

2 Million Tons/Year Coal Gangue Solid Waste Resource Utilization Project

Turning coal gangue into high-value industrial products

<div>Total Investment</div> <div>RMB 1,280.8966 million</div> <div>Includes construction investment, interest during construction, and working capital</div>	<div>Annual Capacity</div> <div>2 million tons per year</div> <div>Designed capacity</div>	<div>Annual Revenue</div> <div>RMB 1,244.30 million</div> <div>In full production year (Year 4), excluding tax</div>
<div>After-tax IRR</div> <div>43.35%</div> <div>Before-tax IRR: 55.93%</div>	<div>Payback Period</div> <div>3.17 years</div> <div>After income tax, including 1-year construction period</div>	<div>Return on Investment (ROI)</div> <div>63.89%</div> <div>Full production year</div>

Project Overview

Located in Tumed Right Banner, Baotou, Inner Mongolia, this project aims to utilize 2 million tons per year of coal gangue solid waste. The project involves the construction of facilities to process coal gangue into valuable products such as clean coal, ferric oxide and titanium dioxide, gangue, kaolin, mineral soil conditioner, flint clay, and mullite. The total investment is RMB 1,280.8966 million, with a construction period of 1 year and an operation period of 4 years. The project is financially feasible with strong profitability, excellent debt solvency, and high risk resistance. It is positioned as a high-quality bank credit asset.

Technology & Competitive Edge

- Processes coal gangue into multiple high-value products including clean coal, kaolin, mullite, and mineral soil conditioner.
- Utilizes proprietary technology and patents (intangible assets of RMB 48.9056 million) to ensure product quality and efficiency.
- High added value products contribute to strong profitability, with after-tax FIRR of 43.35%, far exceeding the benchmark rate of 7.5%.
- Break-even point at 16.78% of designed capacity indicates extremely strong risk resistance.
- Sensitivity analysis shows project benefits are most sensitive to product price changes, but IRR remains above benchmark even under adverse conditions.

Market & Business Model

- Revenue generated from sale of seven product categories: clean coal, ferric oxide and titanium dioxide, gangue, kaolin, mineral soil conditioner, flint clay, and mullite.
- In full production year, operating revenue reaches RMB 1,244.30 million (excluding tax).
- Main revenue contributors: mullite (RMB 408 million), mineral soil conditioner (RMB 252 million), kaolin (RMB 222.3 million).
- Business model based on resource utilization of solid waste, converting waste into marketable products.
- Strong market demand implied by high revenue and profitability, with products serving various industries.

Scope of Works & Project Status

- Construction of processing facilities including buildings, equipment procurement, and installation.
- Total construction investment of RMB 1,241.64 million, including engineering costs of RMB 1,063.4148 million.
- Project includes land use rights (RMB 20.6796 million) and patented technology (RMB 48.9056 million).
- Construction period of 1 year, followed by 4-year operation period with ramp-up: 60% in Year 2, 80% in Year 3, 100% in Years 4 and 5.
- Project is financially feasible and ready for financing, with bank loans covering 66.82% of total investment.

Key Financials

Total Investment	RMB 1,280.8966 million
Equity (Own Funds)	RMB 425.0486 million (33.18%)
Bank Loans	RMB 855.848 million (66.82%)
Annual Revenue (full production)	RMB 1,244.30 million
Total Cost (full production)	RMB 430.625 million
Net Profit (full production)	RMB 598.7042 million
EBIT (full production)	RMB 818.376 million
After-tax FIRR	43.35%
Payback Period	3.17 years

Investment Highlights

- After-tax FIRR of 43.35% and payback period of 3.17 years indicate rapid recovery of investment.
- Average DSCR of 2.60 and ICR of 27.77 demonstrate extremely strong debt servicing capacity.
- Break-even point at 16.78% of capacity ensures profitability even at low utilization.
- Diversified product mix with seven revenue streams enhances market resilience.

Key Risks

- Product price volatility: Sensitivity coefficient of approximately 1.40 means revenue is highly sensitive to price changes.
- Construction and operating cost overruns: Although less sensitive than price, increases could impact returns.
- Execution risk: Timely completion of construction and ramp-up to full capacity within planned schedule.

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