Summary – Written Representation objecting to the East Park Energy Solar Power Complex and Co-located Battery Energy Storage System DCO Application EN010141

This Representation argues that the proposed East Park Energy solar power complex and co-located battery storage system is fundamentally mischaracterised as a low-cost, reliable renewable energy scheme. Instead, it offers evidence to indicate that the project delivers limited real-world energy benefits while causing significant long-term harm. The central point is that, when assessed against actual performance, operational behaviour, and national policy tests (EN-1 and EN-3), the scheme fails to provide secure, affordable, or genuinely decarbonised energy, and that its benefits are overstated relative to its impacts.

1. Solar PV does not deliver "secure" or "reliable" energy under EN-1. Solar power is inherently intermittent, weather-dependent, and seasonally misaligned with UK demand, producing the least energy during winter when it is most needed. The application fails to demonstrate meaningful contribution to energy security or quantify output during periods of system stress.

2. The proposal is not a "low-cost" solar scheme under EN-3. The inclusion of a grid-connected battery capable of importing electricity transforms the scheme into a commercial trading operation, not a simple renewable project. As a result, claims of low-cost energy are unsupported, with no clear evidence of reduced consumer bills or improved affordability.

3. The battery's primary function: grid trading and arbitrage. The battery is presented as supporting renewable energy but in practice operates as a market-driven trading asset, buying and selling electricity (including fossil-fuel-derived power). This undermines claims that it contributes directly to decarbonisation.

4. Seasonal limitations of solar and the battery as a stand-alone asset. For much of the year, low solar output means the battery would rely on grid-imported electricity rather than on-site generation. This effectively decouples the battery from the solar installation, reinforcing its role as an independent commercial asset.

5. Battery storage does not resolve intermittency or deliver energy security (EN-1). Battery systems provide only short-duration storage and cannot address prolonged winter shortages or ensure supply during peak demand. Their operation is driven by price signals rather than system need, limiting their contribution to reliability.

6. Implications for planning policy and assessment. The scheme should be assessed as a hybrid development rather than a pure renewable project, with reduced weight given to claims of affordability and decarbonisation. The application risks overstating public benefits while masking commercial trading functions.

7. Planning balance and conclusions. The project delivers limited, uncertain benefits while causing substantial and enduring harms, including land loss, landscape impacts, and potential cost increases. Overall, the planning balance is argued to weigh decisively against granting consent.

8. Conclusion. The Representation concludes with a series of 14 questions for the Examining Authority during the Examination:

Nature and characterisation of the development

1. How should the proposed development be properly characterised in planning terms: as a renewable energy generating station, or as a hybrid scheme comprising solar generation and a commercially-operated battery trading asset?
2. To what extent does the Application accurately reflect the actual operational behaviour of the scheme, particularly the independence of the BESS from on-site solar generation?

Energy security – NPS EN-1

3. What evidence demonstrates that the scheme would contribute meaningfully to a "secure and reliable" energy supply, given the seasonal and non-dispatchable nature of solar generation?
4. Has the Applicant quantified the scheme's electricity output during winter periods of peak demand, and if not, how can its contribution to energy security be assessed?
5. Given that battery storage operates over short durations and is driven by market signals, what assurance exists that it would be available during periods of system stress?
6. Can the scheme be said to meet EN-1 requirements where it does not deliver firm or dispatchable capacity?

Cost and affordability – NPS EN-3

7. On what evidential basis is the scheme described as "low-cost", particularly where electricity pricing from the East Park installation would be influenced by battery trading and wholesale market conditions?
8. Has the Applicant demonstrated that the scheme would reduce consumer costs or improve affordability, as required by EN-3?

Battery operation and decarbonisation

9. What proportion of electricity stored and exported by the BESS is expected to originate from grid imports rather than on-site solar generation?
10. To what extent will the BESS store and re-export electricity derived from gas-fired generation, particularly during the periods of very low solar power output?
11. How should the Examining Authority treat claims of decarbonisation where a significant element of the scheme involves trading grid electricity of mixed (including fossil) origin?

Assessment of benefits

12. Should greater weight be given to actual energy output and seasonal performance, rather than installed capacity, when assessing the scheme's benefits?
13. In the absence of clear evidence of material contributions to energy security, affordability, or decarbonisation, what weight should be attributed to the scheme's claimed benefits?

