INDEPENDENT CASE STUDY | PUBLIC INFORMATION ONLY

MARA x Soluna

Buy the power, not the company

Strategic alternatives for MARA Holdings (NASDAQ: MARA) regarding Soluna Holdings (NASDAQ: SLNH)
Figures in US$ unless noted
Version 2 - full rework of the March 2024 study

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Not prepared for, reviewed by or affiliated with MARA, Soluna or any employer or client. Not investment advice.

Recommendation: pass on Soluna equity; bid $40M + $10M contingent for the Dorothy Energy Campus

Cash flows, not the AI pipeline narrative, set the price. Every whole-company structure destroys value for MARA.

$14.3M

NPV of recommended bid

$40M cash + $10M contingent; 13.7% unlevered IRR before the expansion option

$60.9M

Walk-away price

Breakeven all-cash value of the campus to MARA at a 10.5% WACC

($277.8M)

NPV of a whole-company bid

Cash at a 30% premium ($0.94/sh) with the preferred redeemed

Dorothy 2 is built, so the 2024 deal no longer exists.

D2 (48 MW) energised in Nov-2025. Spring Lane holds the Class B and takes 92.5% of distributable cash until an 18% IRR.

Soluna cannot cover its overhead.

Normalised site cash margin of $22.7M/yr runs against $23.0M/yr of cash corporate opex. Q2-26 Adj. EBITDA was ($1.6M).

The preferred makes control expensive.

Par plus arrears is $163.7M at close versus $51.7M at market. The 0.2817 share cap makes conversion worthless, so holders keep the claim; a clean takeout pays it in full.

The campus fits MARA's 2027-28 needs.

150 MW of owned wind, 50 MW of energised data halls, and a 50 MW expansion request. MARA's main third-party hosting contracts expire between 3Q27 and 1Q28.

Source: Valuation date: close of 14-Oct-2026. Model (model/MARA_Soluna_v2_model.xlsx); SLNH 10-Q Q2-26; MARA 10-Q Q2-26; Yahoo Finance closes 14-Oct-2026.

Since March 2024, both companies moved from building bitcoin sites to chasing AI power

Soluna consolidated its Dorothy campus. MARA started buying powered land and plans to exit third-party hosting.

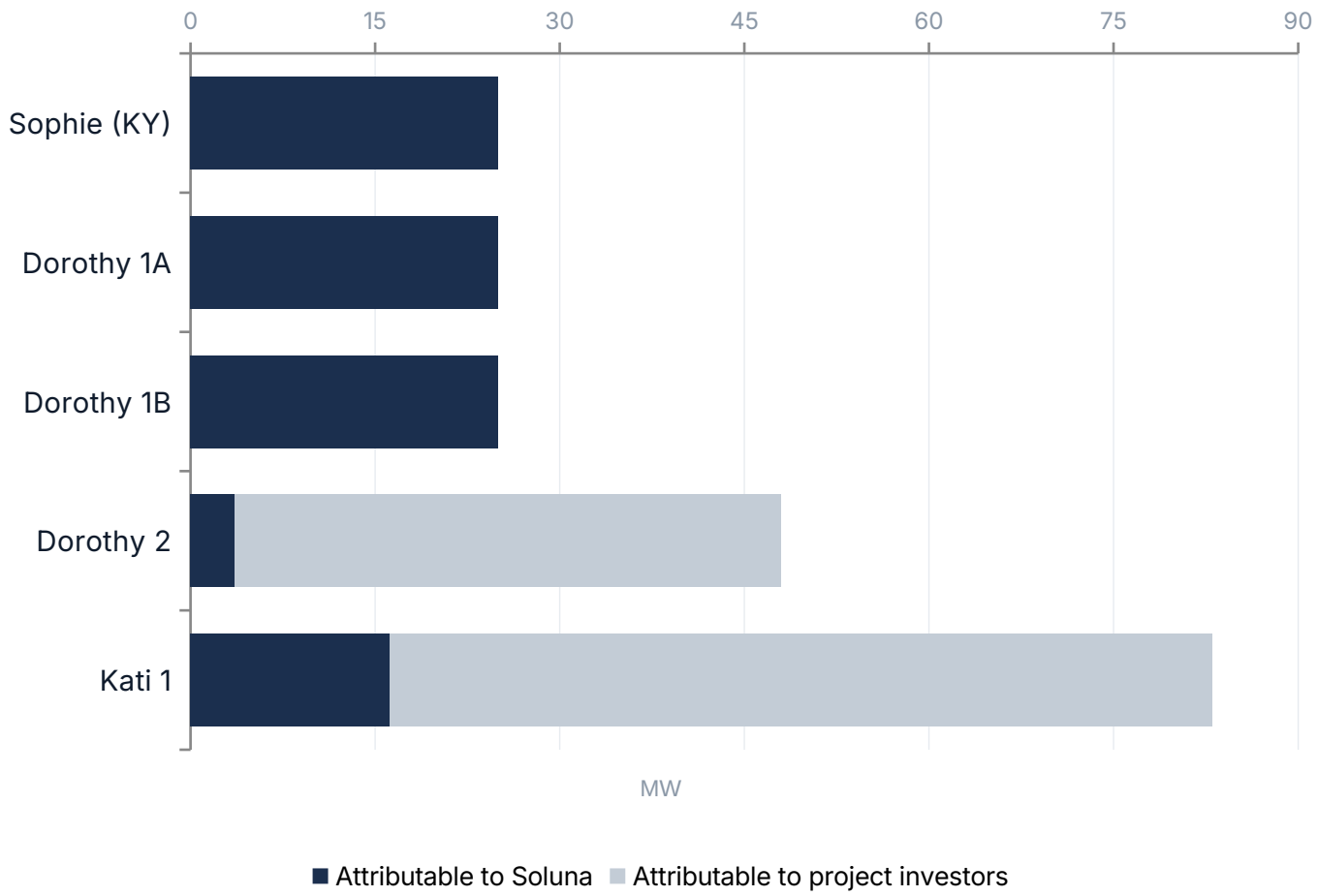


Implication: the v1 thesis (buy Dorothy 2 before it was built, $6.0M, NPV +$3.6M) is obsolete. Dorothy 2 is now a built asset whose cash goes mostly to Spring Lane. Any v2 deal has to be re-tested against today's capital structure and MARA's new strategy.

