

EXAMPLE FOR LARGE COMPANIES

BioSertão

Biomethane plant from sugar-cane residues — a new business unit, 10-year plan. Bahia, Brazil.

Opportunities Accacia found for this project

90%

BNDES Finem — renewable energy

Long-term credit

Funds large biogas and biomethane projects.

85%

Climate Fund (BNDES)

Subsidised credit

Lower rates for decarbonisation projects.

78%

Decarbonisation credits (RenovaBio)

Extra revenue

Revenue not included in the base plan; lifts the IRR.

What Accacia flagged before export

- Brazil is outside the v1 tax engine (tax reform in transition): every tax value is proposed by the AI and still to be confirmed.
- Decarbonisation-credit revenue not included — the AI suggests confirming eligibility before adding it.
- Environmental installation licence in progress — this does not block exporting the plan.

1 · Describe the project
Text, attachments and links feed the project record.

2 · The AI writes and calculates
Plan, tables and bank-style analysis, without inventing data.

3 · Find opportunities
Funding, guarantees and commercial opportunities across the CPLP.

B

BIOSERTÃO

BAHIA, BRAZIL



Biomethane from cane residues · Bahia

Illustrative image · AI-generated

FINANCING REQUEST

Business Plan

BioSertão Energia S.A.

BioSertão — biomethane plant from vinasse and filter cake

Bahia, Brazil · 10 years · BRL

The information in this document belongs exclusively to BioSertão Energia S.A. and is confidential; anyone who consults it undertakes not to disclose any of it, in whole or in part, without the company's prior written consent.

2026

ILLUSTRATIVE PROJECT · FICTITIOUS DATA · EXAMPLE FOR LARGE COMPANIES · GENERATED WITH ACCACIA BY LUSOHUB

Document details

Field	Value
Promoter	BioSertão Energia S.A. — a unit of an agro-industrial group (illustrative)
Project	BioSertão — biomethane plant from vinasse and filter cake
Project location	Bahia, Brazil
Promoter origin	An agro-industrial group headquartered in Portugal with sugar mills in Brazil. The project company is Brazilian; the parent provides a corporate guarantee.
Intended recipient	Development bank · long-term renewable-energy financing
Output profile	Bankability (credit analysis)
Projection horizon	10 years
Presentation currency	BRL
Document date	29 October 2026

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0. Executive summary

TOTAL INVESTMENT	FINANCING REQUESTED	NPV	IRR	MINIMUM DSCR	PAYBACK
52,000 BRL thousand	31,200 BRL thousand	148 BRL thousand	11.1%	1.42 times	6.9 years

BioSertão Energia S.A.. An agro-industrial group headquartered in Portugal with sugar mills in Brazil. The project company is Brazilian; the parent provides a corporate guarantee. It requests financing of 31,200,000 BRL over 12 years, with a 2-year capital grace period, at 11.0%. The financing is 60.0% of a total investment of 52,000,000 BRL.

The plant turns vinasse and filter cake from the group's mill into biomethane. It produces about 9 million m³ a year at full capacity, sold to a gas distributor and used by the group's own fleet. The digestate goes back to the fields as fertiliser.

Revenue grows from 10,200,000 BRL in year 1 to 21,900,000 BRL in year 10. EBITDA is positive from year 1 and reaches 12,132,000 BRL in year 10, a 55.4% margin. Net profit is positive from year 2.

Debt service coverage is lowest among the repayment years in year 3: 1.42 times. Proposed guarantees: Parent-company corporate guarantee, fiduciary transfer of the equipment and fiduciary assignment of the gas sales contract receivables.

The most material risk is construction risk — delayed start-up. Mitigation: fixed-price EPC contract with delay penalties; 2-year grace period. Under the combined scenario of sales −15% and fixed costs +10%, minimum DSCR is 1.23. Assessment: viable.

1. Introduction and purpose of the request

1.1 Purpose and amount requested

Medium- to long-term financing of 31,200,000 BRL is requested to fund the investment described in chapter 4, mainly digesters and upgrading unit and compression and fuelling equipment. The request is addressed to: Development bank · long-term renewable-energy financing.

