# Navigating Data Center Growth: Regulatory Responses

How U.S. and Canadian regulators are rewriting the rules for data center loads on the grid

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EXECUTIVE SUMMARY

# Three themes reshaping data center power policy

## 01 Reliability concerns

NERC has issued a Level 3 Alert concerning operational risks

## 02 Tariffs: Interconnection Rules and Revenue Requirements

Local interests are concerned that data centers will consume low cost generation options, raising prices for communities and industry.

## 03 Rate Design

Should data centers be “lumped in” with other industrial clients?

REGULATORY LANDSCAPE

# Who decides what — a layered jurisdiction stack

| | |
|---|---|
| **Federal — Wholesale & Transmission**<br>**FERC** | Interstate transmission service, wholesale rates, generator interconnection. Now asserting authority over large-load interconnection via RM26-4-000. |
| **Federal — Reliability**<br>**NERC** | Bulk-power reliability standards. Issued 2025 alert on sudden data-center load losses; recommending ride-through and load-modeling reforms. |
| **Regional — ISO/RTO**<br>**PJM, ERCOT, MISO, NYISO, ISO-NE, CAISO** | Capacity markets, interconnection queues, co-location tariffs. PJM order is the current template. |
| **State / Provincial**<br>**PUCs · Régie de l'énergie · AUC** | Retail rate design, siting, special tariffs and ratchets, recovery of upgrade costs. Where most data-center-specific tariffs are written. |
| **Local**<br>**Counties & municipalities** | Zoning, water, noise, backup generation permits. Increasingly used as a brake when state and federal venues are slow. |

*Source:* FERC, NERC LTRA review, RMI

AT A GLANCE

# Cross-jurisdiction comparison

| Jurisdiction | Trigger threshold | Headline mechanism | Status |
|---|---|---|---|
| **NERC (reliability)** | ≥20 MW, ≥60 kV, >1 MW IT | Level 3 Alert: 7 Essential Actions + draft registry | Reports due Aug 3, 2026 |
| **FERC (US federal)** | ≥20 MW (proposed) | Standardized large-load interconnection rules | Final action by Jun 2026 |
| **PJM (US RTO)** | Co-located behind generation | 3 new transmission service types; BTMG reform | Compliance filed Feb 2026 |
| **ERCOT (Texas)** | ≥75 MW aggregate | Large Load Interconnection Process | Interim → permanent rulemaking |
| **Virginia (Dominion)** | Case-by-case | Cost-allocation review; siting reforms | Legislative session 2026 |
| **Ohio (AEP)** | Data centers ≥25 MW | 85% minimum demand ratchet; security deposits | Tariff approved; HB 15 pending |
| **Québec (HQ)** | >5 MW | 13¢/kWh new rate; 19.5¢/kWh crypto | Régie review; eff. H2 2026 |
| **Ontario (IESO)** | Large step loads | Planning framework under development | 2026 APO in progress |
| **British Columbia** | AI/data center load | Competitive allocation process | Launched Jan 2026 |
| **Alberta (Bill 12)** | ≥75 MW grid-connected | 2% computing-equipment levy (1% if new gen) | Legislative process |

*Source:* FERC RM26-4-000, PJM order, ERCOT, Hydro-Québec, BC Hydro, Alberta

# 1. Reliability Concerns

FERC, NERC, states, provinces, and state regulators are addressing reliability

RELIABILITY ACTION · NERC LEVEL 3 ALERT

# Computational load is now a named reliability risk

**LEVEL 3 · ESSENTIAL ACTION**

Issued

**May 4, 2026**

Acknowledgement

**May 11, 2026 · midnight ET**

Status reports due

**August 3, 2026 · midnight ET**

Applies to

**TPs, PCs, TOs, BAs, RCs, TOPs**

Threshold

**≥20 MW at ≥60 kV, >1 MW IT load**

*Proposed "Computational Load Entity" registry category*

## What changed

NERC escalated from a Level 2 Industry Recommendation (large-load interconnection) to a Level 3 Essential Action specifically targeting computational loads — AI training, inference, cryptocurrency mining, and traditional data centers. Level 2 responses showed entities "generally did not have sufficient processes" to address the risk.

## Why it matters for executives

- Not voluntary in practice — acknowledgements are aggregated and reported to FERC; non-response carries reputational and regulatory exposure.
- Foreshadows mandatory standards — a draft registry criterion and Standard Authorization Request (SAR) were posted April 1, 2026.
- Changes the interconnection bar — modeling, ride-through, fault recording, and commissioning expectations are now codified.

