

OPERON TECHNOLOGIES

Grid Infrastructure Technology for Heavy Industries

Standardizing the gray zone. Enabling grid-ready deployments in weeks.





TRADITIONAL GRID INFRASTRUCTURE CAN'T HANDLE AI DEMAND

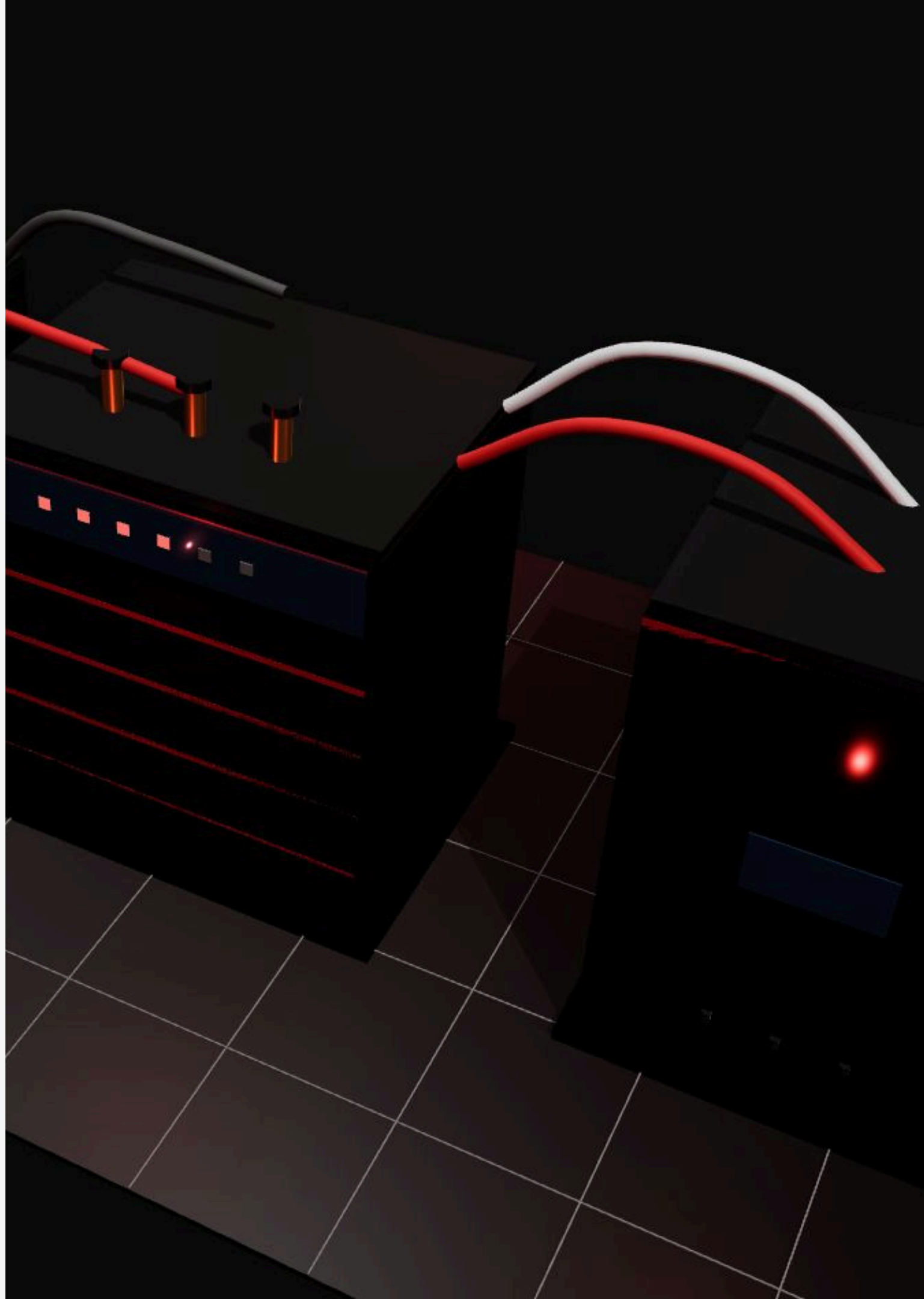
The Path of Power:

