

# From announced capacity to working infrastructure

An evidence protocol for following AI projects across chips, power and capital.

OPEN VARIABLE

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## Executive summary

A delivery claim joins several events that may be documented by different organizations. This brief proposes a practical way to keep those events separate until evidence connects them. It is a desk synthesis and research protocol, not a survey of completed projects or a forecast of aggregate capacity.

Our central finding is methodological: the public sources assembled for this edition support observations about demand, supplier revenue and connection processes at different levels. They do not, by themselves, form a matched project-level delivery ledger. A responsible judgment must preserve that gap.

## Key findings

First, distinguish financial, physical and operating milestones. A commercial event can occur before a physical one, and a physical event can occur before the resource is dependably usable. The value of a record depends on which transition it actually establishes.

Second, match units before comparing values. Company revenue, electricity consumption and project counts describe different objects. They can inform the same inquiry without being directly additive or interchangeable.

Third, keep the unsuccessful and unresolved cases in view. A collection of visible successes cannot establish a general completion rate; a collection of delays cannot establish universal failure. The denominator is part of the finding.

# 1. Define the object before collecting the evidence

Choose whether the inquiry concerns a named project, a campus, an individual phase or a portfolio. Give it a stable identifier. Capture alternative names because a utility record may use a different entity from a company announcement. Record geography and the relevant planning authority without inferring that nearby projects share a connection arrangement.

Next, define the outcome. “Operational” may mean that a building is energized, that installed equipment has passed commissioning, or that the service is available to a customer. The definition should be narrow enough that an independent reader can decide whether a document meets it. If the inquiry changes its definition later, preserve the change.

# 2. Use a milestone ledger

Start with six fields: the claimed event, the responsible actor, the date of the claim, the date of the event, the source, and the remaining condition. Add a status that distinguishes an announced plan from a verified occurrence. A later press release may repeat an earlier plan without establishing a new milestone.

Record the handoffs explicitly. A vendor can establish shipment; a project owner can describe installation; a utility can document a connection arrangement. None of these statements automatically speaks for the others. Where one actor is the only available source, identify that limitation rather than presenting repetition by other outlets as independent corroboration.

# 3. Read the source stack at its proper scale

The IEA outlook supplies global energy context. Berkeley Lab’s large-load research supplies categories of possible connection interventions. Its Queued Up dataset concerns generation-side applications. The company releases supply financial observations. These are complementary source types, not a single measurement system. [International Energy Agency](#) · [Lawrence Berkeley National Laboratory](#) · [Lawrence Berkeley National Laboratory](#) · [NVIDIA](#) · [TSMC / SEC EDGAR](#)

A useful synthesis asks what evidence would connect these layers. It does not assume that the connection already exists. The missing link may be a public commissioning record, a customer-level deployment disclosure or a financial condition that the parties have not published. Unknown is a legitimate field value.

## 4. Make the judgment falsifiable

For a narrowly defined project group, write the expected relationship and the period in which it should be observable. For example, a hypothesis about power constraining delivery needs evidence that the power milestone is controlling the schedule, not merely that power is important in general.

Specify the countercase in advance. A documented sequence in which connection milestones clear and usable capacity arrives on the promised schedule should be able to weaken the hypothesis. If every possible outcome would be described as confirming the same story, the record is not yet a useful Signal.

## 5. Follow changes in evidence

A dated source record makes changes comparable. When new evidence arrives, identify the affected observation and explain its consequence for the judgment. A revised source number and a revised editorial view are separate events.

The related power Signal sets out a hypothesis and the project evidence needed to test it. The framework supports investigation; it does not establish the frequency or cause of delays across an observed project sample.

## Method and limitations

We selected primary public materials relevant to the chain between capacity claims and usable infrastructure, then classified each by its unit of observation and inferential limit. The analysis is qualitative. No project completion probability, return forecast or causal estimate is calculated. Sources were checked on 7 September 2026.

Selection is bounded and purposive, not comprehensive. The brief does not validate the underlying company accounts, reproduce the laboratories’ datasets or establish current conditions at any individual site. Its output is an explicit evidence protocol and the gaps a subsequent project investigation must close.

## Read the delivery chain

A framework for comparing project milestones and the evidence each requires.

| Milestone        | Record needed                                    | How to interpret the record                                    |
|------------------|--------------------------------------------------|----------------------------------------------------------------|
| Power connection | Dated utility connection and energization record | Distinguish a planned connection from documented energization. |

| Milestone            | Record needed                                   | How to interpret the record                                       |
|----------------------|-------------------------------------------------|-------------------------------------------------------------------|
| System commissioning | Acceptance test and commissioning record        | Match acceptance and commissioning records to the same system.    |
| Commercial use       | Dated service availability and operating record | Supplier revenue does not establish a customer's usable capacity. |

Framework: OPEN VARIABLE interpretation. **Berkeley Lab's connection research** provides process context, not these project observations.

## The source set at a glance

| Primary record                                             | Document type                          | Inference limit                                                                       |
|------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------|
| <b>International Energy Agency</b><br>2026-04-16           | Institutional research / forecast      | Global estimates and scenarios; cannot establish an individual project delivery date. |
| <b>Lawrence Berkeley National Laboratory</b><br>2026-06-11 | Institutional research announcement    | Potential interventions; not evidence every intervention works at every site.         |
| <b>Lawrence Berkeley National Laboratory</b><br>2026-05    | Research report / dataset description  | Generation interconnection queues; not a data-centre load connection census.          |
| <b>NVIDIA</b><br>2026-08-26                                | Company financial release              | Issuer-reported results; statements about future demand are management claims.        |
| <b>TSMC / SEC EDGAR</b><br>2026-07-16                      | Issuer earnings release filed with SEC | Consolidated financial data; not direct evidence of end-user workload or return.      |

The cited sources describe distinct objects and should be compared within their stated scope.

## Sources

1. **Key Questions on Energy and AI — Executive summary**  
International Energy Agency · 16 Apr 2026

Institutional research / forecast. Global estimates and scenarios; cannot establish an individual project delivery date.

## 2. **Beyond the Bottleneck: solutions for accelerating large load connections**

Lawrence Berkeley National Laboratory · 11 Jun 2026

Institutional research announcement. Potential interventions; not evidence every intervention works at every site.

## 3. **Queued Up: 2026 Edition**

Lawrence Berkeley National Laboratory · May 2026

Research report / dataset description. Generation interconnection queues; not a data-centre load connection census.

## 4. **Financial Results for Second Quarter Fiscal 2027**

NVIDIA · 26 Aug 2026

Company financial release. Issuer-reported results; statements about future demand are management claims.

## 5. **TSMC second-quarter 2026 results (SEC exhibit)**

TSMC / SEC EDGAR · 16 Jul 2026

Issuer earnings release filed with SEC. Consolidated financial data; not direct evidence of end-user workload or return.