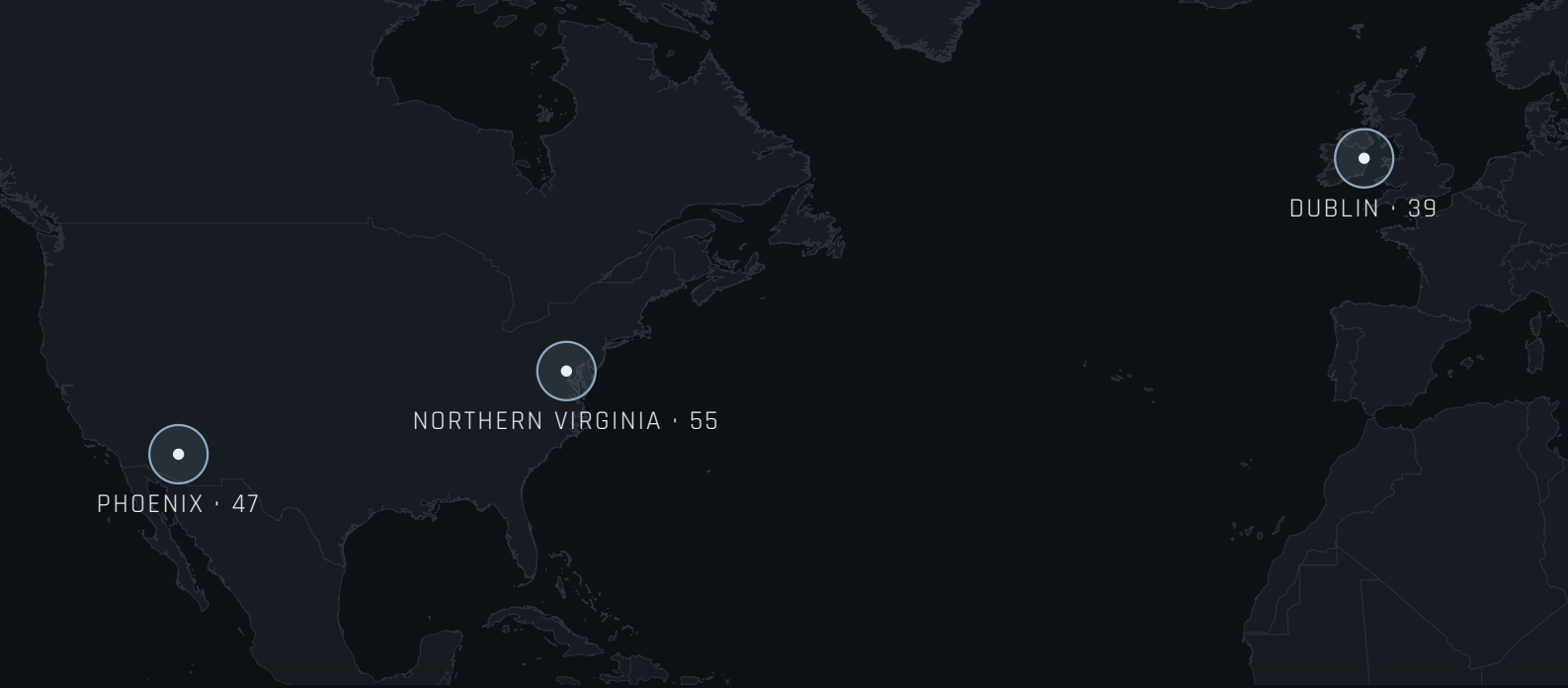




55

Northern Virginia
MODERATE

47

Phoenix, Arizona
MODERATE

39

Dublin, Ireland
SLOW · CAPPED

I N F R A T R A C K

S I T E S C R E E N · S A M P L E E D I T I O N

Speed-to-Power

Where can new data-center load connect fastest? Northern Virginia, Phoenix and Dublin, scored from live data.

