30,077	39,200	76.73%
Mar	31	1,400	27,948	43,400	64.40%	31	1,400	24,024	43,400	55.36%
Total	365	1,400	1,81,431	2,60,220	69.72%	304	1,400	1,81,445	4,25,600	42.63%

* Balance capacity under maintenance / planned shutdown due to lack of raw material



The following table sets forth the details of our capacity utilization on a monthly basis for Fiscal 2025:

Month	Fiscal 2025				
	No. of Days	Capacity in KLPD	Production (KL)	Capacity (KL)	Utilization (%)
Apr	30	1,400	8,540	42,000	20.33%
May	31	1,400	8,645	43,400	19.92%
June	30	1,400	8,138	42,000	19.38%
July	31	1,400	5,136	43,400	11.83%
August	31	700*	4,138	21,700	19.07%
September	30	900*	8,513	27,000	31.53%
October	31	900*	4,538	27,900	16.27%
November	30	1,600	19,434	48,000	40.49%
December	31	1,800	45,550	51,200	88.97%
January	31	1,800	47,548	55,800	85.21%
February	28	1,800	36,080	50,400	71.59%
March	31	1800	32,995	55,800	59.13%
Total	365		2,29,255	5,08,600	45.08%

* Balance capacity under maintenance / planned shutdown due to lack of raw material.

Particulars	As of/ For the Year Ended March 31, 2023 **			As of/ For the Year Ended March 31, 2024		
	Installed Capacity (KL.PD) ^{(1)(a)}	Average Actual Production (KL.PD) ^{(2)(a)}	Capacity Utilisation (%) ⁽³⁾	Installed Capacity (KL.PD) ^{(1)(a)}	Average Actual Production (KL.PD) ^{(2)(a)}	Capacity Utilisation (%) ⁽³⁾
TBL Unit 1	700 ⁽¹⁾	106	53.96% ⁽³⁾	700	232	33.05%
TBL Unit 2	500 ⁽¹⁾	197	79.32% ⁽³⁾	500	230	45.96%
TBL Unit 3	200	100	100.69%	200	136	67.72%
Total	1,400	403	74.06%	1,400	598	42.63%

Particulars	As of/ For 31 st March 2024 ⁽⁷⁾		
	Installed Capacity (KL.PD) ^{(1)(a)}	Average Actual Production (KL.PD) ^{(2)(a)}	Capacity Utilisation (%) ⁽³⁾
TBL Unit 1	700	254	36.33%
TBL Unit 2	500	249	49.89%
TBL Unit 3	400	193	66.45%
TBL Unit 4 ^(a)	200	40	19.76%



Particulars	As of For 31 st March 2025 ⁽⁷⁾		
	Installed Capacity (KLPD) ⁽¹⁾⁽⁴⁾	Average Actual Production (KLPD) ⁽²⁾⁽⁴⁾	Capacity Utilisation (%) ⁽³⁾
TBL Unit 5 ⁽⁵⁾	200	-	-
Total	2,000	628	45.08%

•• Production numbers for capacity utilization have been considered for operations starting from October 2022 upon execution of the BTA to March 2023.

Notes:

- (1) Installed capacity represents the installed capacity as of the last date of the relevant period. The installed capacity is based on various assumptions and estimates, including standard capacity calculation practice in the Indian ethanol industry and capacity of other machinery installed at the relevant distillery unit. Assumptions and estimates taken into account for measuring installed capacities include 300 operational days in a year at three shifts per day operating for 24 hours a day.
- (2) Average actual production in KLPD is calculated as the quantum of ethanol produced in the relevant period at a particular distillery unit, divided by the number of days the relevant distillery unit was operational in the same period.
- (3) Capacity utilization has been calculated on the basis of average actual production in the relevant period divided by the installed capacity in the period. See notes (5) and (6) below.
- (4) KLPD represents kilolitres per day.
- (5) In Fiscal 2023 the installed capacity of TBL Unit 1 increased from 150 KLPD to 700 KLPD from February 2023. Accordingly, our capacity utilization is the weighted average of the capacity utilization in the eleven months of Fiscal 2023 ended February 2023 (which is calculated on the basis of installed capacity being 150 KLPD from April 2022 to January 2023) and the capacity utilization in two months, being February and March 2023 (which is calculated on the basis of installed capacity being 700 KLPD in February and March 2023).
- (6) In Fiscal 2023, the installed capacity of TBL Unit 2 has increased from 240 KLPD to 500 KLPD from November 2022. Accordingly, our capacity utilization for Fiscal 2023 is the weighted average of the capacity utilization in the seven months of Fiscal 2023 ended October 2022 (which is calculated on the basis of installed capacity being 240 KLPD from April 2022 to October 2022) and the capacity utilization in the five months ended March 2023 (which is calculated on the basis of installed capacity being 500 KLPD from November 2022 to March 2023).
- (7) In Fiscal 2025, the installed capacity of TBL Unit 3 has increased from 200 KLPD to 400 KLPD from November 1, 2024. Accordingly, our capacity utilization is calculated on the basis of installed capacity being 200 KLPD from April 2024 to October 31, 2024 and 400 KLPD from November 1, 2024 till March 31, 2025.
- (8) TBL Unit 4 has an installed operational capacity of 200 KLPD from March 30, 2025, production in the month of February 2025 and March 2025 was on a trial basis.
- (9) TBL Unit 5 has an installed capacity of 200 KLPD as of the date of this Red Herring Prospectus and is not operational.



