

Global Wind Atlas calibration to Elexon power

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2025-10-29

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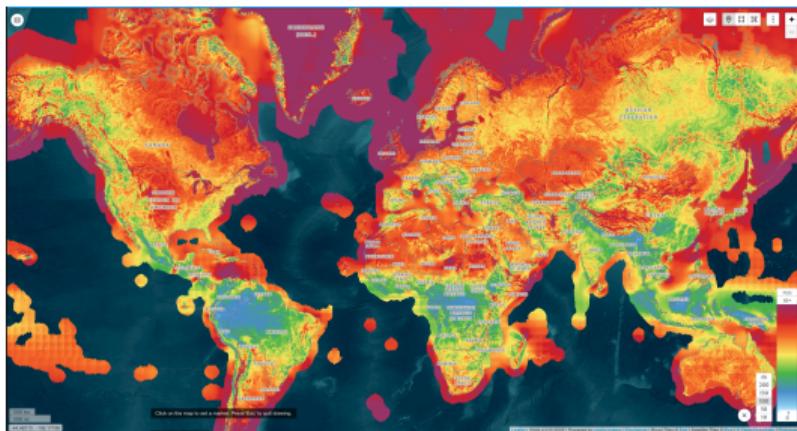
4 Power conversion

Calibration to power

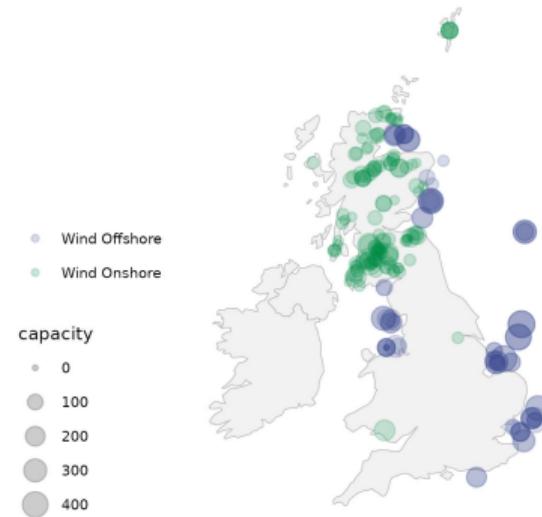
Global Wind Atlas (GWA) vs Elexon generation

Calibrate a GWA driven estimate to actual observed output

Global Wind Atlas



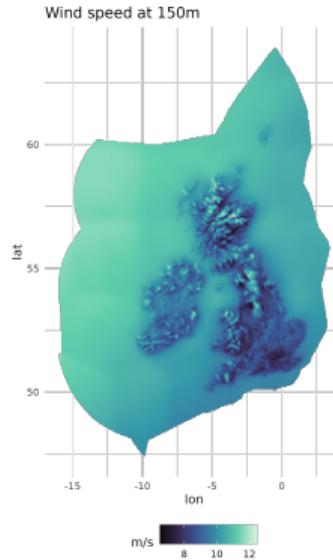
Elexon wind farms map (2025)



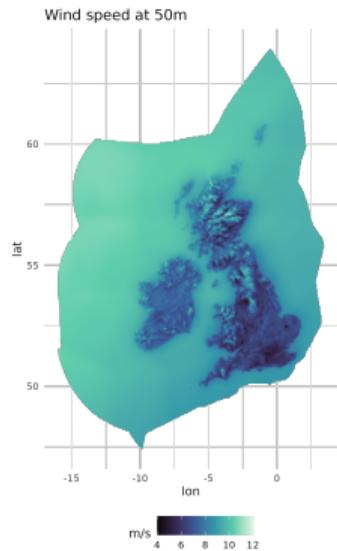
Global Wind Atlas

Characteristics

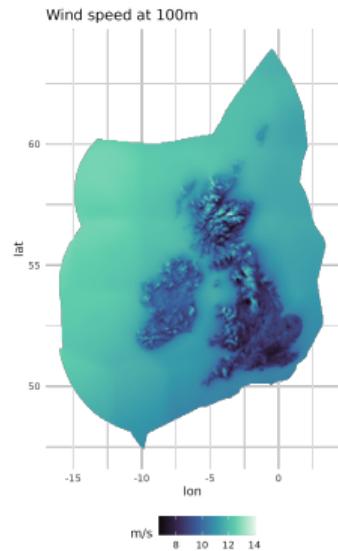
- Using DTU's Wind WAsP methodology
- Downscaled from ERA 5 to a 250m grid
- Models land and 200km from shorelines
- Long term average wind speed
 - Heights: 10m, 50m, 100m, 150m, 200m
- Scale and shape parameters Weibull



