

Baotou 500,000 Tons/Year Water Slag and 500,000 Tons/Year Steel Slag Solid Waste Resource Utilization Project

Valuation Report (Bank Financing Supporting Version)

Purpose: Provide project enterprise value and shareholder equity value reference for bank financing due diligence, project credit analysis and financing negotiations. This document does not constitute a statutory appraisal report issued by an asset appraisal institution, nor does it replace bank internal credit approval, collateral appraisal or financial audit.

Valuation Basis: Based on the feasibility study report financial forecast caliber provided by the user, the valuation model adopts the discounted free cash flow to firm method, and sets dual scenarios with and without policy subsidies. Project total investment, capacity, revenue, costs, debt and cash flow prioritize feasibility study appendices and Chapter 13 data.

I. Valuation Conclusion Summary

Under internal prudent valuation assumptions, the perpetual growth method enterprise value for the Base with policy subsidies scenario is RMB 1,354.784 million. After deducting approximately RMB 210 million net debt on the valuation date, the shareholder equity value is RMB 1,144.784 million. Without policy subsidies, the perpetual growth method enterprise value is RMB 1,276.023 million, and shareholder equity value is RMB 1,066.023 million. Under the Downside scenario, the DCF shareholder equity value with and without subsidies is both RMB 695.849 million, reflecting that the project still has positive reference equity value under the combined pressure of policy subsidies not being cashed, main product price reductions, slower capacity ramp-up, and increased operating costs and construction investment. However, the valuation's dependence on terminal value and operating assumptions significantly increases.

Valuation Scenario	Perpetual Growth Enterprise Value	Perpetual Growth Equity Value	Exit Multiple EV	Exit Multiple Equity	Valuation Notes
Base - With Policy Subsidies	135,478.4	114,478.4	78,658.2	57,658.2	Feasibility study operating assumptions + policy subsidies
Base - Without Policy Subsidies	127,602.3	106,602.3	72,303.2	51,303.2	More suitable as one of the bank prudent value lower limit
Downside - With Policy Subsidies	69,584.9	69,584.9	47,771.9	26,771.9	Operating and investment pressure assumptions, subsidies included
Downside - Without Policy Subsidies	69,584.9	69,584.9	47,771.9	26,771.9	Bank credit stress scenario, policy subsidies not included

Valuation results should not be understood as directly achievable transaction prices for the project. The terminal value present value of the perpetual growth method accounts for approximately 88.0% of enterprise value, higher than the common 50%-70% prudent range, indicating that the valuation is highly sensitive to terminal value assumptions. The shareholder equity value obtained by the exit multiple method is significantly lower than the perpetual growth method, reflecting that under the circumstances of short forecast period, technology scale-up period and revenue structure still pending verification, financing decisions should not be based solely on the high valuation conclusion of the perpetual growth method.

II. Project and Valuation Scope

The project construction unit is Inner Mongolia Huajun Xiyuan Circular Industry Co., Ltd. The project is located in the Industrial Park of Kundulun District, Baotou, planning to process 500,000 tons/year of blast furnace water slag and 500,000 tons/year of steel slag, totaling 1 million tons/year of steel solid waste. Project products include all-solid-waste alkali-activated low-carbon cementitious materials, rare earth concentrate, other valuable metal concentrates and iron concentrate. Meanwhile, steel slag treatment services and water slag line iron scrap recovery are included in the operating revenue structure.

The scope of this valuation is the project-level operating assets and related operating cash flows, excluding the independent market value of land, patents, equipment or other individual assets for which ownership certificates have not been provided. It also does not make audit conclusions on the project company's overall historical operations, contingent liabilities, related party transactions, tax compliance and shareholder equity defects. The valuation date is treated as the starting point of the project construction period. The net debt on the valuation date is temporarily approximated by the proposed financing amount of RMB 210 million; for formal financing, it should be based on actual disbursement, cash balance and other interest-bearing liabilities.

