

Annual 1 Million Tons Coal Gasification Slag Resource Utilization Project, Jiuyuan District, Baotou

Turning coal gasification slag into high-value chemicals and glass-ceramics

<div>Total Investment</div> <div>RMB 681.8924 million</div> <div>Includes construction investment, working capital, and other costs</div>	<div>Annual Processing Capacity</div> <div>1 million tons</div> <div>Coal gasification slag feedstock</div>	<div>Annual Output Value</div> <div>RMB 1.26 billion</div> <div>At full production</div>
<div>Average Annual Net Profit</div> <div>RMB 323.7413 million</div>	<div>After-tax IRR</div> <div>51.19%</div> <div>Industry benchmark: 26.2%</div>	<div>Static Investment Payback Period</div> <div>3.05 years</div> <div>Excluding construction period</div>

Project Overview

The project is located in Jiuyuan District, Baotou, Inner Mongolia Autonomous Region, and is developed by Inner Mongolia Lvbaoxin Environmental Technology Co., Ltd. It aims to comprehensively utilize 1 million tons per year of coal gasification slag through a dual-line parallel process comprising an acid leaching line and a glass-ceramic line. The acid leaching line will produce 320,000 tons of liquid polyaluminum chloride, 480,000 tons of solid polyaluminum chloride, and 240,000 tons of white carbon black annually. The glass-ceramic line will produce 180,000 tons of standard glass-ceramic and 20,000 tons of special glass-ceramic per year. The construction period is 12 months, from March 2026 to March 2027. The project is currently in the planning stage, with financing and preliminary procedures underway. It is positioned to contribute to circular economy and solid waste utilization, with a comprehensive resource utilization rate of $\geq 90\%$ and energy consumption reduced by over 20% compared to traditional processes.

Technology & Competitive Edge

- Dual-line parallel process: acid leaching line and glass-ceramic line for comprehensive utilization.
- Acid leaching line produces polyaluminum chloride and white carbon black via acid leaching, separation, and polymerization.
- Glass-ceramic line produces glass-ceramic through batching, melting, forming, and crystallization.
- Comprehensive resource utilization rate $\geq 90\%$, minimizing waste.
- Energy consumption reduced by over 20% compared with traditional process.

Market & Business Model

- Products include liquid and solid polyaluminum chloride, white carbon black, and glass-ceramic.
- Target markets: water treatment, construction, and new materials industries.
- Revenue generated through product sales; long-term supply agreements and diversified channels planned.
- Regional market share >40% expected due to scale and location.
- Business model leverages environmental policy demand and market-oriented profitability.

Scope of Works & Project Status

- Construction of acid leaching line and glass-ceramic line with associated facilities.
- Site located in Jiuyuan District, Baotou, Inner Mongolia.
- Construction period: March 2026 to March 2027 (12 months).
- Project is in planning stage; preliminary procedures and financing being arranged.
- Phased financing: Q1 2026 land acquisition, Q2-Q3 2026 equipment and civil works, Q4 2026 installation, Q1 2027 working capital.

Key Financials

Total Investment	RMB 681.8924 million
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

Investment Highlights

- High return: After-tax IRR of 51.19%, significantly above industry benchmark of 26.2%.
- Fast payback: Static investment recovered in 3.05 years, shorter than industry average of 5-8 years.
- Strong risk resistance: Break-even point at 23.30% and DSCR of 2.68 provide high safety margin.
- Environmental and social impact: Processes 1 million tons of solid waste annually, creates 145 direct jobs, and supports circular economy.

Key Risks

- Market risk: Product price fluctuations and market competition could affect revenue; mitigated by long-term supply agreements and diversified sales channels.
- Technical risk: Process scaling-up and product quality stability; addressed through mature industrial technology, pilot verification, and technical team support.
- Fund risk: Financing not in place or capital turnover issues; managed via diversified financing channels, financial control, and working capital reserves.

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