Generation (Gas/Nuclear/Solar) → Step-Up Transformation → High-Voltage Transmission → Substation/Step-Down → Distribution Lines → Metering/Protection → Gray-Zone Integration → Consumption

An electron moves through eight distinct regulatory and physical stages, collectively costing an average of **\$115,000–\$145,000 per MW** in capital expenditure and requiring **5–7 years of lead time for large-scale industrial interconnections**, with annual maintenance overhead reaching **3–5% of the total asset value**.

Problem

SOLUTIONS



The Operon System: Modular Power Stack

Defined Energy Router that collapses legacy step-down, conversion, and metering into a single Silicon Carbide (SiC) SST coupled with high-density DC storage.

Shifts deployment from 5+ years to <12 weeks by replacing custom site-built civil engineering with factory-tested, "drop-in" modular skids.

A Physical OS that monitors telemetry at the microsecond level, allowing you to distribute and rebalance power across loads via a software dashboard rather than manual switchgear.

Modular Substations



Microgrid / BTM Power



Competitive Analysis

None of the above standardizes the middle layer (the gray zone), the path from utility entry through transformation, switching, UPS, and distribution to the rack.

OUR VALUE PROPOSITION

Any greenfield → grid-ready infrastructure in weeks.

Operon is the first to bridge the "gray zone" gap by replacing legacy iron-core infrastructure with a proprietary CMOS-integrated Solid State Transformer stack, collapsing years of grid interconnection into a single, software-defined silicon layer.

TARGET MARKETS

DATA CENTERS

MANUFACTURING

MINING SITES

100+ GW

AI compute demand by 2030

Hyperscaler capex commitments exceed \$300B through 2027. Every data center needs power yesterday.

5–7 yrs

Grid interconnection queue

FERC queue backlogs now exceed 2,000 GW nationally. Behind-the-meter and off-grid solutions are the only viable path.

25%

New DC capacity now BTM

Behind-the-meter solutions are the fastest-growing segment. Operators can't wait for utility timelines.

IRA + CHIPS

Domestic manufacturing wave

Trillions in federal incentives driving reshoring of semiconductor, EV, and industrial manufacturing all power-hungry.

MARKET DRIVERS

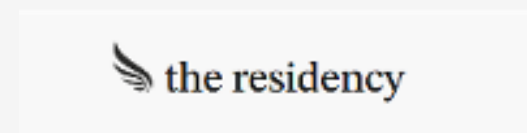
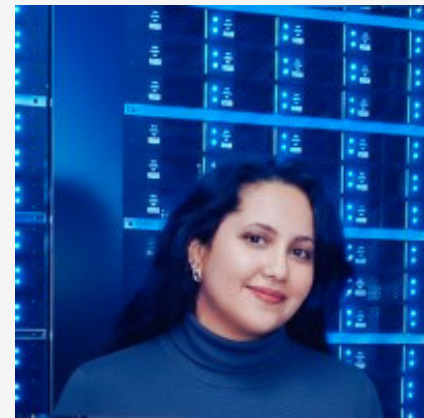
- **\$1T** Total US grid infrastructure investment 2026–2035 (JPMorgan)
- **\$200B+ Addressable gray-zone layer:** switchgear, transformers, distribution, storage at heavy industrial sites
- **\$8B Our initial beachhead:** data centers, manufacturing, mining sites that cannot wait for utility interconnection (there are roughly 340+ industrial campuses actively seeking BTM solutions right now)



Market

The Team

Syrine Ben Driss



FOUNDER & CEO

- Co-designed lab-on-Chip w/Quantum Dots to detect breast cancer
- Prototyped an IOT/AI Device to monitor drug production in Pharma Factories
- Developed an APP to help Sierra Leonean clinic fundraise from UNICEF

Thank You

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