RATING REPORT

Biotech Energy (Private) Limited

REPORT DATE:
April 16, 2025

RATING ANALYST:
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RATING DETAILS				
Rating Category	**Current Ratings**		**Previous Ratings**	
	Long-term	**Short-term**	**Long-term**	**Short-term**
Entity	A	A1	A	A1
Rating Outlook	Stable		Stable	
Rating Action	Reaffirmed		Upgrade	
Rating Date	*April 16, 2025*		*September 21, 2023*	

COMPANY INFORMATION	
Incorporated in 2014	**External auditors:** Baker Tilly Mehmood Idrees Qamar Chartered Accountants
Private Limited Company	**Group Chairman:** Mr. Taimur Shaikh
Key Shareholders (with stake 5% or more):	**Chief Executive Officer:** Mr. Ali Taimur Shaikh
Safco Venture Holdings Ltd through Mohammad Ali Taimur Shaikh – 91.21%	
Mr. Saeed Kausar – 8.79%	

APPLICABLE METHODOLOGY(IES)

VIS Entity Rating Criteria Methodology – Industrial Corporates (May 2023)
https://docs.vis.com.pk/docs/CorporateMethodology.pdf

APPLICABLE RATING SCALE(S)

VIS Issue/Issuer Rating Scale:
https://docs.vis.com.pk/docs/VISRatingScales.pdf

Biotech Energy (Private) Limited

OVERVIEW OF THE INSTITUTION

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

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 founder and 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.

RATING RATIONALE

Corporate Profile

Biotech Energy (Private) Limited ('Biotech' or 'the Company') is engaged in biodiesel production and is part of the Safco Venture Holdings, a family-owned holding structure with diverse business interests. The Chairman of Biotech is also the controlling party of the group and represents the 4th generation of the family business, while the CEO belongs to the fifth. The Group has successfully navigated the generational transition and now appears to have a strong governance structure with controls in place. The group is involved in biodiesel refining. Additionally, its portfolio includes non-ferrous metal trading and investments in liquid and semi-liquid asset classes. Expanding its presence in renewable energy, the group is also venturing into sustainable aviation fuel (SAF) production, marking a first-of-its-kind initiative in Pakistan.

Biotech focuses on second-generation biofuels, utilizing non-food feedstocks primarily derived from organic waste, including used cooking oil, animal fats, and molasses. Its biodiesel serves as a cleaner alternative to conventional diesel, compatible with existing diesel engines without requiring significant modifications. The fuel consists of mono-alkyl esters of long-chain fatty acids, sourced from various renewable inputs such as recycled cooking oil, soybean oil, and animal fats. As a widely traded commodity, biodiesel plays a crucial role in public transportation, particularly across European markets.

The biofuels are segregated under 3 main categories (Biotech is producing the 2nd generation biodiesel):

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 produced through transesterification, a chemical process that separates glycerin from fats or vegetable oils. This results in two products: methyl esters (biodiesel) and glycerin, a non-toxic, sweet-tasting compound used in the food, pharmaceutical, and personal care industries. Biodiesel offers environmental benefits, including lower emissions, reduced climate change impact, enhanced energy independence, and support for agriculture.

Biotech manufactures 2nd-generation EN14214-standard biodiesel, the highest industry standard, and exports it to European markets, providing a value-added advantage. Additionally, the company is the sole global producer of Poultry Feather Acid Oil Methyl Ester (PFAOME), recognized by the UK Road Transport and Fuel Obligations. The Group also operates the SAAF PUNJAB initiative, which is licensed by the Punjab Food Authority

(PFA) to collect used cooking oil from restaurants across Punjab. This initiative supports sustainable waste management by repurposing waste oils for biofuel production.

Sector Dynamics & Competitive landscape

The global biodiesel market continues to experience growth, driven by government policies promoting renewable energy, increased demand in the transportation sector, and technological advancements enhancing production efficiency. As of 2024, the market was valued at approximately USD 36.7 billion and is projected to reach USD 49.4 billion by 2030, with a compound annual growth rate (CAGR) of 5.1%.

In the European Union (EU), regulatory measures play a crucial role in shaping biodiesel demand. The revised Renewable Energy Directive (RED II), adopted in 2023, sets a binding renewable energy target of 42.5% by 2030, with an ambition to reach 45%. For the transport sector, EU member states must achieve either a 14.5% reduction in greenhouse gas intensity from renewables or ensure at least 29% of the sector's energy consumption comes from renewable sources. Advanced biodiesel (2nd generation) continues to hold significant growth potential, as it faces no maximum cap, unlike biodiesel derived from conventional feedstock, which is limited to 7%.

Pakistan's biodiesel industry remains in its early stages, with Biotech Energy as the sole exporter. While the country has a large agricultural and livestock base that could support biodiesel production, several barriers hinder new entrants. The high cost of capital, the need for a specialized feedstock collection network, and stringent quality control and certification requirements pose significant challenges. Additionally, a lack of production and distribution infrastructure has slowed industry expansion. However, as global demand for sustainable fuels rises and regulatory frameworks evolve, Pakistan has the potential to develop its biodiesel sector further, particularly exports.

