

US Data Center Energy Procurement: The Good, The Bad, and The Ugly

Data centers are planning to buy historic volumes of power. This is a draft project – we would welcome your feedback on how we display the data, if there are other things you want to see, or if there are projects we have missed.

US Data Center Energy Procurement: The Good, The Bad, and The Ugly

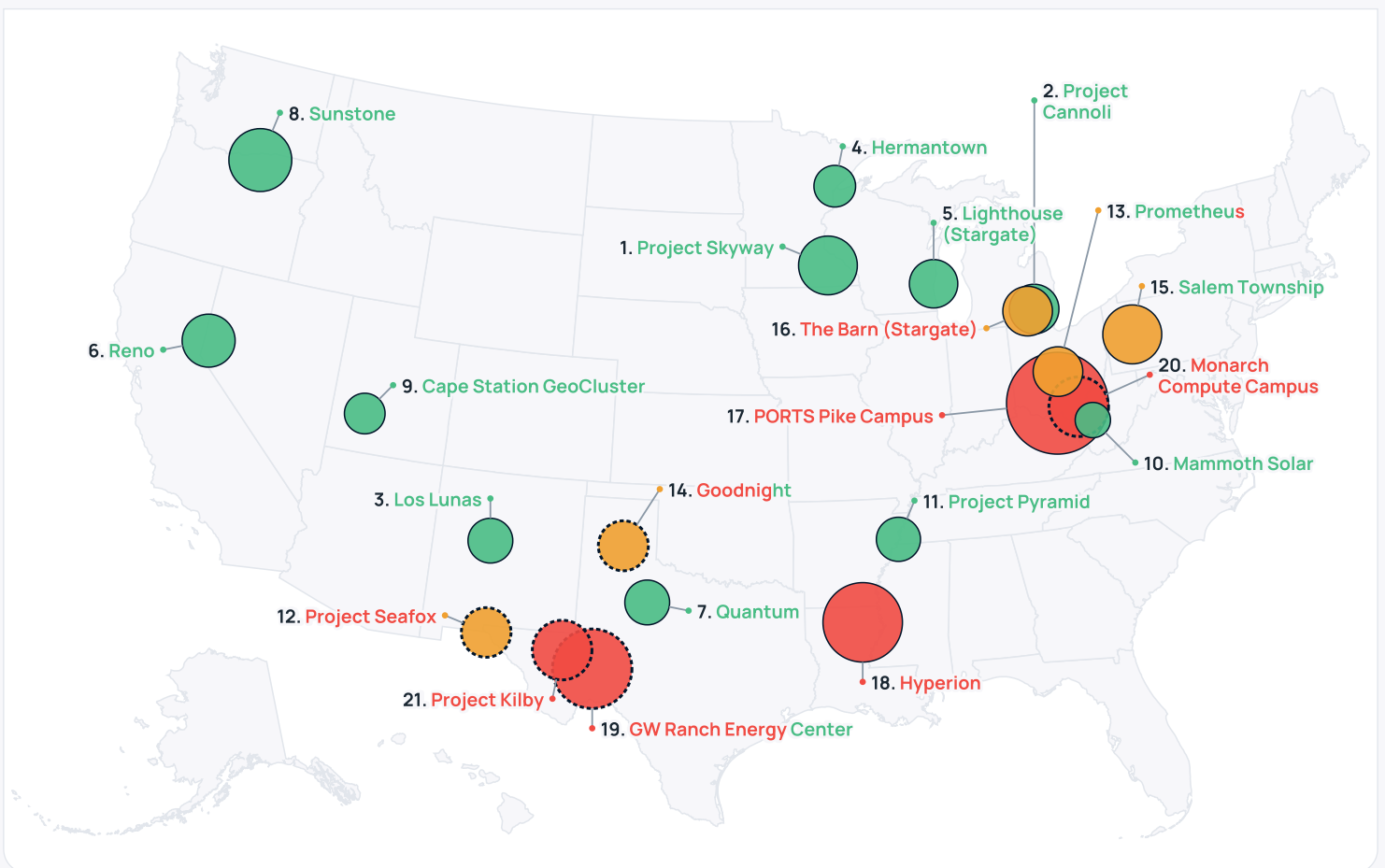


CIRCLE COLOR – RATING ● Good ● Bad ● Ugly ⬢ Planned off-grid

NAME COLOR – SUPPLY MIX **Name** = clean **Name** = fossil

Letters split proportionally to each project's clean/fossil share, larger share first

SIZE – PLANNED DEMAND (MW)



GOOD 11 of 21

Good projects are planning to procure a new clean energy portfolio including storage and/or clean firm that has higher potential to provide clean electricity around-the-clock.

