

# Distributed Onshore Wind Portfolio

Invest Net Zero Cheshire

IKIGAI



CATAPULT  
Energy Systems



**Project reference number:** 006

**Project name:** Distributed Onshore Wind Portfolio

**Project type:** A community and private investment opportunity for utility scale onshore wind generation totalling c.70MW - c.192MW, dependant on whether a 500m or 700m buffer to the nearest residential building is taken, across 5 sites within the Cheshire West and Cheshire borough. Individual projects ranging between 10MW – 53MW. Power to be exported either by private wire to large, local energy consumers or to the grid via an export connection.

**Site selection:** Selection criteria included: 500m and 700m buffer from residential dwellings and settlements; 1,000m buffer from Areas of Outstanding Natural Beauty, National Parks, World Heritage Sites; 300m buffer from Conservation Areas, Schedule Ancient Monuments, Historic Parks Gardens (full criteria available on request).

**Project maturity:** Early-stage development (pre-planning but with strong local authority support)

**Key strategic drivers:** Community investment initiative, affordable, sustainable electricity for local demand and improved electrical resilience.

**Locations:** 5 sites covering up to 550 hectares, located between Connah's Quay and Northwich

**Wind Speeds:** Measured at a height of 100m and ranging between c.7.4 – c.8.4 m/s

**Proposed phases:** To be considered in line with forecast stakeholder demand, appetite for private wire or sleeved corporate Power Purchase Agreements ("PPA"). All sites require planning consent from the local authority, an environmental impact assessment, grid connection agreements if not private wire and technical due diligence. Phasing to be considered further with prospective investors.

**Total est. carbon savings p.a.** c.37,400 – c.102,000 tonnes CO<sub>2</sub> / year

**Est. project costs:**

- Capital Investment cost: c.£77 million – c.£211 million
- Grid Connection: SP Energy Networks are supportive of the projects and have provided distances to the closest connection point however further feasibility is required to provide firm connection costs

**Technology, construction and operation:**

- Wind Turbine Generators: Focus on proven technologies with wildlife mitigation ability, warranted capacity, creditworthiness of the supplier and futureproofing. Local windfarm used as proxy when sizing.
- Construction: EPCM/EPC, to be considered further with prospective investors.
- O&M: Only highly experienced operators with strong sustainability credentials will be considered. A preference for local contractors.

**Revenue streams:** Electricity sales revenue under multiple long-term PPA either via private wire or sleeved corporate PPA

**Initial stakeholders:** This is an Invest Net Zero Cheshire initiative based on land availability and non-renewable electricity demand of project stakeholders.

**Professional advisors to date:** Ikigai (bankability); EA Technology (electrical technical); Energy Systems Catapult (Whole systems modelling); Dulas (site identification)

**Opportunity:** Either on a whole project or piecemeal basis Seeking community investment, co-development, technology, construction, and operation partners and renewable energy offtakers

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