Issued

18 October 2026

Inputs as of

17 October 2026

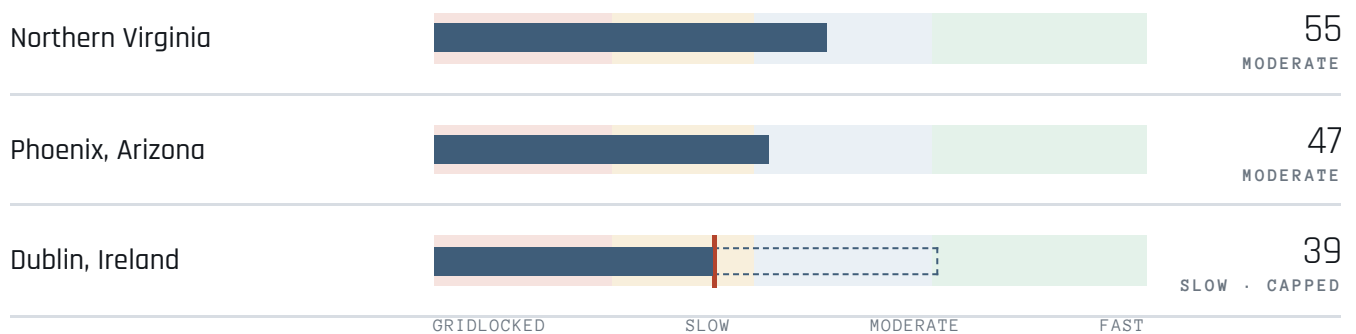
Scoring

s2p-0.1.0

Sample edition issued for evaluation — a client screen scores the regions or sites you are weighing. Comparative screening, not engineering due diligence. Confidential when issued to a named client.

01 The answer

Ranked by how fast new data-center load can realistically connect, on a 0–100 scale.



- **Northern Virginia — 55/100.** Largest contribution: water, 24 of 55 points; weakest input: permitting at 0/100.
- **Phoenix, Arizona — 47/100.** Largest contribution: grid, 15 of 47 points; weakest input: water at 5/100.
- **Dublin, Ireland — 39/100.** Interconnection scores 10/100, a binding constraint that caps the result at Slow — uncapped, the other inputs would score 71.

HOW TO READ THIS

Dashed outline: what Dublin would score without its binding constraint. The red marker is the cap — a site whose grid connection is effectively blocked cannot rank above Slow, however good the rest looks.

02 How the score works

$$S2P = 100 \times (0.30 \cdot \text{Water} + 0.25 \cdot \text{Permitting} + 0.20 \cdot \text{Grid} + 0.15 \cdot \text{Generation} + 0.10 \cdot \text{Interconnection})$$

COMPONENT	WEIGHT	MEASURED AS
Water	30%	Share of data centers within 120 km in critically water-stressed basins (WRI Aqueduct 4.0) — the higher the share, the lower the score.
Permitting	25%	Documented community opposition within 120 km — moratoriums, lawsuits, zoning fights, permit denials; 25 or more cases scores zero.
Grid	20%	National grid-quality composite from World Bank indicators.
Generation	15%	Operating capacity of all technologies within 120 km, log-scaled to a 20 GW reference.
Interconnection	10%	Analyst judgement of how fast new load can actually connect, with its sources stated.

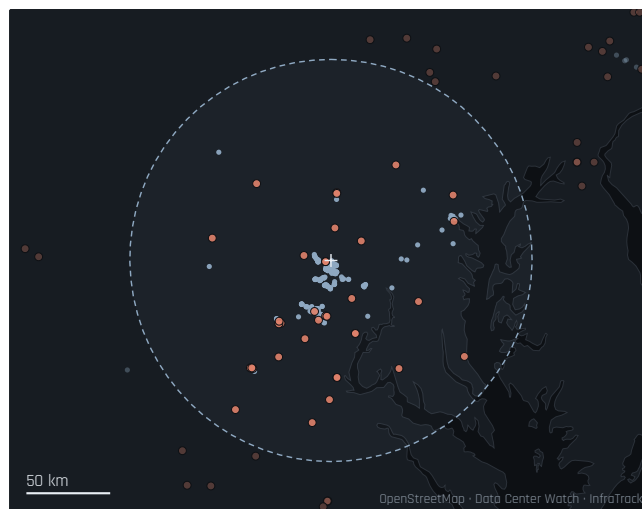
BINDING CONSTRAINTS ARE BINDING

When interconnection scores 15 or below, the result is capped at Slow. Measured inputs (water, opposition) carry more weight than modelled ones, because they are the constraints that most often surprise siting decisions late.