Group equity: R$ 20.8 million (40%). Long-term financing of R$ 31.2 million over 12 years, 2-year grace, 11% rate.

1.2 Methodology, currency and horizon

The study covers 10 years of activity, preceded by year 0, when the investment is made. The presentation currency is BRL. The reference exchange rate is BRL 6.30 per euro. Figures are at constant prices.

The tax and macroeconomic assumptions used are set out in section 5.1.

2. The promoter and the project

2.1 About the promoter

BioSertão Energia S.A.. An agro-industrial group headquartered in Portugal with sugar mills in Brazil. The project company is Brazilian; the parent provides a corporate guarantee.

2.2 The project

The plant turns vinasse and filter cake from the group's mill into biomethane. It produces about 9 million m³ a year at full capacity, sold to a gas distributor and used by the group's own fleet. The digestate goes back to the fields as fertiliser.

2.3 Team and staffing

22 people in operations; engineering and maintenance shared with the mill.

3. Market and sales

3.1 Demand, clients and sales strategy

A 10-year pre-purchase agreement with a distributor covers 70% of volume. The rest replaces diesel in the group's fleet. Feedstock is the group's own and carries no purchase cost.

3.2 Forecast revenue

Revenue grows 8.9% a year on average, from 10,200,000 BRL in year 1 to 21,900,000 BRL in year 10. The yearly detail is in the projected income statement (chapter 5).

4. Investment and financing

4.1 Investment plan

Total investment is 52,000,000 BRL, made in year 0. The largest item is “Digesters and upgrading unit”, at 69.2% of the total with a 20-year useful life. Initial working capital of 4,000,000 BRL covers the first months of activity.

Item	BRL thousand	% of total	Useful life (years)
Digesters and upgrading unit	36,000	69.2%	20
Compression and fuelling equipment	8,000	15.4%	10
Pipeline connection	2,500	4.8%	20
Other investment and contingencies	1,500	2.9%	5
Initial working capital	4,000	7.7%	—
Total investment	**52,000**	**100.0%**	

Table 1 — Investment plan

Year-0 figures. Useful lives drive the depreciation in chapter 5.

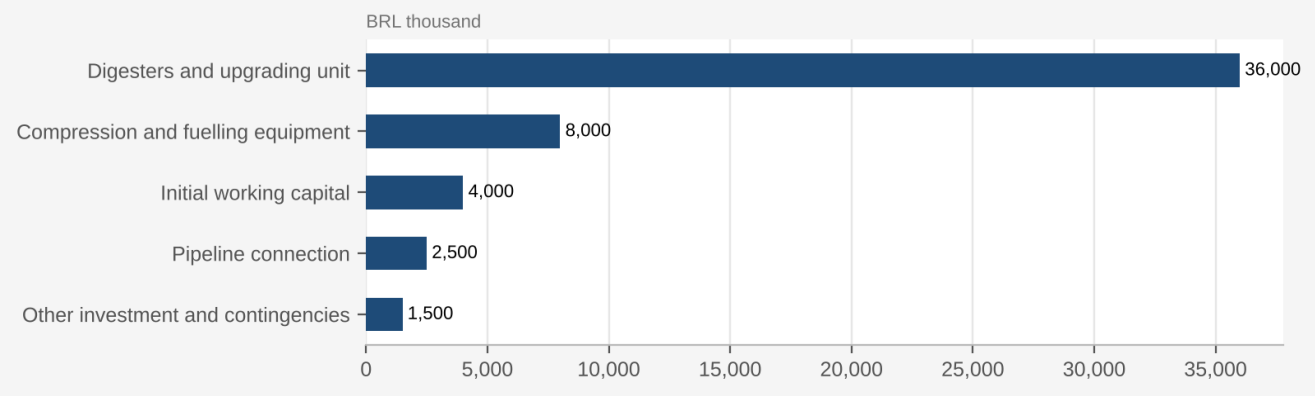


Figure 1 — Investment by item

4.2 Financing needs and sources

Total needs are 52,000,000 BRL and sources match them exactly. Equity cover 40.0% of the investment; bank debt, 60.0%.