15.5 GW new clean

BAD 5 of 21

Bad projects either do not bring nearly enough clean power to support operations, rely on significant existing clean power, or a combination of both.

5+ GW existing clean

UGLY 5 of 21

Ugly projects are planning to build historic levels of new gas capacity to support their operations, even if some clean power is included in the mix.

30.8 GW new gas

Could result in ~70.6M tons CO₂/yr = ~Pennsylvania's entire power-sector emissions each year

Supply composition per project



RESOURCE

Gas

Solar

Wind

Storage

Clean firm

Other / unspecified

RATING

Good

Bad

Ugly

Colored circle = contracted supply (MW), sized and split by resource. Dashed ring = planned demand (MW, not MWh) – inside the circle means supply may cover demand; outside means supply likely falls short. Dashed card border = planned off-grid.



Analysis Context

- This is not an exhaustive list of data center projects. These examples were chosen based on projects with enough public information to provide a fuller picture of the power portfolio being procured, the data center capacity, or both.
- Despite that, we generally cannot know whether an energy portfolio will effectively *match* the real data center demand. That could not be known without more details about the size, demand profile, and location of the data center combined with the exact location and expected supply curves of each generator. So even the "good" projects may still rely on gas backup depending on the details, however they receive the good rating if they bring a new energy portfolio that *can* provide carbon-free power around the clock.
- These projects are at many different stages of approval, this report doesn't indicate that all of these projects will come to fruition. This is meant to be illustrative of the type of projects being proposed and the feasibility of pursuing higher integrity clean energy portfolios.
- Emissions impact estimates are based on standardized capacity factors of combined cycle gas turbines and thus may be an underestimate in some cases.
- All demand and supply figures are power capacity (MW) – a point-in-time rate, not energy delivered over time (MWh). Capacity being contracted does not guarantee it matches demand hour by hour.

Resource mix vs. demand

RESOURCE ■ Gas ■ Solar ■ Wind ■ Storage ■ Clean firm ■ Other / unspecified | RATING ● Good ● Bad ● Ugly

A condensed view of the same projects: each bar shows contracted supply capacity (MW) as a share of planned demand capacity (MW, not MWh – capacity, not energy over time), capped at 100%. Grouped Good, then Bad, then Ugly.

	COMPANY	PROJECT	DEMAND (MW)	SUPPLY MIX VS. DEMAND	% OF DEMAND MW BROUGHT
1	Google	Project Skyway	1,900 MW		100%
2	Google	Project Cannoli	1,000 MW		235%
3	Meta	Los Lunas	640 MW		177%
4	Google	Hermantown	450 MW		156%
5	Vantage, Oracle, OpenAI	Lighthouse (Stargate)	902 MW		222%
6	Amazon	Reno	Unstated		Unclear
7	Google	Quantum	Unstated		Unclear
8	Amazon	Sunstone	Unstated		Unclear
9	Google	Cape Station GeoCluster	Unstated		Unclear
10	Google	Mammoth Solar	Unstated		Unclear
11	Google	Project Pyramid	600 MW		417%
12	Meta	Project Seafox	1,000 MW		37%
13	Meta	Prometheus	1,000 MW		721%
14	Google	Goodnight	1,030 MW		116%
15	Amazon	Salem Township	Unstated		Unclear
16	Oracle / OpenAI	The Barn (Stargate)	1,000 MW		140%
17	OpenAI / SB Energy / NVIDIA / DOE	PORTS Pike Campus	10,000 MW		92%
18	Meta	Hyperion	5,000 MW		198%
19	Amazon	GW Ranch Energy Center	5,000 MW		204%
20	Anthropic + Microsoft	Monarch Compute Campus	2,000 MW		100%
21	Microsoft	Project Kilby	2,000 MW		134%

