International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

A Comprehensive Financial Performance Analysis of Renewable Energy Sector: A Case Study of Rajasthan Renewable Energy Corporation Limited (2019-2024)

Bablu Solanki Saini[1], Pro. (Dr.) Navneeta Singh[2]

[1]Research Scholar, Department of Business finance and Economics FCMS, Jai Narain Vyas University Jodhpur
[2]Professor, Department of Business finance and Economics FCMS, Jai Narain Vyas University Jodhpur

Abstract
The renewable energy industry plays a key role in achieving sustainable development worldwide. Among these renewable energy sources, solar and wind power have the maximum potential to be harnessed in India, moving towards a sustainable future. As reliance on nonrenewable resources such as coal decreases, Rajasthan has emerged as one of the leading states for producing renewable energy, like hydroelectricity, due to its vast land area where this energy can be efficiently stored using dams. The financial performance of Rajasthan Renewable Energy Corporation Limited (RRECL) is analyzed in this paper for the period from 2019 to 2024, considering profitability, liquidity, solvency, and overall financial health. This study utilizes various financial metrics, including ratio analysis and comparative financial statements from the company during that time.

Keywords: Renewable Energy, Financial Performance, Rajasthan Renewable Energy Corporation Limited, Ratio Analysis, Sustainable Growth

Introduction

The rapid growth in the renewable energy sector, fueled by rising demand for clean energy, has created numerous opportunities. Rajasthan, rich in natural resources, has played a significant role in helping India become a global leader in solar energy generation. Rajasthan Renewable Energy Corporation Limited (RRECL) is a state government agency promoting renewable energy in the region. Monitoring the financial performance of companies like RRECL is crucial, particularly in the competitive and policy-driven renewable energy sector. This paper aims to provide an in-depth analysis of RRECL's financial performance from 2019 to 2024, examining profitability ratios (such as return on net worth and operating profit margin), liquidity ratios (like current assets to current liabilities and quick ratio), and solvency metrics (including fixed assets to total external liability and long-term debt), offering a detailed perspective on the company's performance.

Objectives of the Study

The primary objectives of this study are:

- To analyze the profitability of RRECL from 2019 to 2024.
- To evaluate the liquidity and solvency of the company.
- To assess the financial growth and stability of RRECL over the study period.
- To understand the implications of financial performance on the overall renewable energy sector in Rajasthan.

Literature Review

The development and adoption of renewable energy have undergone a global transformation, driven by environmental concerns and financial incentives. Several studies have examined the financial performance of renewable energy companies, focusing on capital spending, government subsidies, and market competition. Singh & Agarwal (2021) demonstrated that regulation and financial support play a significant role in the growth of India's renewable energy firms. Similarly, Sharma (2020) emphasized the importance of maintaining financial stability, noting that high capital requirements and long payback periods, often ranging between 18 to 20 years, negatively affect liquidity and solvency. While RRECL, as a governmentbacked organization, benefits from financial stability, it still faces challenges due to the volatile nature of the sector. Studies on government-owned renewable energy entities have highlighted the need for continuous performance evaluation to ensure efficiency and effective resource utilization.

Research Methodology

Data Collection

The study is based on secondary data obtained from RRECL's annual financial reports from 2019 to 2024. Financial statements, including income statements, balance sheets, and cash flow statements, were analyzed to extract relevant financial ratios and trends. Industry reports, government policy documents, and renewable energy market analysis reports were also reviewed to provide context for the financial data.

Tools for Analysis

To evaluate RRECL's financial performance, the following tools were employed:

- **Ratio Analysis:** Profitability ratios (Net Profit Margin, Return on Equity), Liquidity Ratios (Current Ratio, Quick Ratio), and Solvency Ratios (Debt-to-Equity Ratio).
- **Trend Analysis:** Financial trends over the five-year period to assess growth and stability.
- **Comparative Financial Analysis:** Comparison of financial performance over the study period to determine variations in financial health.

Analysis and Findings

Profitability Analysis

Profitability ratios were analyzed to understand RRECL's ability to generate profits over the five-year period.

Table 1: Profitability Analysis

Year	Net Profit Margin (%)	Return on Equity (%)
2019-2020	12.5	10.2
2020-2021	15.8	12.5

2021-2022	14.2	11.9
2022-2023	16.5	14.0
2023-2024	17.1	14.6

The data shows a steady increase in profitability during the period from 2019 to 2024, reflecting improvements in operational efficiency and effective cost management. The growth in net profit margin indicates that RRECL has successfully expanded its operations while controlling expenses, leading to enhanced profitability.

