

01 / Executive summary

ANALYST WORK SAMPLE • BASE SCENARIO

Data Center Infrastructure Project Finance Case

A hypothetical \$50M starting development case testing how infrastructure generates cash, funds construction, services debt, and withstands downside conditions. Edited assumptions below may differ from the starting case.

CURRENT DEVELOPMENT BUDGET

\$52,500,000

DEBT COMMITMENT

\$21,000,000

PROJECT NPV

-\$12,177,305

MINIMUM OPERATING DSCR

0.87x

Analytical conclusion

Project cash flows fall below the assumed discount rate. Minimum coverage is 0.87x against a 1.20x user assumption. Economics and credit coverage require separate judgments; this case makes no financing recommendation.

Recruiting focus: financial modeling, sources & uses, debt financing, CFADS, DSCR, capital structure, sensitivity analysis, and risk communication. All assumptions are hypothetical; the completed case includes a formula-based Excel workbook and PDF work sample.

02 / Project overview

SELECTED ASSUMPTIONS · FULL EDITABLE REGISTER REMAINS IN THE MODEL

PROJECT INPUT	USER ASSUMPTION	PROJECT INPUT	USER ASSUMPTION
IT CAPACITY	5 MW	PUE	1.40
CONSTRUCTION	1 years	Operating life	15 years
UTILIZATION RAMP	40.0% / 55.0% / 70.0% / 82.0% / 90.0%	Capacity price	\$250/kW/month
POWER	\$0.080/kWh	Revenue growth	2.0%
TAX RATE	25.0%	Working capital / revenue	5.0%
MAINTENANCE CAPEX	\$250,000	Depreciable cost share	80.0%
DISCOUNT RATE	10.0%	Terminal disposal	\$0

Industry context

AI / cloud demand → Data center capacity → Power demand → Cooling → Electrical infrastructure → Grid / generation → Capital investment

The IEA describes data centers as geographically concentrated electricity loads and highlights the mismatch between fast-moving computing investment and slower energy infrastructure. For this case, that makes power availability, cooling efficiency, interconnection timing, and project completion central diligence questions.

IEA · Energy and AI (2025), Energy demand from AI · accessed 2026-10-12. Sector context only. No industry forecast, employer statistic, or published operating benchmark supplies the model assumptions.

Existing Luna1 Capital Flow research →

03 / Sources & uses / capital structure

Debt funds the assumed share of the development budget, including contingency. Sponsor equity is the balancing source and funds fees and construction interest; it is not a financing commitment. Operating working capital and recurring reinvestment are funded from operating cash or additional sponsor contributions.

USES · DEVELOPMENT AND FINANCING BUDGET

USE	USD
LAND / SITE	\$3,000,000
BUILDING	\$8,000,000
ELECTRICAL INFRASTRUCTURE	\$10,000,000
UPS / POWER DISTRIBUTION	\$4,000,000
GENERATORS	\$4,000,000
COOLING	\$6,000,000
NETWORK INFRASTRUCTURE	\$3,000,000
RACKS	\$2,000,000
SECURITY	\$1,000,000
CONSTRUCTION	\$6,000,000
ENGINEERING	\$2,000,000
OTHER	\$1,000,000
CONTINGENCY	\$2,500,000
FINANCING FEES	\$420,000
CONSTRUCTION INTEREST	\$1,470,000
TOTAL USES	\$54,390,000

SOURCES · MODELED FUNDING COMMITMENTS

SOURCE	USD	ALL-IN SHARE
DEBT	\$21,000,000	38.6%
SPONSOR EQUITY	\$33,390,000	61.4%
TOTAL SOURCES	\$54,390,000	100.0%

FUNDING GAP / SURPLUS

\$0

Balanced by sponsor equity. A zero gap does not establish sponsor liquidity or lender approval.

40.0% debt / 60.0% equity on the development budget. Fees of 2.0% of debt and construction interest are sponsor-funded. All-in leverage is 38.6%.

