Fosse Green Energy

Project Definition & Delivery Plan (Draft)

- **Project Type:** Ground-mounted solar PV generating station with co-located battery energy storage (BESS)
- **Capacity & Location:** 50 MW+ export capacity located in Lincolnshire, UK, on agricultural land parcels
- **Purpose:** Provide low-cost, low-carbon electricity and enhance grid flexibility via BESS
- **Current Status:** Pre-application phase under Development Consent Order (DCO) planning route
- **Ownership Model:** Special purpose vehicle (SPV) with UK-based development and EPC partners

Project Snapshot

Fosse Green Energy Overview

- **Technology Type:** Ground-mounted solar PV system with integrated battery energy storage system (BESS)
- **Project Scale:** Over 50 MW export capacity; final BESS duration to be defined during detailed design
- **Site Location:** Situated in rural Lincolnshire, UK across agricultural land parcels
- **Purpose:** Deliver low-carbon, cost-effective electricity and provide grid flexibility
- **Project Status:** Pre-application stage under the DCO planning route

Planning & Consenting Pathway

NSIP / DCO Route Overview

- **DCO Route Requirement:** Project exceeds 50 MW threshold, thus requires Development Consent Order (DCO) process
- **Consultation Phases:** Non-statutory (Sept–Oct 2023) and statutory (Oct–Dec 2024) consultations completed
- **Application Target:** DCO application planned for submission in 2025
- **Post-Submission Milestones:** Includes acceptance (~28 days), pre-examination (2–3 months), and examination (up to 6 months)
- **Final Decision & Review:** Secretary of State decision within ~3–6 months; followed by 6-week judicial review window

Technical Concept

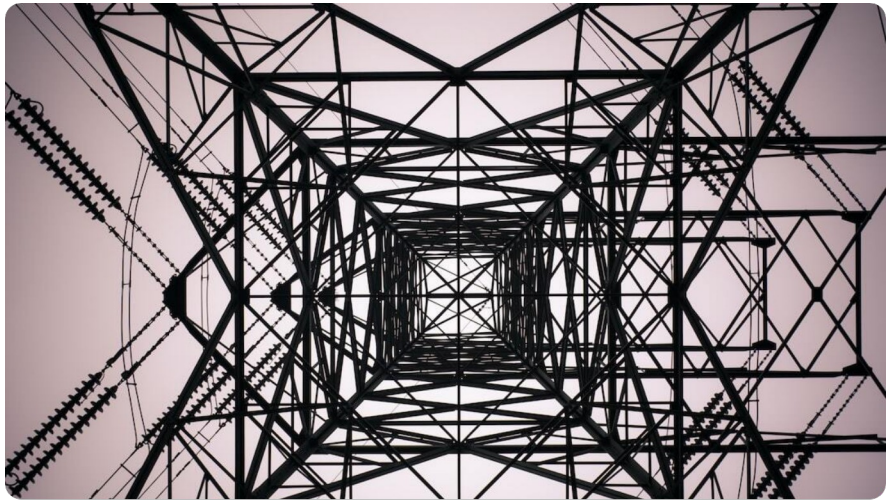
Indicative Design for PV + BESS System

- **Solar PV Structure:** Single-axis or fixed-tilt racking, selected via LCoE analysis and landscape considerations
- **Inverter Configuration:** Central or string inverters, determined by supply chain and operational efficiencies
- **Private Network:** On-site 33–66 kV infrastructure with substation and step-up transformer for grid export
- **Battery Storage System:** Containerised lithium-ion BESS (2–4 hr duration) with peak shaving and output firming capabilities
- **Control & Cybersecurity:** SCADA-enabled remote monitoring; grid-compliant controls and cyber-secured protection protocols

Grid Strategy

High-Level Connection Approach

- **Connection Point:** To be confirmed with DNO or Transmission Operator, aligning with system design
- **Export/Import Design:** ≥50 MW export; BESS import sized to match operational revenue stack
- **Key Engineering Tasks:** Includes connection offer acceptance, detailed electrical design, and protection studies
- **Outage & Grid Planning:** Outage management and sequencing to be developed with network operator



Land, Access & Construction Logistics

Site Control, Build Phases & Transport Strategy

Land Agreements
Option/lease agreements secured for array and BESS compound parcels