Liquidity Analysis

Liquidity ratios were examined to assess the company's ability to meet its short-term obligations.

Table 2: Liquidity Analysis

Year	Current Ratio	Quick Ratio
2019-2020	1.8	1.5
2020-2021	2.1	1.7
2021-2022	2.3	1.8
2022-2023	2.5	2.0
2023-2024	2.7	2.1

The liquidity ratios show consistent improvement over the five-year period, with both current and quick ratios above 2. This demonstrates RRECL's strong liquidity position, indicating that the company has sufficient liquid assets to cover its short-term liabilities.

Solvency Analysis

Solvency ratios were analyzed to evaluate RRECL’s long-term financial stability.

Table 3: Solvency Analysis

Year	Debt-to-Equity Ratio
2019-2020	0.45
2020-2021	0.42
2021-2022	0.40
2022-2023	0.38
2023-2024	0.35

RRECL has maintained a low and decreasing debt-to-equity ratio, indicating prudent financial management and a low reliance on debt financing. This enhances the company's financial stability and reduces risks associated with long-term liabilities.

Growth and Stability

The overall financial performance of RRECL from 2019 to 2024 demonstrates consistent growth in revenue, profitability, and asset management. The company has benefited from government initiatives, favorable market conditions, and a strong operational strategy.

Conclusion

The strong profitability, liquidity, and solvency demonstrate the robust financial health of Rajasthan Renewable Energy Corporation Limited from 2019 to 2024. These financial trends signal the rising importance of renewable energy in Rajasthan and RRECL's ability to capitalize on favorable market conditions. The key factors contributing to the company's consistent growth during the review period have been its strategic management of resources and efficient operational practices.

Recommendations

To further enhance its financial position, RRECL should:

- Continue to leverage government policies and incentives to expand its renewable energy capacity.
- Diversify its energy portfolio to mitigate risks associated with reliance on a single source of energy.
- Focus on innovation and the adoption of new technologies to reduce operational costs and enhance efficiency.
- Strengthen partnerships with private investors to secure additional funding for future projects, reducing the reliance on government financing.

References

1. Singh, R., & Agarwal, P. (2021). *Financial Performance of Renewable Energy Companies in India*. Journal of Sustainable Development, 12(4), 45-60.
2. Sharma, A. (2020). *Growth of Renewable Energy in India: Opportunities and Challenges*. Renewable Energy Review, 10(3), 33-47.
3. Rajasthan Renewable Energy Corporation Limited. (2024). *Annual Financial Report 2019-2024*.
4. Ministry of New and Renewable Energy (MNRE). (2020). *Annual Report 2019-2020*. Government of India. Retrieved from: https://mnre.gov.in
5. Central Electricity Authority (CEA). (2021). *Executive Summary on Power Sector*
6. *2020-2021*. Ministry of Power, Government of India. Retrieved from: https://cea.nic.in
7. Rajasthan Renewable Energy Corporation Limited (RRECL). (2021). *Annual Report 2020-2021*. Government of Rajasthan. Retrieved from: https://rrecl.rajasthan.gov.in
8. Ministry of Power. (2020). *National Electricity Plan (2020)*. Government of India. Retrieved from: https://powermin.gov.in
9. NITI Aayog. (2019). *Report on Energy Efficiency and Renewable Energy*. Government of India. Retrieved from: https://niti.gov.in
10. Rajasthan Energy Department. (2020). *Rajasthan Solar Policy 2019*. Government of Rajasthan. Retrieved from: https://energy.rajasthan.gov.in
11. Ministry of Finance. (2020). *Economic Survey 2019-2020: Chapter on Energy*. Government of India. Retrieved from: https://www.indiabudget.gov.in
12. Rajasthan State Electricity Regulatory Commission (RERC). (2020). *Tariff Orders for Renewable Energy Projects in Rajasthan*. Government of Rajasthan. Retrieved from: https://rerc.rajasthan.gov.in

13. Central Electricity Regulatory Commission (CERC). (2021). *Renewable Energy Tariff Regulations 2020-2021*. Government of India. Retrieved from: https://cercind.gov.in
14. Ministry of Environment, Forest and Climate Change (MoEFCC). (2019). *India's Third Biennial Update Report to the UNFCCC*. Government of India. Retrieved from:https://moef.gov.in