

CASE STUDY

35MW Modular Tier III HPC Deployment.

Full lifecycle delivery from permit to compute-ready 11 months, \$5.345M/MW,
33% below market.

CAPACITY

35 MW

DELIVERY

11 Months

COST / MW

\$5.345M

TOTAL SAVINGS

~\$92M

YEAR

2025

Time-to-power is the product. This project proves it.

DARKNX delivered a utility-scale, modular Tier III data centre for HPC workloads in 11 months 40–63% faster than market at \$5.345M/MW against a benchmark of \$8M/MW. Total project savings exceeded \$92M.

This engagement demonstrates DARKNX's Power Infrastructure Prime model in full deployment: single-point accountability, in-house manufacturing, and parallelized execution from permitting through compute-ready energization.

The client's primary concern at engagement ability to deliver at required speed was resolved through transparent execution systems and process control. The highest-valued outcome reported by the client was ease of execution: reduced friction, predictable delivery, and full accountability at every phase.

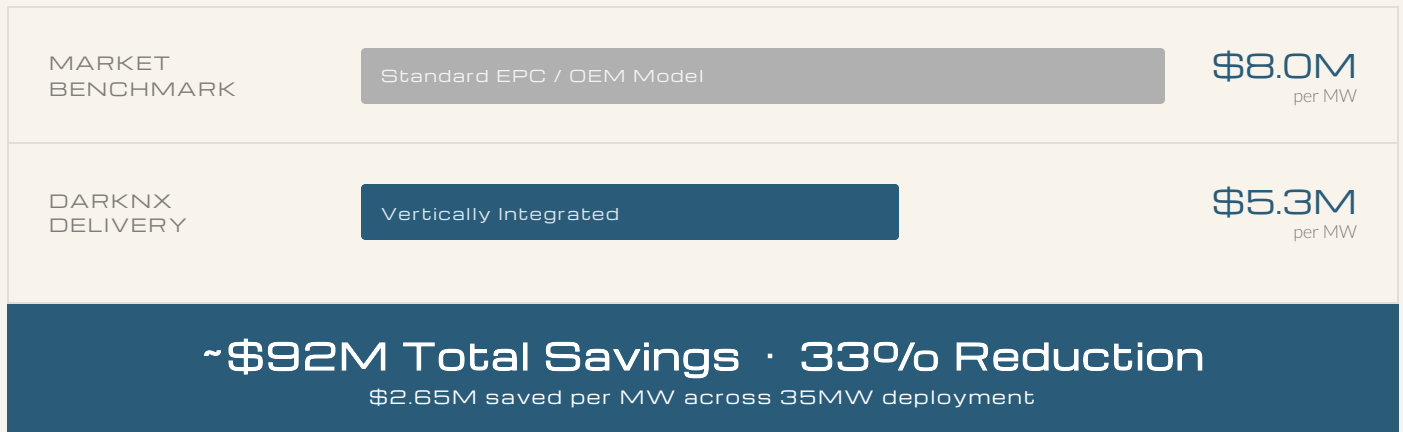
<p>35 MW</p> <p>Total commissioned capacity at energization</p>	<p>11 mo</p> <p>Time to energization, permit through compute-ready</p>	<p>\$92 M</p> <p>Total project savings vs market benchmark</p>
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COST PERFORMANCE

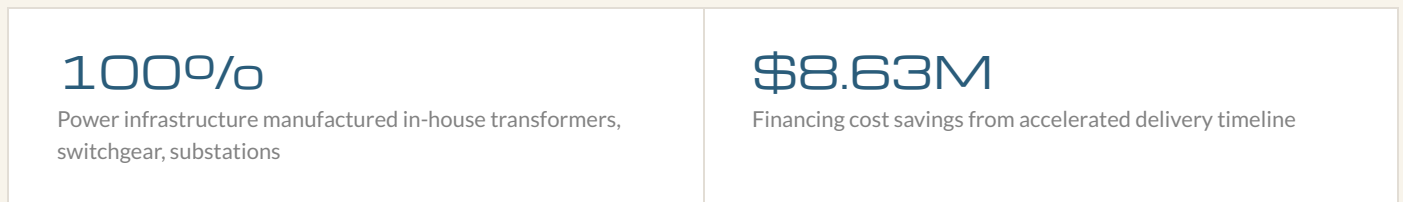
\$2.65M saved per megawatt.
\$92M saved at project scale.

Vertical integration eliminates every layer of margin stacking between manufacturer and client. DARKNX controls the stack and passes the savings through.

COST PER MW DARKNX VS MARKET BENCHMARK



Cost reduction drivers: Elimination of OEM margin stacking across transformer, switchgear, and substation supply chains. Removal of multi-layer subcontracting. In-house electrical manufacturing on all major power components. Single-point delivery accountability replacing fragmented contractor coordination.