Source: SLNH 8-Ks 1-Apr, 17-Apr, 20-May, 9-Jun, 13-Aug, 8-Sep, 14-Sep-2026; SLNH 10-K FY25; MARA 8-Ks 26-Feb, 30-Apr, 9-Jul, 25-Sep-2026; MARA 10-Q Q2-26.

Soluna operates 206 MW, but owns the cash flows of only ~95 MW

Spring Lane's Class B preference captures most of the cash from Dorothy 2 and Kati 1 until it earns its hurdle IRR.



SOLUNA AT A GLANCE

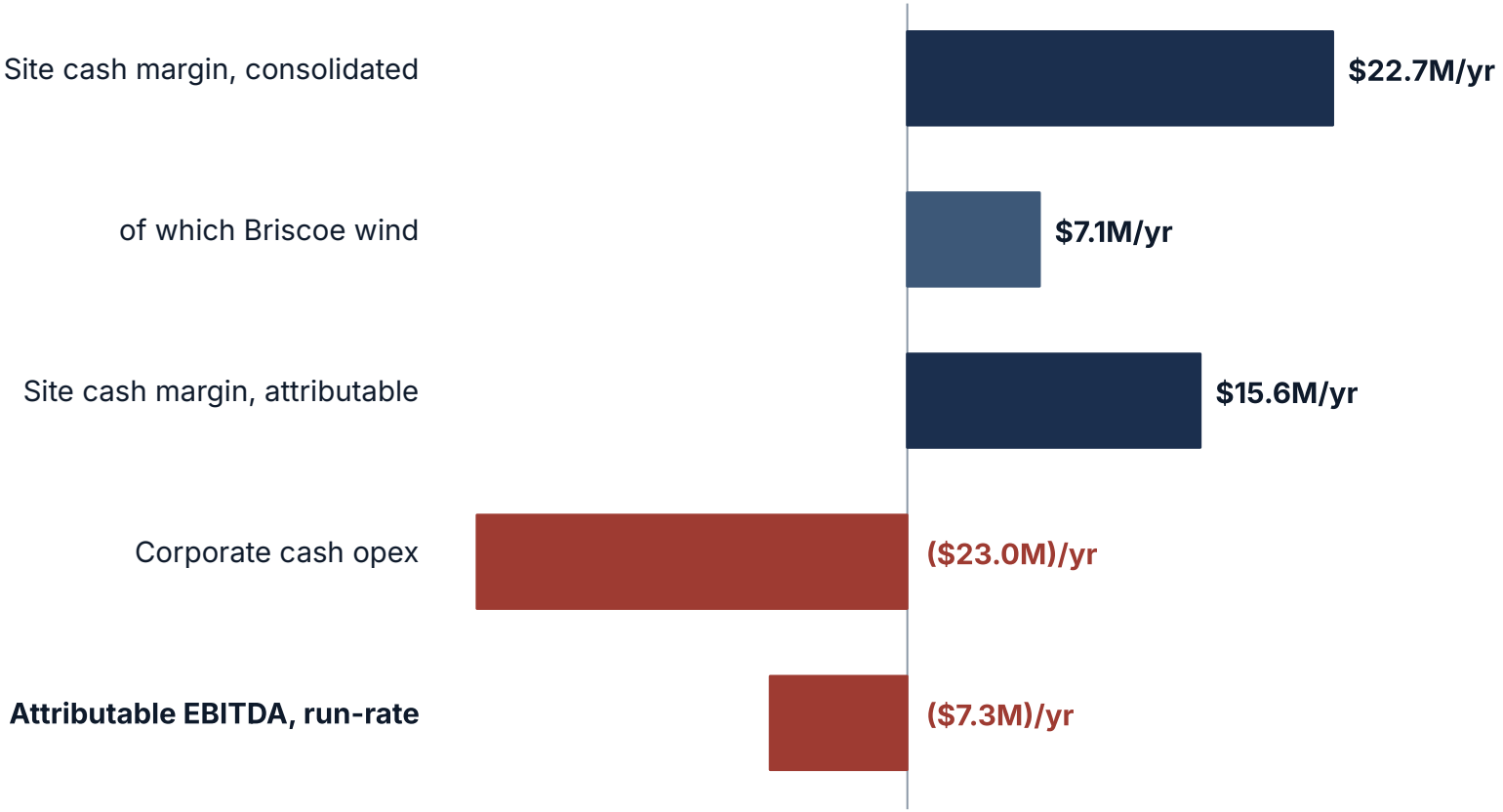
Metric	Value
Operating capacity (Sep-26)	206 MW
Attributable capacity	94.8 MW
Briscoe wind (owned)	150 MW
Q2-26 revenue	$15.1M
LTM revenue	$42.1M
Q2-26 gross profit	$0.8M
Q2-26 Adj. EBITDA	($1.6M)
Q2-26 net loss	($22.6M)
Pro forma cash	$117.9M
Development pipeline	6.3 GW

Q2-26 revenue includes $4.4M of electricity pass-through, now shown gross.

