AEVION QVenture — Investment Memo

Generated 2026-11-26 · AEVION AI Investment Analyst · not investment advice

FICTIONAL EXAMPLE: the company in this example is made up; any resemblance of names is coincidental. All figures are model output on invented inputs.

Helion Grid

Climate / Energy Transition · series-a · EU · raising $14,000,000

Score 63/100 — WATCH (conviction: medium)

Signal coverage: 59% company-specific (3 metrics parsed from the plan); remainder from sector priors.

Investment memo

Verdict: watch, with a conditional lead — this is a real business, not a science bet, and the strongest reason to act is a proven VPP engineering stack already generating €2.1M ARR at 62% gross margin, growing 18% QoQ across three live balancing markets with a policy tailwind. The strongest reason against is structural and unhedgeable at the model level: balancing-market revenue is commodity-linked and policy-dependent, so as EU VPP capacity scales, clearing prices compress and a single TSO rule change could halve revenue in one of only three markets — against a moat that is ~84% "realized" yet tiny (38 MWh) versus GW-scale incumbents. Enter only on conditions. Lead with $7M for ~10.3% at the ~$53.9M pre-money anchor, capping exposure at $7M and reserving $10.5M for pro-rata. Close is contingent on three diligence items: per-market revenue breakdown, capex-per-MWh and LTV/CAC economics, and a clean GDPR data-provenance audit on installer-onboarded household data. Sized at ~1.6% of a diversified portfolio.

Narrative engine: model anthropic (per-part source not recorded)

Entry strategy

Ticket: $7,000,000 target (range $3,500,000–$7,000,000)
Target ownership: 10.3%
Valuation band (pre-money): $25,975,000 / $53,900,000 / $107,800,000
Modelled return (not a forecast): 5.47x multiple (9.7x base) · horizon 6yr · loss prob 44%

Deployment schedule:

- 60% — Entry: On close, after commercial + legal + financial diligence.
- 40% — Pro-rata: Reserve to maintain ownership through the next round.

Portfolio: Size at ~1.6% of a diversified venture portfolio (fractional-Kelly, conviction-scaled). Reserve 10,500,000 USD for pro-rata follow-on.

Score breakdown

Market size & growth — 53/100 (weight 14%)
~$31B TAM, 24% CAGR (Climate / Energy Transition).

Timing / tailwinds — 80/100 (weight 5%)
Sector growth 24% vs. 12% neutral baseline.

Moat / defensibility — 63/100 (weight 16%)
economies of scale is the category's mature moat (ceiling 68), but ~84% realized at series-a given disclosed traction — an unproven moat is discounted toward the 35 "no demonstrated defensibility" floor.

Unit economics potential — 48/100 (weight 15%)
Company metrics: 62% disclosed gross margin (capital intensity 85%).

Team / execution signal — 73/100 (weight 28%)
Quantified traction: $2.1M ARR; 18% unspecified growth.

Scientific / tech feasibility — 66/100 (weight 7%)
solid-state storage, long-duration storage chemistry, DAC cost curves

Regulatory / legal headroom — 61/100 (weight 7%)
Regulatory intensity 60% (higher = more legal drag).

Competitive headroom — 62/100 (weight 8%)
Competitive intensity 55%. policy/subsidy dependence and commodity-linked margins.

Analyst council

Research Scientist — VPP aggregation is proven engineering, not frontier science — 66/100 undersells tech readiness but the real risk is market/regulatory, not physics

+ The 66/100 feasibility score is anchored to sector-frontier tech (solid-state, long-duration chemistry, DAC) that Helion does NOT need to solve — it aggregates existing behind-the-meter Li-ion batteries and EV chargers. The hard science lives with cell OEMs; Helion's stack is control software, telemetry, and market-bidding optimization. On that basis I'd push feasibility HIGHER (~75-80): the core

+ The genuine technical challenge is latency and dispatch reliability: EU frequency-containment (FCR) and aFRR markets require response in seconds-to-30s with penalties for non-delivery. Managing thousands of heterogeneous assets (varying SoC, chargers with owner-override, comms dropouts) to hit contracted MW with ~99% availability is a distributed-systems / forecasting problem — solvable (Tesla Aut

+ 62% gross margin is credible for a software-led revenue-share model but the 85% capital-intensity flag suggests hardware/gateway costs per site; margin durability depends on whether Helion owns any hardware or is asset-light. Balancing-market prices are commodity-linked and mean-reverting — FCR prices in DE/other EU markets have fallen sharply since the 2022 spike as VPP supply flooded in, directl