CBG

The following table sets forth certain information relating to the installed capacity, actual production and capacity utilisation in connection with CBG for the periods indicated:

Particulars	As of March 31, 2023			As of March 31, 2024		
	Installed Capacity (Kg per annum) ⁽¹⁾	Actual Production (Kg per annum) ⁽²⁾	Capacity Utilisation (%) ⁽³⁾	Installed Capacity (Kg per annum) ⁽¹⁾	Actual Production (Kg per annum) ⁽²⁾	Capacity Utilisation (%) ⁽³⁾
CBG Unit	34,17,000	14,50,697	42.46%	34,17,000	11,03,122	32.28%

Particulars	As of March 31, 2025	
	Installed Capacity (Kg per annum) ⁽¹⁾	Capacity Utilisation (%) ⁽²⁾
CBG Unit	34,17,000	85.73%

Notes:

(1) Installed capacity represents the installed capacity as of the last date of the relevant period. The installed capacity is based on various assumptions and estimates, including standard capacity calculation practice in the Indian CBG industry and capacity of other machinery installed at the distillery unit. Assumptions and estimates taken into account for measuring installed capacities include 335 operational days in a year at 3 shifts per days operating for 24 hours a day.

(2) Actual production represents quantum of production in the relevant period.

Capacity utilization has been calculated on the basis of actual production in the relevant period divided by the capacity calculated for 335 days at 10,200 TPD



Capacity Utilisation for Fiscal 2026 upto July 31, 2025

Fiscal 2026 upto July 31, 2025				
Month	No. of Operational days	Capacity (in KL)	Production (in KL)	Utilisation
April, 2025	3-20*	15,500	7,189	46.38%
May, 2025	2-22**	16,200	6,793	41.93%
June, 2025	5***	3,500	1,949	55.69%
July, 2025	4***	2,800	1,800	64.29%
		35,200	17,731	50.37%

*No. of days Operational – Unit 1- 20 days, Unit 2 – 3 days.

** No. of days Operational – Unit 1- 22 days, Unit 3 – 2 days.

***Only Unit 1 was operational.

Note: The above table has been calculated based on the number of operational days of the plants. The plants typically operate for 300 to 330 days in a year. TBL Units 2, 3 and 4 were under a scheduled shutdown between May, 2025 and July, 2025.

Consent to operate is yet to be received from the Karnataka State Pollution Control Board for TBL Unit 5.

[Handwritten Signature]



Annexure – B

(i) In Fiscal 2023 and in Fiscal 2024, the Company produced 1,64,904 kilo litres ("KL") and 1,41,659 KL of ethanol, of which 70,238 KL and 89,675 KL of ethanol was produced using molasses and 94,666 KL and 51,984 KL was produced using sugar syrup. For fiscal 2025, the company produced 1,82,588 KL of ethanol of which 63,313 KL was produced using molasses and 1,19,275 KL was produced using sugar syrup.

(ii) In Fiscal 2023 and in Fiscal 2024 the Company produced 15,528 MT of solid FOM and 59,127 MT of liquid FOM and 10,225 MT of solid FOM and 42,504 of liquid FOM respectively. For fiscal, 2025 the company produced 15,887.88 MT of solid FOM and 94,444 MT of liquid FOM.

(iii) Leafiniti, operates one CBG plant with a capacity of 10.20 tonnes per day ("TPD") as of March 31, 2025, which also produces solid and liquid fermented organic manure ("FOM"). The company has entered into a share subscription cum shareholders' agreement with GAIL through which, Leafiniti will commence setting up multiple CBG units across various locations in a phased manner, of which 20 locations have been identified in the subscription cum shareholders' agreement. In Fiscal 2023, 2024 and in Fiscal 2025, Leafiniti Bioenergy Private Limited produced 1,450,697 kg and 11,03,122 kgs and 29,29,463 kg of CBG, respectively. In Fiscal 2023 and in Fiscal 2024 and Fiscal 2025, the Company produced 16,527.91 KL and 39,785.67 KL and 46,668 KL of ENA, respectively. Leafiniti is equipped with technology sourced from Praj Industries. Leafiniti is a "no effluent discharge plant". Further, liquid fermented organic manure is recycled to reduce fresh water consumption.

(iv) Company recently expanded Ethanol production capabilities by 600 KLPD in three locations, to an aggregate installed capacity of 2,000 KLPD. Further, they are in the process of converting current mono feed (sugarcane juice / sugar syrup / molasses) unit to a dual feed unit. By March 2026, out of the 2,000 KLPD capacity, Company intends to convert 1,300 KLPD to dual-feed, capable of producing ethanol from grain-based feedstocks or grains unfit for human consumption.