Operational Profile

Over the years, Biotech has made incremental capacity additions and process modifications to support operational efficiency. By FY24, Biotech incurred capital expenditure of Rs. 6.73b (FY23: Rs. 4.56b), with key additions worth Rs. 2.17b including machinery for the third phase of its project, upgrades to pre-treatment technology, and the installation of an Industrial Distillation Tower for biodiesel production. The Capex also covered process control systems, heat exchangers, pressure management equipment, and a new PEB-based shed structure to safeguard critical boiler areas for enhanced operational efficiency.

The Company operates four self-generation power plants with a total capacity of 3.4 MW, against a peak electricity requirement of 500 KVA or 0.4 MW. The power mix consists of two HFO-based and two diesel-based generators, mitigating risks associated with power supply fluctuations.

Production capacity utilization improved in FY24. While installed capacity remained unchanged at 123.28 metric tons per day (MTPD), the actual production rose to 89.50 MTPD, bringing capacity utilization to 73%. According to management, the improvement was driven by enhanced operational efficiencies and higher demand, supported by the addition of a new client with a one-year sales contract, which has a strong likelihood of renewal. Comparative figures are provided in the table below.

Metric	*FY23*	*FY24*
Installed Capacity (MTPD)	123.28	123.28
Actual Production (MTPD)	77.30	89.50

Capacity Utilization (%)	63	73

Future operational plans focus on improving production efficiency, for which Biotech has planned further BMR initiatives, primarily for plant maintenance, process optimization and equipment upgrades, with an estimated budget of up to Rs. 300m for 2025. No other major Capex plans are currently in the pipeline.

Key Rating Drivers

Business Risk Profile

The Company's business risk profile is supported by its export-oriented operations, the presence of offtake agreements, and favorable growth prospects.

Biotech manufactures biodiesel meeting the EN14214 standard (highest standard), which is entirely exported to the EU. Stringent compliance requirements are in place, with regular audits conducted by the International Sustainability and Carbon Certification (ISCC) and the European Union to maintain certification as a biodiesel supplier. Continued compliance with international standards is the driving rating factor; as revenues are dependent on the same.

Revenue stability is reinforced by sales contracts, with structured payment terms. While contract renewals remain a ratings consideration, the risk of non-renewal is considered limited, as fuel buyers seldom change suppliers due to stringent quality standards and long-term trust-based relationships. Additionally, the broader group has established connections with one of the world's leading oil and energy companies, providing further revenue stability in case existing contracts are not extended.

Customer concentration remains high. Nonetheless, the EU's sustained demand for biodiesel and Pakistan's strategic access to feedstock due to high edible oil consumption present opportunities for expansion. This is supported by Biotech onboarding a new client during the period under review.

Raw material sourcing is predominantly domestic, with only 3.5% comprising imported inputs (Methyl) needed as catalysts, minimizing exposure to import restrictions and fluctuations in pricing arising due to exchange rate movement.

Sponsor Profile

The sponsors maintain a hands-on approach in business operations, supported by a well-structured management team and strong governance framework. Oversight is strengthened through 11 dedicated committees, including the Internal Audit Committee, Engineering Committee, and Remuneration Committee, with the CEO actively participating in all committee meetings. The management team provides strategic direction and has worked well to continuously improve operational efficiency. The Company's internal audit, operational, and IT functions are considered well-developed.

Environmental, Social and Governance (ESG)

Biotech's ESG (Environmental, Social, and Governance) initiatives remain a key consideration in the rating assessment, given their role in regulatory compliance, operational sustainability, and long-term risk mitigation. The company's production of biodiesel (FAME) and Sustainable Aviation Fuel (SAF) contributes to lower greenhouse gas (GHG) emissions compared to fossil fuels. The use of Used Cooking Oil (UCO) and waste-based

oils as primary feedstock aligns with the circular economy principles, reducing environmental waste. Additionally, the company's biofuels facilitate a reduction of up to 85% in CO_2 emissions, supporting industry-wide decarbonization targets. The stated objective of achieving Net-Zero emissions by 2050 involves the adoption of new technologies and the expansion of waste feedstock collection points (currently 3000+ in the country).

Beyond environmental factors, Biotech Energy's social and governance policies influence the company's risk profile and compliance framework. The company adheres to global ESG reporting standards, including EU sustainability frameworks, ensuring alignment with international regulatory requirements. Workplace safety measures, employee training programs on health & safety, skill development, and environmental awareness, and adherence to ISO 14001, ISO 9001, and ISO 45001 standards contribute to operational stability. Compliance with ISCC EU and RED II regulations is relevant for regulatory risk management, while financial transparency is supported through IFRS-aligned audited accounts and ethical sourcing policies. These factors collectively impact the rating assessment by addressing regulatory compliance, sustainability commitments, and governance practices.

