

1 Million Tons/Year Coal Gasification Slag Comprehensive Utilization Project

High-value recycling of coal gasification slag into industrial chemicals and glass-ceramic

<div>Total Investment</div> <div>RMB 681.8924 million</div> <div>Includes construction investment, interest, and working capital</div>	<div>Annual Processing Capacity</div> <div>1 million tons/year</div> <div>Coal gasification slag</div>	<div>Annual Revenue</div> <div>RMB 1,260 million</div> <div>Average after reaching full production</div>
<div>Annual Net Profit</div> <div>RMB 323.7413 million</div> <div>Average after reaching full production</div>	<div>IRR (after-tax)</div> <div>51.19%</div> <div>Financial internal rate of return</div>	<div>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, and is a new construction project focused on large-scale comprehensive utilization of coal gasification slag. With a total investment of RMB 681.8924 million and a 12-month construction period (March 2026 - March 2027), it adopts a dual-line parallel process of an acid leaching line and a glass-ceramic line. The facility will process 1 million tons per year of coal gasification slag to produce liquid polyaluminum chloride, solid polyaluminum chloride, white carbon black, and glass-ceramic. The project site covers 200 mu with a total construction area of 106,667 square meters, including production facilities, ancillary buildings, and supporting infrastructure. Currently in the planning stage, the project aims to start construction in March 2026 and complete acceptance by March 2027. It aligns with national circular economy and dual carbon strategies, offering significant economic, social, and environmental benefits.

Technology & Competitive Edge

- Adopts mature 'aluminum-silicon step-by-step extraction' and 'continuous counter-roller calendaring integral crystallization method' technologies.
- Comprehensive resource utilization rate $\geq 90\%$; energy consumption reduced by over 20% compared to traditional processes.
- Environmental protection investment accounts for 25% of total investment; emissions superior to national standards.
- Located adjacent to raw material sources and demand centers with convenient transportation, lowering logistics costs.

- Production costs significantly lower than industry average due to waste resource utilization and subsidies.

Market & Business Model

- Liquid polyaluminum chloride: target area annual demand 600,000 tons vs. existing capacity 120,000 tons, indicating a significant gap.
- Solid polyaluminum chloride: project capacity 480,000 tons/year, only 12% of national demand; low competitive pressure.
- White carbon black: national demand 1.78 million tons in 2023, growing 6-8% annually; project capacity 240,000 tons/year can be absorbed.
- Glass-ceramic: can replace high-grade natural stone; annual market demand 5 million tons with broad substitution space.
- Revenue generated from sales of liquid and solid polyaluminum chloride, white carbon black, and glass-ceramic products.

Scope of Works & Project Status

- Construction of industrial buildings (85,000 sqm) including acid leaching, concentration, polymerization, white carbon black, and glass-ceramic workshops.
- Ancillary facilities (21,667 sqm) such as office buildings, power distribution rooms, and gatehouses.
- Acid leaching line: annual processing of 800,000 tons slag, producing 320,000 tons liquid PAC, 480,000 tons solid PAC, 240,000 tons white carbon black.
- Glass-ceramic line: annual processing of 200,000 tons slag, producing 180,000 tons standard and 20,000 tons special glass-ceramic.
- Project currently in planning; construction scheduled March 2026 to March 2027, with commissioning in early 2027.

Key Financials

Total Investment	RMB 681.8924 million
Annual Revenue	RMB 1,260 million
Annual Net Profit	RMB 323.7413 million
Financial IRR (after-tax)	51.19%
Payback Period (after-tax)	3.05 years
Break-even Point	23.30%
Return on Total Investment	67.94%
Debt Service Coverage Ratio	2.68

Investment Highlights

- High profitability: after-tax IRR of 51.19% and payback period of 3.05 years.
- Strong market demand: significant gaps in regional liquid PAC market and national solid PAC/white carbon black markets.
- Environmental benefits: annual processing of 1 million tons slag, reducing CO2 emissions by 150,000 tons and saving 200 mu of land.
- Policy support: aligns with national circular economy and dual carbon strategies, with local government backing.

Key Risks

- Market risk: product price fluctuations and intensified competition could affect revenue.
- Fund risk: financing not in place or capital turnover difficulties may delay project progress.
- Policy risk: changes in environmental protection or tax policies could impact operations.

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