(v) In a limited operating period, Company has been able to grow business as a result of strategic utilization of production capacity. They have adopted a focused expansion pathway including diversifying raw material base for Ethanol production. Of the total installed capacity of 2,000 KLPD, 1,300 KLPD is proposed to be fungible, being capable of using grain as well as sugar syrup/sugarcane juice and molasses as raw materials for Ethanol production, and is to be commissioned by Fiscal 2026. Company intends to utilize existing units and the proposed additional capacities in a fungible manner based on seasonal availability of raw material to optimize output, navigate the dynamic nature of raw material prices and the different prices for Ethanol sourced from multiple feedstock.

(vii) The Company operates four molasses and sugar syrup-based distillery units in Karnataka, with an aggregate installed Ethanol production capacity of 2,000 KLPD out of which they have operational capacity of 1,800 KLPD as of March 31, 2025. Within the existing distillery units, Company proposes to set up dedicated segments for pre-treatment and dried distillers grain solids production units. These will be utilized to offset the idle capacity during seasons when sugar is available in reduced quantities. Company's existing infrastructure provides familiarity with the Ethanol production process.

Installed/ Proposed Capacity of Ethanol and ENA*

Unit / Location	Area	Install ed Capac ity* (A)	Projected Capacity Expansion in SCJ / Molasses (B)	Fungible Integratio n by addition of Grains Capacity	Total Capacity (A+B)	Feedstock
Unit 1 Kulali Cross, Jamkhandi Road , Mudhol , Bagalkot District , Karnataka.	45 Acres , 38 Gunta	700 KLPD	-	550 KLPD by September 2025	700 KLPD	Dual Feed Stock (550 KLPD dual feed and 150 KLPD Sugarcane Juice / Syrup / Molasses)
Unit 2	26 Acres , 23 Guntas	500 KLPD	-	450 KLPD by October 2025	500 KLPD	Dual Feed Stock (450 KLPD dual feed and 50



B. Indira

Unit / Location	Area	Install ed Capac ity* (A)	Projected Capacity Expansion in SCJ / Molasses (B)	Fungible Integratio n by addition of Grains Capacity	Total Capacity (A+B)	Feedstock
Hippargi-Maigur , Jamkhandi Taluk , Bagalkot District , Karnataka.						KLDP Sugarcane Juice / Syrup / Molasses)
Unit 3 Kallapur- S.K. Post , Kulageri , Badami , Taluk , Bagalkot District , Karnataka.	17 Acres , 26 Guntas	400 KLDP			400 KLPD	400 KLPD Sugarcane Juice / Syrup / Molasses
Unit 4 (Proposed) Jalageri and Ganganaboodhahala , Taluka Badami , Bagalkot District , Karnataka	22 Acres , 22 Guntas	200 KLDP		300 KLPD by October 2025	200 KLPD	Dual Feedstock (200 KLPD
Unit 5 (Proposed) Muttalgeri, Badami Taluka , Bagalkot District , Karnataka	15 Acres , 2 Guntas	200 KLDP			200 KLPD	Sugarcane Juice / Syrup / Molasses-200 KLPD
Total		2,000 KLP D	200 KLPD	1,300 KLDP	2,000 KLPD	

* As on date

(viii) As of March 31, 2025, the Company has incurred capital expenditure of ₹ 45,020.64 lakhs towards this increase in capacity.

(ix) The Company's installed capacity has increased from 590 KLPD as of March 31, 2022, when they were not a part of Company on a proforma basis to 1,400 KLPD as of March 31, 2024 and subsequently to 2000 KLPD as of March 31st 2025. Correspondingly, the volume of ethanol sold by the Company increased from 100,282 KL in Fiscal 2022 on a proforma basis to 158,701 KL in Fiscal 2023 and was 1,48,920.55 KL in Fiscal 2024 and volume of ENA sold by the Company was 9365 KL in Fiscal 2022 , 15,885 KL in Fiscal 2023 and was 37,670 KL in Fiscal 2024. Volume of ethanol sold by company for Fiscal 2025 was 2,17,539 KL and volume of ENA sold was 43,795 KL.

(x) The Promoter Group from whom the Company sources sugar syrup and molasses, namely Nirani Sugars Limited (formerly known as MRN Chamundi Canepower and Biorefineries Private Limited), and MRN Bhima Sugar and Power Private Limited and MRN Canepower and Biorefineries Private Limited has a sugarcane crushing capacity of 79,000TCD as on March 31, 2025. Its crushing capacity includes 79,000 TCD production capacities for molasses and sugarcane syrup per day.

(xi) In Fiscal 2024, operating at the Company's existing installed capacity of 1,400 KLPD, it utilized 171,175 MT of sugar syrup/sugarcane juice and 4,45,168 MT of molasses for its operations. For fiscal 2025, operating at the Company's existing operational capacity of 1,800 KLPD, it utilized 3,74,676 MT of sugar syrup/sugarcane juice and 3,60,825 MT of molasses for its operation.

In the sugar crushing season lasting approximately 140-160 days in a year the Company is able to operate utilizing the sugarcane juice/ syrup and molasses from the promoter group entity while during off-season it operates using stored molasses for approximately 70-90 days. Further with the Company's dual feed integration facilities it will be able to operate approximately 330 to 340 days.