Source: SLNH 10-Q Q2-26 (VIE notes, segment tables); SLNH 8-K 8-Sep-2026. Attributable MW = MW x Soluna share of distributable cash before the hurdle (assumption: Kati 1 = 7.5% + 92.5% x 13%).

Site margins do not cover corporate cost: Soluna burns cash before any growth capex

Run-rate economics normalised from Q2-26: one-off Briscoe maintenance added back; Kati 1 averaged ~50 MW in the quarter.



WHAT DRIVES IT

- Data-centre cash margin of $90k per MW-year, after power, labour and site costs.
- Cash corporate opex of $23.0M/yr, which excludes $9.5M of Q2 stock compensation.
- Hashprice is $38.85/PH/day today (Q2-26 average: $33.63). The April 2028 halving cuts the block subsidy in half.
- Read-across: a buyer that strips out the overhead captures the site margin. A buyer of the whole company inherits the overhead and the preferred.

Source: SLNH 10-Q Q2-26 (gross profit $0.766M, COR D&A $3.411M, Adj. EBITDA ($1.561M), wind segment table); SLNH 8-K 13-Aug-2026 ($1.5M Briscoe maintenance). Model sheet Economics.

The preferred stack sits between MARA and Soluna's common equity

At the market, common equity is $178M. In a change of control, the preferred claim triples to $164M.

$M at close of 14-Oct-2026	Market	Change of control
Common equity (247.0M FD shares)	$177.8	$231.2 at 30% prem.
Series A preferred (4.92M sh)	$51.7	$163.7 par + arrears
Debt principal (pro forma)	$22.7	$22.7
HPE termination liability	$19.3	$19.3
Cash (pro forma)	($117.9)	($117.9)
Attributable enterprise value	**$153.6**	**$319.0**
Non-controlling interests (book)	$54.5	$54.5
Consolidated enterprise value	**$208.1**	**$373.5**
EV / operating MW ($M)	1.01	1.81

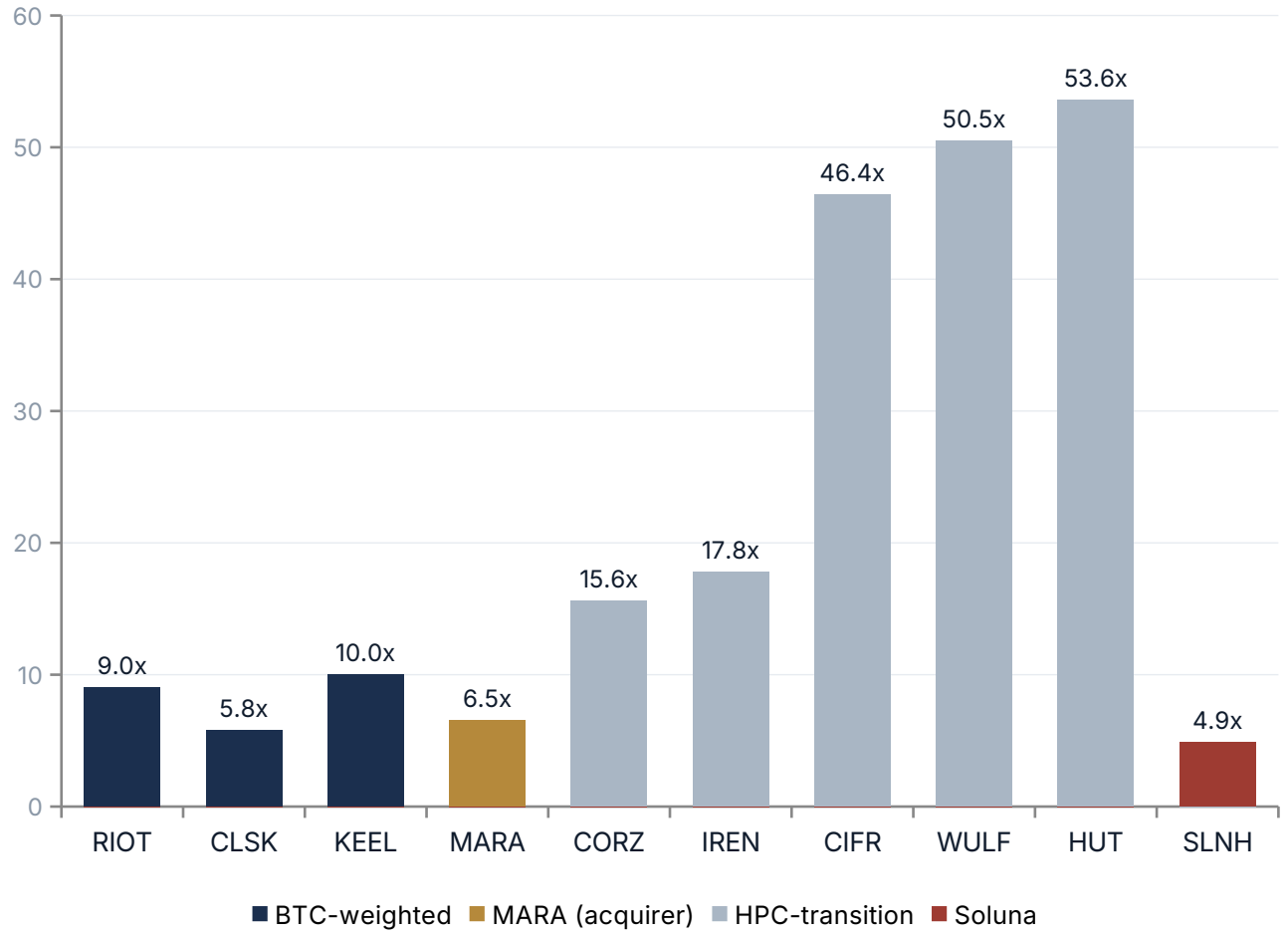
WHY THE PREFERRED MATTERS

- 9% cumulative perpetual preferred; no dividends declared since Oct-2022. Arrears: $35.1M at 30-Jun, accruing $11.1M/yr.
- On a change of control, each preferred share converts into at most 0.2817 common shares. At $0.94 that is worth $0.26 against a $10.50 market price. Holders would keep the preferred instead.
- The base case assumes MARA redeems the preferred at $25 plus arrears. The alternative is to leave a 9% claim outstanding inside MARA. Both are tested.
- Excluded from the table: 24.3M warrants (aggregate strikes not disclosed).

