# BtMData

## Site Dossier

Zaragoza (PLAZA), Spain

41.62800, -0.98700 · Radius 50 km · 24/11/2026

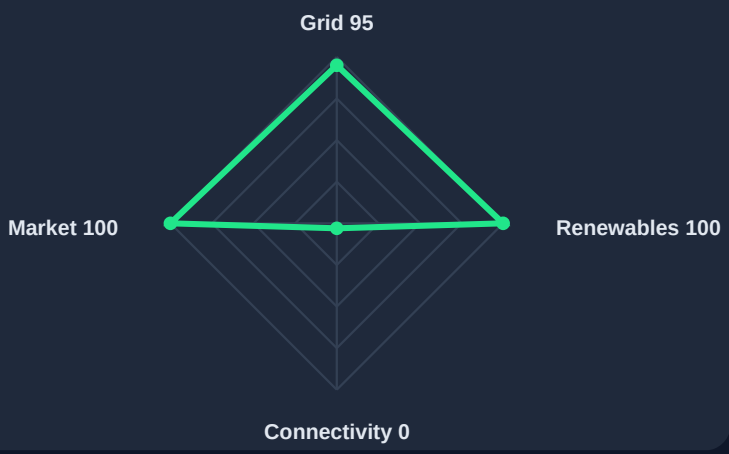
BtMData Site Viability Index

**78**

/ 100

**Strong**

Indicative, from recorded data




| | | |
|---|---|---|
| **55** Substations | **248** HV lines >=110 kV | **400 kV** Max. voltage |
| **4,296.7** Renewable MW | **-** Nearest IX | **22** DCs within 75 km |

## Key findings

Nearest substation of 220 kV or more: 2.5 km (220 kV).

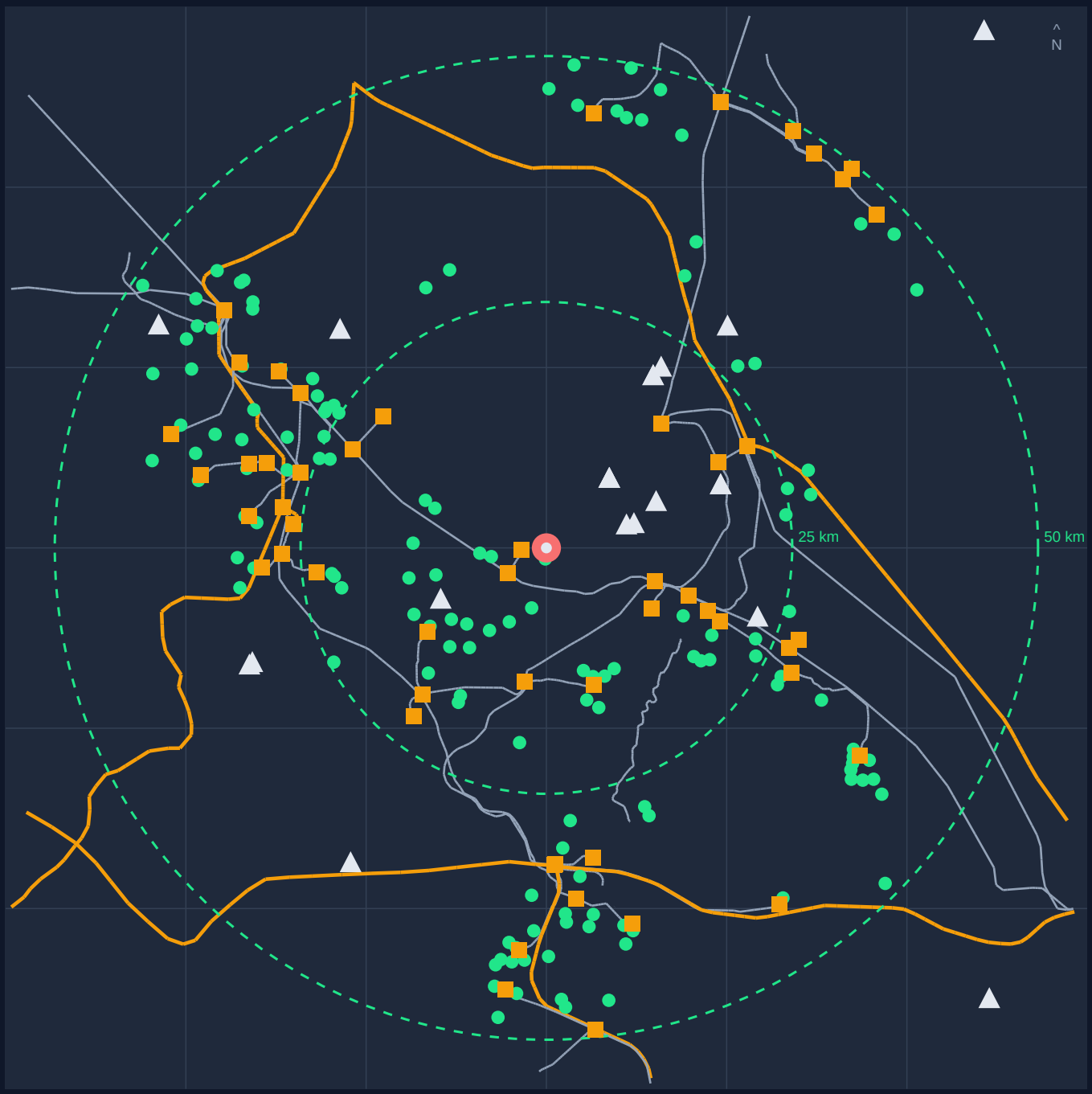
Operator-published capacity: 21 node(s) within 50 km, up to 175 MW available.