The projects, in detail



RESOURCE

Gas

Solar

Wind

Storage

Clean firm

Other / unspecified

RATING

Good

Bad

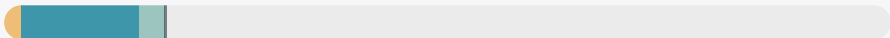
Ugly

1 GOOD

Google
Project Skyway

Pine Island, MN · Xcel Energy · 1,900 MW planned demand · Grid-connected

Known supply: Solar 200 MW + Wind 1,400 MW + Storage 300 MW



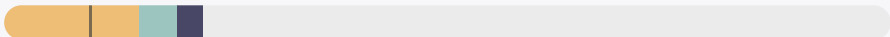
No new fossil capacity; 1.9 GW of new wind, solar and storage.

2 GOOD

Google
Project Cannoli

Van Buren Township, MI · DTE Energy · 1,000 MW planned demand · Grid-connected

Known supply: Solar 1,600 MW + Storage 450 MW + Other / unspecified 300 MW



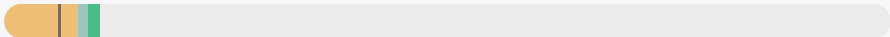
The only project in this set with stated demand flexibility.

3 GOOD

Meta
Los Lunas

Valencia County, NM · XGS Energy · 640 MW planned demand · Grid-connected

Known supply: Solar 885 MW + Storage 100 MW + Clean firm 150 MW



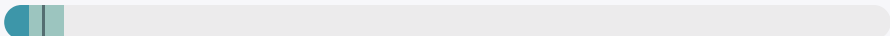
Wind, solar, storage and geothermal – an ideal clean energy portfolio for this demand profile.

4 GOOD

Google
Hermantown

Hermantown, MN · Minnesota Power · 450 MW planned demand · Grid-connected

Known supply: Wind 300 MW + Storage 400 MW



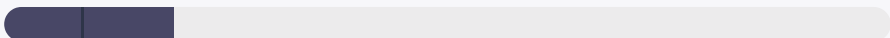
Newly detailed wind and storage contracts.

5 GOOD

Vantage, Oracle, OpenAI
Lighthouse (Stargate)

Port Washington, WI · We Energies · 902 MW planned demand · Grid-connected

Known supply: Other / unspecified 2,000 MW



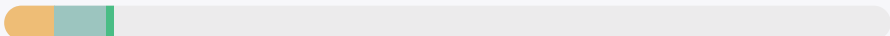
Targeting 70% hourly and 100% annual match with 2 GW of new solar, wind and storage.

6 GOOD

Amazon
Reno

Reno, NV · NV Energy · Demand unstated · Grid-connected

Known supply: Solar 600 MW + Storage 600 MW + Clean firm 100 MW



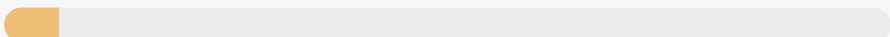
Amazon's first dedicated geothermal deal for a data center.

7 GOOD

Google
Quantum

Haskell County, TX · Intersect · Demand unstated · Unstated

Known supply: Solar 640 MW



Co-located solar; unclear if fully off-grid or also grid-connected.

The projects, in detail (continued)



RESOURCE

Gas

Solar

Wind

Storage

Clean firm

Other / unspecified

RATING

Good

Bad

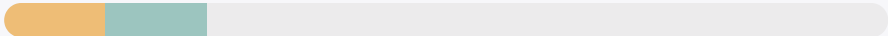
Ugly

8 GOOD

Amazon
Sunstone

Morrow County, OR · Gallatin Power Partners · Demand unstated · Grid-connected

Known supply: Solar 1,200 MW + Storage 1,200 MW



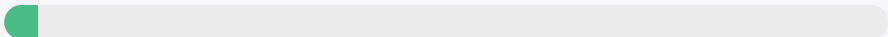
Large shovel-ready solar-plus-storage project serving existing and new data center demand.