*Source:* NERC Level 3 Alert (May 4, 2026), NERC Rules of Procedure, NERC Project 2026-02

THE SCALE OF THE PROBLEM

# Data centers are now the dominant source of U.S. load growth

**9-17%**

Share of U.S. electricity data centers could consume by 2030

*EPRI; up from ~4% in 2023*

**~410 GW**

Large-load interconnection requests tracked by ERCOT

*~87% are data centers*

**+224 GW**

10-year U.S. peak demand growth in NERC's 2025 forecast

*+69% vs. prior year forecast*

## Why regulators care now

Virginia alone could see data centers consume up to 57% of state electricity by 2030. Seven additional states may exceed 20%. PJM expects the Dominion zone to lead absolute peak-demand growth through 2030 — a concentration that prompted NERC's May 2026 Level 3 Alert on computational-load reliability risks and is straining cost allocation across the BPS.

*Source:* EPRI, ERCOT, NERC LTRA review, EIA

# Seven required workstreams for TPs, PCs, TOs, and operators

| | | |
|---|---|---|
| 1 | **Modeling data**<br>TPs, PCs → TOs | Require PERC1-equivalent dynamic models with IT/non-IT composition (PUE), ramp rates, UPS settings, protective relays, and on-site generation. |
| 2 | **System studies**<br>TPs, PCs | Update SOL/P-Q/P-V analysis; identify instability-prone areas; treat aggregate computational-load loss as a credible contingency. |
| 3 | **Qualified-change criteria**<br>PCs | Expand FAC-001/FAC-002 "qualified change" definitions to cover load growth, setting changes, and repurposing (e.g., crypto → AI). |
| 4 | **Commissioning process**<br>TOs | Full load/no-load tests, ±10% voltage step tests, SCADA/RAS verification, and TO–TOP–BA–RC coordination before energization. |
| 5 | **Ride-through & fault response**<br>TPs, PCs, TOs | Eliminate non-consequential firm-load loss from normally cleared faults; improve facility-level ride-through to widen stability margins. |
| 6 | **Dynamic fault recording**<br>TOs (with RC) | Install continuous and trigger-based digital fault recorders at computational load facilities; share data with TPs, PCs, RCs, and ERO. |
| 7 | **Operator communications**<br>TOPs, RCs, BAs | Establish Interpersonal Communication and joint operating procedures so operators can issue dispatch instructions during BES Emergencies. |

*Source:* NERC Level 3 Alert — Essential Actions 1–7 (May 4, 2026)

FEDERAL ACTION · FERC RM26-4-000

# Standardizing large-load interconnection by June 2026

## What FERC is doing

- Asserting jurisdiction over interconnection of large loads (≥20 MW) to FERC-jurisdictional transmission.
- Mandating standardized study deposits, readiness requirements, and withdrawal penalties to deter speculative queue positions.
- Creating an expedited path (potentially 60 days) for curtailable loads and dispatchable hybrid facilities.
- Acting on a DOE Section 403 directive (Oct. 23, 2025) — final action targeted by end of June 2026.

## What's at stake

- State vs. federal authority — whether PUCs retain control over customers connecting to the transmission system.
- Speed-to-power — standardized rules could shorten queues but may displace bespoke state arrangements.
- Cost allocation — who pays for network upgrades when a single 500 MW load drives them.
- Co-location precedent — whether behind-the-meter generation deals get a federally sanctioned framework.

*Source:* Power Magazine, Mayer Brown, RMI

# 2. Tariffs: Interconnection Rules and Costs

ISO and PUC rules and regulations

# Old School Solutions

## Bonneville Power Administration

- In 1979 Congress enacted the Pacific Northwest Electric Power and Conservation Act
- The act explicitly designed a set of “pools” that protected the haves (public utilities), the sort of haves (aluminum plants), and the have nots (investor owned utilities and new large single loads)
- Interconnection based on FERC 888 and succeeding orders..
- This is still in place today.

## Hydro-Quebec

- In 2000, the assembly passed the Loi sur Hydro-Québec.
- The law established a 165 TWh “bloc d’électricité patrimoniale” that Hydro-Québec Production must supply annually to Hydro-Québec Distribution at a regulated low price; more detailed tariff and allocation rules are then handled under the **Loi sur la Régie de l’énergie** and subsequent .
- Interconnection based on FERC 888 and succeeding orders..
- This is still in place today.

CO-LOCATION FLASHPOINT

# The Amazon-Talen ruling and PJM's new tariff architecture

**Nov 2024**

## FERC rejects amended ISA

Commission refuses to let Amazon's Susquehanna co-located data center exceed 300 MW behind Talen's nuclear plant.

**Apr 2025**

## Rehearing denied

FERC declines to reopen the decision, signaling broader concern over cost shifting from co-located loads.

**Dec 2025**

## Landmark PJM order

FERC finds PJM tariff unjust and unreasonable; directs three new transmission service types for co-located load.

**Feb 2026**

## PJM compliance filing

Tariff revisions, generator interconnection updates, BTMG rule overhaul submitted for review.