Profitability Profile

The Company has recently optimized its capacity utilization, by enhancing operational efficiency, resulting in higher production and consequently boosting the topline, marking an increase of ~17% in net sales (FY24: Rs. 10.07b; FY23: Rs. 8.63b). The pricing of biodiesel remains subject to international market dynamics, with producers being price takers. Prices are primarily influenced by green and waste-based feed stock premiums, while raw material costs follow trends in edible oil prices. Gross margins in FY24 reverted to prior levels after experiencing a temporary increase in FY23, which was driven by exchange rate fluctuations. The stabilization of exchange rates in FY24 limited any exchange gains on inventory, leading to the normalization of margins.

Operating margins followed a similar trajectory to gross margins; however, margins from operations increased at a slightly higher rate than gross margins in FY23 and declined at a relatively lower rate in FY24, with a differential of 3-5%. This was driven by a significant reduction in freight costs, following a shift from ISO containers to full vessel loads with storage arrangements at Kemari Port, resulting in efficiencies in selling and distribution expenses; though this has increased the sales and cash cycle, requiring the company to mobilize short term borrowings.

A greater reliance on short-term borrowings led to elevated financial charges for working capital, contributing to a decline in net margins to 9.2% in FY24 (FY23: 19.0%). However, as volumes continue to grow, improved fixed cost absorption and management's focus on maintaining gearing at reasonable levels are expected to support profitability going forward.

Capitalization Profile

The Company has historically maintained a conservative capitalization profile reflected in moderate gearing. In FY24, gearing increased to 0.57x (FY23: 0.29x) due to higher short-term debt drawdowns; through remaining within manageable levels. While the Company plans to utilize short-term debt to move away from supplier credit, gearing is expected to remain within reasonable levels due to sufficient internal cashflows.

The projected working capital requirement at full capacity is estimated at Rs. 2.5b, planned to be funded through short-term borrowings. Projected revenues and margins are expected to support cash generation. BMR initiatives would be financed through internal cash generation, while no major Capex plans are currently in the pipeline.

Coverage Profile

During FY24, the coverage profile normalized due to higher debt utilization in an elevated interest rate environment and stabilization of profitability margins. This resulted in a contraction of the debt service coverage ratio (DSCR) to 4.40x (FY23: 18.95x), aligning with historical trends while remaining at a healthy level.

Liquidity profile

The management continues to prioritize an aggressive investment strategy focusing on BMR initiatives to improve efficiency. Biotech invested approximately PKR 2.2 billion in BMR during FY24, channeling much of its liquidity here. Simultaneously, the accumulation of trade debts due to invoiced products being stored at Kemari port, awaiting shipment, led to liquidity constraints, prompting the company to finance working capital through short term funding. This has impacted its current ratio and short-term debt coverage with both declining to 1.34x (FY23: 2.11x) and 0.91x (FY23: 1.62x), respectively. While short-term debt coverage has been noted to come under stress, we expect this to alleviate to an extent in the on-going year with BMR costs limited to Rs. 300m and expectations regarding FFO to be higher than this.

Biotech Energy (Private) Limited Appendix I

Financial Summary				
Ratio Analysis	FY21A	FY22A	FY23A	FY24A
Gross Margin (%)	21.3%	19.4%	29.6%	20.6%
Operating Margin (%)	6.8%	6.2%	20.7%	13.3%
Net Margin (%)	3.0%	3.5%	19.0%	9.2%
Funds from Operation (FFO) (PKR Millions)	106	237	1,938	1,299
FFO to Total Debt* (%)	16.0%	35.8%	120.3%	33.2%
FFO to Long Term Debt* (%)	850.6%	2203.2%	2457.2%	1324.0%
Gearing (x)	0.46	0.40	0.29	0.57
Leverage (x)	0.57	0.63	0.35	0.64
Debt Servicing Coverage Ratio* (x)	3.31	4.23	18.95	4.40
Current Ratio (x)	1.61	1.54	2.11	1.34
(Stock in trade + trade debts) / STD (x)	1.69	1.36	1.62	0.91
Return on Average Assets* (%)	1.7%	5.0%	25.3%	8.0%
Return on Average Equity* (%)	3.1%	9.5%	45.2%	14.8%
Cash Conversion Cycle (days)	291	82	77	114

**Annualized, if required*
A - Actual Accounts
P - Projected Accounts
M - Management Accounts

REGULATORY DISCLOSURES — Appendix II

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				
16/4/2025	**A**	**A-1**	**Stable**	**Reaffirmed**
21/9/2023	A	A-1	Stable	Upgrade
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.
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Due Diligence Meeting Conducted

Name	Designation	Date
Ali Shaikh	CEO	14th February, 2025
Adeel Aleem	CFO	
Umair Amjad	Company Secretary	