04 / Operating & power economics

FIRST OPERATING REVENUE

\$6,000,000

FIRST OPERATING EBITDA

\$1,987,760

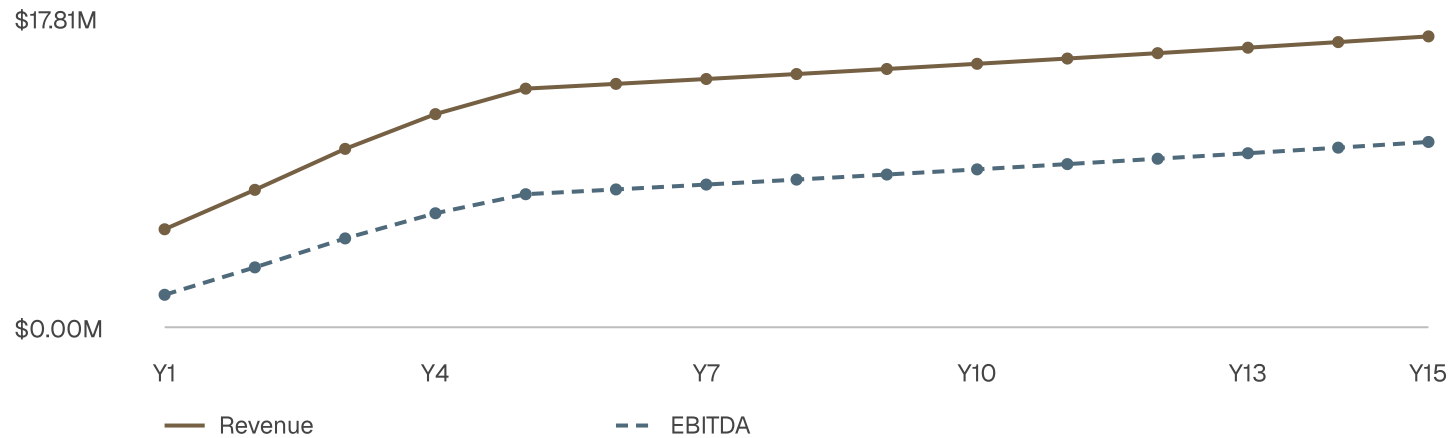
FIRST OPERATING POWER COST

\$1,962,240

FIXED ANNUAL OPEX

\$2,050,000

Operating revenue and EBITDA



IT MW = capacity × utilization; facility MW = IT MW × PUE. Annual kWh = facility MW × 8,760 × 1,000. First operating year consumes 24,528,000 kWh. PUE includes cooling electricity; cooling service costs exclude electricity.

Fixed operating costs and power price remain flat; capacity pricing grows annually. Maintenance expense is distinct from maintenance CapEx. Year-five utilization continues through useful life.

05 / Debt service / CFADS / DSCR

MINIMUM OPERATING DSCR

0.87x

AVERAGE OPERATING DSCR

2.00x

ASSUMED THRESHOLD

1.20x

DEBT TERM AFTER CONSTRUCTION

10 years

CFADS = revenue – power – other OpEx – cash taxes – Δ working capital – maintenance CapEx. DSCR = CFADS ÷ (interest + principal). Cash taxes reflect the modeled interest deduction. Exit proceeds and working-capital release do not support DSCR.

SELECTED OPERATING-YEAR MILESTONES · FULL ANNUAL SCHEDULE IN MODEL VIEW

OP. YEAR	EBITDA	CFADS	INTEREST	PRINCIPAL	ENDING DEBT	DSCR
1	\$1,987,760	\$1,437,760	\$1,470,000	\$0	\$21,000,000	0.98x
2	\$3,666,920	\$3,296,170	\$1,470,000	\$2,333,333	\$18,666,667	0.87x
10	\$9,668,710	\$7,726,548	\$163,333	\$2,333,333	\$0	3.09x
15	\$11,347,923	\$8,943,479	\$0	\$0	\$0	N/A

Repayment: equal-principal; 1 operating grace years, 7.0% interest. Construction interest is sponsor-funded. Calendar years below the assumed coverage threshold: 2, 3. No actual lender covenant is represented.