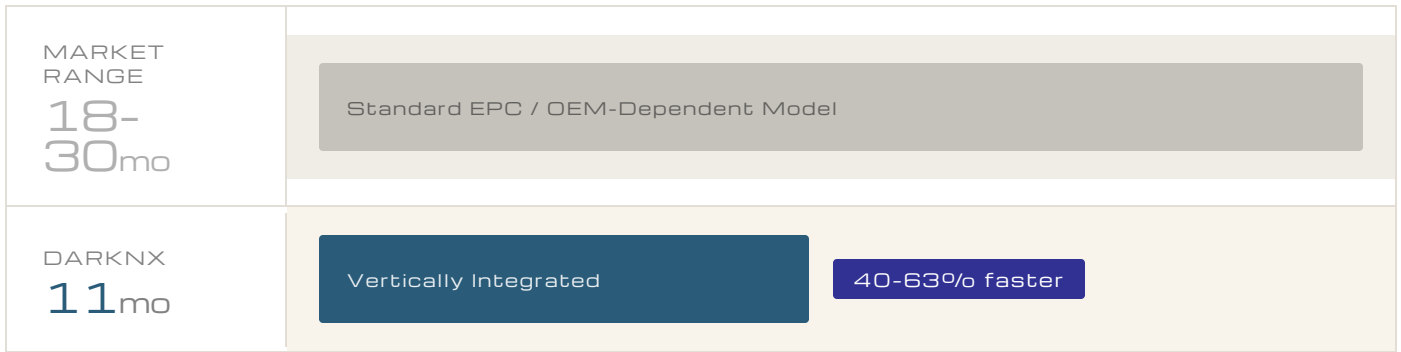


TIME-TO-POWER ADVANTAGE

11 months versus a market range of 18-30.

Manufacturing control eliminates the constraint that governs every other delivery model OEM lead time. When you control what you build, you control when it arrives.

DELIVERY TIMELINE DARKNX VS MARKET



Speed enablers: 22-week procurement lead times. 30-week procurement-to-site delivery. Parallelized execution model manufacturing initiated ahead of full regulatory approvals. Critical path driven by manufacturing, not sequencing gaps between contractors.



Permit to energization. 48 weeks. No sequencing gaps.

Manufacturing was initiated ahead of full permits. Phases ran in parallel where possible. The critical path was owned by DARKNX not by OEMs or subcontractors.

PHASE	W4	W8	W12	W16	W20	W24	W28	W32	W36	W40	W44	W48
Permitting 16 weeks	Regulatory Approvals											
Design & Engineering 3 weeks	Parallel											
Manufacturing + Delivery 30 weeks	Critical Path 100% In-House											
Construction 4 weeks (buffered)	Civil Works											
Install & Commissioning 6 weeks	Energization											

Manufacturing was initiated before full permits cleared. **The critical path is owned by DARKNX** not by a grid of OEMs, subcontractors, and coordination delays. This is the structural advantage that makes 11 months possible.

35MW. 16 pods. 550 racks. Full lifecycle. One team.

Every layer of infrastructure from 15kV utility interconnection to compute-ready rack environments was designed, manufactured, and delivered by DARKNX.

01 / POWER

Electrical Infrastructure

15kV utility-grade interconnection. 4 × 12.5MW switchgear systems. 16 × 2.5 MVA compact substations. 40 MVA total transformation capacity. Full MV → LV distribution architecture. 100% controlled and manufactured by DARKNX.

02 / ARCHITECTURE

Modular Deployment

16 compute pods (containers) at ~2.2MW per pod. Each module paired with a dedicated compact substation. Isolated failure domains per module. Repeatable multi-megawatt deployment unit built for scale.

03 / COOLING

Thermal Management

Closed-loop single-phase liquid cooling designed for high-density HPC workloads. PUE 1.2–1.3. Architecture is upgrade-ready to higher density and advanced cooling configurations as workload requirements evolve.

04 / COMPUTE

HPC Environment

~550 racks at 63.6 kW per rack. ~6,600 servers at 5.3 kW per server. N+1 redundancy (Tier III design). Full-load energization no phased ramp. High-density compute readiness from day one.

Power Infrastructure Prime. A new delivery category.

DARKNX operates above EPC contractors and below developers owning the critical path to energization. This is not a better contractor. It is a structurally different model.

TRADITIONAL MODEL	DARKNX MODEL
<ul style="list-style-type: none">● OEM-dependent supply chain lead times not controlled	<ul style="list-style-type: none">● 100% in-house manufacturing of transformers, switchgear, substations
<ul style="list-style-type: none">● Sequential execution phases blocked by prior phase	<ul style="list-style-type: none">● Parallelized execution manufacturing starts before full permits
<ul style="list-style-type: none">● Multi-layer subcontracting accountability fragmented	<ul style="list-style-type: none">● Single point of accountability one team, full lifecycle
<ul style="list-style-type: none">● Coordination failure risk across contractor boundaries	<ul style="list-style-type: none">● DARKNX Enterprise System real-time coordination and transparency
<ul style="list-style-type: none">● Margin stacking at every OEM and contractor layer	<ul style="list-style-type: none">● Margin elimination across all power infrastructure layers
<ul style="list-style-type: none">● 18-30 month delivery windows as standard	<ul style="list-style-type: none">● 11-month delivery repeatable, not a one-off outcome

Control of manufacturing = control of timeline. DARKNX does not wait for power. DARKNX delivers it from utility interconnection through compute-ready rack environments, under one roof.

NEXT STEPS

Ready to compress your timeline?

DARKNX operates as your Power Infrastructure Prime a single accountable team from utility interconnection to compute-ready delivery. If your project requires speed, cost discipline, and execution certainty, we should talk.

EMAIL	info@darknx.com
PHONE	+1 647 850 6315
OFFICES	Seattle, WA · Toronto, ON
WEB	darknx.com