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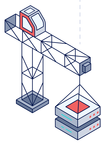
The 5-year difference of a Day 1 energy strategy

What early energy planning unlocks across the data center timeline

Two data centers start with the same capital, same site plan, and same compute targets. As their projects progress, their approaches to energy lead to very different outcomes.

At 5 years in, the gap is undeniable.

TRADITIONAL POWER PLAN	MODERN ENERGY STRATEGY



PHASE 1
Planning The Data Center

Select site, finalize compute architecture, and detail energy plans afterward.

Project plans move forward.

Include energy partners from Day 1 to model power needs alongside compute.

Project plans move forward.

PHASE 2
Gaining Community Support

File standard disclosures and address community concerns about rates and emissions.

Approvals slow, permitting stalls, and opposition grows.

File the same disclosures backed by zero Scope 1 emissions and demand that's isolated from the local rate base.

The project moves through approvals and permitting.

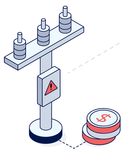
PHASE 3
Applying For Interconnection

Submit the AI workload's natural load profile, which shows extreme peaks and valleys.

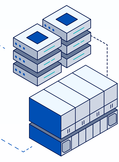
Utility flags the project as a grid stability risk, adding years to the timeline.

Reshape the load profile with on-site storage and submit a smooth, predictable curve.

Utility provides conditional grid approval, allowing the project to progress.



PHASE 4
Building Energy Infrastructure



Co-fund new transmission or utility-scale generation and align operations with the upgrade timeline.

Site sits idle while energization lags, putting revenue and project success at risk.

Deploy on-site energy storage in parallel with the data center build.

Data center is energized in 2–3 years, allowing quick ramp-up to meet customer demand.

PHASE 5
Running Day-To-Day Operations

Run AI workloads directly on grid or turbine power with diesel backup for outages.

Dynamic AI workloads strain the power source, impacting compute performance and SLAs.

Run AI workloads through on-site storage that absorbs spikes and isolates them from the grid.

With 99% fleet-wide availability, the data center easily meets token-per-watt commitments.

PHASE 6
The Five-Year Audit

Continue running on the original power stack while evaluating retrofits to support new AI workloads.

Energy assets decline in value year-over-year, limiting next-gen workloads.

Operate on a modular energy stack that scales and adapts to new AI workloads.

The site is built to flex, with an energy asset that can generate revenue.

How a modern energy strategy gives your data center the edge

1. **Streamline the interconnection process**
Energy storage shapes a grid-friendly load profile and isolates demand from the local rate base, making communities—and ISOs—more accepting.

2. **Run reliably under any AI workload**
Energy storage absorbs spikes and outages, so high availability holds, performance guarantees stand, and contractual commitments to customers don't slip.

3. **Clear regulatory and FEOC hurdles**
Compliance is built in from Day 1 instead of retrofit under pressure. Energy storage produces zero Scope 1 emissions, while energy storage can provide additional regulatory incentives.

4. **Scale alongside evolving power requirements**
Energy storage scales as power profiles evolve. The site adapts to new compute architectures instead of getting locked into a legacy design.

5. **Earn revenue from energy markets**
When developers choose to participate, the same storage that powers operations becomes a second revenue line.

6. **Supply chain contamination**
Cybersecurity risks associated with foreign content could disrupt energy control systems at some future point. Decarbonization mandates: Standards for acceptable emissions, impact, and more, are evolving at a local and national level. Failing to comply can cause delays.

Smartstack™ turns energy into a competitive advantage

Planning a data center is complex. Powering it doesn't have to be.

Fluence Smartstack is the modular, future-ready energy storage platform engineered for AI data centers. From strategic planning to streamlined permitting to scaling massive AI workloads, Fluence helps you build a smarter energy infrastructure faster.

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Better outcomes start with better energy decisions on Day 1.