RATING REPORT

Biotech Energy (Private) Limited

REPORT DATE:
29 March, 2023

RATING ANALYST:
Ali Yousuf
ali.yousuf@vis.com.pk

RATING DETAILS		
Rating Category	Initial Ratings	
	Long-term	Short-term
Entity	A	A-2
Rating Outlook	Stable	
Rating Date	*March 29, 2023*	

COMPANY INFORMATION	
Incorporated in 2014	**External auditors:** Zahid Jamil & Co.
Private Limited Company	**Group Chairman:** Mr. Taimur Shaikh
	Chief Executive Officer: Mr. Ali Taimur Shaikh

APPLICABLE METHODOLOGY(IES)
VIS Entity Rating Criteria: Industrial Corporates (August 2021)
https://docs.vis.com.pk/docs/CorporateMethodology202108.pdf

Biotech Energy (Private) Limited

OVERVIEW OF THE INSTITUTION	RATING RATIONALE

Biotech Energy (Private) Limited was incorporated in Pakistan in 2014, as a private limited company.

Profile of the Chairman: *The group is chaired by Mr. Taimur Shaikh who is a founder member of Biotech Energy. He holds BS degree from the London School of Economics & Political Science and has over 40 years of experience in industry and trading.*

Profile of the CEO: *Mr Ali Taimur Shaikh is the CEO at Biotech Energy is an M.A from University of Oxford with over 10 years of experience. He is a founder member as well and runs the Biodiesel refinery.*

Corporate Profile

Incorporated in 2014, Biotech is a private limited company involved in the production of Biodiesel with its refinery located in Sheikhpura. The Company is part of the Group Shaikh trust, a holding structure for the Shaikh family. The group is involved in owning and operating Bio Diesel refineries (*in the process of setting up a second generation Biodiesel refinery in Qatar)*, trading non-ferrous metals and investments in liquid and semi liquid asset classes.

Biotech specializes in advanced biofuel (second-generation) production, which involves utilizing feedstock that cannot be used for human consumption and is mainly composed of organic wastes and residues, used cooking oil, animal fat, and molasses. The biodiesel is a clean-burning diesel replacement that can be used in existing diesel engines without modification; it is comprised of mono-alkyl esters of long-chain fatty acids derived from vegetable oils or animal fats and created from an increasingly diverse mix of resources such as recycled cooking oil, soybean oil and animal fats.

The biofuels are segregated under 3 main categories:

Conventional biofuels (1st generation): Produced from 'food and feed crops' that include starch-rich crops, sugars and oil crops produced on agricultural land.

Advanced Biofuels (2nd generation): These are produced from feedstock that cannot be used for human consumption and are mainly organic wastes and residues, used cooking oil, animal fat and molasses, and palm oil mill effluent.

Advanced Biofuels non-established (3rd generation): It is based on improvements in the production of biomass and mainly includes algae, biomass from households and industrial waste, agriculture and forestry residue, energy crops.

Biodiesel is manufactured following a chemical process called transesterification whereby the glycerin is separated from the fat or vegetable oil; the process results in having two products – methyl esters (the chemical name for biodiesel) and glycerin which is a simple polyol compound that is a colorless, odorless, viscous liquid that is sweet-tasting and non-toxic used in various industries including Food, pharmaceutical, and personal care. Biodiesel has significant environmental benefits in terms of decreased global warming impacts, reduced emissions, greater energy independence and a positive impact on agriculture.

The Company produces 2nd generation EN14214 standard Biodiesel and sells it in European Market. Furthermore Biotech is the innovator and only producer of 'Poultry Feather Acid Oil Methyl Ester (PFAOME) in the world and is recognized by the UK Road Transport and Fuel Obligations.

The Group also runs the SAAF PUNJAB initiative, under which The Punjab Food Authority (PFA) has granted them license to collect used cooking oil from restaurants in Punjab.

Refinery capacity of the Company is tabled at 36,000/ton annually, however capacity utilization, historically has remained low, operating at around 49%. Reason for lower utilization has been on account management's strategy to conservatively ramp production in view of limiting leveraging of balance sheet. Additionally, in past years, the Company has invested in process enhancement and debottlenecking for localized feedstock funded through free cash flows, constraining cash for working capital.

Plant capacity and actual production	2020	2021	2022	HY 2023
Installed capacity per day in Metric Ton	123.28	123.28	123.28	123.28
Actual production per day in Metric Ton	11.48	20.63	35.32	60.18
Capacity Utilization	**9%**	**17%**	**29%**	**49%**

Total electricity required for the plant at peak load is 500KVA. The Company has 4 back up self-generation power plants with a total capacity of 3.4MW.

