ENERGY BY DESIGN

How Power Markets are Shaping the Next Generation of Industrial Projects

Energy By Design

Denver Energy Network | APRIL 2026

CANUSA EPC

ENGINEERING, PROCUREMENT & CONSTRUCTION FOR ENERGY INFRASTRUCTURE & FACILITIES

CANUSA EPC executes projects through an integrated model with a team of experts, minimizing construction risks and supporting the safe operation of the facility.

Our team is in Calgary and Denver, allowing us to serve the North American market with local resources and an expandable team to meet our client's needs.

Our Diversified Expertise

Natural Gas Processing

Power Generation & Storage

- Greenfield & Brownfield
- Sweet & Sour Systems
- Gas Processing Facilities
- Oil Batteries & Satellite Facilities
- Pilot Scale to Commercial Developments

Oil Processing & Storage

Pipelines & Gathering Systems

- Process & Hydraulic System Modelling
- Front End Engineering Design
- FEL Estimates
- Detailed Engineering Design, Drafting, & 3D Modelling

Carbon Capture, Utilization & Storage

Helium Processing

- Equipment Sizing & Specification *(New & used)*
- Construction Management
- On Site Support & Troubleshooting
- System Revalidation (PSM)

AGENDA

01 **THE HOOK**
Headlines that changed the energy landscape

02 **THE DEMAND CYCLE**
Why U.S. electricity demand broke a 20-year flat line

03 **THE MARKET SIGNAL**
PJM's $67 billion wake-up call

04 **THE PLAYERS**
Who's winning, who's scrambling, and what to watch

05 **YOUR PLAYBOOK**
Presenting tips and closing thoughts

SECTION 01

THE HOOK

Headlines that changed the energy landscape

THREE HEADLINES, ONE THEME

OCTOBER 23, 2025

Google Signs First Carbon Capture Power Deal[1]

- 400 MW gas plant with CCS in Decatur, IL
- Captures ~90% of CO_2 emissions
- First corporate PPA for CCS-enabled power
- Commercial operations targeted for 2030

FEBRUARY 24, 2026

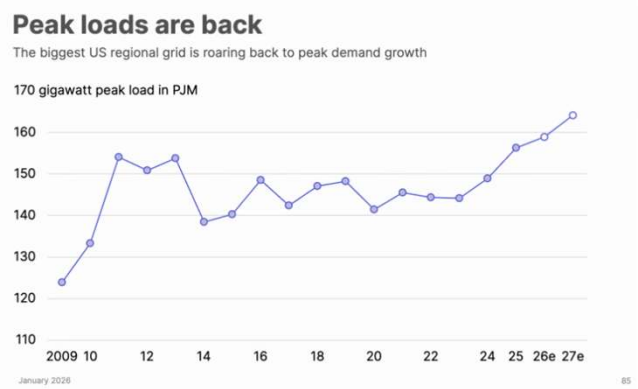
Xcel Energy to Power New Google Data Center[3]

- 1,900 MW of new clean energy
- 300 MW / 30 GWh iron-air battery
- Google funds ALL infrastructure costs
- Zero cost shift to existing ratepayers

MARCH 13, 2026

PJM Wholesale Power Costs Jump 54% in One Year[2]

- Total wholesale cost: $67 Billion (2025)
- Capacity costs up +262% year-over-year
- $23.1B in added costs from data center load
- Costs locked in through May 2028



Nat Bullard PJM Demand[4]

One theme: power is now a first-order business variable, not a utility bill footnote.

Stay informed.

Read newsletters like Utility Dive or listen to podcasts like The Interchange and Short Circuit.

THE SHALE PARALLEL

SHALE BOOM (2005–2015)	POWER DEMAND BOOM (2023–???)
Nobody predicted the scale or speed	**Nobody predicted the scale or speed**
Infrastructure wasn't ready	**The grid isn't ready**
Land rush created winners & losers	**Interconnection queue IS the new land rush**
New operators: capital, no expertise	**Hyperscalers: capital, no grid expertise**
Royalty owners didn't know value	**Site owners don't know power's worth**
Regulators scrambled to catch up	**FERC & state PUCs scrambling right now**
Pros who moved first won	**Same playbook — same opportunity**
Public perception issues	**Public perception issues**