Item	BRL thousand	% of total
Fixed-asset investment	48,000	92.3%
Working capital	4,000	7.7%
Total needs	**52,000**	**100.0%**
Equity	20,800	40.0%
Bank financing requested	31,200	60.0%
Total sources	**52,000**	**100.0%**
Check (sources − needs = 0)	**0**	**—**

Table 2 — Financing needs and sources

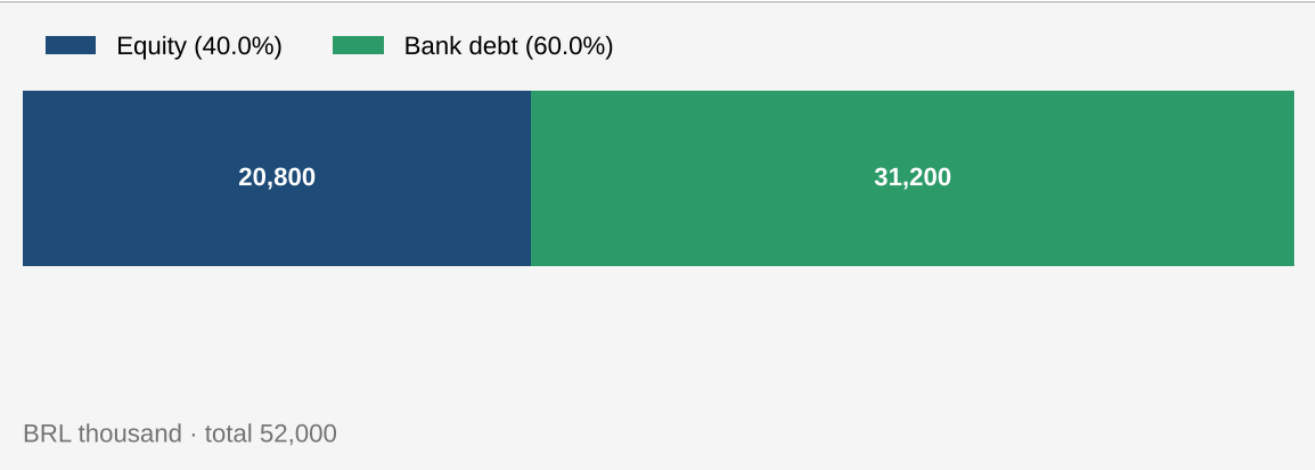


Figure 2 — Sources of funds

4.3 Terms of the proposed loan

Item	Term
Amount	31,200,000 BRL
Currency	BRL
Interest rate	11.00%
Total term	12 years
Capital grace period	2 years
Calculation period	Annual
Repayment method	Equal principal

Table 3 — Financing terms

Terms proposed by the promoter, used to compute debt service.

4.4 Proposed guarantees

Parent-company corporate guarantee, fiduciary transfer of the equipment and fiduciary assignment of the gas sales contract receivables.

4.5 Debt service

Only interest is paid during the grace period. Principal is repaid in equal instalments until maturity; at the end of year 10 outstanding principal is 6,240,000 BRL.

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Opening principal	31,200	31,200	31,200	28,080	24,960	21,840	18,720	15,600	12,480	9,360
Principal repayment	0	0	3,120	3,120	3,120	3,120	3,120	3,120	3,120	3,120
Interest	3,432	3,432	3,260	2,917	2,574	2,231	1,888	1,544	1,201	858
Total debt service	**3,432**	**3,432**	**6,380**	**6,037**	**5,694**	**5,351**	**5,008**	**4,664**	**4,321**	**3,978**
Closing principal	31,200	31,200	28,080	24,960	21,840	18,720	15,600	12,480	9,360	6,240

Table 4 — Debt service

BRL thousand.