Source: Yahoo Finance closes 14-Oct-2026 (SLNH $0.72, SLNHP $10.50); SLNH 10-Q Q2-26 (shares, preferred terms, arrears $35.1M at 30-Jun, debt, HPE liability, NCI); post-quarter ATM $23.6M and Generate prepayment $19.1M.

Revenue multiples flatter Soluna; HPC names trade on contracted lease backlogs

Soluna trades at 4.9x LTM revenue, below the BTC-weighted peers' 9.0x median. But its cash margin is a fraction of theirs, so the gap is not mispricing.



Ticker	EV $bn	EV/Rev	Beta L	Beta U
RIOT	6.0	9.0x	4.02	3.60
CLSK	3.9	5.8x	3.46	2.17
KEEL	1.9	10.0x	3.89	2.57
MARA	5.2	6.5x	2.82	1.76
CORZ*	6.9	15.6x	3.59	2.01
IREN*	12.6	17.8x	4.84	3.12
CIFR*	8.9	46.4x	4.24	2.06
WULF*	8.4	50.5x	3.50	2.04
HUT*	17.0	53.6x	4.40	2.65
BTC peers 25th-75th		**7.4-9.5x**		
SLNH (consolidated)	**0.21**	**4.9x**	**4.03**	

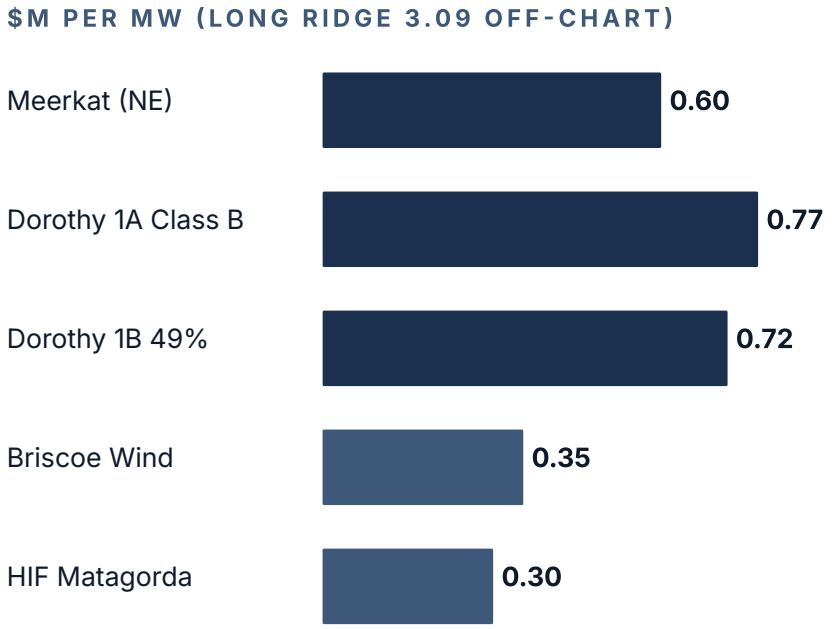
* HPC-transition peers: shown for context and not applied. Betas: 102 weekly returns against the S&P 500 to 14-Oct-2026, unlevered at a 21% tax rate.

Source: Company 10-Q/10-K filings (balance sheets at 30-Jun-2026; IREN FY Jun-26 10-K); Yahoo Finance closes 14-Oct-2026. EV = market cap + debt + NCI - unrestricted cash; bitcoin holdings not netted. Model sheet Comps.

Recent deals: $0.60-0.77M per MW for operating halls, $0.30M per MW for powered land

Soluna's own 2026 buyouts and MARA's purchases give a tight, recent and directly relevant range.

Date	Acquirer / target	Asset	MW	Price $M	$M / MW
Jan-26	MARA / Meerkat (NE)	Operating data centre	42	25.2	0.60
Apr-26	Soluna / Dorothy 1A Class B	Operating data centre	25	16.5	0.77
May-26	Soluna / Dorothy 1B 49%	Data centre + miners	25	8.8	0.72
Apr-26	Soluna / Briscoe Wind	Wind generation	150	53.0	0.35
Jul-26	MARA / HIF Matagorda	Powered land (milestones)	2000	600.0	0.30
Apr-26	MARA / Long Ridge (pending)	CCGT + 1,600 acres	485	1500.0	3.09

