



## Five Critical Decisions for Data Center Power Projects: From Delivery Model to Commissioning

by Kevin Kolton

Data centers need power that is fast, clean, and predictable during defined critical windows. When onsite or adjacent generation supports IT load, sponsors and EPCs face five decisions that directly affect uptime:

1. choosing the right delivery model—single engineering, procurement, and construction (ECP) vs. engineering, procurement, and construction management (EPCM)<sup>1</sup>—with disciplined interfaces;
2. demanding guarantees that go beyond nameplate to cover availability during critical windows, start/response times, and point of common coupling (PCC) power quality (total harmonic distortion (THD), flicker, voltage ride-through);
3. maintaining schedule integrity by treating utility reviews, witness tests, and long-lead procurement as true critical path;
4. (implementing pragmatic operational technology (OT) security baselines that segment controls, enforce access, and align patching and incident service level agreements (SLAs) with original equipment manufacturer (OEM) obligations; and
5. managing change without stall through hybrid pricing, pre-agreed triggers, and rapid-response protocols that keep crews moving while commercials finalize.

The practical takeaway: Define “critical windows” early, measure power quality at the PCC, front-load utility engagement, make security operable, and treat the interface matrix as a living artifact. These steps ensure capacity shows up exactly when IT workloads need it.

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<sup>1</sup>With the EPCM model, the contractor (or an integrator) manages and coordinates engineering, procurement, and construction activities, but the owner holds the prime contracts with key vendors and trades. The practical implications are more owner control and flexibility, but higher interface risk unless you define a disciplined integrator role, clear responsibility assignment RACI, and strong interface/commissioning protocols.