SECTION 02

THE DEMAND CYCLE

Why U.S. electricity demand broke a 20-year flat line

THE BASELINE THAT BROKE

~20 Years

U.S. electricity demand was flat

Less than 1% CAGR

Source: EIA

4,260B+ kWh

Projected U.S. consumption, 2026

Up from 4,110B kWh in 2024

Source: EIA STEO

+5% YOY

Commercial sector growth forecast, 2026

Up from +3% in 2025

Source: EIA / DCD

$720 Billion

Grid upgrades needed through 2030

Just to keep up with demand

Source: Goldman Sachs

Planning Areas with Greatest Increase in Summer 2029 Peak Demand

Planning Area	2029 Peak Demand						
	2022 Forecast (GW)	2023 Forecast (GW)	2024 Forecast (GW)	Forecast Updates (GW)	Forecast Increase (GW)	Forecast Increase (Percent)	Total Growth Through 2029 (GW)
ERCOT	84.4	89.6	88.1	+ 36.9	40.6	48.1%	42.8
PJM	153.3	156.9	165.7	+ 15.2	27.5	18.0%	29.6
Georgia Power	16.3	17.3	22.4	+ 7.3	13.5	83.1%	13.0
MISO	132.4	133.0	138.4		6.1	4.6%	9.1
Pacific Northwest	37.4	38.4	38.5	+ 2.0	3.1	8.2%	7.4
SPP	56.6	59.5	62.5		5.9	10.4%	6.3
Duke Energy (North & South Carolina)	33.9	36.2	36.6		2.7	7.8%	2.6
Arizona Public Service	8.7	9.8	9.9		1.2	13.6%	1.5
NYISO	31.5	32.3	32.3		0.9	2.8%	4.6
Tennessee Valley Authority	31.8	32.4	32.5		0.7	2.2%	1.4
All other planning areas	251.2	250.5	249.5		-1.7	-0.7%	10.0
Total	840.5	858.9	879.8	+ 61.4	100.7	12.0%	128.2

https://gridstrategiesllc.com/wp-content/uploads/National-Load-Growth-Report-2024.pdf

DEMAND PIPELINE IS REAL

DATA CENTER ELECTRICITY USE

58 TWh (2014)

176 TWh (2023)
4.4% of U.S. total

325–580 TWh (2028 (proj))
6.7–12% of U.S. total

Source: DOE / Lawrence Berkeley National Lab, 2024

GRID DEMAND PROJECTIONS

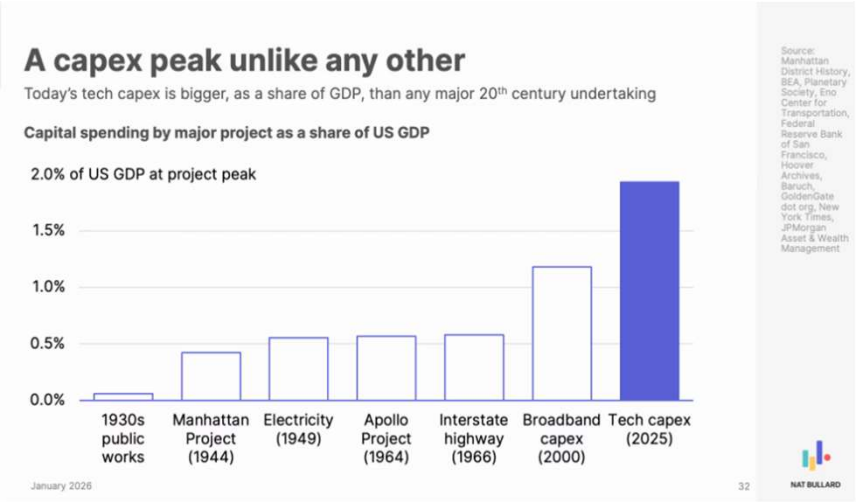
75.8 GW
U.S. data center demand, 2026

108 GW
Projected demand, 2028

134 GW
Projected demand, 2030
(~3× in 4 years)
Source: S&P Global / 451 Research, Oct 2025

Stay informed.

Listen to Nat Bullard for analysis on clean energy, fossil fuels, power, demand, supply, and much more



Nat Bullard CapEx Run[4]

KEY INDICATORS

- 72% of executives rate grid capacity as very/extremely challenging (Deloitte)
- 79% say AI will increase power demand through 2035 (Deloitte)
- 39 GW of data center and manufacturing load IOUs working to interconnect (EEI)
- 7-year interconnection wait times in some regions (Deloitte)

THREE PHASES OF THE DEMAND CYCLE

PHASE 01 DISCOVERY / RUSH	PHASE 02 BUILDOUT	PHASE 03 MATURATION
• Demand spike catches market off-guard • Capital floods into data center development • Interconnection queues overwhelmed • Site values skyrocket near substations	• New generation capacity under construction • Transmission upgrades begin (7+ year lead) • Regulatory frameworks evolving rapidly • Cost allocation fights intensify	• Market rules stabilize • Long-term contracts become standard • Behind-the-meter solutions scale • Professionals who moved early are established

We are in Phase 1 right now. The professionals who recognize it first will build careers on it.