55

MODERATE · /100

Water WEIGHT 30%		79 /100	24 PTS
Permitting WEIGHT 25%		0 /100	0 PTS
Grid WEIGHT 20%		76 /100	15 PTS
Generation WEIGHT 15%		87 /100	13 PTS
Interconnection WEIGHT 10%		25 /100	3 PTS



● Data centers ● Opposition cases — — 120 km scoring radius

Evidence

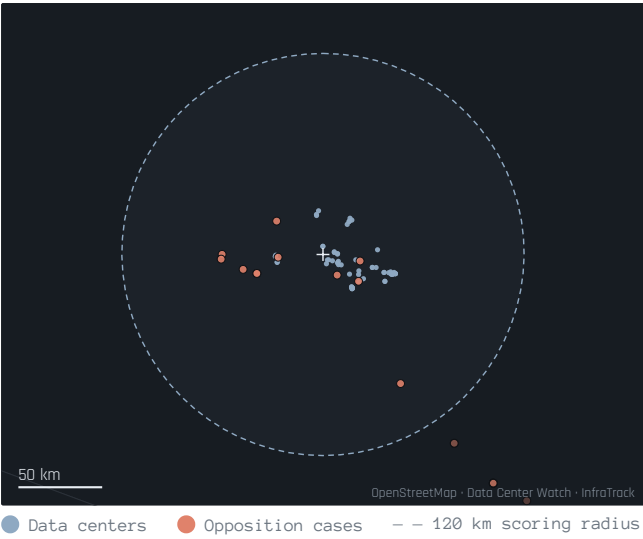
COMPONENT	WHAT THE SCORE RESTS ON
Water	0% of 323 data centers within 120 km sit in critically water-stressed basins (WRI Aqueduct 4.0).
Permitting	35 documented opposition cases within 120 km (25 or more scores zero).
Grid	National grid-quality composite from World Bank indicators (access, losses, consumption, outages).
Generation	5.7 GW of operating capacity within 120 km (Global Energy Monitor), log-scaled to a 20 GW reference.
Interconnection	New large loads in Dominion's Virginia zone face a roughly seven-year wait for power, with only about 25 GW of a ~100 GW request queue holding energization dates. The squeeze dates to Dominion's July 2022 warning of transmission constraints in eastern Loudoun, and on 9 Oct 2026 FERC rejected PJM's proposed interim fast-track service for large loads. ^{1 2 3}

Opposition evidence – 5 most recent of 35 cases inside the radius

CASE	YEAR	ACTION
Loudoun County (Amazon/GW campus) ⁴	2026	other
Dickerson (Montgomery County) ⁵	2026	moratorium
Montgomery County ⁶	2026	zoning restriction
Prince William County (Hornbaker Road) ⁷	2026	other
Prince William County (Diamond Hill substation) ⁸	2026	permit denial

47
MODERATE · /100

Water WEIGHT 30%		5 /100	2 PTS
Permitting WEIGHT 25%		56 /100	14 PTS
Grid WEIGHT 20%		76 /100	15 PTS
Generation WEIGHT 15%		92 /100	14 PTS
Interconnection WEIGHT 10%		30 /100	3 PTS



Evidence

COMPONENT	WHAT THE SCORE RESTS ON
Water	100% of 63 data centers within 120 km sit in critically water-stressed basins (WRI Aqueduct 4.0).
Permitting	11 documented opposition cases within 120 km (25 or more scores zero).
Grid	National grid-quality composite from World Bank indicators (access, losses, consumption, outages).
Generation	9.0 GW of operating capacity within 120 km (Global Energy Monitor), log-scaled to a 20 GW reference.
Interconnection	APS, the region's largest utility, has made no new data-center service commitments since 1 Jan 2024, citing grid and overnight-supply constraints, and lists a 19 GW uncommitted queue. SRP still accepts large loads, but through a study process (LCIP, introduced 2025) with upfront upgrade payments, and both utilities told the state regulator in April 2026 that demand exceeds their capacity to serve. ^{9 10 11}