No interconnection facility recorded within 100 km.

**Weakest pillar: Connectivity.**

# Site map

Recorded infrastructure around the site. Rings at 25 and 50 km.




- Site
- Renewable plant
- Substation / line >=380 kV
- Data centre
- Line 110-220 kV
- Interconnection (IX)

Schematic projection from OpenStreetMap, operator and PeeringDB records; not a survey.

## Grid: operator-published capacity

| Node | kV | Available MW | km | Source date |
|---|---|---|---|---|
| FERIA DE MUESTRAS 220 (Red Eléctrica (REE)) | 220 | 175 | 0.5 | 2026-10-01 |
| PLAZA 220 (Red Eléctrica (REE)) | 220 | 0 | 0.9 | 2026-10-01 |
| SAGUNTO 220 (Red Eléctrica (REE)) | 220 | 0 | 9 | 2026-10-01 |
| LOS LEONES 220 (Red Eléctrica (REE)) | 220 | 0 | 11.8 | 2026-10-01 |
| CARTUJOS 220 (Red Eléctrica (REE)) | 220 | 0 | 12.7 | 2026-10-01 |
| EL PILAR 220 (Red Eléctrica (REE)) | 220 | 0 | 14.4 | 2026-10-01 |
| VILLANUEVA DE GALLEGO 220 (Red Eléctrica (REE)) | 220 | 0 | 17.2 | 2026-10-01 |
| AVE ZARAGOZA 220 (Red Eléctrica (REE)) | 220 | 0 | 17.8 | 2026-10-01 |
| LOS VIENTOS 220 (Red Eléctrica (REE)) | 220 | 0 | 19.6 | 2026-10-01 |
| ENTRERRIOS 220 (Red Eléctrica (REE)) | 220 | 0 | 21.3 | 2026-10-01 |

## Substations

| Name | Location (lat, lon) | kV | Available MW | km |
|---|---|---|---|---|
| Unnamed | 41.6261, -1.0176 | 220 | not published | 2.5 |
| Unnamed | 41.6046, -1.0339 | 220 | not published | 4.7 |
| Substacion Monte Torrero | 41.5973, -0.8540 | 220 | not published | 11.6 |
| Unnamed | 41.5719, -0.8583 | 220 | not published | 12.4 |
| Unnamed | 41.5052, -1.0138 | 220 | not published | 13.8 |
| Unnamed | 41.5509, -1.1320 | 220 | not published | 14.8 |
| SET La Plana | 41.5018, -0.9295 | 220 | not published | 14.8 |
| Unnamed | 41.5841, -0.8134 | 220 | not published | 15.2 |
| Unnamed | 41.7422, -0.8468 | 220 | not published | 17.2 |
| Unnamed | 41.5703, -0.7893 | 220 | not published | 17.6 |
| Unnamed | 41.5602, -0.7751 | 220 | not published | 19.2 |
| Unnamed | 41.7069, -0.7763 | 220 | not published | 19.6 |