+ No breakthrough is required to de-risk the science — the de-risking milestones are operational: demonstrated availability/penalty track record across full market cycles, and asset-diversity scaling (does the algo hold at 380 MWh vs 38 MWh?). This is an execution/scale story, not a research bet, which is why the 7% weight on feasibility is appropriate — the composite risk sits in market saturation

! Balancing-market revenue compression: as EU VPP capacity scales, FCR/aFRR clearing prices fall — Helion's TAM and margins are exposed to a commoditizing, subsidy/policy-adjacent revenue pool it does not control (STRUCTURAL RISK confirmed). Falling per-MWh revenue could outpace 18% QoQ MWh growth.

! Dispatch-reliability penalties: failure to deliver contracted capacity (comms failure, EV-owner opt-out, SoC miscalculation) triggers market penalties and prequalification loss — a technically real tail risk that scales with fleet heterogeneity and is not evidenced by disclosed availability metrics.

! Moat is thin and unproven at this scale: 38 MWh is ~84% of the economies-of-scale moat ceiling per the model but tiny in absolute terms vs incumbents (Next Kraftwerke ~10+ GW); no proprietary science barrier means the defensibility must come from asset lock-in and market prequalification, neither yet demonstrated durable.

Data Analyst — 62% GM is healthy for a VPP, but 48/100 is fair until CAC/LTV and capex-per-MWh are disclosed

+ The 48/100 unit-economics score is defensible, not harsh: 62% blended gross margin is genuinely strong for a hardware-touched business, but the model correctly flags 85% capital intensity — the missing question is who funds the batteries/chargers. If Helion owns the hardware, that GM excludes asset capex and the true payback is 4-7yr; if owners fund it and Helion is asset-light software+revenue-sh

+ No LTV/CAC, no CAC payback, no churn — STRESS TEST couldn't run. At EUR2.1M ARR / 38 MWh, implied ~EUR55k ARR per MWh; validate whether that's per-asset gross or net of the owner revenue share (the split % is unstated and directly sets contribution margin).

+ Revenue is policy-linked: balancing-market clearing prices are volatile and commodity-driven (STRUCTURAL RISK). 18% QoQ (~94% annualized) is strong but 'unspecified' growth — confirm it's ARR not MWh, and whether it tracks market price spikes rather than durable customer acquisition.

+ TAM $31B/24% CAGR is top-down and un-triangulated; bottom-up EU balancing-market revenue pool is far smoothersmaller (single-digit EUR-billions) and shrinks as more capacity enters and clearing prices compress — the SOM, not the TAM, is the binding constraint here.

! Margin erosion from crowding: VPP aggregation has low switching costs and multiple funded EU competitors; as pooled capacity grows, balancing-market prices fall and 62% GM compresses — the moat is scale (63/100, 84% realized) and 38 MWh is subscale versus 100MWh+ incumbents.

! Undisclosed capex burden: if Helion balance-sheets the hardware, $14M Series-A funds asset acquisition not growth, and cash-to-MWh economics dominate — the disclosed 62% GM would be misleading and the real payback could exceed asset life.

! Regulatory/revenue-stack dependence: balancing-market rules and subsidy regimes vary by country and change; a single market rule change (e.g., FCR/aFRR reform) could halve revenue in one of the 3 live markets.

Economist — VPP aggregator with real ARR but thin moat and margin capped by commodity-linked balancing-market revenue

+ The 53/100 market score is roughly fair but for the wrong reason. The ~$31B TAM is a category proxy; the addressable slice — EU behind-the-meter flexibility monetizable in balancing markets — is far smaller near-term (~EUR 2-5B) and gated by distributed asset install base, not aggregator demand. I'd hold near 53 but flag that the real constraint is asset supply, not TAM ceiling.

+ Traction is genuine: EUR 2.1M ARR at 18% QoQ (~94% annualized) across 3 live balancing markets and 38 MWh is a credible product-market signal for a Series A. But revenue is derived from grid balancing prices, which are volatile and mean-reverting as more flexibility floods in — the structural risk 'commodity-linked margins' is the core economic issue, not a footnote.