Raw Material	Fiscal 2023		Fiscal 2024		Fiscal 2025	
	Quantity Sourced from Promoter Group (MT)	Percentage of Total Quantity Sourced (%)	Quantity Sourced from Promoter Group (MT)	Percentage of Total Quantity Sourced (%)	Quantity Sourced from Promoter Group (MT)	Percentage of Total Quantity Sourced (%)
Sugar syrup/Sugarcane	3,11,453	100%	171,175	100.00%	374676	100.00%



P. Indupati

Raw Material	Fiscal 2023		Fiscal 2024		Fiscal 2025	
	Quantity Sourced from Promoter Group (MT)	Percentage of Total Quantity Sourced (%)	Quantity Sourced from Promoter Group (MT)	Percentage of Total Quantity Sourced (%)	Quantity Sourced from Promoter Group (MT)	Percentage of Total Quantity Sourced (%)
Juice						
Molasses	1,39,099	98.47%	372,737	86.01%	286759	78.93%

(xii) Further, the Company has a cooling tower and have large fermenters at all units, with capacities of 18 lakh litres, as of March 31, 2025.

(xiii) The Company's production units have processes to monitor product quality. As part of continued focus on technology that aids sustainability, proposed new units will be equipped with distillation sections requiring steam pressure of 1.2 kilograms per square centimeter compared to its existing distillery units, where steam pressure of 3.5 kilograms per square centimeter is utilized. This in turn is intended to allow for higher electricity to be generated at turbo generators, leading to energy optimization and cost efficiency.

(xiv) The Company has installed zero discharge facilities at units for the treatment of all liquid effluents, wherein no treated liquid effluent from its units is discharged on to the land or into any water body.

(xv) 100% of the water that the Company uses in the distillation process is condensed and reused further. Similarly, the moisture extracted in the spent wash process is further used for fermentation, instead of fresh water;

(xvi) The Company has established effluent treatment plants at its distillery units, to reduce fresh water usage, and mitigate disruptions to the ecology of the areas.

(xvii) The Subsidiary of the Company, Leafiniti Bioenergy Limited utilizes the effluents being ejected as a result of the distillation process, called 'spent wash', for CBG production. It also uses spent wash in boilers to burn as fuel and the residual waste which is otherwise hazardous, known as spent leese, is used in the digesters to produce methane for CBG production. Further, the residual waste from CBG production in the digester that comes out as solid waste is treated subsequently and converted into FOM.

(xviii) All of the Company's ethanol units have bagasse and spent wash-fired incineration boilers, compared to erstwhile boilers which use coal. The ash emitted from the boilers is sold externally, which is then used in making bricks and in making potash granules, which are used as manure. As part of Company's operations, once bagasse is burnt in boilers, ash from the boilers generates high quality potash. Further, the company has been able to source steam and power requirements internally through captive power sources. Each of the units have bagasse based cogeneration plants, with a boiler and turbines, which reduces external power requirements. Company's bagasse-based cogeneration plants offer a cost advantage over coal-based cogeneration plants, resulting in lower fuel expenses and reduced power generation costs.

(xix) The Company has cogeneration units, with boilers and turbines, at each of the units, which generate steam and power for captive consumption, and reduce external power requirements. Potash derived from molasses, a by-product of the ethanol production, is sold externally and CO₂ expelled as a by-product of the production process is sold to third parties for use in other applications as either dry ice or as liquid CO₂, instead of being externally discharged.

(xx) Company's Promoter Group has capacity for all the bagasse requirements for the proposed second generation ("2G") ethanol production. Company proposes to set up a 200 KLPD unit for 2G Ethanol production and diversify feedstock for Ethanol production by utilizing excess bagasse of 800,000 MT as additional feedstock in proposed unit.

(xxi) CBG Unit has an annual installed capacity of 34,17,000 kg per annum, as of March 31, 2025.

(xxii) Even in the absence of any working capital limits in these periods, Company achieved capacity utilization of 74.06%, and 42.63% in Fiscal 2023 and in Fiscal 2024 for Ethanol and ENA. Company achieved capacity utilization of 45.08% for Fiscal 2025.

(xxiv) The Promoter Group companies have a cumulative crushing capacity of 79,000 TCD as of March 31, 2025.



B. Anudip Khanna

(xxv) The Company has planned its expansion to benefit from raw material diversification, as 1,300 KLPD of the total installed capacity of 2,000 KLPD in Fiscal 2026 is proposed to be fungible, and capable of producing both grain-based and sugar syrup and molasses-based ethanol.

(xxvi) The Company has adopted technology such as multi-pressure vacuum distillation and molecular sieve dehydration systems, which create ease of operations. The Company's compressors and purification system is membrane-based and driven by advanced technology.

(xxvii) Company is also having a cooling tower and large fermenters at all units, with capacities of 18.0 lakhs as of March 31, 2025.

(xxx) The Company is intending to utilise 800,000 MT of bagasse from Promoter Group companies to produce approximately 6 crore litres per annum of 2G ethanol.