Sector Dynamics & Competitive landscape

The demand for the global biodiesel market is driven by a number of factors, including government policies and incentives to promote the use of renewable energy sources, increasing demand for biofuels in the transportation sector, and growing concerns over climate change and air pollution. Additionally, the biodiesel industry is benefiting from advancements in technology that have improved the efficiency and cost-effectiveness of production.

As per Renewable Energy Directive (RED) II of 2018 (refer to table below), the set new renewable energy targets to be achieved by 2030 for transport sector in EU is 14%. The contribution of advanced bio-diesel (2nd generation) (in the overall bio-diesel mix remains small with significant room for growth having no maximum cap compared to bio-diesel from conventional feedstock which is capped at 7%. As of today, EU meets 55% of its biodiesel requirements internally while importing the remaining.

The top global players in biodiesel production are REG (USA), ADM (USA) , Neste Oil Rotterdam (Netherlands), Louis Dreyfus (The Netherlands), Diester Industries (France), In terms of value, the biodiesel market is expected to reach $51.47 billion by 2029, at a CAGR of 3.6% during the forecast period 2022-2029.

The biodiesel market is a relatively new industry aging around 10-12 years, the sector in Pakistan is still in its early stages of development, with Biotech Energy is the sole exporter of biofuel from Pakistan. Despite significant livestock and agricultural industry, which are capable, to provide abundant raw materials the growth is slow. The main challenges facing the industry is a lack of infrastructure for biodiesel production and distribution. The Asia-Pacific region is expected to be the fastest-growing market for biodiesel due to increasing investments in the sector, favorable government policies, and the availability of raw materials.

Besides high cost of capital, feedstock collection network and stringent quality controls and certifications makes it challenging for new entrants to enter the market.

Key Rating Drivers

Export based business with presence of off take agreement and strong growth prospects supports business risk profile of the Company.

The Company's risk profile is bolstered by its export-based business, along with the presence of an offtake agreement and promising growth opportunities. Specifically, the Company produces standardized EN14214 standard bio diesel that is completely exported to the EU, with the majority of raw materials sourced locally and only a small portion, 4%, being imported (*namely Methyl)*. Given export-based revenues, import restrictions have not affected them adversely. Furthermore, the Company has secured a three-year offtake agreement with a Multinational oil company for 48,000 tons of bio diesel, ensuring a stable revenue stream, although capacity utilization remains on the lower side. Client concentration is on the higher side however, there is potential for growth due to strong demand for bio diesel fuel in the EU and Pakistan strategically placed with easy access to raw material on the back of a large edible oil consuming population.

Revenue growth and margin uptick to be supported by ramping of capacity

Sales crossed Rs. 4bn mark in FY22 (FY21: Rs. 1.4bn) on the back of ~179% increase in volumes. This trend has continued in HY23 where the revenue figure stood at Rs. 4.4bn with the management projecting it to cross Rs.11bn by end FY23. The Company plans to ramp up its production capacity, which is expected to not only boost topline, but at the same time result in margin uptick as fixed cost coverage improve.

Price of bio-diesel is set by the international market without any control from the refineries i.e. all producers are price takers. It mostly trails international us green and waste premiums. Raw material prices also tailgate edible oil prices. Resultantly, margins have remained fairly stable ~20% historically, however, projected to increase sizably (26%) as the Company takes advantage of economies of scale. In addition, the Company also benefits from currency gains.

Operating margins increased sharply by more than 2x in HY23 to 15% (FY22: 6.5%) largely attributable to decrease in freight costs arising from the Company changing its freight mode from Iso containers to full vessel load after making necessary storage arrangements at Kemari port. Similarly, net margins are also expected to get an uplift considering improvement in fixed cost coverage as volumes pick up together with management plans to maintain gearing at reasonable levels.

Sound Capitalization indicators

Total equity base stood at Rs. 3.5b (FY22: Rs. 2.2b) at end HY23. The Company has limited long-term debt in the form of lease liabilities of Rs. 8m. Capitalization profile is reflective of management's conservative approach of keeping gearing low. Consequently, gearing was recorded at 0.19x in HY23 (FY22: 0.30x). While Company intends to take up additional short-term borrowing for working capital support to scale up production, gearing is expected to remain within reasonable levels. Projected working capital requirement at full capacity is estimated at Rs 2.1b which is planned to be funded through 40:60 debt equity ratio. Projected revenues and margins are expected to result in higher cash generation. .