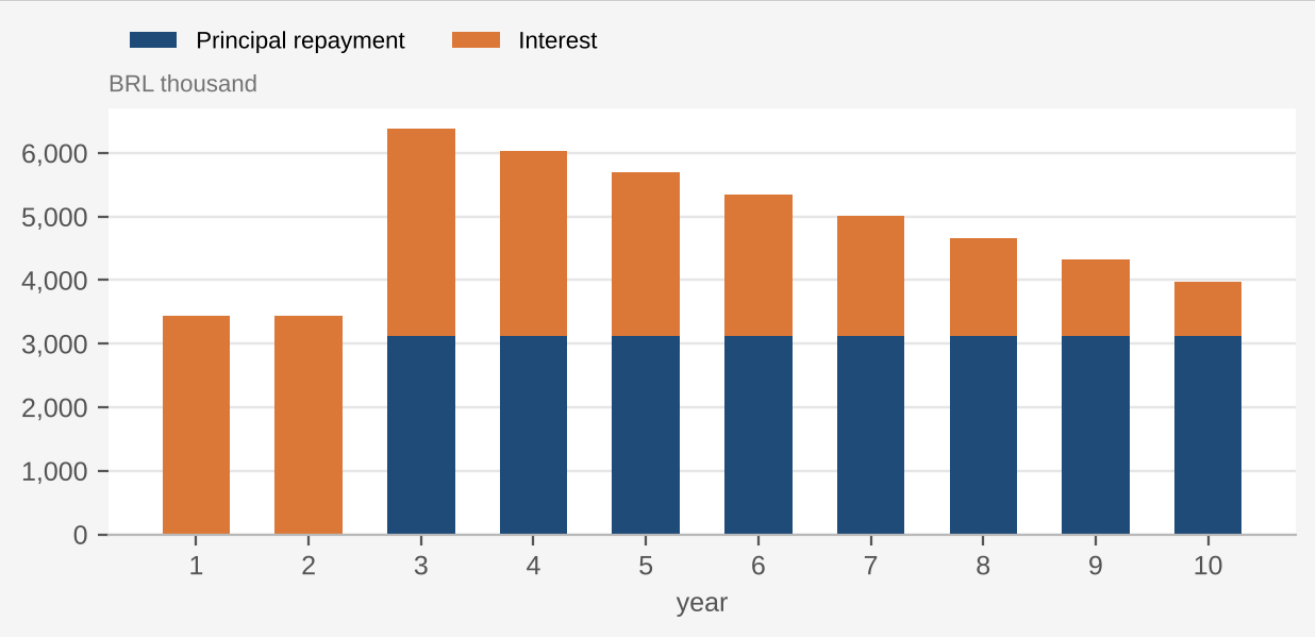


Figure 3 — Debt service — principal and interest

5. Financial plan

5.1 Assumptions

The following assumptions underlie every projection in this plan.

Assumption	Value
IRPJ + CSLL — actual-profit regime	34%
Consumption taxes (CBS/IBS) — 2026–2033 reform transition	Sales stated net of tax
Plan reference exchange rate	€1 = R$ 6.30
Prices	Constant
Variable costs (% of sales)	22%
Project discount rate	11%

Table 5 — General assumptions

5.2 Projected income statement

EBITDA is positive from year 1. EBITDA margin moves from 42.7% in year 1 to 55.4% in year 10, as fixed costs are diluted.

Tax reflects carry-forward of early-year tax losses. Net profit is positive from year 2 and reaches 5,444,340 BRL in year 10.

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Sales and services	10,200	17,000	18,800	19,400	19,900	20,300	20,700	21,100	21,500	21,900
Variable costs	(2,244)	(3,740)	(4,136)	(4,268)	(4,378)	(4,466)	(4,554)	(4,642)	(4,730)	(4,818)
External supplies and services	(2,100)	(2,400)	(2,500)	(2,600)	(2,700)	(2,750)	(2,800)	(2,850)	(2,900)	(2,950)
Staff costs	(1,500)	(1,650)	(1,700)	(1,750)	(1,800)	(1,840)	(1,880)	(1,920)	(1,960)	(2,000)
EBITDA	**4,356**	**9,210**	**10,464**	**10,782**	**11,022**	**11,244**	**11,466**	**11,688**	**11,910**	**12,132**
Depreciation and amortisation	(3,025)	(3,025)	(3,025)	(3,025)	(3,025)	(3,025)	(3,025)	(3,025)	(3,025)	(3,025)
Operating profit (EBIT)	**1,331**	**6,185**	**7,439**	**7,757**	**7,997**	**8,219**	**8,441**	**8,663**	**8,885**	**9,107**
Interest expense	(3,432)	(3,432)	(3,260)	(2,917)	(2,574)	(2,231)	(1,888)	(1,544)	(1,201)	(858)
Profit before tax	**(2,101)**	**2,753**	**4,179**	**4,840**	**5,423**	**5,988**	**6,553**	**7,119**	**7,684**	**8,249**
Income tax	0	(222)	(1,421)	(1,646)	(1,844)	(2,036)	(2,228)	(2,420)	(2,612)	(2,805)
Net profit for the period	**(2,101)**	**2,531**	**2,758**	**3,194**	**3,579**	**3,952**	**4,325**	**4,698**	**5,071**	**5,444**