(xxxi) For the process to produce ethanol Company currently utilises sugarcane juice/syrup/molasses as a raw material. Company utilizes bagasse to fuel the boilers. Company utilises press mud a residue of sugarcane as a raw material for producing compressed biogas.

(1) The firm stands at a competitive advantage as the Promoter Group companies have the ability to supply adequate amounts of raw material even following the proposed capacity expansion.

(2) Company has fungible production units, which enables them to produce grain-based ethanol with the addition of sections such as grain storage section, loading and unloading section, grain handling, cleaning, milling and flour handling, flour weighing system, slurry handling, jet cooking, liquification, pre-scarification section, decantation section, and DDGS dryer section.

(3) Leafiniti has entered into a share subscription cum shareholders' agreement with GAIL through which, Leafiniti will commence setting up multiple CBG units across various locations in a phased manner, of which 20 locations have been identified in the subscription cum shareholders' agreement.

Further the company will be setting up multiple CBG plants starting from three to five CBG plants in different parts of India through a joint venture with a Japanese strategic partner. Additionally, the company has a non-binding term sheet and a memorandum of understanding with Sumitomo Corporation Asia & Oceania Pte. Ltd. for potential collaboration in the bioenergy sector. The initial phase will involve developing CBG plants, followed by future projects in ethanol and sustainable aviation fuel.

(xxxii) Key processes for production of Ethanol:

Fermentation: Fermentation is the process by which complex organic substances are converted into simple organic substances by the action of enzymes secreted by microorganisms. Alcoholic fermentation is the process by which sucrose and reducing sugars i.e. glucose and fructose, are converted into ethyl alcohol and CO₂ by the action of enzymes invertase and zymase secreted by the microorganism, yeast. During the fermentation, yeast strains converts sugar present in the molasses, such as sucrose or glucose to ethanol. Optimum parameters like pH and temperature control and substrate concentration are required for fermentation.

Alcohol will be distilled out from fermented wash to produce rectified spirit, ENA and ethanol as a finished product. CO₂ gas is collected and sent to the CO₂ procuring unit to produce liquefied CO₂ and solid CO₂ which is used for beverages, pharmaceuticals and for cold storage.

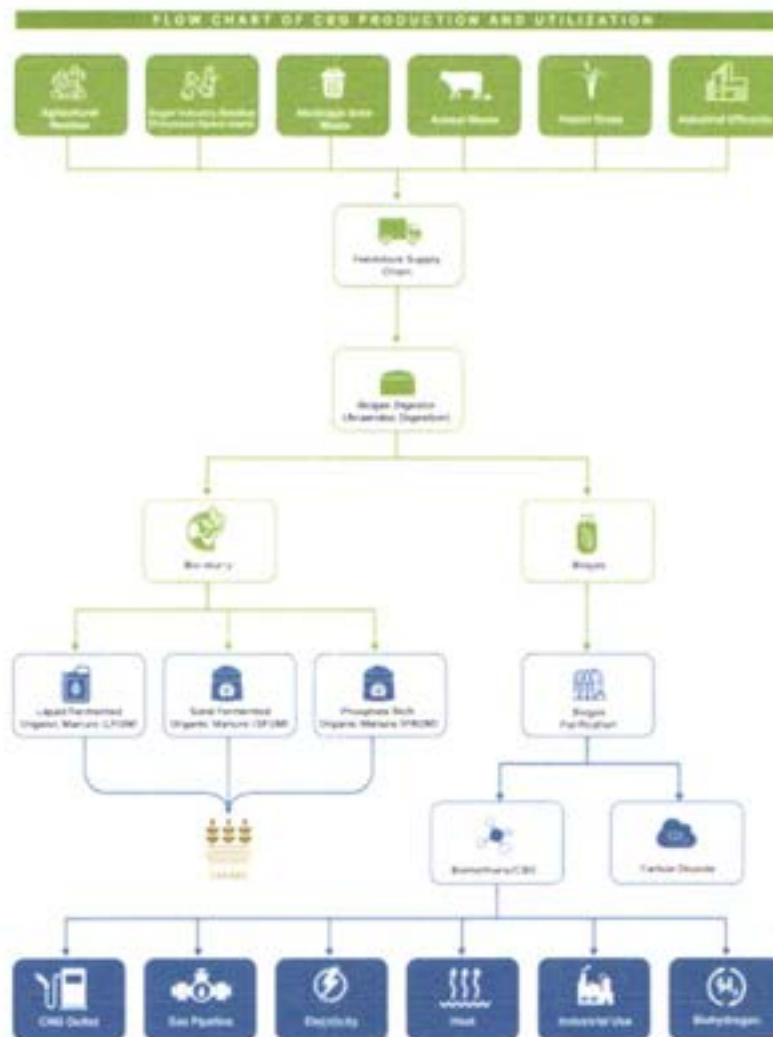
Distillation: Distillation serves to remove impurities based on the principle of hydro extraction. Dilution water to the distillation column is fed in such a way that it selects the higher alcohols and other impurities to move upwards and extracts ethanol down. The distillation column operates under vacuum. The column is heated using pre-rectifier cum exhaust column and alcohol vapors are condensed on the shell side of the distillation column reboiler. As the process continues, there is an inversion in relative volatilities of higher alcohols as compared to ethanol and these alcohols are separated in the top distillate.