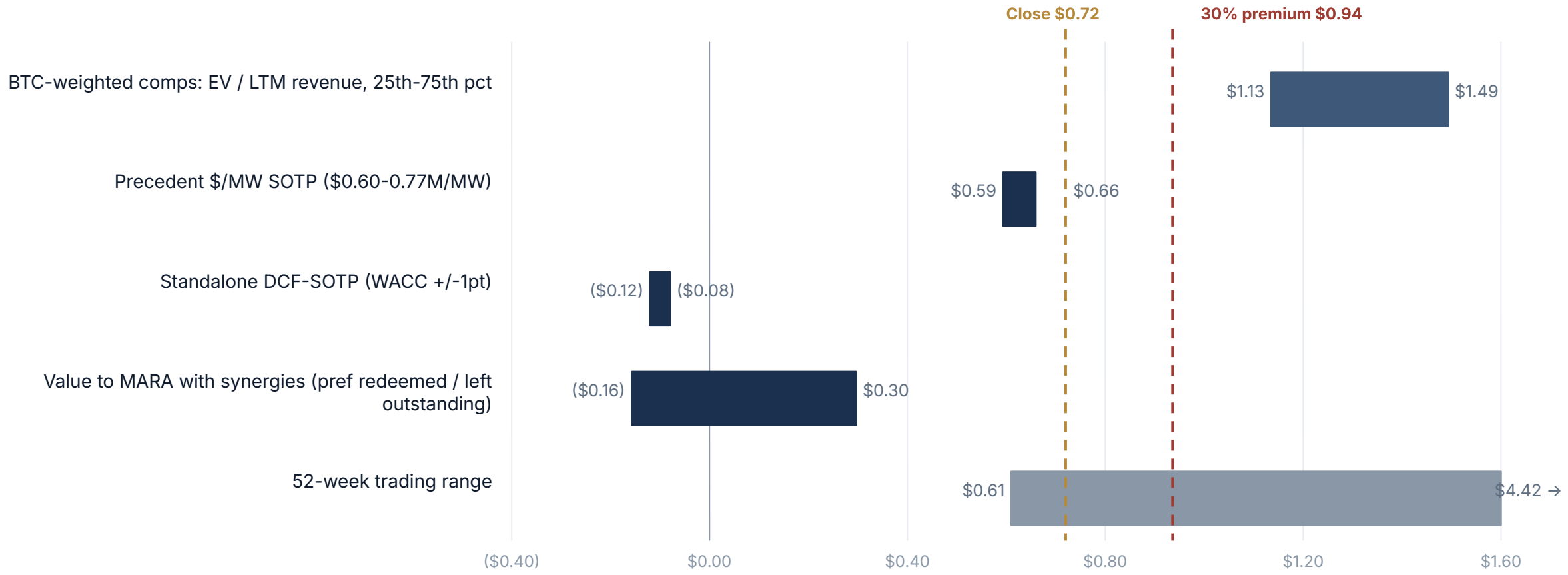


How we use them: Dorothy 1 and the other attributable MW are valued at $0.60-0.77M/MW, Kati 2 and the extra 50 MW at the HIF $0.30M/MW, and Briscoe at its April 2026 cost of $53.0M. Long Ridge (3.09) prices dispatchable gas generation and is not comparable.

Source: MARA 10-Q Q2-26 (Meerkat); SLNH 8-Ks 1-Apr, 17-Apr, 20-May-2026; MARA 8-Ks 30-Apr, 9-Jul, 25-Sep-2026. D1A and D1B grossed up to 100% of the interest acquired.

Every cash-flow method values SLNH common below its $0.72 share price

Only revenue multiples support the share price or a premium to it. The market is paying for the 6.3 GW pipeline story, which MARA should not buy.