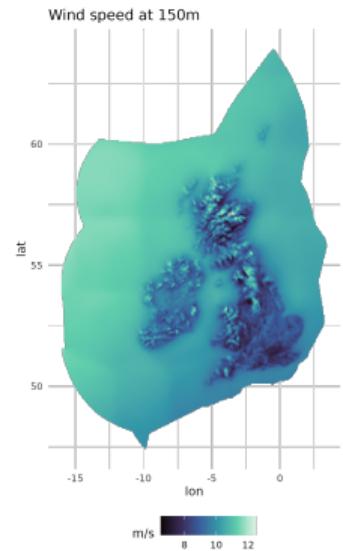
Mean wind speed



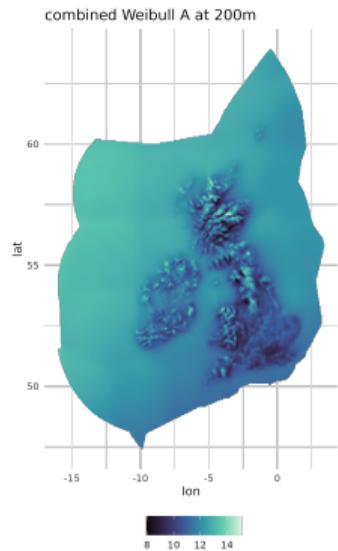
50m



100m

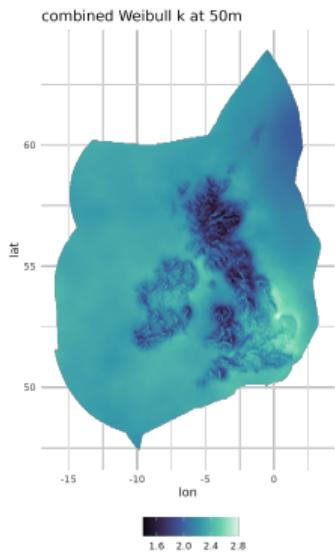


150m

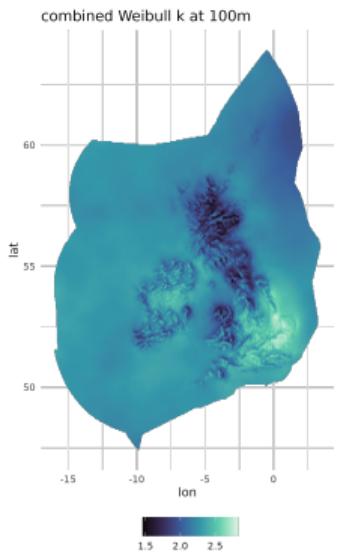


200m

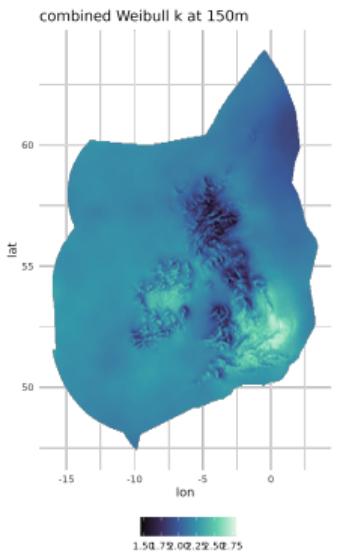
Weibull shape parameter k



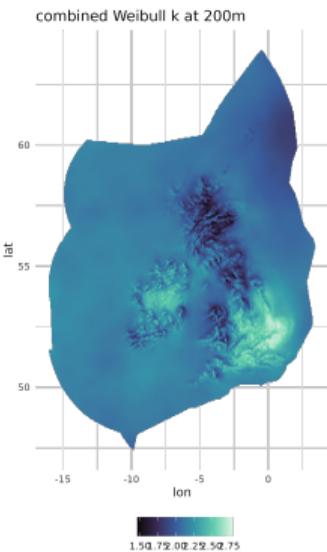
50m



100m

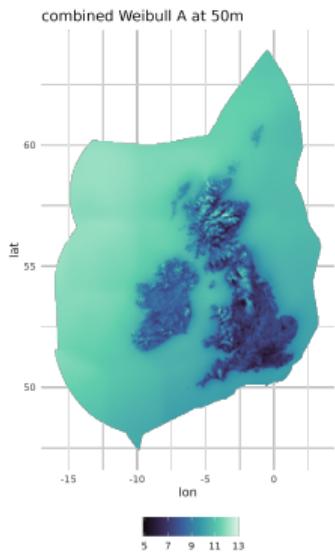


150m

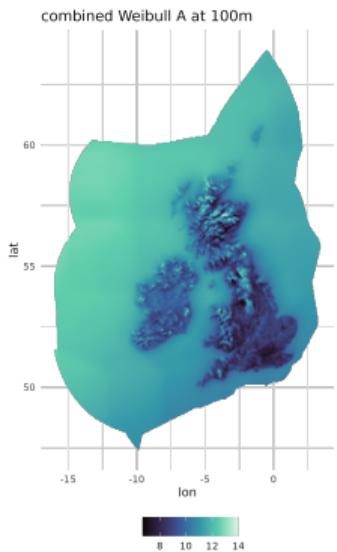


200m

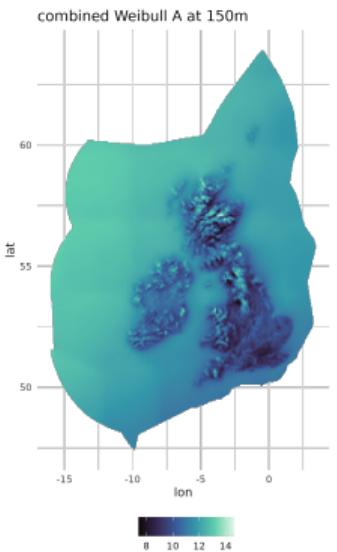
Weibull shape parameter A



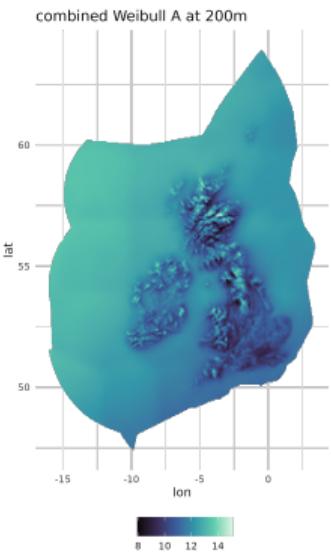
50m



100m



150m



200m

Elexon data

BMU data

Renewable energy planning database

Turbine data available

Power conversion

Generic power curves

Power conversion estimates vs Elexon