(xxxiii) CBG

Depending upon the raw material being utilized for CBG production, set forth below are details key processes for CBG production:



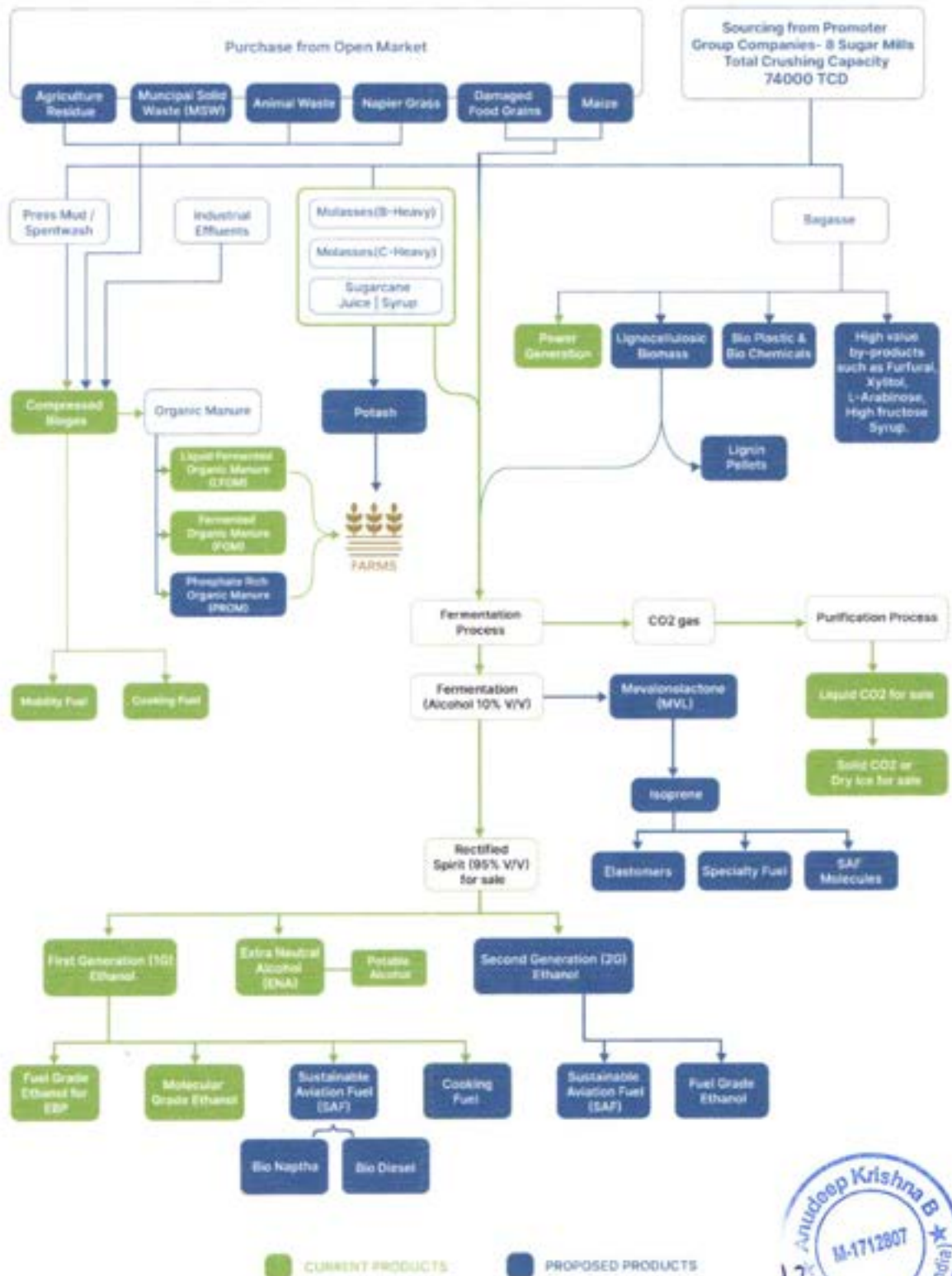
B. Anudeep