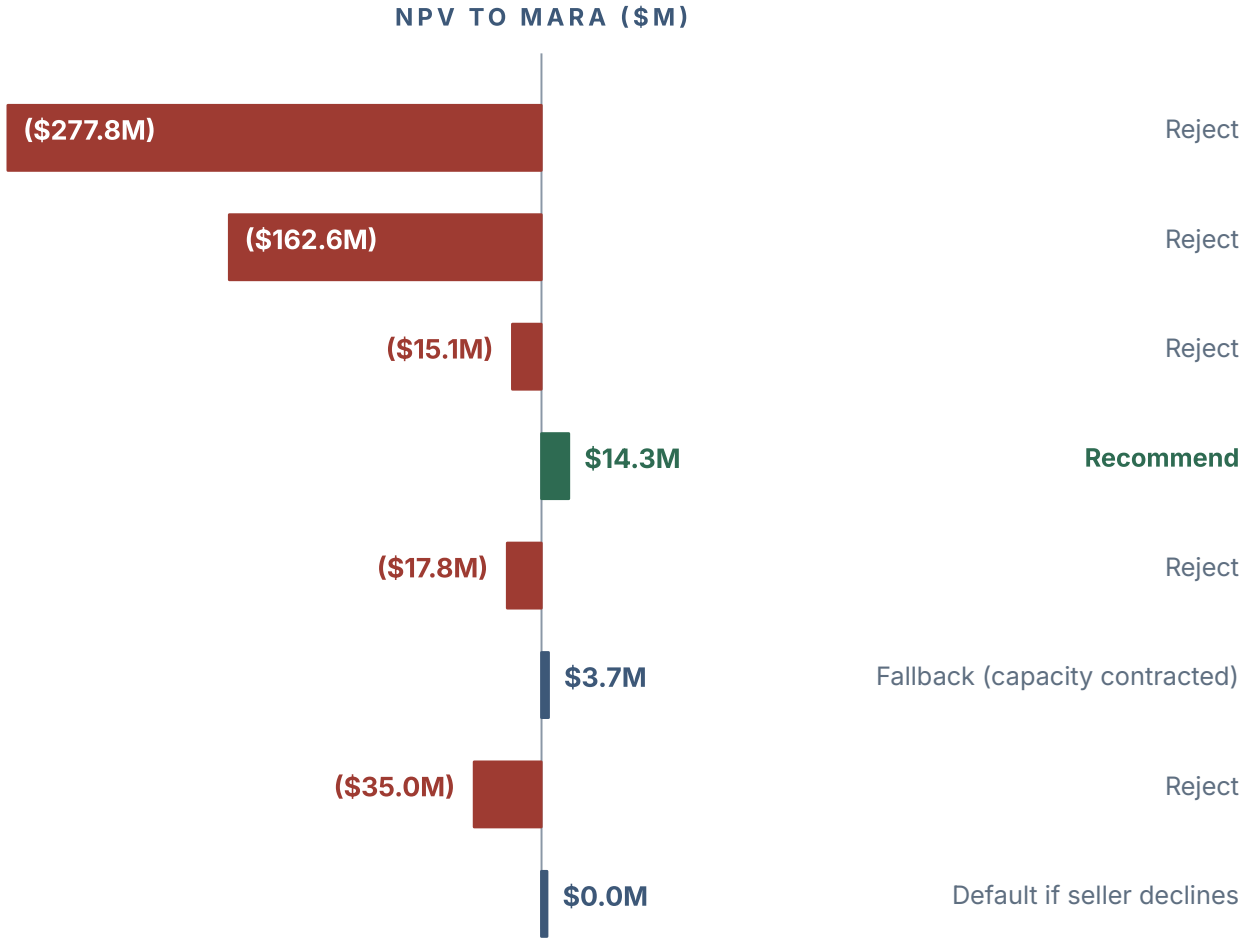


Source: Model sheet Football. $ per SLNH fully diluted share (247.0M). Precedent and standalone methods leave the preferred outstanding at market; the value-to-MARA bar ranges from the preferred redeemed (low) to left outstanding (high).

Of eight alternatives, only a disciplined campus purchase creates value

NPV to MARA at a 10.5% WACC. Each alternative was built from the same inputs; the hosting MSA is positive but has no available capacity.

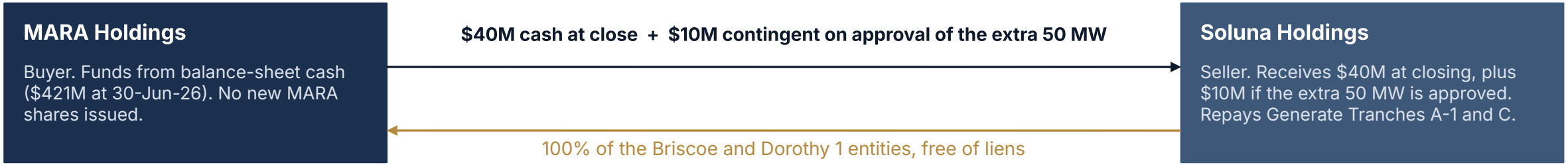
	Alternative	Outlay $M
A1	Whole company, cash, 30% premium; preferred redeemed	$394.9
A2	Whole company, all-stock, 30% premium; preferred left outstanding	$231.2
B1	Dorothy Energy Campus at seller's recent cost basis	$78.3
B2	Dorothy Energy Campus: $40M cash + $10M contingent	$50.0
C	Buy 100% of Dorothy 2 at $0.60M/MW	$28.8
D	Hosting MSA, 35 MW for 2028-30	-
E	19.9% PIPE in SLNH at market	$43.8
F	No transaction	-



Source: Model sheet Alternatives. NPV = value to MARA less consideration and fees. Whole-company values include synergies (75% of corporate opex removed) and $8M of integration cost.

Structure: a cash asset purchase of the generation and the energised halls

MARA buys Briscoe and Dorothy 1, cash-free and debt-free. Soluna keeps Dorothy 2, Dorothy 3, Kati and Sophie, plus its AI equity story.



KEY TERMS

- Headline $50.0M = 4.7× 2027E EBITDA
- Below the $133.9M HSR threshold: no filing needed
- Asset deal: stepped-up tax basis
- Assignment of hosting contracts and of the Golden Spread PPA
- Transition services from Soluna for 6 months

DOROTHY ENERGY CAMPUS - ACQUIRED PERIMETER

Briscoe Wind

149.85 MW nameplate. PPA and REC revenue. Run-rate EBITDA $7.1M.

Dorothy 1A / 1B

50 MW of energised halls, hosting contracts and D1B miners. EBITDA $4.5M.

+50 MW load

Request under TDSP study. Valued at $0.30M/MW x 50% = $7.5M.

Soluna retains Dorothy 2 (with SLC), Dorothy 3 land, Kati 1-2 and Sophie. Briscoe keeps selling power to Dorothy 2 under a long-term PPA (to be negotiated).