Opposition evidence – 5 most recent of 11 cases inside the radius

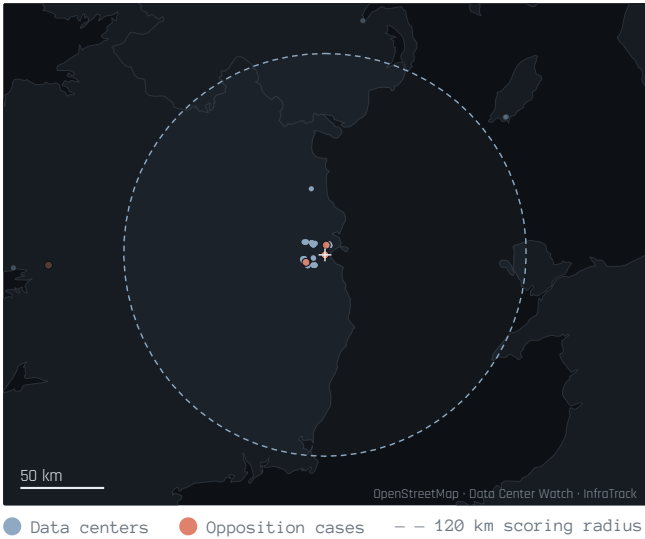
CASE	YEAR	ACTION
Ahwatukee (Phoenix) ¹²	2026	other
Pinal County ¹³	2026	other
Mesa ¹⁴	2025	zoning restriction
City of Chandler ¹⁵	2025	permit denial
Surprise (Maricopa County) ¹⁶	2025	other

39

SLOW · /100

BINDING CONSTRAINT — CAPPED (UNCAPPED 71)

Water WEIGHT 30%		80 /100	24 PTS
Permitting WEIGHT 25%		80 /100	20 PTS
Grid WEIGHT 20%		71 /100	14 PTS
Generation WEIGHT 15%		77 /100	12 PTS
Interconnection WEIGHT 10%		10 /100	1 PTS



Evidence

COMPONENT	WHAT THE SCORE RESTS ON
Water	0% of 95 data centers within 120 km sit in critically water-stressed basins (WRI Aqueduct 4.0).
Permitting	5 documented opposition cases within 120 km (25 or more scores zero).
Grid	National grid-quality composite from World Bank indicators (access, losses, consumption, outages).
Generation	2.0 GW of operating capacity within 120 km (Global Energy Monitor), log-scaled to a 20 GW reference.
Interconnection	Since the CRU's December 2025 decision (CRU/2025/236), new Irish data centres must bring their own dispatchable generation or storage matching their import capacity and source 80% of their demand from new Irish renewables. EirGrid's May 2026 constraint review treats greater Dublin as 'fully constrained' with no end date, because that bundled generation would worsen Dublin's short-circuit problem. ^{17 18 19}

Opposition evidence – 5 most recent of 5 cases inside the radius

CASE	YEAR	ACTION
Grange Castle, South Dublin — Google planning refused ²⁰	2024	permit denial
AWS Cruiserath Data Center Appeals (Dublin, Ireland) ²¹	2023	lawsuit
Ireland Dublin Data Center Grid Connection Moratorium ²²	2021	moratorium
Ireland Environmental Campaign Against Data Centers ²³	2021	protest
Ireland Emergency Gas Generator Deployment ²⁴		other

04 What would move the scores

- 01 **Northern Virginia.** Its weakest input is permitting at 0/100, which costs it 25 points against a perfect score — the first thing to test site by site.
- 02 **Phoenix, Arizona.** Its weakest input is water at 5/100, which costs it 29 points against a perfect score — the first thing to test site by site.
- 03 **Dublin, Ireland.** A firm path to grid connection is the only lever that matters — lifting interconnection above 15/100 removes the cap (uncapped inputs total 71).

05 Sources

DATASET	RELEASE / SNAPSHOT	LICENSE
Global Energy Monitor — Global Nuclear Power Tracker	September 2025	CC BY 4.0
Global Energy Monitor — Global Solar Power Tracker	February 2026	CC BY 4.0
Global Energy Monitor — Global Wind Power Tracker	February 2026	CC BY 4.0
Global Energy Monitor — Global Hydropower Tracker	April 2025	CC BY 4.0
Global Energy Monitor — Global Geothermal Power Tracker	March 2026	CC BY 4.0
OpenStreetMap (Overpass) — data centers	March 2026 snapshot	ODbL 1.0
WRI Aqueduct 4.0 — baseline water stress	2023 release	CC BY 4.0
World Bank Open Data — grid indicators	2018–2023	CC BY 4.0
Data Center Watch — US opposition cases	March 2026; links checked Oct 2026	CC BY 4.0
InfraTrack research — international opposition, interconnection notes	Sources checked Oct 2026	Own compilation

Every source cited in this screen, in order of first use.