## High-voltage lines

| Operator | kV | km | Status |
|---|---|---|---|
| Red Eléctrica de España | 220 | 2.5 | Recorded |

| Operator | kV | km | Status |
|---|---|---|---|
| Red Eléctrica de España | 220 | 4 | Recorded |
| Red Eléctrica de España | 220 | 9.7 | Recorded |
| Red Eléctrica de España | 220 | 11.5 | Recorded |
| Red Eléctrica de España | 220 | 11.6 | Recorded |
| Red Eléctrica de España | 220 | 11.6 | Recorded |
| Red Eléctrica de España | 220 | 11.6 | Recorded |
| Red Eléctrica de España | 220 | 11.6 | Recorded |
| Red Eléctrica de España | 220 | 11.6 | Recorded |
| Red Eléctrica de España | 220 | 11.6 | Recorded |
| Red Eléctrica de España | 220 | 11.6 | Recorded |

+236 more

## Renewable generation

| Plant | Technology | MW | km |
|---|---|---|---|
| PFV El Palomar | Solar | 12.5 | 1.1 |
| Centrovía III | Solar | 12 | 5.7 |
| Parque Eólico El Campillo (BRIAL) | Wind | 50 | 6.3 |
| Centrovía I | Solar | 12 | 6.8 |
| Parque Eólico El Cabezo | Wind | 49.4 | 8.4 |
| Parque Eólico El Portillo 2 Fase 2 | Wind | 38 | 10.2 |
| Parque Eólico El Portillo 2 Fase 1 | Wind | 47.8 | 11.2 |
| Parque Eólico La Muela Norte | Wind | 29.8 | 11.6 |
| Larral | Solar | 40 | 12 |
| Parque Eólico La Carracha | Wind | 49.5 | 12.1 |
| Parque Eólico La Plana III | Wind | 15 | 12.8 |
| Parque Eólico Plana de la Balsa | Wind | 24 | 13.1 |

## Connectivity

No interconnection facility recorded within 100 km.

## Distance to European internet hubs

| Hub | Straight-line km | Indicative round-trip latency |
|---|---|---|

| Hub | Straight-line km | Indicative round-trip latency |
|---|---|---|
| Madrid | 264 | ~4 ms |
| Marseille | 553 | ~8 ms |
| Paris | 845 | ~13 ms |
| Milano | 923 | ~14 ms |
| Zürich | 989 | ~15 ms |
| London | 1,101 | ~17 ms |
| Frankfurt | 1,202 | ~18 ms |
| Amsterdam | 1,274 | ~19 ms |

Latency estimated from distance with a 1.5x fibre-route factor (~1 ms round trip per 100 km of fibre). Source for facilities: PeeringDB.