Sound liquidity and cash flow coverage.

Liquidity metrics including current ratio and short-term borrowing coverage remain comfortable at 2.1x and 2.2x respectively. Cash flow coverage from Funds from Operations (FFO) also remain sound with FFO to LTD at 20% and debt servicing at 4x at end FY22. Working capital cycle has been streamlined from previous years. Collection cycle is relatively short with export proceeds realized in 7-10 days from shipment. Aging profile is considered sound.

Active oversight of sponsors and stringent compliance requirements

Sponsors are noted to take active part in the business operations, supported by a management team and strong supervisory structure. For effective oversight, 11 committees, including Internal Audit Committee, Engineering Committee & Remuneration Committee are in place. The CEO has active participation in all committee meetings. Management team expertise bodes well for the Company.

Overall scope and functioning of internal audit, operations and IT function is considered adequate. In addition, Company remains under close surveillance and regular audits by International Sustainability and Carbon Certification (ISCC) and European Union, in order to remain compliant as a Biodiesel supplier. The Company remains exposed to risk of non -compliance with international standards, resulting in revenue loss for the Company.

Sustainability impact of biodiesel business is a rating driver

Biodiesel being a renewal fuel source has a greater environmental impact through reduced greenhouse gas emissions and improved air quality. As per the European Renewable Energy Directive (RED), only Biofuels that have proof of sustainability can be sourced in Europe. To comply with that, Biotech has secured International Sustainability and Carbon Certification (ISCC), which entails an assessment of the entire biofuel supply chain and technical plant for calculation of all relevant emissions. As set out by RED, minimum Greenhouse Gas (GHG) emissions savings of at least 80% have to be achieved for all installations starting operations from Jan 2026. Biotech Energy (Pvt) Limited was first ISCC certified in July 2016 and remains certified till date with the latest certification recording GHG savings of 89%.

In addition, the Company has obtained ISO 9001 certification for Quality Management System, ISO 14001 for Environmental Management Systems and ISO 45001 for Occupational Health and Safety Management Systems.

Biotech Energy (Private) Limited **Appendix I**

Financial Statement	(Amount in Million)							
RATIO ANALYSIS	**FY19**	**FY20**	**FY21**	**FY22**	**HY23**	**FY23 (P)**	**FY24 (P)**	**FY25 (P)**
Gross Margin (%)	10.0%	22.1%	21.3%	19.4%	20.1%	26.7%	26.7%	26.7%
Net Margin (%)	-10.6%	0.7%	3.0%	3.5%	12.2%	19.3%	20.7%	21.2%
FFO to Long-Term Debt	1.47	8.79	58.92	19.68	145.49	NA	NA	NA
FFO to Total Debt	0.04	0.15	0.16	0.37	1.96	3.48	5.40	5.61
Debt Servicing Coverage Ratio (x)	2.90	3.90	2.34	4.12	13.41	3.90	3.90	3.90
ROAA (%)	-2.3%	0.2%	1.7%	4.9%	14.1%	33.1%	40.9%	29.9%
ROAE (%)	-3.4%	0.3%	2.5%	7.2%	19.3%	43.1%	50.6%	34.7%
Gearing (x)	0.40	0.38	0.35	0.30	0.19	0.13	0.08	0.05
Debt Leverage (x)	0.45	0.43	0.44	0.48	0.31	0.30	0.20	0.14
Current Ratio	1.42	1.58	1.61	1.54	2.07	2.33	4.38	6.57
Inventory + Receivables/ST Borrowings	1.35	1.37	1.67	1.32	2.19	5.25	5.39	5.47

ISSUE/ISSUER RATING SCALE & DEFINITIONS Appendix II

VIS Credit Rating Company Limited

RATING SCALE & DEFINITIONS: ISSUES / ISSUERS

Medium to Long-Term

AAA
Highest credit quality; the risk factors are negligible, being only slightly more than for risk-free Government of Pakistan's debt.

AA+, AA, AA-
High credit quality; Protection factors are strong. Risk is modest but may vary slightly from time to time because of economic conditions.

A+, A, A-
Good credit quality; Protection factors are adequate. Risk factors may vary with possible changes in the economy.

BBB+, BBB, BBB-
Adequate credit quality; Protection factors are reasonable and sufficient. Risk factors are considered variable if changes occur in the economy.

BB+, BB, BB-
Obligations deemed likely to be met. Protection factors are capable of weakening if changes occur in the economy. Overall quality may move up or down frequently within this category.

