IKEATLAS · KNOWLEDGE, MAPPED.

WindAtlas
Global

User Guide · Version 1.0

The interactive global database of wind energy projects — onshore, offshore, and floating — spanning 55+ countries and 1,347 GW of global capacity.

507	1,347 GW	55+	83 GW
Wind Farms	Global Capacity	Countries	Offshore

April 2026
windatlas-global.vercel.app
IkeAtlas Platform
ikeatlas.com

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SECTION 1

Getting Started

WindAtlas Global is an interactive map of wind energy projects around the world. It covers onshore wind farms, offshore wind farms, and floating offshore wind — spanning 507 facilities across 55+ countries representing 1,347 GW of global installed capacity.

Accessing the App

URL	windatlas-global.vercel.app
Platform	IkeAtlas — ikeatlas.com
Browser	Chrome, Firefox, Safari, Edge (latest versions)
Mobile	Fully responsive — works on tablet and mobile

First Look — Interface Layout

When you open WindAtlas, you see a dark 3D globe rendered with MapLibre GL. The interface has three main zones:

- Header bar (top) — App title, filter controls, toolbar buttons (News, Watchlist, Heatmap, Wind Flow), global stats, and theme toggle
- Map (center) — Interactive globe with wind farm markers color-coded by type
- Detail panel (right) — Slides in when you click a wind farm, showing full project data

QUICK START

> Open the app → the globe loads centered on Europe. Scroll to zoom, drag to pan. Click any marker to open the detail panel for that farm. Use the filter bar to narrow by country, type, or capacity.

SECTION 2

Navigating the Map

WindAtlas uses a 3D globe rendering engine. Navigation is intuitive and works on both desktop and touch devices.

Mouse & Trackpad Controls

Scroll wheel / pinch	Zoom in and out
Click + drag	Pan and rotate the globe
Right-click + drag	Tilt the globe perspective
Double-click	Zoom to that location
Click a marker	Open the detail panel for that wind farm

Touch Controls (Mobile/Tablet)

One finger drag	Pan the map
Two finger pinch	Zoom in / out
Two finger rotate	Rotate the globe
Tap a marker	Open detail panel

Zoom Levels

At low zoom (world view), markers are clustered by region. As you zoom in, individual farm markers appear with their exact locations. At high zoom levels you can distinguish the layout of offshore wind farms relative to the coastline.

NAVIGATION TIP

> Double-click any ocean or land area to zoom directly to that region. Use scroll + drag together to smoothly navigate to a specific country.

SECTION 3

Wind Farm Data

WindAtlas contains 507 wind farms sourced from publicly available project data, national energy registries, and IEA wind statistics. Each farm has been verified for location accuracy and capacity figures.

Data Coverage

Total wind farms	507 globally
Global capacity	1,347 GW installed
Offshore capacity	83 GW
Wind added in 2025	169 GW
Countries covered	55+ active wind markets
Annual generation	~3,000 TWh
Global workforce	1.5 million+ jobs
Share of electricity	~11% of global supply

Data Fields per Farm

Each wind farm record includes the following data fields:

Field	Description
Name	Official project name
Country	Host country
Coordinates	Latitude / longitude (decimal degrees)
Capacity	Installed capacity in MW
Turbines	Number of turbine units

Type	Onshore / Offshore / Floating
Year	Year commissioned or expected
Status	Operational / Under Construction / Planned
Owner	Asset owner or operator
Developer	Project developer
Cost (USD)	Estimated project cost where available
Investment Grade	Yes / No — bankability indicator

DATA UPDATES

Wind farm data is refreshed monthly. New farms commissioned or announced globally are added automatically via the WindAtlas monthly cron job. Status changes (Under Construction → Operational) are also updated.

SECTION 4

Farm Types & Status

Farm Types

Markers are color-coded by wind farm type:

Type	Marker Color	Description
Onshore	Green (#4ade80)	Land-based wind farms
Offshore	Sky Blue (#38bdf8)	Fixed-foundation offshore farms
Floating	Purple (#a78bfa)	Floating offshore — deepwater technology

Project Status

Each farm has a status indicator visible in the detail panel:

Status	Color	Meaning
Operational	Solid green dot	Grid-connected and generating power
Under Construction	Amber dot	Currently being built
Planned / Permitted	Blue dot	Approved but construction not started
Decommissioned	Gray dot	No longer operational

Offshore Wind Ring Indicator

Offshore and floating wind farms display a distinctive sky-blue ring halo around their marker (#38bdf8). This makes them visually distinct from onshore farms at a glance, especially when zoomed out to a regional view.