### Three new PJM transmission service types for co-located load

**1. Network Integration (NITS)**

Existing firm service — unchanged.

**2. Interim non-firm service**

Speed-to-power, with curtailment risk until upgrades are complete.

**3. Firm Contract Demand**

Customer pays firm transmission only for the portion not served by co-located generation.

*Source:* Reuters, Perkins Coie, ANS

# From cheap hydro to scarcity pricing and gated allocation

## Québec

*Hydro-Québec / Régie de l'énergie*

**C13¢/kWh proposed for new data centers >5 MW**

Roughly double the current large-power rate. Existing customers transition over 5 years. Crypto/blockchain rate would rise to 19.5¢/kWh over 3 years. Effective H2 2026 if approved. Sector use forecast to grow ~7× to ~1,000 MW by 2035.

## Ontario

*IESO*

**Step-load framework under development**

2026 Annual Planning Outlook flags large step loads (data centers, electrification) as the central planning challenge. IESO is developing dedicated demand-research methods for large-load interconnection studies.

## British Columbia

*BC Hydro / Province*

**Competitive process for AI & data-center load**

Province launched a competitive allocation process (Jan 2026) to manage rising demand from AI/data centers while preserving clean-power priorities. No automatic right to connect.

## Alberta

*Bill 12 / AUC*

**2% levy on computing equipment for grid-served centers**

Levy applies to ≥75 MW grid-connected data centers; halved (1%) for centers backed by new power capacity agreements or self-generation. Off-grid arrangements exempt. Designed to encourage net-new generation.

*Source:* Hydro-Québec, IESO, BC Hydro, Bennett Jones (Alberta Bill 12)

# 3. Rate Design

How Oregon and other states are addressing who pays

# Six Points from the Oregon PUC Order

## 01 Core outcomes for data centers (Schedule 96)

The Commission formally creates a **separate large data center customer class** under Schedule 96. schedule 96 uses a multi-part rate (basic, transmission, distribution, system usage, and generation demand charges). All Schedule 96 customers must pay the **maximum EE and public purpose contributions allowed under HB 3141's 4 million-dollar cap.** For Schedule 96 customers with **≥100 MW allocated system capacity**, the order imposes a **1 ¢/kWh surcharge** to fund non-cost-effective EE, enabling repairs, and DER targeted to energy-burdened customers, justified as a way to mitigate system-wide impacts

## 02 Large-load cost allocation and "growth pays for growth"

The Commission adopts PGE's Peak Growth Modifier (PGM) concept to allocate growth-related generation and transmission costs to classes driving peak load growth. "Growth-related" investments are defined largely using PGE's criterion (triggered by new or increasing load for transmission; incremental capacity/energy for generation). The Commission accepts the concept of an Energy Growth Modifier (EGM) to adjust net variable power cost allocation. Direct assignment is endorsed for radial/single-customer transmission facilities (e.g., a dedicated line to a single large load) while the PGM governs shared network assets. The Commission does not yet directly assign Hillsboro Reliability Project (Shute and Evergreen) substation costs.

## 03 Changes to existing large-customer tariffs and Rule I

The stipulation is adopted in full: it establishes the framework of Schedule 96, revises Rules C and I, and updates the distribution marginal cost study to have class-specific substation marginal costs. Schedules 89 and 90 (large non-residential, non-data-center) are changed so that fixed generation recovery is collected via a demand charge instead of volumetric charges, intended to be revenue-neutral. The Commission adopts changes to Rule I for large load customer agreements (LLCAs). Clarifies that exclusive-use distribution facilities are allocated 100% to the customer and other new/upgrade distribution costs are proportionally allocated. Allows customers with LLCAs/MLAs to contribute up to 100% CIAC for non-shared distribution assets.

# Six Points from the Oregon PUC Order: Page 2

## 04 Contract term lengths and minimum demand requirements

The Commission tightens LLCA terms across large loads, not just data centers: Minimum contract term is 10 years at 20 MW, increasing by 1 year per 10 MW up to 30 years at 220 MW or greater, with renewal terms of 10 years for all LLCAs. Contract term is explicitly measured from the in-service date, aligning with HB 3546's 10-year requirement. To limit over-contracting and stranded assets, large customers face high minimum demand requirements: Minimum generation demand (MGD) and minimum transmission demand (MTD) are set at 90% of contracted demand/capacity for LLCA customers on Schedules 90 and 96

## 05 Data center queueing, HB 2021 compliance, and special contracts

The order establishes an interconnection/energization queue for Schedule 96 that conditions data center energization on sufficient emissions-free generation being available so that adding the load does not jeopardize HB 2021 clean-energy compliance. Special contracts are affirmed as an important tool under the POWER Act; each must be filed for Commission approval with full disclosure of costs, risk allocation, and HB 2021/HB 3546 compliance. They not shift costs or resource risks to other customers.