B+, B, B-
Obligations deemed less likely to be met. Protection factors are capable of fluctuating widely if changes occur in the economy. Overall quality may move up or down frequently within this category or into higher or lower rating grade.

CCC
Considerable uncertainty exists towards meeting the obligations. Protection factors are scarce and risk may be substantial.

CC
A high default risk

C
A very high default risk

D
Defaulted obligations

Short-Term

A-1+
Highest certainty of timely payment; Short-term liquidity, including internal operating factors and /or access to alternative sources of funds, is outstanding and safety is just below risk free Government of Pakistan's short-term obligations.

A-1
High certainty of timely payment; Liquidity factors are excellent and supported by good fundamental protection factors. Risk factors are minor.

A-2
Good certainty of timely payment. Liquidity factors and company fundamentals are sound. Access to capital markets is good. Risk factors are small.

A-3
Satisfactory liquidity and other protection factors qualify entities / issues as to investment grade. Risk factors are larger and subject to more variation. Nevertheless, timely payment is expected.

B
Speculative investment characteristics; Liquidity may not be sufficient to ensure timely payment of obligations.

C
Capacity for timely payment of obligations is doubtful.

Rating Watch: VIS places entities and issues on 'Rating Watch' when it deems that there are conditions present that necessitate re-evaluation of the assigned rating(s). Refer to our 'Criteria for Rating Watch' for details. www.vis.com.pk/images/criteria_watch.pdf

Rating Outlooks: The three outlooks 'Positive', 'Stable' and 'Negative' qualify the potential direction of the assigned rating(s). An outlook is not necessarily a precursor of a rating change. Refer to our 'Criteria for Rating Outlook' for details.www.vis.com.pk/images/criteria_outlook.pdf

(SO) Rating: A suffix (SO) is added to the ratings of 'structured' securities where the servicing of debt and related obligations is backed by some sort of financial assets and/or credit support from a third party to the transaction. The suffix (SO), abbreviated for 'structured obligation', denotes that the rating has been achieved on grounds of the structure backing the transaction that enhanced the credit quality of the securities and not on the basis of the credit quality of the issuing entity alone.

(blr) Rating: A suffix (blr) is added to the ratings of a particular banking facility obtained by the borrower from a financial institution. The suffix (blr), abbreviated for 'bank loan rating' denotes that the rating is based on the credit quality of the entity and security structure of the facility.

'p' Rating: A 'p' rating is assigned to entities, where the management has not requested a rating, however, agrees to provide informational support. A 'p' rating is shown with a 'p' subscript and is publicly disclosed. It is not modified by a plus (+) or a minus (-) sign which indicates relative standing within a rating category. Outlook is not assigned to these ratings. Refer to our 'Policy for Private Ratings' for details. www.vis.com.pk/images/policy_ratings.pdf

'SD' Rating: An 'SD' rating is assigned when VIS believes that the ratee has selectively defaulted on a specific issue or obligation but it will continue to meet its payment obligations on other issues or obligations in a timely manner.

REGULATORY DISCLOSURES — Appendix III

Name of Rated Entity	Biotech Energy (Private) Limited
Sector	Renewable Energy
Type of Relationship	Solicited
Purpose of Rating	Entity Rating

Rating History

Rating Date	Medium to Long Term	Short Term	Rating Outlook	Rating Action
		RATING TYPE: Entity		
29/3/2023	A	A-2	Stable	Initial

Statement by the Rating Team	VIS, the analysts involved in the rating process and members of its rating committee do not have any conflict of interest relating to the credit rating(s) mentioned herein. This rating is an opinion on credit quality only and is not a recommendation to buy or sell any securities.
Probability of Default	VIS' ratings opinions express ordinal ranking of risk, from strongest to weakest, within a universe of credit risk. Ratings are not intended as guarantees of credit quality or as exact measures of the probability that a particular issuer or particular debt issue will default.
Disclaimer	Information herein was obtained from sources believed to be accurate and reliable; however, VIS does not guarantee the accuracy, adequacy or completeness of any information and is not responsible for any errors or omissions or for the results obtained from the use of such information. Copyright 2023 VIS Credit Rating Company Limited. All rights reserved. Contents may be used by news media with credit to VIS.

Due Diligence Meeting Conducted

Name	Designation	Date
Mr. Ali Taimur Shaikh	CEO	March 6, 2023
Mr. Adeel Aleem	CFO	
Mr. Umair Amjad	Manager Accounts and Taxation	