FLOATING OFFSHORE WIND

Floating offshore wind is an emerging technology allowing turbines in water depths exceeding 60m — opening vast new ocean areas. Key projects include Hywind Scotland (30 MW), Windfloat Atlantic (25 MW), and Kincardine (50 MW). WindAtlas tracks all major floating projects globally.

SECTION 5

Detail Panel

Clicking any wind farm marker opens the Detail Panel — a full data card that slides in from the right side of the screen.

Panel Contents

Type badge	Onshore / Offshore / Floating — shown at the top of the panel
Country flag	Host country with name
Farm name	Official project name in large heading
Status indicator	Colored dot + status text + commission year
Capacity card	Installed capacity in MW
Turbines card	Number of turbine units
Coordinates card	Lat/long in decimal degrees
Est. Annual Output	Estimated TWh/year (calculated where data is available)
Homes Powered	Equivalent household count
CO_2 Avoided/yr	Estimated annual carbon displacement
Developer & Financials	Owner, developer, cost, investment grade
Capacity bar	Visual comparison against world's largest farm (7,965 MW)
Project Details table	Hub height, rotor diameter, water depth (offshore), grid connection

Panel Actions

- Add to Watchlist — Star the farm for quick access later (star button)
- Share — Copy a direct link to this farm's detail view
- Compare — Add to the comparison tool (up to 3 farms)

- Download CSV — Export this farm's full data record
- Download JSON — Machine-readable export
- Download PDF — Printable one-page farm profile

PRO TIP

Use the Compare button on 2–3 farms to open the side-by-side comparison modal. This is especially useful when evaluating projects in the same region or technology class.

SECTION 6

Filtering & Search

WindAtlas has a filter bar and search function to help you quickly find specific farms or subsets of the global dataset.

Filter Controls

Country filter	Dropdown — select a specific country to show only farms in that country
Type filter	Toggle: All / Onshore / Offshore / Floating
Status filter	Toggle: All / Operational / Under Construction / Planned
Capacity filter	Slider — set minimum MW threshold (e.g., show only 500+ MW farms)

Search Bar

The search bar (top center of the header) searches across all wind farm fields in real time as you type. It matches against:

- Farm name
- Country
- Owner / developer name
- Status
- Farm type

Results appear as a dropdown. Clicking a result flies the map to that farm and opens its detail panel automatically.

SEARCH TIP

> Try searching for a developer name (e.g. "Ørsted" or "Vestas") to see all farms associated with that company globally. You can also search by country code or partial farm name.

SECTION 7

Watchlist

The Watchlist lets you bookmark wind farms for quick access across sessions. Your watchlist is saved locally in your browser.

Adding to Watchlist

- Open any wind farm's detail panel
- Click the Add to Watchlist (star) button
- The button changes to show the farm is saved

Accessing Your Watchlist

- Click the Watchlist (star) button in the header toolbar
- A panel slides in showing all saved farms
- Click any farm in the list to fly to it and open its detail panel
- Click the × next to any farm to remove it

WATCHLIST USE CASE

> The Watchlist is ideal for tracking a shortlist of projects — for example, all wind farms in a specific deal pipeline, or the top offshore projects in a target market. Save them once and pull them up instantly on every visit.

SECTION 8

Comparing Farms

WindAtlas includes a side-by-side comparison tool for up to 3 wind farms. This is useful for benchmarking capacity, technology, cost, and status across projects.

How to Compare

- Open the first farm's detail panel → click Compare
- Open a second farm → click Compare again
- Optionally open a third farm → click Compare
- The comparison modal opens automatically when 2+ farms are selected

Comparison Modal

The comparison modal shows all selected farms in columns with matching rows for every data field — making it easy to see differences in capacity, turbine count, cost, developer, and status at a glance.

COMPARISON TIP

To compare the world's largest offshore farms, search for "Hornsea", add to compare, then search "Dogger Bank" and add, then "Vineyard Wind". The side-by-side view immediately shows the scale differences.

SECTION 9

Downloading Data

WindAtlas supports multiple export formats for individual wind farm records. All downloads are available from the detail panel.

Format	Button	Contents
CSV	Download CSV	All data fields for the selected farm as a spreadsheet-compatible file
JSON	Download JSON	Full structured data record — useful for developers and data pipelines
TXT	Download TXT	Plain text summary — name, country, capacity, status, coordinates
PDF	Download PDF	Printable one-page farm profile with key stats and map coordinates
Full Export	Download All	ZIP file containing CSV + JSON + TXT for the selected farm

DATA USE

CSV exports are formatted for direct import into Excel, Google Sheets, or any data analysis tool. JSON exports include all fields in a clean structure suitable for pipeline ingestion or API integration.

