

# Fulcrum Sustainable Aviation Fuel and Solar

Invest Net Zero Cheshire

IKIGAI



CATAPULT  
Energy Systems



**Project reference number:** 028

**Project type:** Fulcrum BioEnergy Limited's new bio-refinery facility in Ellesmere Port, their first project in the UK, will convert non-recyclable household waste into sustainable aviation fuel (“SAF”) for use by airlines operating at UK airports. As part of delivering their NetZero ambitions, Fulcrum are considering a private wire power solution by connecting to nearby solar and wind plants being developed as part of Invest Net Zero Cheshire. See also [Solar PV Portfolio](#).

**Location:** The site of the Essar Oil (UK) Limited refinery at Stanlow, Ellesmere Port.

**Project maturity:** Early stage development phase, i.e. pre-planning (in respect of both the SAF plant and potential private wire renewable generation).

**Key strategic drivers:** Fulcrum’s innovative and patented waste-to-fuel process will help reduce aviation industry carbon impact by supplying low-carbon, drop in transportation fuel, as well as bringing high quality, advanced manufacturing jobs and investment to the Cheshire region.

**Proposed phases:** Construction, subject to planning permission and financing, is expected to begin in late 2023 and will take approximately 18-24 months to complete.

**Total estimated carbon savings p.a.**

- SAF: At least 65% saving in CO<sub>2</sub> when compared to fuels produced from conventional fossil crude.
- Carbon savings using local renewable power generation (compared with grid connection): approximately 5,250 tonnes CO<sub>2</sub> / year.

**Est. project costs:**

- SAF facility: circa £600 million
- Private wire: circa £3.9 million, assuming a cable route to the closet proposed solar PV array (cost to be borne by/shared with solar PV developer)

**Jobs:** 800 direct and indirect jobs during the design, build and commissioning process and over 100 permanent jobs during its operation.

**Feedstock:** Refuse Derived Fuel.

**Technology, construction and operation:**

- Technology: Fulcrum proprietary gasification and Fischer-Tropsch processes technology.
- Construction: Contractor subject to procurement.
- O&M: The facility will be owned and operated by Fulcrum and other project partners.

**Professional advisors to date (with respect to renewable energy private wire solution):** Ikigai (bankability); EA Technology (electrical technical); Energy Systems Catapult (Whole systems modelling); Dulas (solar & wind site identification)

**Opportunity:** Seeking investment with respect to the proposed renewable energy projects and private wire solution.

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