## 06 Reporting and forward-looking work

The Commission adopts the stipulation and Staff-backed concept of **enhanced reporting** on large loads, including annual information on the number of ≥20 MW customers and anonymized data on facility size, energy demand, water use, and emissions, to support ongoing oversight and required POWER Act reports.

# Other states pioneering data-center-specific tariffs

## Virginia

*PJM · Dominion Energy zone*

**57%**

of state electricity could go to data centers by 2030 (EPRI)

- Commercial sales soaring on data-center growth
- PJM expects Dominion zone to lead U.S. peak-demand growth 2026–2030
- Legislature debating cost-allocation and siting reforms

## Ohio

*PJM · AEP Ohio service area*

**85%**

minimum demand ratchet under new data-center tariff (up from 60%)

- AEP Ohio tariff approved 2024–2025; House bill (HB 15) seeks statewide extension
- Tariff aims to insulate other ratepayers from speculative load
- Manufacturers argue AEP's 13 GW forecast still inflated

## Texas

*ERCOT · standalone interconnect*

**75 MW**

trigger for Large Load Interconnection Process

- ~410 GW of large-load requests tracked; ~87% data centers
- Interim process in place; SB 6 (2025) and PUCT rulemaking advancing
- Co-location and behind-the-meter framework under PUCT review

*Source:* EIA, Utility Dive — AEP Ohio, ERCOT, AEP Ohio

WHAT TO WATCH · NEXT 12 MONTHS

# Three milestones to track

**Aug 3, 2026**

## NERC Level 3 Alert status reports due

Aggregated, anonymized industry response reported to FERC; informs draft Computational Load registry and Project 2026-02 SAR.

**June 2026**

## FERC final action on RM26-4-000

Will define federal jurisdiction over large-load interconnection and standardized rules for ≥20 MW projects.

**H2 2026**

## Hydro-Québec new rate effective

Sets a North American reference price near 13¢/kWh for new data centers and reshapes Canadian siting economics.

EXECUTIVE SUMMARY

# Four shifts reshaping data center power policy

## 01 NERC issues a Level 3 Alert on computational load

May 4, 2026 alert classifies data centers, AI training, and crypto mining as a reliability risk and prescribes seven Essential Actions — acknowledgement due May 11, status reports due Aug 3.

## 02 FERC is asserting federal jurisdiction

RM26-4-000 will standardize large-load (≥20 MW) interconnection by June 2026, displacing bespoke state arrangements and adding readiness deposits and withdrawal penalties.

## 03 Co-location rules are being rewritten

FERC's December 2025 PJM order created three new transmission service types and curbed behind-the-meter cost shifting — a template likely to spread to other ISOs.

## 04 States and provinces are pricing in scarcity

Ohio, Oregon, Virginia, Texas, Québec, BC, and Alberta have moved to dedicated tariffs, ratchets, competitive allocation, and computing-equipment levies.

KEY TENSIONS

# Five unresolved questions that will shape the next 18 months

| | |
|---|---|
| **Reliability vs. speed-to-power** | NERC's Level 3 Alert codifies modeling, ride-through, and commissioning expectations — will industry meet the Aug 3 reporting bar without slowing connections? |
| **Federal vs. state authority** | Will FERC's RM26-4-000 preempt PUC retail interconnection rules, or run in parallel? |
| **Cost causation vs. economic development** | How much network-upgrade cost should a single hyperscaler bear before subsidies kick in? |
| **Co-location vs. grid contribution** | Should behind-the-meter generation count toward resource adequacy if it never serves the grid? |
| **Clean firm capacity vs. gas buildout** | Data centers want 24/7 firm power; queues are skewing toward new gas, complicating decarbonization commitments. |

*Source:* Author analysis based on FERC, PJM, ERCOT, NERC, and provincial regulatory filings

IMPLICATIONS

# What this means for developers, utilities, and policymakers

## For data center developers

- Plan for security deposits, minimum demand ratchets, and curtailment options as baseline asks.
- Co-location is viable but no longer a cost-shifting shortcut — model firm-transmission obligations explicitly.
- Site selection is shifting toward jurisdictions with clear, fast rules over the cheapest historical tariff.

## For utilities & ISOs

- Speculative interconnection requests must be filtered through readiness and deposit tests.
- Load forecasts need uncertainty bands — NERC and EIA have both flagged forecast inflation risk.
- Cost-allocation methods need defensible legal and economic foundations as challenges mount.

## For policymakers & regulators

- Cross-border alignment matters: divergent U.S./Canadian tariffs are already steering siting decisions.
- Ratepayer protection mechanisms (ratchets, deposits, dedicated rate classes) are converging across jurisdictions.
- Reliability standards must catch up to data-center load behavior, including sudden trip events.

# Thank you!


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