06 / Returns & sensitivity

PROJECT IRR · AFTER TAX

6.8%

EQUITY IRR · AFTER TAX

7.0%

PROJECT NPV

-\$12,177,305

OPERATING PAYBACK

10.4 years

Sensitivities use base assumptions independently of the selected scenario. Utilization rows replace the entire ramp with a constant level. Construction cost scales all development CapEx; fees, contingency, and debt funding recalculate. N/A means no conventional IRR or no debt-service period.

EQUITY IRR VS. CONSTANT UTILIZATION / CONSTRUCTION COST

UTILIZATION	COST -10%	BASE COST	COST +10%
70.0%	5.9%	4.4%	3.1%
80.0%	8.7%	7.1%	5.6%
90.0%	11.2%	9.5%	8.0%

Project returns use unlevered taxes and exclude debt, financing fees, and financing interest. Equity returns include staged funding, fees, interest, repayment, and the interest tax effect. Payback excludes disposal and working-capital release. IRR is withheld for nonconventional cash-flow patterns.

07 / Risks / downside case

Downside from the editable base case

DOWNSIDE NPV

-\$32,289,460

DOWNSIDE MIN. DSCR

-0.16x

DOWNSIDE EQUITY IRR

-1.0%

OPERATING FUNDING SHORTFALL

\$7,293,117

Utilization -10 points; capacity pricing -10%; construction, power, fixed costs, and maintenance CapEx +10%; interest +1 point; construction +1 year. Bounded inputs can limit the full shock.

CREDIT DILIGENCE AGENDA · PROTECTIONS ARE NOT ASSUMED TO EXIST

RISK	REQUIRED EVIDENCE / POSSIBLE MITIGATION
DEMAND / CONCENTRATION	Customer commitments, contract tenor, churn and counterparty review
POWER / INTERCONNECTION	Utility studies, power contract, hedge and energization schedule
CONSTRUCTION / COMPLETION	Independent engineer, fixed-price scope, contingency, guarantees
DEBT / LIQUIDITY	Term sheet, reserves, amortization fit, sponsor support
LIFECYCLE / RESIDUAL	Replacement study, disposal evidence, decommissioning cost

o8 / Conclusion

Project economics

NPV of -\$12,177,305 at 10.0% is negative. Project IRR is 6.8% and equity IRR is 7.0%. N/A indicates that a conventional unique IRR is not available.

Debt capacity & coverage

Modeled debt is \$21,000,000. Minimum coverage is 0.87x, with 2 operating periods below the assumed 1.20x threshold. This tests the selected debt amount; it is not optimized debt sizing.

Operating funding shortfalls after debt service total \$539,403 before exit cash. Additional sponsor support or restructuring would be needed in those periods.

Key return drivers

Utilization, capacity pricing, delivered power cost, PUE, development cost, construction timing, and repayment profile.

Break-even conditions

First-year EBITDA break-even utilization is 20.3%. This excludes taxes, reinvestment, working capital, debt service, and recovery of invested capital.

Model limitations: annual timing; straight-line depreciation on the assumed depreciable development share; no loss carryforwards, interest-deduction limits, maintenance-CapEx depreciation, or tax benefit on disposal losses. Working capital is released at exit. No refinancing, cash sweep, reserve account, default waterfall, or decommissioning model. Independent educational work sample; no underwriting opinion or personalized financial advice is provided.

Key credit risks

Uncontracted demand, customer concentration, grid delays, energy-price exposure, construction overruns, refinancing or balloon risk, and sponsor liquidity. The model assumes scheduled payments continue; it does not simulate default remedies.

Downside protection

The budget includes \$2,500,000 of assumed contingency. Contracted revenue, power hedges, completion guarantees, liquidity reserves, and covenant protections are diligence requirements, not protections asserted to exist.

What could change the investment case?

Executed contracts, independently verified CapEx, a monthly draw schedule, tax diligence, replacement costs, asset-sale evidence, and lender terms could change cash generation and debt capacity.

Project finance assessment

Modeled operating cash does not cover all scheduled debt payments. Project economics also fall below the assumed required return. No financing recommendation is made.