Site Access
Utilizes existing highways where possible; access managed via Construction Traffic Management Plan (CTMP)

Indicative Build Sequence
Phases: enabling works → cabling → civils → racking/modules → completion → commissioning

Construction Timeline
Estimated 18–24 months; sequencing aligned with environmental and logistical constraints

Environment & Community

Design, Biodiversity & Engagement Commitments

- **Design Principles:** Layout avoids sensitive habitats, maintains PRoW setbacks, incorporates screening for glare and views
- **Biodiversity Strategy:** Target ≥10% Biodiversity Net Gain via habitat creation and long-term management
- **Water & Drainage:** Employ sustainable drainage systems (SuDS), runoff controls, and pollution prevention
- **Community Benefits:** Includes education outreach, local supply chain inclusion, and dedicated grant fund
- **Consultation Outcomes:** Two consultation rounds (2023, 2024) completed; feedback shaped layout and mitigation

Programme & Milestones

Illustrative Timeline: 2023–2030

- **2023–2024:** Non-statutory and statutory consultations completed
- **2025:** Target for DCO application submission
- **2026–2027:** DCO process: acceptance, examination, Secretary of State decision
- **2027–2028:** Financial close, detailed engineering, procurement
- **2028–2030:** Construction and phased commissioning of PV and BESS systems

Commercial & Revenue Framework

Cost Structure, Revenue Streams, and Operating Strategy

Revenue Stack
Combines wholesale market capture, balancing services, capacity market, CfD optionality

CAPEX Focus
Cost optimization across modules, inverters, transformers, and BESS containers

Civil & Grid Costs
Emphasis on civil works efficiency and reducing grid interconnection expenses

OPEX Structure
Planned for vegetation management, routine maintenance, warranties, and asset guarantees

Risk Register

Top 10 Project Risks and Mitigations

- **DCO Delays:** Mitigated via strong consultation record, early SoCGs, and issue-resolution tracking
- **Grid Timeline/Cost:** Early engagement with network operator; evaluate phased energisation scenarios
- **Environmental Risks:** Targeted ecological surveys and avoidance of high-value habitats
- **Community Opposition:** Proactive communication, visual mitigation, and benefit-sharing programs
- **Supply Chain Volatility:** Framework supply agreements, multiple sourcing strategies, and schedule buffers
- **BESS Technology Risk:** Use of proven chemistries, safety design, and hazard analysis protocols
- **Policy & Market Shifts:** Scenario planning and revenue model flexibility (incl. CfD optionality)
- **Construction Logistics:** Managed via CTMP, seasonal planning, and local contractor participation
- **Archaeology & Heritage:** Desk studies, trial trenching, and watching briefs during construction
- **Weather/Ground Risk:** Geotechnical surveys and weather-resilient construction sequencing

KPIs & Success Metrics

Performance, Environmental, and Safety Targets

- **DCO Success:** Secure Development Consent Order with minimal redesign requirements
- **Grid Timeline:** Achieve grid connection within ±3 months of baseline schedule
- **System Availability:** ≥98% availability for PV and ≥97% for BESS in first operational year
- **Biodiversity Gain:** Deliver and verify at least 10% Biodiversity Net Gain (BNG)
- **Local Economic Impact:** Track % of construction spend retained in the regional economy
- **Health & Safety:** Maintain zero Lost Time Incidents (LTI) during build and operations

Next 90-Day Priorities

Tasks for Pre-Submission & Delivery Readiness

- **DCO Submission Pack:** Finalize application documents, Environmental Statement, and consultation report
- **Grid Progression:** Advance protection studies and secure wayleaves/easements
- **Land & Access Strategy:** Lock in final land agreements and confirm construction access plan
- **Reference Design Freeze:** Set PV technology, BESS duration, and substation layout for procurement
- **Stakeholder Plan:** Update engagement plan for pre-examination communications

Summary & Call to Action

Strategic Vision, Readiness, and Delivery Path

- **Project Vision:** Deliver clean, flexible, and resilient solar energy for the UK grid
- **Planning Momentum:** DCO consultations complete; submission package near finalisation
- **Technical Readiness:** Design, grid strategy, and construction planning well-advanced
- **Execution Priorities:** Land agreements, procurement strategy, and stakeholder planning underway
- **Engagement Needed:** Continued collaboration with regulators, suppliers, and community partners