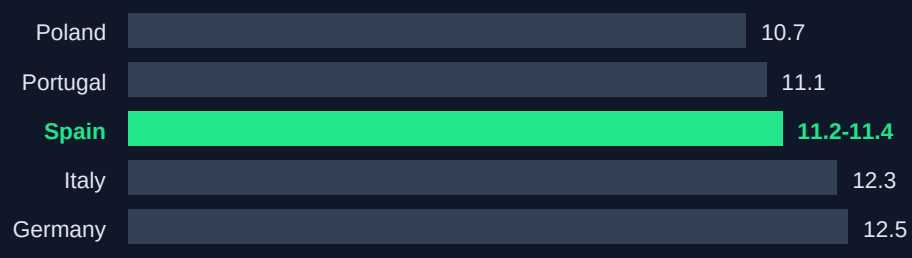
## Data centres within 75 km

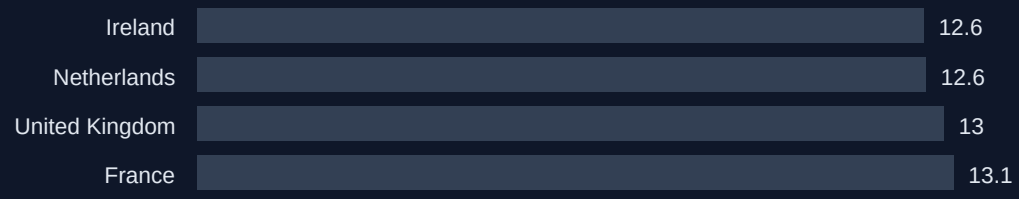
| Name | Operator | Stage | MW | km |
|---|---|---|---|---|
| Oman Investment Fund Zaragoza | Oman Investment Authority | Announced | - | 8.5 |
| AWS Aragón Region (Zaragoza) | Amazon Web Services | Operational | - | 9.2 |
| Grupo Aire Zaragoza | Grupo Aire | Operational | - | 9.5 |
| Microsoft - Zaragoza Puerto Venecia / Distrito Tecnológico Alierta Zaragoza | Microsoft - Zaragoza Puerto Venecia / Distrito Tecnológico Alierta | Announced | 50 | 9.5 |
| Vantage Data Centers Zaragoza Campus | Vantage Data Centers | Announced | - | 9.5 |
| Microsoft - La Muela / Aragón La Muela | Microsoft - La Muela / Aragón | Announced | 50 | 12 |
| Redestel Data Center Zaragoza | Redestel Data Center | Operational | - | 12.1 |
| Microsoft - Villamayor de Gállego / Aragón Villamayor de Gállego | Microsoft - Villamayor de Gállego / Aragón | Announced | 50 | 18.8 |
| Tillion Data Centers ZAZ1 | Tillion Data Centers | Announced | 150 | 18.8 |
| AWS Villanueva de Gállego | Amazon Web Services | Operational | 48.1 | 20.6 |

## Country market context

### Spain · Barcelona · Madrid

Indicative construction CapEx, M USD/MW (Turner & Townsend · DCCCI 2026)






### RD 1032/2026

For centres with access power >=10 MW (including qualifying same-site aggregation): 80% renewable annual coverage and 80% hourly correlation, subject to the decree's scope, transitional provisions and exceptions. Access MW are not IT MW.

### EU 2024/1364 · Energy Efficiency Directive

Data centres with installed IT power demand >=500 kW fall within the EU energy and sustainability reporting framework. National implementation and permits also apply.

## Water and climate risk

| Indicator | Country value |
|---|---|
| Baseline water stress | High (40-80%) |
| Drought risk | Medium (0.4-0.6) |
| Riverine flood risk | Low (0 to 2 in 1,000) |
| Cooling degree days (2025) | 386.9 |

National averages; local conditions at the site can differ. Higher cooling degree days mean more cooling energy.

WRI Aqueduct 4.0 (2023-07-05) · Eurostat nrg_chdd_a (CDD 2025) + WRI Aqueduct 4.0 riverine flood

## Decision brief

# Advance to grid-access request

## Strengths to build on

Grid: 95/100 · Renewables: 100/100 · Market: 100/100

## Critical evidence to obtain

| Decision | Evidence status / action |
|---|---|
| Grid access | 21 published nodes: obtain a site-specific access response. |
| Land and permits | Parcel, ownership and compatible use pending local records. |
| Energy economics | Supplier/PPA and on-site generation quotes pending. |
| Fibre resilience | Obtain two physically independent carrier routes. |

## Compare nearby search areas

Existing data-centre clusters used as reference points for a location search; no plot availability is recorded.

Selected site index: 78/100 (50 km infrastructure radius).

| Area | From site km | 220 kV+ km | IX km | Renewable MW | SVI /100 |
|---|---|---|---|---|---|
| Selected site | 0 | 2.5 | - | 4,296.7 | 78 |
| Villamayor de Gállego | 18.8 | 2.4 | - | 3,640.9 | 78 |
| Villanueva de Gállego | 20.6 | 4.9 | - | 3,757.9 | 76 |
| El Burgo de Ebro | 22.6 | 3.9 | - | 3,935.4 | 77 |

All reference areas: infrastructure 50 km, facilities 100 km, data centres 75 km; same national CapEx and risk benchmarks. Distances measured from the recorded cluster point.