1. **wydaily.com** <https://wydaily.com/latest/2026/10/16/virginia-lawmakers-propose-moratoriums-on-new-data-centers/>
2. **datacenterfrontier.com** <https://datacenterfrontier.com/ashburn-power-crunch-may-cause-delays-in-data-center-construction/>
3. **utilitydive.com** <https://www.utilitydive.com/news/ferc-pjm-large-load-interconnection-iras-byonc/832716/>
4. **wtop.com** <https://wtop.com/loudoun-county/2026/03/loudoun-county-will-fight-to-keep-amazon-data-center-off-just-sold-gw-campus-in-ashburn/>
5. **bethesdamagazine.com** <https://bethesdamagazine.com/2026/02/25/dickerson-data-center-developers-have-right-to-go-forward-elrich-says/>
6. **foodandwaterwatch.org** <https://www.foodandwaterwatch.org/2026/02/24/md-advocates-residents-call-for-data-center-moratorium-at-town-hall/>
7. **potomaclocal.com** <https://www.potomaclocal.com/2026/03/04/prince-william-supervisors-move-to-end-by-right-data-centers-in-overlay-district-but-approve-contra-versial-hornbaker-project-in-4-3-vote/>
8. **princewilliamtimes.com** https://www.princewilliamtimes.com/localnews/planning-commission-denies-substation-for-data-centers-in-bristow/article_442f4d3b-2bea-42f5-ac48-af6167e1a709.html
9. **kjzz.org** <https://www.kjzz.org/business/2026-09-02/aps-says-it-cant-commit-to-new-data-centers-because-of-electric-grid-constraints>
10. **aps.com** https://www.aps.com/en/Utility/Company-wide-Events-and-Messages/Data_Centers_How_Were_Protecting_Customers_While_Planning-for_Big_Energy_Needs
11. **azcc.gov** <https://www.azcc.gov/news/home/2026/04/20/acc-large-load-data-center-workshop-highlights>
12. **azfamily.com** <https://www.azfamily.com/2026/02/24/ahwatukee-residents-push-back-approved-1-million-square-foot-data-center/>
13. **datacenterdynamics.com** <https://www.datacenterdynamics.com/en/news/land-developer-vermaland-plans-33bn-data-center-in-arizona/>
14. **kjzz.org** <https://www.kjzz.org/business/2025-07-14/mesa-city-council-approves-new-data-center-zoning-rules>
15. **phoenixnewtimes.com** <https://www.phoenixnewtimes.com/news/chandler-city-council-unanimously-kills-sinema-backed-data-center-40628102/>
16. **ktar.com** <https://ktar.com/arizona-business/valley-data-center-scrutiny/5812647/>
17. **cru.ie** https://cru.ie/live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/CRU2025236_Large_Energy_User_connection_policy_decision_paper.pdf
18. **cms.eirgrid.ie** <https://cms.eirgrid.ie/sites/default/files/publications/Data-Centre-Constrained-Area-Overview-May-2026.pdf>
19. **mhc.ie** <https://www.mhc.ie/latest/insights/new-data-centre-connection-rules>
20. **datacenterdynamics.com** <https://www.datacenterdynamics.com/en/news/google-denied-data-center-planning-permission-in-dublin-ireland/>
21. **breakingnews.ie** <https://www.breakingnews.ie/ireland/appeals-lodged-against-amazon-data-centre-plan-for-north-dublin-1541737.html>
22. **pinsentmasons.com** <https://www.pinsentmasons.com/out-law/news/irish-data-centres-power-national-grid-regulator>
23. **raconteur.net** <https://www.raconteur.net/technology/data-centre-protests-on-the-rise>
24. **techpolicy.press** <https://www.techpolicy.press/what-irelands-data-center-crisis-means-for-the-eus-ai-sovereignty-plans/>

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