+ Moat is aggregation economies of scale (model ceiling 68, ~84% realized), but this is contestable: asset owners multi-home, switching costs are low, and OEMs (Tesla, Sonnen, Enode) plus utilities can vertically integrate the aggregation layer. Durable rents accrue to whoever owns the customer/asset relationship — not necessarily the

bidding software.
+ Unit economics (48/100) are the weakest lever: 62% gross margin is decent but capital intensity ~85% and undisclosed LTV/CAC mean owner-acquisition cost and revenue-share dynamics are unproven. As balancing-market clearing prices compress with competition, margins face a squeeze from both sides.
! Balancing-market price erosion: as VPP capacity scales across the EU, the arbitrage/frequency-response spreads that drive the revenue share compress toward marginal cost — a classic competitive-equilibrium erosion that could flatten ARR growth even as MWh under management rises.
! Policy/subsidy dependence: revenue depends on market-access rules (e.g., aggregator participation thresholds, prequalification) that vary by TSO and can change; regulatory intensity is scored 60% and no LTV/CAC or downside stress test was run to size this.
! Disintermediation by asset OEMs and utilities with existing customer bases and lower CAC, which could relegate Helion to a low-margin software vendor rather than the rent-capturing aggregator.

Corporate & Regulatory Lawyer — 61/100 legal headroom is fair-to-generous: VPP market-participation and GDPR are the real drag, not the round mechanics

+ The 61 score conflates round-level risk (low — Prospectus Regulation qualified-investor/sub-threshold exemptions and AIFMD/MiFID II are well-trodden for a $14M Series-A) with operational-license risk (material and understated). The binding constraint is Helion's status as an aggregator bidding into balancing markets: Electricity Regulation (EU) 2019/943 + Directive 2019/944 mandate member-state fr
+ GDPR is a live exposure, not boilerplate: behind-the-meter battery/EV-charger telemetry is granular household energy data (occupancy, travel patterns) — likely personal data requiring explicit lawful basis, DPAs with each installer/OEM, and a DPO. Fines up to 4% of global turnover. Confirm consent chain and data-processing role (controller vs processor) before close — a broken consent chain retroa
+ AI Act is low-risk here: VPP dispatch optimization is unlikely to be 'high-risk' Annex III, so 2026-27 high-risk duties probably don't bind — but if any ML touches grid-stability decisions, watch for energy-critical-infrastructure classification. Not a dealbreaker; flag for a 1-page classification memo.
+ Company law is national, not 'EU' — enforceability of the SHA is the term that actually protects $14M. Tag/drag, liquidation preference, and anti-dilution enforceability differ sharply across GmbH vs SAS vs B.V.; GmbH share transfers require notarial deeds and cap-table moves are slower/costlier. Verify entity of incorporation before pricing preference mechanics.
! Policy/subsidy dependence (structural risk, correctly flagged): balancing-market revenue and margins are set by TSO-administered auctions and regulated remuneration — a single member-state rule change (capacity thresholds, aggregator access, revenue-sharing caps) can compress the 62% gross margin without warning. Demand contractual/portfolio diversification across "e3 markets as a covenant, not jus
! Regulatory concentration: with only 38 MWh and 3 markets, loss of prequalification in one TSO market is a single-point revenue shock. No LTV/CAC or per-market revenue split disclosed, so we cannot size this — condition close on market-level revenue breakdown.
! GDPR consent-chain defect: if household energy data was onboarded via installers without a valid lawful basis / DPA, the exposure is both a 4%-turnover fine and forced deletion of the managed data underpinning the VPP model — an existential, not cosmetic, IP/data risk. Requires pre-close data-provenance audit.

Market data sources

- Fortune Business Insights (2026) — Climate tech $39.1B in 2026 at 23.3% CAGR 2026–2034 (~$31–32B in 2025) https://www.fortunebusinessinsights.com/climate-tech-market-109849
- Precedence Research (2026) — $39.6B in 2026 !’ $282.0B by 2035 at 24.4% CAGR https://www.precedenceresearch.com/climate-tech-market

Assumptions & limitations

- Market size / growth for Climate / Energy Transition is anchored to Fortune Business Insights (2026): Climate tech $39.1B in 2026 at 23.3% CAGR 2026–2034 (~$31–32B in 2025). Full citations are listed under "Market data sources".
- Signal coverage: ~59% of the score is backed by the plan's own disclosed metrics (3 quantified fields); the remainder uses Climate / Energy Transition sector priors — add financials to raise it.
- Stage norms reflect US-market series-a deals; adjust for geography "EU".
- Score is a screening signal, not a substitute for legal, financial, and technical due diligence.

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