Table 6 — Projected income statement

Figures in BRL thousand.

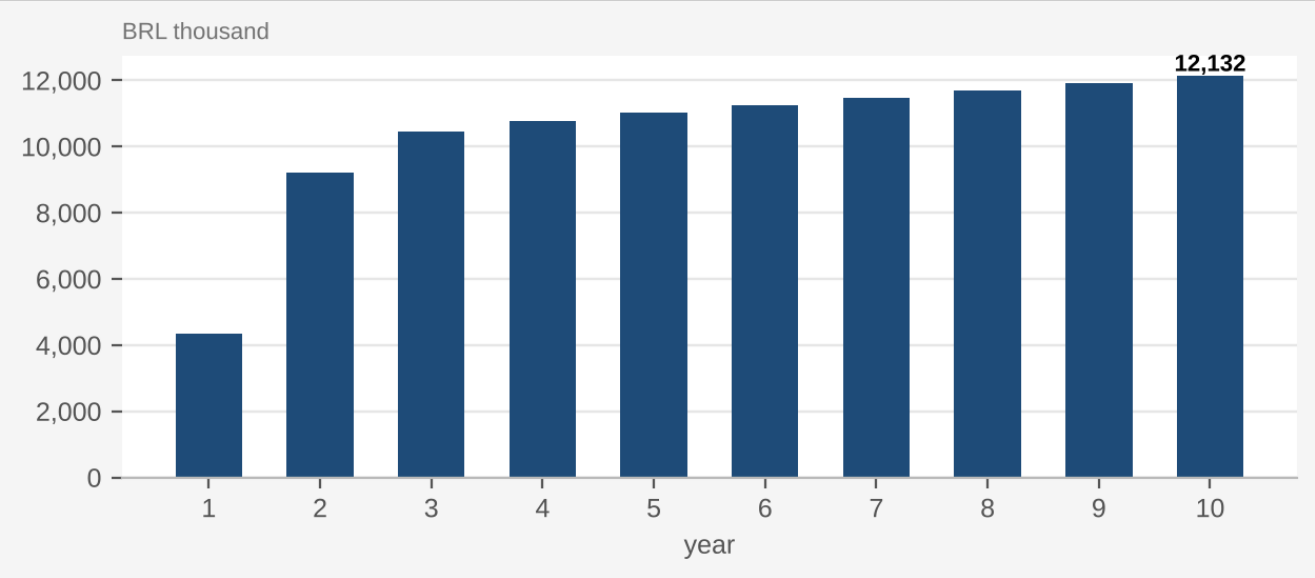


Figure 4 — EBITDA over time

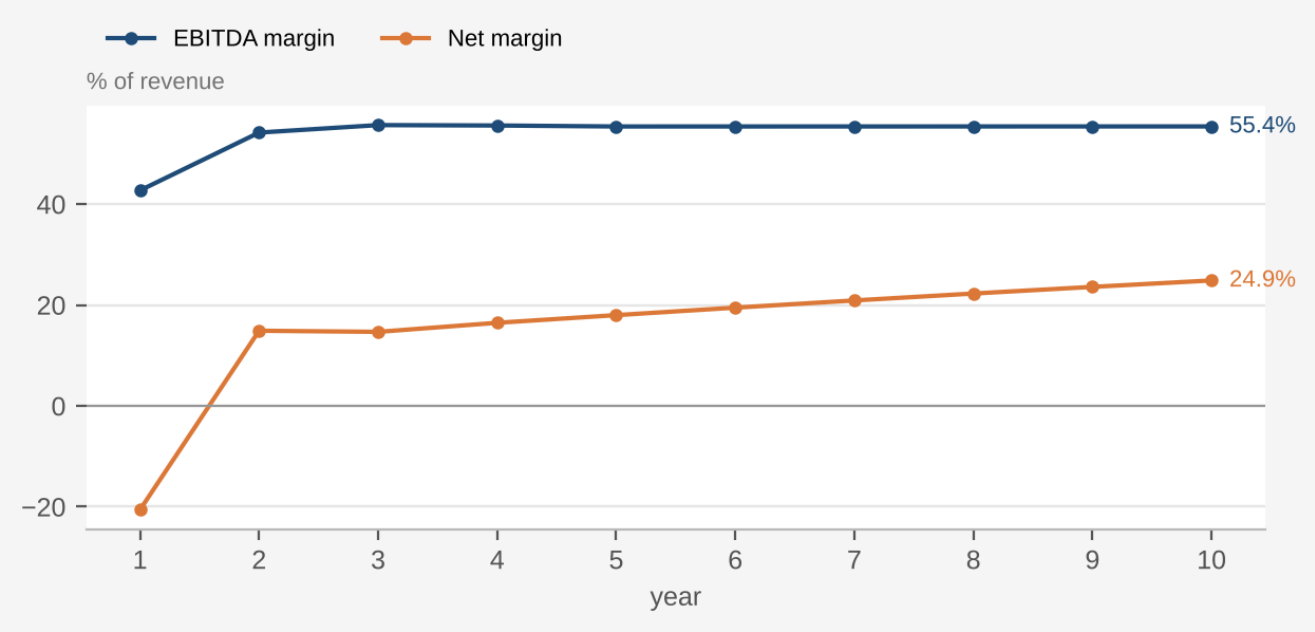


Figure 5 — EBITDA margin and net margin

6. Viability and bankability analysis

6.1 Project valuation

Project cash flow starts from EBITDA, deducts tax on operating profit and the investment, and adds in the last year the residual value (asset book value plus working capital). At a 11% discount rate, NPV is 147,935 BRL, IRR 11.1% and simple payback 6.9 years.

Item	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
FCFF	(52,000)	3,903	7,107	7,935	8,145	8,303	8,450	8,596	8,743	8,889	30,786
Discount factor	1.000	0.901	0.812	0.731	0.659	0.593	0.535	0.482	0.434	0.391	0.352
Discounted FCFF	(52,000)	3,517	5,768	5,802	5,365	4,927	4,517	4,140	3,794	3,475	10,842
Cumulative discounted FCFF	(52,000)	(48,483)	(42,715)	(36,913)	(31,548)	(26,621)	(22,103)	(17,963)	(14,169)	(10,694)	148

Table 7 — Valuation — project perspective

Figures in BRL thousand; discount factors at 11%.

Indicator	Value
Project NPV	147,935 BRL
Project IRR	11.1%
Simple payback	6.9 years
Discounted payback	10.0 years