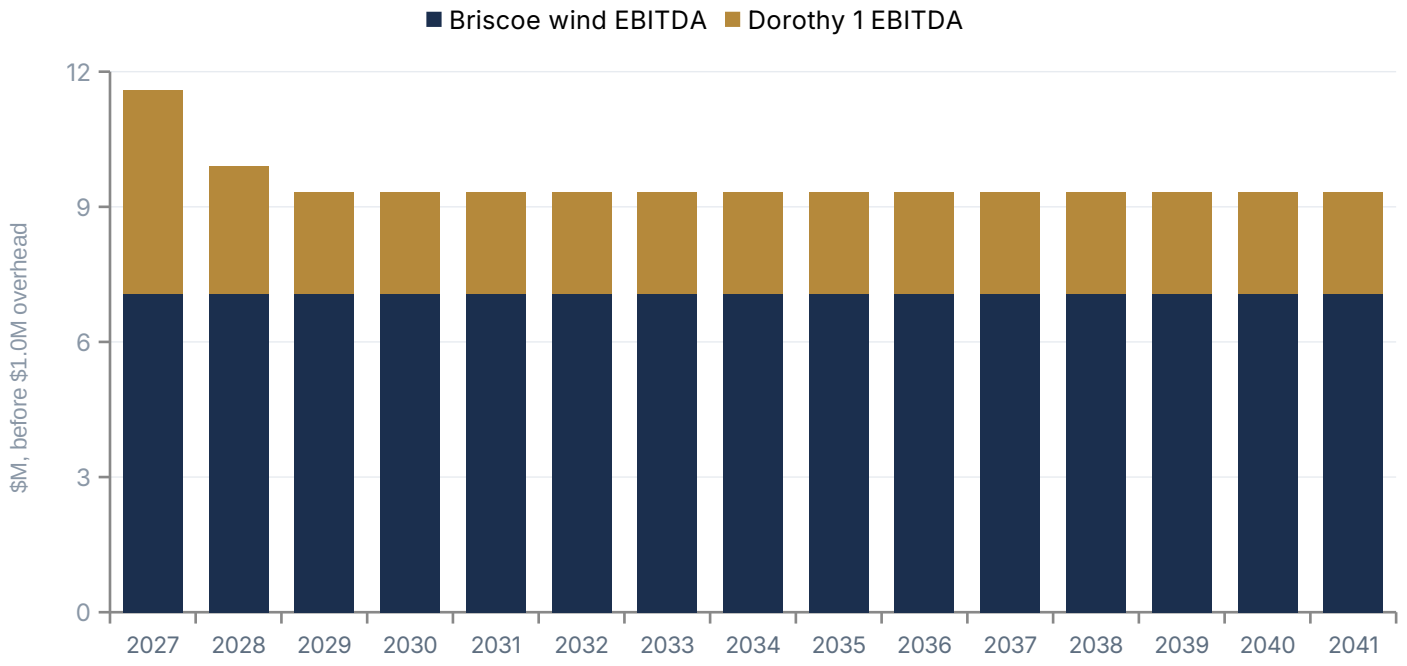
WHY SOLUNA MIGHT SAY YES

- Raising $40M through the ATM at $0.72 would mean ~56M new shares (18.5% dilution)
- Funds its share of Kati 2 (83 MW AI phase) without more equity
- Keeps Dorothy 3 and the AI story

Source: Perimeter and terms: proposal in this case study. Briscoe, D1A, D1B and the 50 MW request: SLNH 8-Ks 1-Apr, 17-Apr, 20-May, 14-Sep-2026. Generate liens: SLNH 8-K 1-Apr-2026 (Tranches A-1 and C secure D1A and Briscoe).

Campus DCF: $45.4M of operating value, $60.9M all-in to MARA in an asset deal

Wind cash flows are stable. Data-hall margin halves after the April 2028 halving. 15-year life, no terminal value.



$M	2027	2028	2029	2030+
EBITDA (after overhead)	10.6	8.9	8.3	8.3
Less: tax on EBITDA	($2.2)	($1.9)	($1.7)	($1.7)
Less: maintenance capex	($1.0)	($1.0)	($1.0)	($1.0)
Unlevered FCF	**7.4**	**6.0**	**5.6**	**5.6**

VALUE BRIDGE ($M)

Component	$M
PV of operating FCF	45.4
+ 50 MW expansion option	7.5
= Campus value, carry-over basis	**52.9**
+ Step-up tax shield, net of fees, at breakeven	8.0
= Breakeven all-cash price	**60.9**
Recommended headline price	50.0
NPV of bid (expected contingent)	**14.3**
Unlevered IRR (before option)	13.7%
Seller's 2026 cost basis	78.3

Source: Model sheet Campus_DCF. Run-rate inputs from SLNH 10-Q Q2-26 segment data; mid-year discounting from 31-Dec-2026 at 10.5%; tax 21%; 7-year straight-line tax depreciation of stepped-up basis; $1.0M/yr maintenance capex and $1.0M/yr site overhead (assumptions).

The bid survives a 20% cut in wind EBITDA and MARA's own 17.0% cost of equity

NPV of the $40M + $10M bid ($M). Every cell is positive; the worst case is $2.0M at 80% of run-rate wind EBITDA and a 12.5% WACC.

Wind EBITDA \ WACC	8.5%	9.5%	10.5%	11.5%	12.5%
80% of run-rate ($5.7M)	$9.9	$7.7	$5.6	$3.8	$2.0
90% of run-rate ($6.4M)	$14.7	$12.2	$10.0	$7.9	$6.0
100% of run-rate ($7.1M)	$19.5	$16.8	**$14.3**	$12.0	$9.9
110% of run-rate ($7.8M)	$24.4	$21.4	$18.6	$16.1	$13.8
120% of run-rate ($8.5M)	$29.2	$25.9	$23.0	$20.2	$17.7

STRESS TESTS

Case	NPV $M
Base (10.5%)	$14.3
At MARA cost of equity (17.0%)	$2.1
Breakeven WACC	18.6%
50 MW never approved	$10.7
Pay seller's cost ($78.3M)	($15.1)

Halving risk is in the base case: Dorothy 1 margin falls to 50% of run-rate from mid-2028. Wind is the value driver, at 61% of run-rate EBITDA.

Source: Model sheet Campus_DCF (sensitivity grid computed live with SUMPRODUCT). WACC base 10.5% from a blended unlevered beta of 1.21 (wind 0.47, Damodaran Jan-2026; miners 2.37 peer median).

Cash-funded and non-dilutive; the rejected stock route would hand over 6.8% of MARA

Sources and uses at closing, per-share effects on MARA, and the pro forma ownership of the rejected all-stock route.