P. Aditya

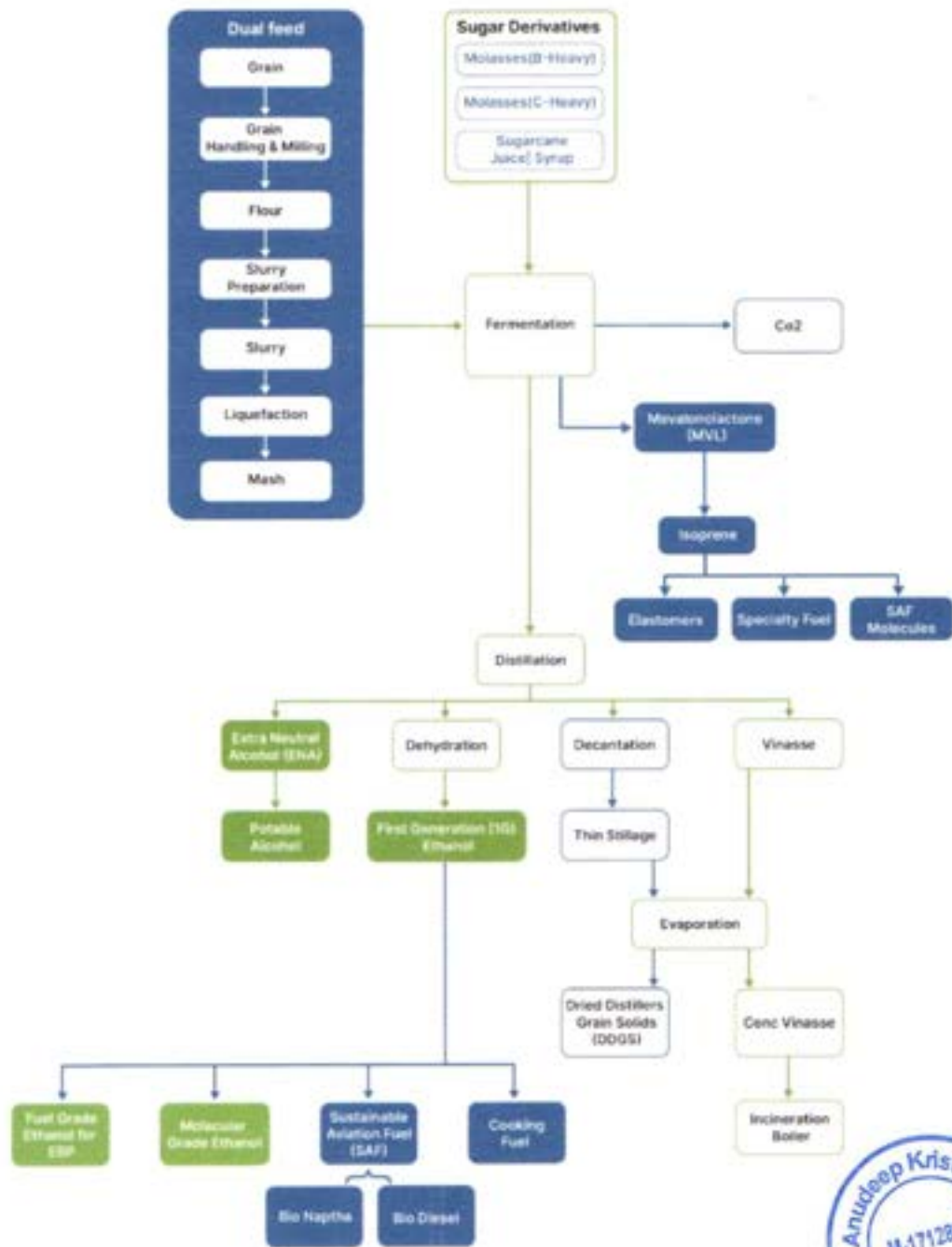


PRODUCTS FLOW CHART



P. Anudeep Krishna B
M-1712807
Assistant Engineer (India)

PROCESS FLOW CHART - 1G ETHANOL

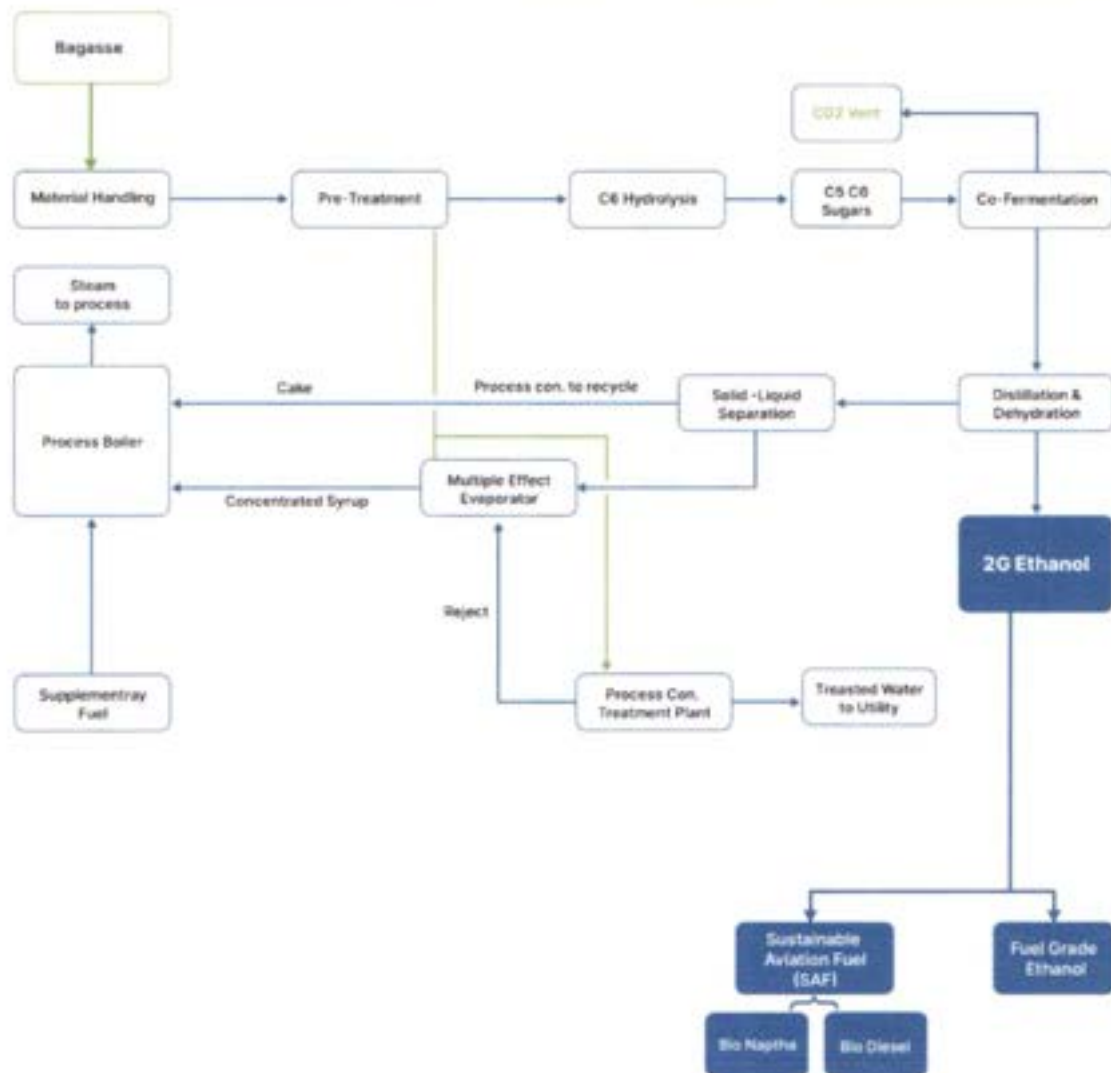