III. Valuation Method and Key Assumptions

The main valuation method is the discounted free cash flow to firm method. Free cash flow to firm adopts after-tax operating profit plus depreciation and amortization, minus maintenance operation investment and working capital input, then minus construction period project investment. The explicit forecast period is 1 year construction period plus 4 years operation forecast, totaling 5 calculation periods. Cash flow adopts mid-year discount convention; terminal value adopts perpetual growth method, and uses exit multiple method for cross-verification.

Parameter	Base Value	Downside Value	Basis and Limitations
Forecast Period	1 year construction + 4 years operation	Same as base	Based on feasibility study financial calculation period of 5 years
WACC	11.5%	11.5%	Internal prudent assumption, not equivalent to loan interest rate
Perpetual Growth Rate	2.5%	2.5%	Internal valuation assumption, lower than WACC
Exit Multiple	5.0x	5.0x	Internal cross-verification, does not represent market transaction quotation
Project Net Debt	RMB 210.0 million	RMB 210.0 million	Based on feasibility study proposed financing amount, formal valuation should be based on actual financing
Loan Interest Rate	4.5%	5.5%	Downside increases 100bp on feasibility study interest rate basis
Policy Subsidies	Included per feasibility study	Not Applied	Downside is bank prudent assumption
Capacity Load	20%/40%/60%/70%/80%	15%/35%/55%/65%/75%	Downside is internal stress assumption
Main Prices	Feasibility study caliber	Cementitious -10%, Iron concentrate -15%, Steel slag treatment service -10%	Downside is internal stress assumption
Construction Investment	RMB 285.0 million	Up 10%	Downside is internal stress assumption

WACC does not adopt the complete split of public market CAPM, because the project has not yet been put into operation and there is no directly observable listed entity beta, public bond yield and long-term transaction data. WACC 11.5% is used to reflect the uncertainty of early project construction, DC RF dielectric separation industrial scale-up, product certification, raw material supply, customer development and policy subsidy cashing. Formal bank financing or asset appraisal should be recalibrated based on the valuation date risk-free rate, industry risk premium, capital structure, debt cost and project-specific risk.

IV. DCF Calculation Logic

Free cash flow to firm calculation formula:

$$\text{FCFF} = \text{NOPAT} + \text{Depreciation \& Amortization} - \text{Maintenance Operation Investment} - \text{Working Capital Input} - \text{Construction Period Project Investment}$$

Among them, NOPAT is calculated by EBIT multiplied by (1 - income tax rate). EBIT is derived from operating revenue, policy subsidies, operating costs, taxes and surcharges, and depreciation and amortization. Project construction investment is only included in the construction period. Maintenance operation investment is restored at RMB 10 million per year in Years 2-5 per feasibility study. Working capital input is restored per feasibility study Appendices 2-3.

Terminal value formula:

$$\text{TV} = \text{FCFF} \times (1 + g) \div (\text{WACC} - g)$$

The operating free cash flow for the Base with subsidies scenario is -RMB 208.916 million in the construction period, and RMB 69.302 million, RMB 125.602 million, RMB 148.157 million and RMB 170.845 million in the subsequent operation periods respectively. The above values are valuation model derivation results under the feasibility study financial caliber, and can be verified from the FCFF, discount coefficient and terminal value formulas on the "DCF" page of the workbook.

Base with Subsidies DCF Key Items	Year 1	Year 2	Year 3	Year 4	Year 5
EBIT	10,248.0	8,043.8	13,022.5	15,459.8	17,956.6
FCFF (Operation Period)	7,608.4	6,930.2	12,560.2	14,815.7	17,084.5
Project FCFF (Including Construction Investment)	(208.916)	6,930.2	12,560.2	14,815.7	17,084.5
Total FCFF Present Value	16,258.9				
Perpetual Growth Terminal Value	194,573.7				
Perpetual Growth Terminal Value PV	119,219.5				
Enterprise Value	135,478.4				

Note: "Total FCFF Present Value" in the table should be understood as RMB 162.589 million; the display format is only expressed by amount; the workbook retains the complete formula chain.

The exit multiple method multiplies the terminal year EBITDA by the 5.0x exit multiple. The Base with subsidies terminal value is RMB 1,018.395 million. After discounting, the terminal value present value is RMB 623.992 million, enterprise value is RMB 786.582 million. After deducting RMB 210 million net debt, shareholder equity value is RMB 576.582 million. The perpetual growth method implies an exit multiple of approximately 9.6x, significantly higher than the 5.0x used for cross-verification, indicating that the perpetual growth method result is relatively optimistic and cannot be used alone as a financing value anchor.