Table 8 — Viability indicators

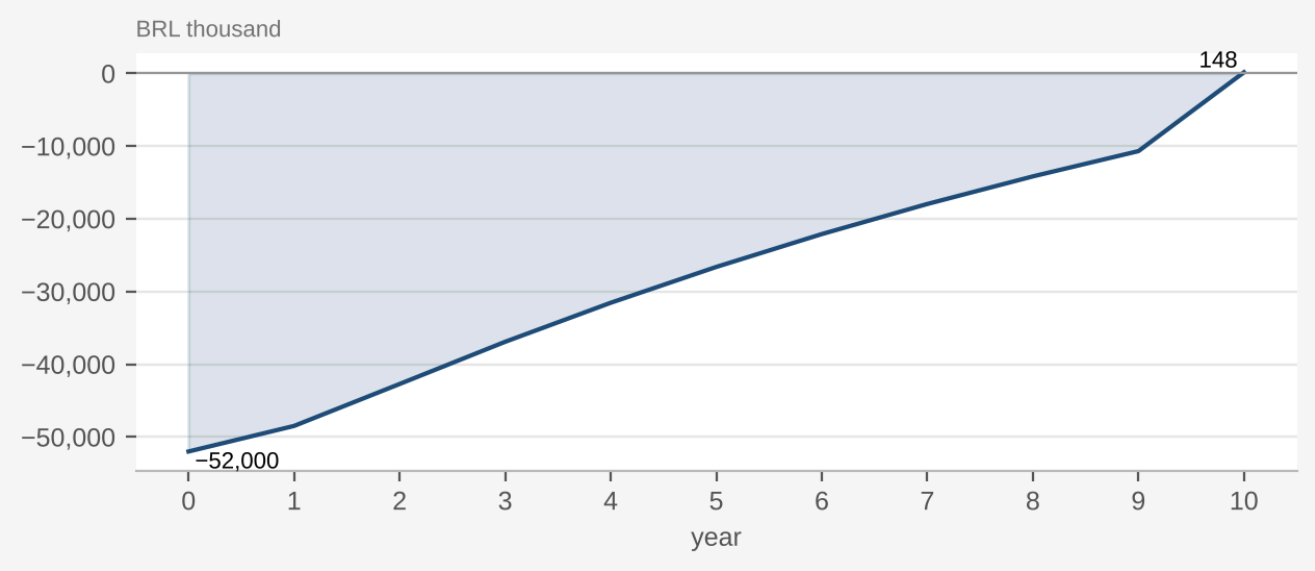


Figure 6 — Cumulative discounted cash flow

6.2 Debt service coverage

Debt service coverage (DSCR) measures how many times available cash flow — EBITDA after tax — covers debt service. In the principal-repayment years the lowest value is 1.42 in year 3 and the average 1.82. Banks usually look for 1.2 or more.

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Cash flow available (CFADS)	4,356	8,988	9,043	9,136	9,178	9,208	9,238	9,268	9,298	9,327
Debt service	3,432	3,432	6,380	6,037	5,694	5,351	5,008	4,664	4,321	3,978
DSCR	**1.27**	**2.62**	**1.42**	**1.51**	**1.61**	**1.72**	**1.84**	**1.99**	**2.15**	**2.34**

Table 9 — Debt service coverage

CFADS and debt service in BRL thousand; DSCR in times.