■ CURRENT PRODUCTS

■ PROPOSED PRODUCTS

B. Anudeep

PROCESS FLOW CHART - 2G ETHANOL

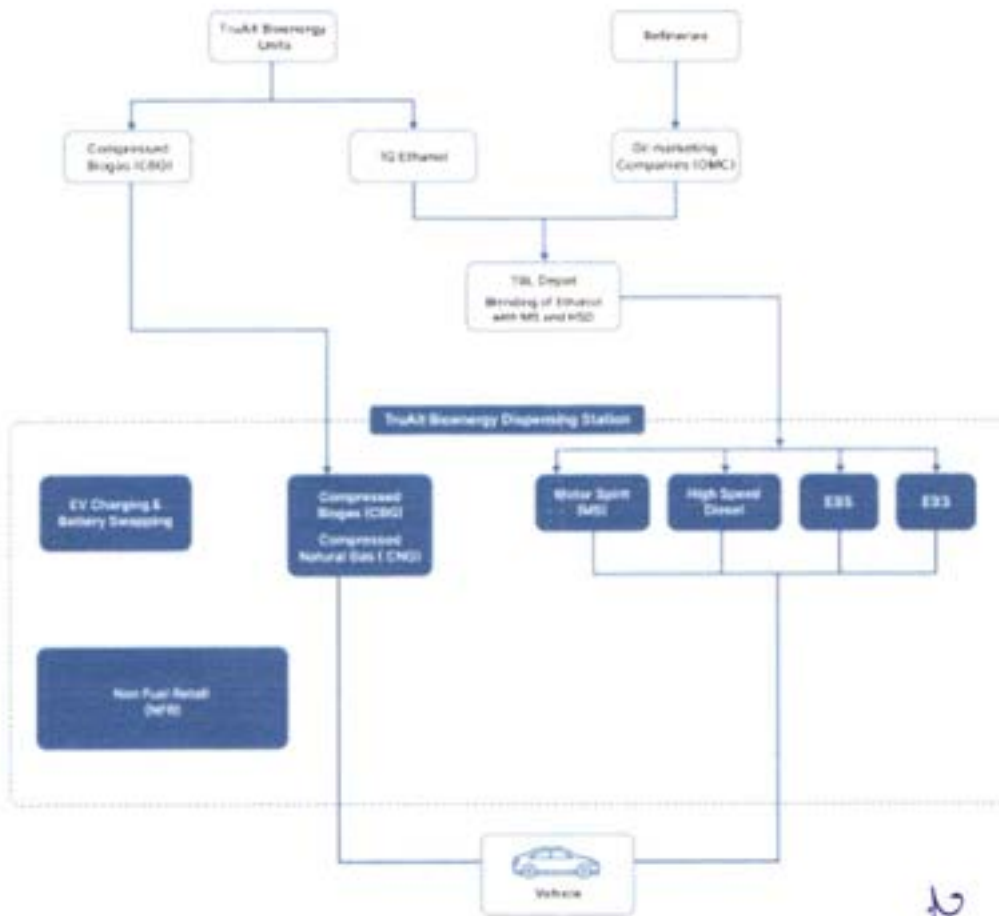


ETHANOL TO SAF CHART



P. Anubhav





B. A. S. 16

