

Climate Change – Making Solar Work as part of your Climate Emergency Action Plan

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How to Approach a Solar Farm Project – What's the recipe?

- Land availability
- Grid connectivity
- Planning environment
- Location
- Access to Funding
- Financial model
- Delivery team/expertise

Delivery Stages

Stage	Expertise	Source
Preplanning	Survey, yield calcs, grid connection, business case & feasibility report	External consultants APSE Energy EPC Contractor
Planning	Outline design, studies, reports, ecology, EIA, L&VIA, communications	External consultants Internal planners APSE Energy
Mobilisation	Approvals, procurement, legal & finance	Committee Internal procurement Int/ext legal Internal finance APSE Energy
Delivery	EPC, O&M contracts, grid connection agreement, ICP/DNO	Int/ext project management APSE Energy
Commissioning	Testing & sign off, PAC, IAC & FAC	Technical advisor
Operation	O&M Management, asset management & administration & accounts	Internal administration External Aggregator/energy advisor Internal asset management

Financial Model – Project Control

- Vital for viability assessment
- Sensitivity analysis
- Model develops over time – inputs gain surety
- Return threshold testing
- Reporting
- Supports financing/funding (bankability)

Business Case – Key Drivers

- e.g. Location – irradiance levels = yield for Solar
- Grid access/capacity/cost
- Site conditions – geotechnical/access/proximity
- Planning
- Indexation – RPI and power price inflation
- Interest rates

Business Case Financial Viability– Key Components

- Revenue
 - Electricity sales
 - FiT/ROC incentives (not any more!)
 - Capacity Market Payments
- Costs
 - Development costs
 - Capital costs
 - Grid connection
 - Operation & maintenance
 - Insurance
 - Business rates
 - Rent (if applicable)
 - Community benefit (if applicable)

Business Case Financial Model – Variations & Impacts

- Use of power on site
- Private wire/private power sales
- Sleeving
- Energy Storage – intraday, trading & FFR
- EV Charging hubs

Business Case Financial Model - Outputs

- Plant size
- Irradiance – kWhrs/kWp for Solar
- Yield – kWhrs per annum of energy production
- PPA revenue
- Total development costs
- Funding structure and ratios (Equity and Debt)
- Project IRR
- Payback
- NPV
- Cash flow

A Business Case that is Robust and Bankable

- Detailed analysis and sensitivity
- Bankable equipment – Tier 1 - validated
- Degradation for Solar
- Indemnities and warranties
- Contractual risk transfer (EPC and O&M)

Conclusion

- Financial model forms the backbone of the project Business Case
- Referable and reportable
- Benchmark against return threshold targets
- Solar PV projects are a good asset class – low risk revenue creation – if you get it right!
- Grid parity for Solar is here
- So, assess land assets now, what is available

Thank you



- Any questions?