SECTION 03

THE MARKET SIGNAL

PJM's $67 billion wake-up call

PJM — THE COST SPIKE

$67B
Total Wholesale Cost (2025)
Up from $43.5B

+54%
Year-Over-Year Increase
Largest in PJM history

+262%
Capacity Cost Increase
6.5% → 16% of total

$23.1B
Added System Costs from Data Centers
Last 3 auctions

CAPACITY SHORTFALL — RELIABILITY GAP

~210 MW
Capacity Shortfall
2026/2027 Base Capacity Auction

~6,520 MW
Capacity Shortfall
2027/2028 Base Capacity Auction

Source: Monitoring Analytics — 2025 State of the Market Report, PJM / Utility Dive, March 2026

WHAT PJM MEANS FOR YOU

LAWYERS

- FERC cost allocation proceedings are live now
- Large-load tariffs are active drafting issues
- PJM's proposed data-center auction will generate FERC litigation

REAL ESTATE

- 'Shovel-ready' now requires a clear power path
- Substation proximity is first-tier site criteria
- Interconnection capacity has a hard dollar value

REGUALTORY

- Navigation of existing permitting structures for new applications
- Government policies will impact long term operations
- Acceleration of projects for limited resources

SUBSURFACE

- Transmission corridor ROW is a high-value asset
- Behind-the-meter gas supply creates new opportunities
- New transmission needs demand for easements

FACILITY OPS

- Capacity costs can triple year-over-year
- Demand response is now a cost management tool
- Review curtailment rights — queue times exceed 7 years

Find Your Value

These deals have layers, just like oil production. Find a "pain point" and help solve that

SECTIONS 04 & 05

THE PLAYERS

Who's winning, who's scrambling, and what to watch

XCEL / GOOGLE BLUEPRINT

DEAL TERMS — PINE ISLAND, MN

- 1,900 MW of new clean energy resources
- 1,400 MW wind (Clean Energy Accelerator)
- 200 MW solar
- 300 MW / 30 GWh iron-air battery — largest by GWh ever announced globally
- $50M into Capacity*Connect reliability program
- Google covers ALL new infrastructure costs

BUSINESS DEVELOPMENT LESSONS

01 Large loads must now come with their own power supply

02 Regulatory review is a project milestone, not a formality

03 Long-duration storage is entering deal structures as a reliability instrument

04 'No cost-shift to existing customers' is becoming a regulatory requirement

Source: Xcel Energy Newsroom, February 24, 2026

TALLGRASS / CRUSOE BLUEPRINT

DEAL TERMS — CHEYENNE, WY

- 2.7 GW on-site natural gas generation (scalable to 10 GW)
- $7B Tallgrass energy infrastructure investment
- $50B+ total campus capex (Project Jade AI data center)
- "Bring your own power" model — no impact on local utility rates
- Closed-loop cooling & adjacent CO_2 sequestration hub
- 5,000 peak construction jobs; first buildings online Q2 2027

BUSINESS DEVELOPMENT LESSONS

01 Behind-the-meter gas generation unlocks hyperscale without grid dependency

02 County-level siting approval can fast-track projects state regulators might delay

03 CO_2 sequestration co-location positions gas plants for future carbon rules

04 National security framing is becoming a catalyst for AI infrastructure approvals

Source: Yahoo Finance / POWER Magazine, January 2026

NEW & OLD PLAYERS

SHALE ERA	→	POWER ERA
Independent E&P operators	→	**Hyperscalers (Google, Microsoft, Amazon)**
Midstream pipeline companies	→	**Transmission developers & grid operators**
Mineral rights landmen	→	**Interconnection queue brokers**
Royalty aggregators	→	**Power purchase agreement (PPA) intermediaries**
Oilfield services (Halliburton, SLB)	→	**EPC firms & battery integrators**

SIGNALS TO WATCH

SIGNAL 01

PJM FERC RULING

Proposed separate capacity auction for data centers. Expect FERC filings in coming months. This will set precedent for cost allocation nationwide.

SIGNAL 02

STATE LEGISLATION

Multiple states considering data center-specific power procurement frameworks. Watch for industrial rate reform and siting authority changes.

SIGNAL 05

NET ZERO POWER

400 MW of 90% emission capture from natural gas generation. The price point was not disclosed, but estimated @ $.06/kWh price adder for the net-zero.

SIGNAL 03

IOU QUEUE PROGRESS

39 GW of pending interconnection requests from data centers and manufacturing. Queue clearing speed will determine which regions win the buildout.

SIGNAL 04

STORAGE FINANCE

Long-duration storage (iron-air, flow batteries) entering project finance structures. The Xcel/Google 30 GWh deal is the benchmark.

Learn Local

Local regulations can drive tax incentives, burden costs, long-term planning. Become the expert in your local market.

"The next big industrial deal in your market will either be won or lost based on power — and now you know why."

Power is the new first-order business variable.

The professionals who recognized shale early built careers on it.

This is the same moment. Move.

QUESTIONS & DISCUSSION

Young Professionals Energy Network | 2026

We're Hiring!

Scan to explore careers at CANUSA EPC

canusaepc.com/epc-engineering-jobs

SOURCES

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carbon-direct.com/insights/capture-committed-google-and-broadwing-sign-carbon-capture-power-deal

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3 *Xcel Energy will power a new Google data center in Pine Island,* February 27th, 2026
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