Investment Plan

1 Million Tons/Year Coal Gasification Slag Comprehensive Utilization Project

Jiuyuan District, Baotou, Inner Mongolia

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Date: January 2026

I. Project Overview

Item	Details
Project Name	Annual 1 Million Tons Coal Gasification Slag Resource Utilization Project, Jiuyuan District, Ba
Construction Unit	Inner Mongolia Lvbaoxin Environmental Technology Co., Ltd.
Construction Location	Jiuyuan District, Baotou, Inner Mongolia Autonomous Region
Construction Nature	New Construction
Construction Period	March 2026 - March 2027, total 12 months
Total Investment	RMB 681.8924 million

II. Product Plan and Capacity

Product Line	Product	Annual Capacity	Unit
Acid Leaching Line	Liquid Polyaluminum Chloride	320,000	tons
Acid Leaching Line	Solid Polyaluminum Chloride	480,000	tons
Acid Leaching Line	White Carbon Black	240,000	tons
Glass-ceramic Line	Standard Glass-ceramic	180,000	tons
Glass-ceramic Line	Special Glass-ceramic	20,000	tons

III. Technology Route

Adopting dual-line parallel process of "Acid Leaching Line + Glass-ceramic Line":

Acid Leaching Line: Acid leaching → Solid-liquid separation → Concentration polymerization → Producing polyaluminum chloride and white carbon black

Glass-ceramic Line: Batching → Melting → Forming → Crystallization → Producing glass-ceramic

Technical Features: Comprehensive resource utilization rate ≥90%, energy consumption reduced by over 20% compared with traditional process

IV. Investment Estimation (Unit: RMB 10,000)

Item	Amount	Proportion
Construction Investment	600,000	87.99%
Initial Working Capital	38,690	5.67%
Other Costs	43,202	6.34%
Total Investment	**681,892**	**100%**

V. Financing Plan

Source	Amount (RMB 10,000)	Proportion
Enterprise Self-financing	201,300	29.52%
Bank Loan	380,590	55.81%
Green Bonds	50,000	7.33%
Strategic Equity Investment	50,000	7.33%
Total	**681,890**	**100%**

Financing Method: Apply for bank loan, term 5 years, interest rate 6%, equal principal and interest repayment.

VI. Financial Benefit Analysis

Indicator	Value
Annual Output Value (Full Production)	RMB 1.26 billion
Average Annual Net Profit	RMB 323.7413 million
After-tax IRR	51.19%
After-tax NPV (Discount Rate 13%)	RMB 744.7774 million
Static Investment Payback Period	3.05 years (excluding construction period)
Break-even Point	23.30%
DSCR	2.68
ICR	29.65

VII. Social and Environmental Benefits

Employment Driving: Providing 145 direct jobs, indirectly driving thousands of employment opportunities

Tax Contribution: Average annual VAT RMB 83.6588 million, income tax RMB 107.9138 million

Environmental Benefits: Annual processing 1 million tons of coal gasification slag, reducing solid waste pollution, improving comprehensive resource utilization rate

Industrial Driving: Promoting circular economy and new materials industry development, helping regional green transformation

VIII. Risk Analysis and Response

Risk Type	Risk Description	Response Measures
Market Risk	Product price fluctuations, market competition	Long-term supply agreements, diversified sales channels, cost advant
Technical Risk	Process scaling-up, product quality stability	Mature industrial technology, pilot verification, technical team support
Fund Risk	Financing not in place, capital turnover	Diversified financing channels, financial control, working capital reserv
Policy Risk	Environmental protection, tax policy changes	Close policy tracking, green production, policy compliance

IX. Conclusion and Recommendations

This project conforms to national circular economy and bulk solid waste comprehensive utilization policies, with mature technology, broad market prospects, and good economic and social benefits.

Recommendations:

- Accelerate preliminary procedures to ensure project starts on schedule
- Strengthen fund management and cost control to ensure funds in place
- Establish and improve quality management and safety production systems
- Actively seek local government policy and financial support
- Promote industrial chain collaboration to enhance project comprehensive competitiveness

Detailed Financing Plan and Investment Return Analysis

I. Refined Financing Plan

1. Financing Structure Design

Tier	Instrument	Amount (RMB 10,000)	Term	Rate
Senior	Bank Loan	380,590	5 years	6%
Subordinated	Green Bonds	50,000	5 years	5%
Equity	Strategic Investment	50,000	3-5 years	Negotiable
Equity	Enterprise Self-financing	201,300	-	-
Total		**681,890**		

2. Phased Financing Plan

Phase	Timing	Funding Amount	Purpose
Phase 1	Q1 2026	RMB 200 million	Land acquisition, preliminary design
Phase 2	Q2-Q3 2026	RMB 300 million	Equipment procurement, civil construction
Phase 3	Q4 2026	RMB 150 million	Installation, commissioning
Phase 4	Q1 2027	RMB 31.89 million	Working capital, trial production

3. Repayment Guarantee and Credit Enhancement Measures

First Repayment Source: Project operating net cash flow (average annual net profit RMB 324 million)

Second Repayment Source: Parent company guarantee, project asset mortgage

Policy Credit Enhancement:

- Project listed in "Inner Mongolia Autonomous Region Energy Conservation and Environmental Protection Industry 15th Five-Year Plan"

- Conforming to national bulk solid waste comprehensive utilization demonstration project application conditions

Risk Mitigation:

- Signing long-term coal gasification slag supply agreements with Baotou Shenhua Coal Chemical and others

- Signing polyaluminum chloride product procurement intentions with Beijing Enterprises Water, Inner Mongolia Water and others

II. Investment Return In-depth Analysis

1. Core Financial Indicators Summary

Indicator	Value	Industry Benchmark
After-tax IRR	51.19%	26.2%
After-tax NPV (13%)	RMB 744.78 million	-
Investment Payback Period	3.05 years	5-8 years
Break-even Point	23.30%	40-50%
DSCR	2.68	≥1.2
ICR	29.65	≥2.0
Average Annual Net Profit Margin	25.7%	10-15%

2. Cash Flow Sensitivity Analysis

Variable Change	IRR Change	NPV Change (RMB million)
Revenue -10%	42.35%	580.2
Revenue -5%	46.82%	662.5
Base Case	**51.19%**	**744.8**
Cost +10%	44.67%	615.3
Cost +5%	47.98%	680.1
Investment +10%	45.21%	625.8

3. Investment Value Highlights

- **High Return:** IRR 51.19%, far exceeding industry benchmark (26.2%)
- **Fast Recovery:** Full investment recovered in 3.05 years
- **Strong Risk Resistance:** Break-even point only 23.3%, high safety margin
- **Dual-wheel Drive:** Environmental policy rigid demand + product market-oriented profitability
- **Scale Effect:** Million-ton processing capacity, regional market share >40%

4. Shareholder Return Simulation

Assuming project company equity structure: Construction Unit 70% + Industrial Fund 30%

Industrial Fund 5-year Exit Return:

Item	Value
Investment Amount	RMB 50 million
Cumulative Dividends	Approx. RMB 120 million

Equity Appreciation	At 8x PE valuation, equity value approx. RMB 2 billion
Exit Return Rate	Annualized IRR >35%

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January 2026