9 GOOD

Google
Cape Station GeoCluster

Beaver County, UT · Fervo Energy · Demand unstated · Grid-connected

Known supply: Clean firm 396 MW



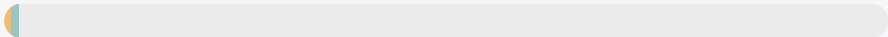
The power purchase agreement could scale toward 1 GW total by 2030.

10 GOOD

Google
Mammoth Solar

Kanawha County, WV · MN8 Energy · Demand unstated · Grid-connected

Known supply: Solar 86 MW + Storage 80 MW



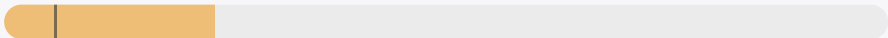
Strong clean portfolio, but the data center demand size is unclear.

11 GOOD

Google
Project Pyramid

West Memphis, AR · Cypress Creek Energy · 600 MW planned demand · Grid-connected

Known supply: Solar 2,500 MW



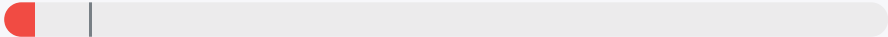
Plus 2,900 MWh of storage — energy, not capacity, so not shown in the bar.

12 BAD

Meta
Project Seafox

El Paso, TX · El Paso Electric · 1,000 MW planned demand · Off-grid

Known supply: Gas 366 MW



A local coalition says the gas plant was not disclosed to them.

13 BAD

Meta
Prometheus

New Albany, OH · Oklo, TerraPower, Vistra · 1,000 MW planned demand · Grid-connected

Known supply: Gas 614 MW + Clean firm 6,600 MW



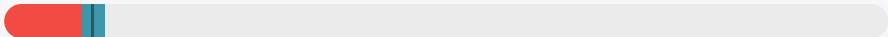
Clean-firm figure is largely an existing nuclear extension, not new build — and it still brings new gas.

14 BAD

Google
Goodnight

Armstrong County, TX · Unstated · 1,030 MW planned demand · Off-grid

Known supply: Gas 933 MW + Wind 265 MW



Negotiations are ongoing; not a finalized deal.

The projects, in detail (continued)

RESOURCE

GasSolarWindStorageClean firmOther / unspecified

RATING

GoodBadUgly

15BAD

Amazon
Salem Township

Salem Township, PA · Talen Energy · Demand unstated · Grid-connected

Known supply: Clean firm 1,920 MW

Existing nuclear only, no new clean power — optionality for future small modular reactors.

16BAD

Oracle / OpenAI
The Barn (Stargate)

Saline Township, MI · DTE Energy · 1,000 MW planned demand · Grid-connected

Known supply: Other / unspecified 1,400 MW

1,400 MW from existing resources; no new generation identified.

17UGLY

OpenAI / SB Energy / NVIDIA / DOE
PORTS Pike Campus

Piketon, OH · Unstated · 10,000 MW planned demand · Unstated

Known supply: Gas 9,200 MW

Gas emissions comparable to Utah's entire power sector.

18UGLY

Meta
Hyperion

Richland Parish, LA · Entergy Louisiana · 5,000 MW planned demand · Grid-connected

Known supply: Gas 7,400 MW + Other / unspecified 2,500 MW

Three new gas turbines approved August 2025; 2,500 MW of solar, storage and nuclear uprates.

19UGLY

Amazon
GW Ranch Energy Center

Pecos County, TX · PacifiCo Energy · 5,000 MW planned demand · Off-grid

Known supply: Gas 7,650 MW + Solar 750 MW + Storage 1,800 MW

1 GW near-term, scaling to 5+ GW by 2031. Still rated Ugly despite the clean power alongside it.

20UGLY

Anthropic + Microsoft
Monarch Compute Campus

Point Pleasant, WV · Unstated · 2,000 MW planned demand · Off-grid

Known supply: Gas 2,000 MW

Gas emissions comparable to Hawaii's entire power sector.

21UGLY

Microsoft
Project Kilby

Pecos, TX · Chevron · 2,000 MW planned demand · Off-grid

Known supply: Gas 2,670 MW

Chevron's final investment decision is expected by the end of 2026; reportedly scalable to 5 GW.





We want your feedback

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GET IN TOUCH

Alex Piper

Head of US Policy and Markets

alex@energytag.org