## Villamayor de Gállego

41.68575, -0.77403 · From site: 18.8 km

https://observatorioedc.com/datacenter/microsoft-villamayor-de-gallego-aragon/ · Record reviewed: date not recorded

## Villanueva de Gállego

41.78603, -0.85652 · From site: 20.6 km

https://www.elperiodicodearagon.com/economia/2022/11/16/nube-amazon-aragon-comienza-operar-78623975.html · Record reviewed: 2026-10-25

## El Burgo de Ebro

41.56405, -0.72885 · From site: 22.6 km

https://www.elperiodicodearagon.com/economia/2022/11/16/nube-amazon-aragon-comienza-operar-78623975.html · Record reviewed: 2026-10-25

## Energy design options

| Architecture | What it needs | Cost drivers |
|---|---|---|
| Grid + PPA | Access agreement, hourly supply profile and renewable contract. | Energy, network charges, balancing and connection works. |
| On-site generation + storage | Land, fuel/resource, permits, dispatch and redundancy. | Equipment, finance, fuel, O&M and replacements. |
| Bridge to Power + future grid | Interim supply contract, permits and grid transition plan. | Bridge tariff, minimum term and transition investment. |

## Annual energy budget sensitivity

Illustrative sizing, not the requested project: 10 MW IT, PUE 1.20, constant load for 8,760 hours = 12 MW facility / 105,120 MWh per year.

| Assumed energy EUR/MWh | Annual energy EUR million |
|---|---|
| 60 | 6.3 |
| 100 | 10.5 |
| 150 | 15.8 |
| 250 | 26.3 |

Sensitivity prices are assumptions, not country tariffs or supplier quotes. Energy-only budget: excludes network charges, tax, capex and financing; hourly matching requires generation and consumption series.

Recorded country wholesale reference: 73.3 EUR/MWh · 2025-10  2026-09 · Ember - European wholesale electricity prices (ENTSO-E). Not a delivered electricity price.

## Land and planning evidence

Official cadastre at the exact point · Dirección General del Catastro (Sede Electrónica)

| Evidence | Authority / source | Status |
|---|---|---|
| Parcel reference and area | Official cadastre | 50900A10500001 · 52,485 m2 · Polígono 105 Parcela 1 ACAMPO GASCON. ZARAGOZA (ZARAGOZA) |
| Ownership, title and easements | Land registry and owner documents | Not recorded |
| Zoning / recorded use | Cadastre / municipal planning | Agrario |
| Local flood and water constraints | Water authority / local hazard maps | Not recorded |
| Land price and transaction evidence | Owner offer / recorded transactions | Not recorded |

https://www1.sedecatastro.gob.es/CYCBienInmueble/OVCListaBienes.aspx?rc1=50900A1&rc2=0500001

## Development route and decision gates

| Gate | Evidence to proceed | Who confirms |
|---|---|---|
| 1 Identify | Confirm parcel and alternative areas | Owner / municipality |
| 2 Transform | Compatible use, environmental path and layout | Planning authority / design team |
| 3 Energise | Operator response, supply quotes, bridge feasibility | Grid operator / suppliers |
| 4 Manage | Metering, PPA matching and GridPass evidence | DC operator / GridPass |

Site-specific durations remain pending operator and permitting responses; national benchmarks above retain their original scope.

**Continue with BtMData Developments: btmdata.com/portfolio/brownfield**

## BtMData preliminary opinion

# Advance to grid-access request

### Why

· High-voltage substation close to the site.

· Significant recorded renewable generation in the radius (PPA potential).

· Limited connectivity: interconnection points are far.

· Existing data-centre cluster nearby.

· High national water stress: favour dry or closed-loop cooling.

### What to check next

1. Check the latest published capacity of the nearest operator nodes.
2. Confirm land zoning and plot availability with the municipality.
3. Assess a bridge-to-power solution if grid connection exceeds 24 months.
4. Obtain dark-fibre routes and quotes from carriers.

## How the index is built

Grid 40%: distance to the nearest substation of 220 kV or more, capped at 30 when every published operator node nearby reports 0 MW. Renewables 20%: recorded MW in the radius. Connectivity 20%: distance to the nearest PeeringDB facility. Market 20%: recorded data centres within 75 km.

## Scope and next step

Straight-line distances from OpenStreetMap and public registers; coverage is partial. Proximity and recorded MW do not confirm available grid capacity, operating status or a PPA.

**Request an expert assessment: btmdata.com/site-advisor · frank@btmdata.com**

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