SOURCES & USES AT CLOSING ($M)

Uses	$M
Cash consideration	40.0
Transaction costs (2%)	0.9
Total uses	**40.9**
Sources	**$M**
MARA balance-sheet cash	40.9
Total sources	**40.9**
Deferred: contingent payment	10.0
MARA cash after closing	380

PER MARA SHARE

$0.037

NPV added per share (campus)

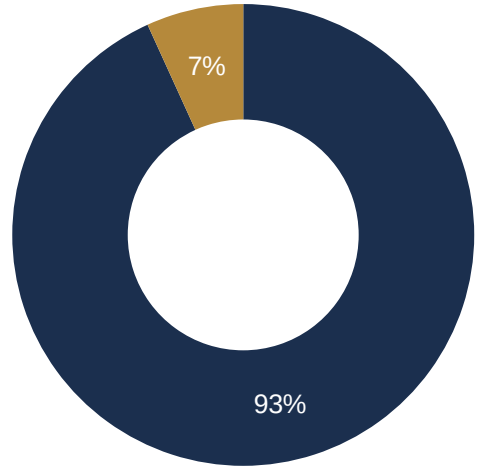
+$0.027

2027E EBITDA added per share

($0.72)

NPV per share, whole-company (A1)

PRO FORMA MARA OWNERSHIP - A2 ALL-STOCK



28.1M new MARA shares at $8.23 for an NPV of ($162.6M). The cash campus deal leaves ownership unchanged (100% existing holders).

Source: Model sheet Deal and SOTP. MARA shares 386.3M (10-Q cover, 30-Jul-2026); MARA cash at 30-Jun-2026; MARA close $8.23 on 14-Oct-2026.

The main risks are seller willingness and wind output; each has a contractual answer

The risks that would move NPV most, ranked, with the mitigant written into the offer.

Risk	Likelihood	Impact	Mitigant
Seller refuses below its $78.3M cost basis	High	Deal does not happen	Walk away above $60.9M. Lead with non-dilutive funding versus 18.5% ATM dilution. The contingent tranche bridges the gap on value.
Wind output or merchant price shortfall	Medium	−20% wind EBITDA: NPV $5.6M	Diligence 10 years of P50/P90 output; assume the GSEC PPA; price merchant volumes at forward curves.
50 MW request not approved	Medium	NPV falls to $10.7M	$10M of the price is paid only on TDSP approval, so MARA pays only for what it receives.
Dorothy 2 PPA and shared-substation disputes	Medium	Operational friction	Long-term PPA and interconnection-sharing agreement signed at closing; cross-default carve-outs.
Halving and hashprice compress hall margin	High	Already in base case (50%)	Redeploy MARA's fleet as hosting expires (3Q27-1Q28). Evaluate AI conversion with MARA's Starwood Digital Ventures platform if the 50 MW is approved.
Generate liens and lender consent	Low	Closing delay	Cash-free, debt-free closing: Soluna repays Tranches A-1 and C from proceeds at closing; payoff letters are a condition precedent.

Source: Risk sizing from the model sensitivities (Campus_DCF). Briscoe GSEC PPA and merchant exposure: SLNH 10-Q Q2-26 revenue recognition note. ERCOT Batch Zero: SLNH 8-K 14-Sep-2026. Starwood platform: MARA 8-K 26-Feb-2026.

Offer $40M + $10M for the campus, walk away above $61M, and do not bid for the equity

A staged process keeps MARA's exposure small until diligence confirms the wind and interconnection economics.

1

Approach

Non-binding indication: $40M + $10M contingent; exclusivity for 45 days

2

Confirmatory diligence

Wind P50/P90, GSEC PPA, hosting contracts, substation and interconnection, Generate payoff

3

Sign

Asset purchase agreement, D2 PPA and interconnection-sharing agreement, TSA

4

Close

Cash-free, debt-free; no HSR filing; target 31-Dec-2026

5

Earn-out event

TDSP approval of the extra 50 MW triggers the $10M payment

DECISION RULES

- Bid ceiling: $60.9M all-cash equivalent. Above that, MARA should not transact.
- No bid for SLNH equity. A cash takeout that clears the preferred is negative even at $0 per common share; an all-stock deal that leaves the preferred outstanding breaks even only at $0.29/sh.
- Fallback: a 35 MW hosting MSA for 2028-30 (NPV $3.7M) if capacity frees up.

WHAT WOULD CHANGE THE VIEW

- A signed hyperscale lease at Kati 2 or Dorothy 3 with disclosed $/MW economics
- A restructuring of the preferred, which today puts a $164M claim ahead of the common in any takeout
- ERCOT confirming the Base Load positions and the 50 MW approval before signing

Source: Model; HSR threshold: FTC press release 14-Jan-2026. Timeline is illustrative.

Appendix: discount rate and key assumptions

Every input is in the model's Inputs sheet with its unit, as-of date and source URL, or is marked as an assumption.

WACC BUILD (CAMPUS)

Component	Value
Risk-free rate (10Y UST)	5.19%
Equity risk premium	4.20%
Unlevered beta: wind / miners	0.47 / 2.37
Wind weight (by EBITDA)	61%
Blended unlevered beta	1.21
Relevered beta (D/V 20%)	1.45
Cost of equity	11.28%
Pre-tax cost of debt (assumption)	9.0%
WACC (rounded)	**10.5%**
MARA levered cost of equity (stress)	17.0%

KEY ASSUMPTIONS (ALL FLAGGED IN FIGURES.JSON)

Assumption	Value
Kati 1 average MW in Q2-26	~50 MW
Post-halving data-hall margin	50% of run-rate
Campus life / terminal value	15 yrs / none
Site overhead; maintenance capex	$1.0M; $1.0M per yr
Probability the 50 MW is approved	50%
Soluna share of Kati 2 JV	50%
Corporate opex removed by MARA	75%
Integration cost (whole company)	$8.0M
Transaction fees	2% of price
Close date	31-Dec-2026

Source: FRED DGS10 (5.19% on 14-Oct-2026); Damodaran implied ERP 4.20% (1-Oct-2026) and Jan-2026 industry betas; peer betas computed from Yahoo Finance weekly closes; mempool.space (difficulty, fees).