V. Sensitivity Analysis

The valuation sensitivity to WACC and perpetual growth rate is as follows. The values in the table are shareholder equity values under the Base with policy subsidies scenario, amount unit: RMB 10,000.

WACC \ g	1.5%	2.0%	2.5%	3.0%	3.5%
9.5%	141,318.1	151,680.8	163,523.8	177,188.9	193,131.5
10.5%	119,165.8	127,038.8	135,896.0	145,934.2	157,406.3
11.5%	101,509.7	107,652.8	114,478.4	122,107.1	130,689.4
12.5%	87,121.4	92,018.7	97,405.8	103,359.9	109,975.5
13.5%	75,182.4	79,156.2	83,491.3	88,239.2	93,462.0

Sensitivity results show that when WACC rises from 11.5% to 13.5% and terminal growth rate remains at 2.5%, shareholder equity value decreases from RMB 1,144.784 million to RMB 834.913 million, a decrease of approximately 27.1%. When perpetual growth rate decreases from 2.5% to 1.5% and WACC remains at 11.5%, shareholder equity value decreases to RMB 1,015.097 million, a decrease of approximately 11.3%. Therefore, bank credit analysis should focus more on cash flow coverage and repayment sources, and should not directly use DCF shareholder equity value as loan safety margin.

VI. Valuation Quality and Bank Financing Interpretation

Positive factors of project valuation include: Project operating cash flow increases year by year under the feasibility study caliber; full production year operating revenue mainly comes from cementitious materials, iron concentrate and solid waste treatment income, with certain diversification in product structure; the project's proposed financing amount of RMB 210 million is lower than the feasibility study full production year operating cash flow and project cumulative free cash flow, and the comprehensive debt service coverage ratio disclosed in Appendix 9 is 2.77 and comprehensive interest coverage ratio is 26.81.

Limiting factors of project valuation include: The nature, cashing conditions and sustainability of policy subsidies have not been independently documented; DC RF dielectric separation is still at a stage requiring pilot verification and equipment joint development; there is an approximately 1000x unit difference between rare earth and other valuable metal concentrate product plan output and financial appendix revenue calculation; perpetual growth method terminal value accounts for approximately 88.0% of EV, significantly higher than the common range for prudent valuation; raw material supply, product sales, land and environmental procedures, engineering performance assessment, customer certification and project company historical financial materials still need to be supplemented.

Accordingly, when using valuation conclusions for bank financing, the following hierarchy is recommended: The first hierarchy uses project cash flow without policy subsidies and Downside DSCR as the basis for repayment ability analysis; the second hierarchy treats cash flow with subsidies as credit enhancement or upside space, not as the sole repayment source; the third hierarchy uses DCF valuation as project overall value reference, not replacing collateral appraisal and credit line calculation; the fourth hierarchy completes condition verification of raw material supply, sales orders, pilot verification, environmental/energy/land, construction contracts and capital in place before loan disbursement.

VII. Valuation Conclusion

Under the current information set and explicitly disclosed assumptions, the project has positive operating value and certain financing value, but the value range is highly dependent on operating revenue cashing, policy subsidies, product prices, capacity ramp-up, technology industrialization and construction investment control. From a bank prudent perspective, the Base perpetual growth method shareholder equity value without policy subsidies of RMB 1,066.023 million and the Downside perpetual growth method shareholder equity value of RMB 695.849 million can be used as value range reference; the shareholder equity value corresponding to the exit multiple method of RMB 513.032 million to RMB 576.582 million can better remind financing parties to pay attention to terminal value dependence and execution risk.

Therefore, the recommendation of this report is not to simply judge "project valuation is high or low", but to recommend binding the financing structure with verifiable milestones: pilot verification, raw material contracts, sales orders, environmental and land procedures, capital in place, equipment performance guarantee and policy subsidy vouchers should become preconditions or continuing conditions for loan disbursement and post-loan management.