SECTION 10

Heatmap & Wind Flow

Wind Density Heatmap

The Heatmap overlay (Heatmap button in the toolbar) renders a wind density heat layer across the globe — showing where wind farm concentration is highest. Hot colors (red/orange) indicate regions with the most installed capacity; cool colors (blue) indicate sparse coverage.

- Useful for identifying under-developed wind markets
- Toggle off to return to the standard marker view
- Works at all zoom levels

Wind Flow Animation

The Wind Flow overlay (Wind Flow button) adds an animated particle layer showing simulated global wind patterns. Particles flow in the direction of prevailing winds, giving an intuitive sense of the resource underlying each region.

- Purely illustrative — based on general prevailing wind patterns
- Can be displayed alongside the heatmap or farm markers
- Toggle off at any time via the toolbar button

INSIGHT

Enable both the Wind Flow animation and the farm markers together to visually confirm that offshore wind clusters align with the strongest prevailing wind corridors — particularly the North Sea, Southern Ocean, and US Great Plains.

SECTION 11

News Panel

Click the News button in the toolbar to open the Wind Energy News panel. It contains curated headlines covering the global wind industry.

News Categories

Use the category chips at the top of the panel to filter by topic:

- All — Full feed of all headlines
- Project — New wind farm announcements and completions
- Policy — Government targets, regulations, grid codes
- Technology — Turbine advances, floating wind, grid integration
- Investment — Financing, M&A, equity deals, project bonds
- Market — Capacity additions, auction results, pricing trends

NEWS TIP

The News panel is a curated static feed — articles are selected for relevance to global wind development. Filter to 'Investment' for deal flow context, or 'Policy' for regulatory developments affecting project pipelines.

SECTION 12

Settings & Display

Dark / Light Mode

Click the sun/moon theme toggle button (far right of header) to switch between dark and light map modes. Dark mode uses a deep navy ocean for maximum contrast with wind farm markers. Light mode uses a standard cartographic style.

DC Transmission Links

WindAtlas includes an optional overlay of high-voltage DC interconnection links — the long-distance transmission cables that export offshore wind power to onshore grids. These are especially prominent in the North Sea and between UK/Europe.

Header Stats Bar

The header displays two live stats: total wind farms loaded (507) and global installed capacity (1,347 GW). These update automatically when filters are applied — showing counts for the currently visible subset of farms.

DISPLAY TIP

> On smaller screens, some toolbar buttons collapse to icon-only mode. Tap the button to activate — the label is visible in the tooltip on hover.

SECTION 13

Keyboard Shortcuts & Tips

Keyboard Shortcuts

Esc	Close the detail panel or any open modal
/ or Ctrl+K	Focus the search bar
Arrow keys	Pan the map in small increments
+ / −	Zoom in / out
H	Toggle Heatmap on/off
W	Toggle Wind Flow on/off
N	Open/close News panel
T	Toggle dark/light theme

Power User Tips

Use search to jump

Type a developer name, country, or capacity value to instantly fly to matching farms

Zoom for detail

Zoom into a specific country to see individual farm positions relative to coastlines and grid infrastructure

Heatmap + markers

Enable the heatmap while keeping markers on to see both density and individual project locations

Watchlist as portfolio

Use the Watchlist to track farms relevant to a specific deal, region, or technology type

Compare before download

Use the Compare modal to decide which project to export — saves time versus downloading each individually

Wind Flow context

Enable Wind Flow to visually validate why a farm is sited where it is — prevailing wind direction is immediately apparent

About WindAtlas Global

WindAtlas Global is part of the IkeAtlas platform — a suite of geo-intelligence applications mapping energy, infrastructure, and supply chain data worldwide. The name IkeAtlas comes from the Hawaiian word 'Ike,' meaning knowledge, to see, and to experience — reflecting the platform's mission of making complex global data visually accessible and actionable.

WindAtlas data is updated monthly, drawing on public project registries, national energy statistics, and IEA wind capacity reports. Investment grade indicators and cost data are sourced from publicly disclosed project filings.

WindAtlas	windatlas-global.vercel.app
IkeAtlas Platform	ikeatlas.com
Version	1.0 — April 2026
Data Refresh	Monthly (automated)