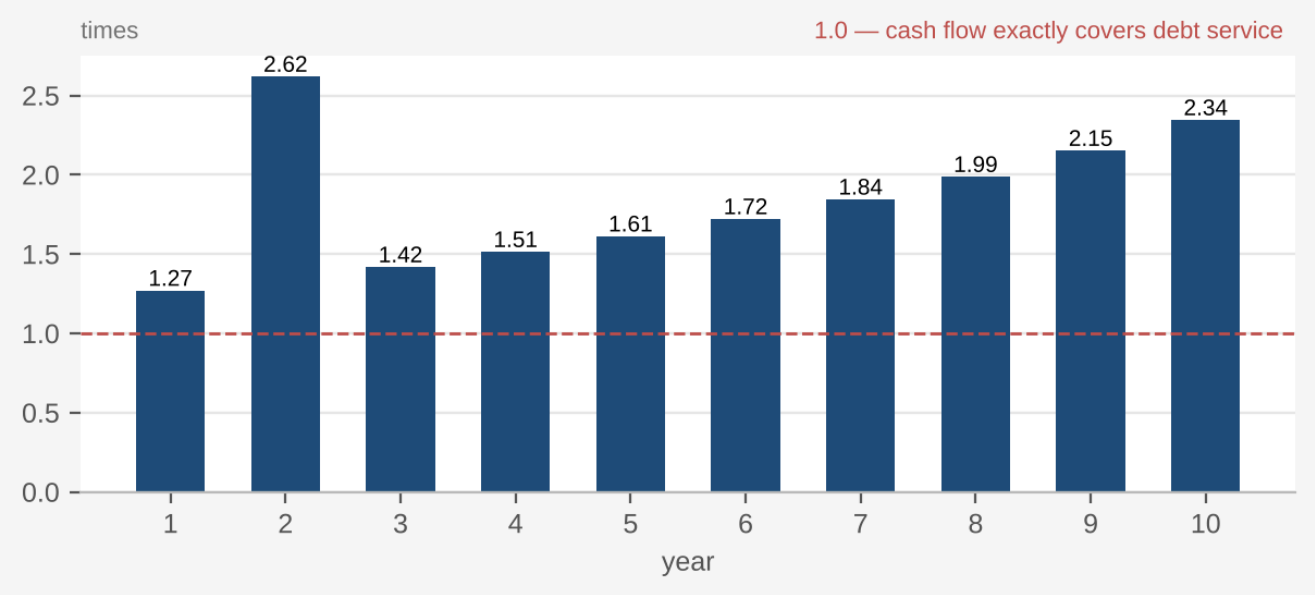


Figure 7 — DSCR by period

6.3 Assessment from a bank analyst's perspective

Summary of the credit analysis across five dimensions, with a recommendation.

Dimension	Rating	Basis
Commercial viability	Strong	70% of volume under a 10-year pre-purchase agreement.
Operational viability	Strong	Proven technology; operator runs the mill next door.
Economic and financial viability	Strong	55% EBITDA margin at full capacity.
Bankability	Strong	Minimum DSCR of 1.42; 40% equity.
Stress test	Strong	Minimum DSCR of 1.23 in the combined scenario.

Table 10 — Assessment by dimension

Recommendation: Viable. An infrastructure project with 10-year contracted revenue, own feedstock and a corporate guarantee. DSCR stays above 1.2 even under the combined scenario. Recommended for approval, with assignment of receivables from the gas sales contract.

7. Risk analysis

7.1 Risk matrix

The matrix identifies 4 risks, each with a mitigation measure and an owner.

Risk	Probability	Impact	Mitigation	Owner
Construction risk — delayed start-up	Medium	High	Fixed-price EPC contract with delay penalties; 2-year grace period.	Project lead
Price risk — natural gas	Medium	Medium	10-year pre-purchase agreement with indexed price for 70% of volume.	Sales lead
Tax risk — tax reform	High	Medium	Tax assumptions reviewed at each stage of the transition; rebalancing clause in the sales contract.	Finance lead
Environmental risk — licensing	Low	High	Installation licence in progress; environmental study completed.	Project lead

Table 11 — Risk matrix

7.2 Scenarios

Scenarios change the base-case assumptions and run through the same calculation engine: sales −15%, fixed costs +10%, and both at once.

Item	Base	Sales −15%	Fixed costs +10%	Combined
Revenue in year 10	21,900	18,615	21,900	18,615
EBITDA in year 10	12,132	9,570	11,637	9,075
NPV	**148**	**(8,147)**	**(1,539)**	**(9,902)**
IRR	**11.1%**	**7.9%**	**10.4%**	**7.3%**
Minimum DSCR	**1.42**	**1.30**	**1.38**	**1.23**

Table 12 — Scenarios

Figures in BRL thousand, except ratios. Minimum DSCR over the principal-repayment years.

Even in the combined scenario minimum DSCR is 1.23: the project services its debt from its own cash.

8. Conclusion

Five points, each with the figure that supports it.

First: the request is 31,200,000 BRL, 60.0% of a total investment of 52,000,000 BRL, with 40.0% covered by equity.

Second: revenue grows from 10,200,000 BRL in year 1 to 21,900,000 BRL in year 10, with a 55.4% EBITDA margin at the end of the horizon.

Third: NPV is 147,935 BRL at 11%, with an IRR of 11.1% and simple payback of 6.9 years.

Fourth: debt service coverage bottoms at 1.42 in year 3, backed by the guarantees in section 4.4.

Fifth: under the combined scenario (sales −15% and fixed costs +10%) minimum DSCR is 1.23. The project keeps its ability to service the debt.

Recommendation: Viable.

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