Planning balance

14. How should the planning balance be struck where the benefits are limited, uncertain, or overstated, and the harms are significant, long-term and irreversible?

In summary, the Representation concludes that the proposed development fails to meet key national policy requirements for secure, reliable, and low-cost energy. By overstating benefits and

underplaying harms, the application presents a misleading case for approval. When assessed realistically, the scheme does not justify development consent and should be refused.

The Representation is informed by the following papers:

'The reality of low power UK solar: the numbers don't stack up', Professor Peter Dobson OBE and Professor Mike Alder

'Modelling of GB grid-scale solar PV generation: impacts of the new category of solar power plant on the national energy system', Professor Tony Day

'Battery energy storage trading: who pays the price? Large-scale solar utilities with co-located battery storage: a brief exploration of the business case', Professor Tony Day

'Solar PV on agricultural land – essential components of environmental assessments and reports', Institute of Sustainability and Environmental Professionals

'Battery energy storage: is the sector racing ahead of safeguards?', Professor Peter Dobson OBE, Professor (Emeritus) Peter P Edwards, Professor (Emeritus) Wade Allison, and Professor Sir David Melville CBE

Written Representation objecting to the East Park Energy Solar Power Complex and Co-located Battery Energy Storage System DCO Application EN010141

This Written Representation builds on and relates to Relevant Representation: https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN010141/representations/100020218

This Representation objects to the proposed East Park Energy Solar Power Complex and associated Battery Energy Storage System.

The objection is made on the basis that the claimed benefits relied on by the Applicant would not fully materialise in practice, particularly when tested against the requirements of National Policy Statements EN-1 and EN-3, and that those diminished benefits do not outweigh the significant, long-term or permanent harms arising from the proposal.

The Application relies heavily on installed headline capacity figures, generic national policy statements, and assertions of affordability and energy security, while failing to properly address actual energy output, seasonality issues, land-use efficiency, system value, commercial/operational issues, consumer cost, cumulative impacts, and health and safety risks. When these matters are examined together, the planning balance weighs decisively against the proposal.

This Representation is divided into the following sections:

1. Solar PV does not deliver “secure” or “reliable” energy under EN-1
2. The proposal is not a “low-cost” solar scheme under EN-3
3. The battery’s primary function: grid trading and arbitrage, including fossil fuel-generated electricity
4. Seasonal limitations of solar and the battery as a stand-alone asset
5. Battery storage does not resolve intermittency or deliver energy security (EN-1)
6. Implications for planning policy and assessment
7. Planning balance and conclusions
8. Request to the Examining Authority
9. Appendix – relevant information

1. Solar PV does not deliver “secure” or “reliable” energy under EN-1

The Applicant asserts that the scheme supports energy security and Net Zero objectives and relies explicitly on NPS EN-1, which considers the need for large-scale energy infrastructure to ensure a:

> “secure, reliable, and affordable supply of energy”.

However, solar PV is not a secure or reliable energy source in the EN-1 sense. It is non-dispatchable, weather-dependent, and seasonally misaligned with UK demand. Solar output peaks in spring and summer when national demand is lowest. Conversely, output is lowest precisely when energy security is most critical – during winter periods when system stress can result when demand rises sharply due to cold weather and shorter daylight hours. Yet the Application does not meaningfully address the fundamental seasonal mismatch inherent in UK solar generation.

The Application does not quantify how much electricity the scheme would deliver during periods of system stress, nor does it engage with evidence showing diminishing marginal returns from additional solar capacity. Even at the government’s 2035 75GW solar target, independent modelling indicates that grid-scale solar could supply as little as 13% of rising national annual electricity demand. Critically, despite this very high installed capacity target, in winter months the national grid-scale solar contribution would collapse to approximately 2–3% of electricity demand.

Modelling of a proxy 400MW capacity grid-scale solar facility using actual regional insolation data for 2024 and 2025 shows the significant gap between capacity and output, as well as the extreme seasonal variations, with exceptionally low output in quarters 1 and 4 (see Figure 1a and Figure 1b).

The Application does not explain how adding a large solar installation materially improves system security. Assertions of “secure power” should therefore be afforded little weight.

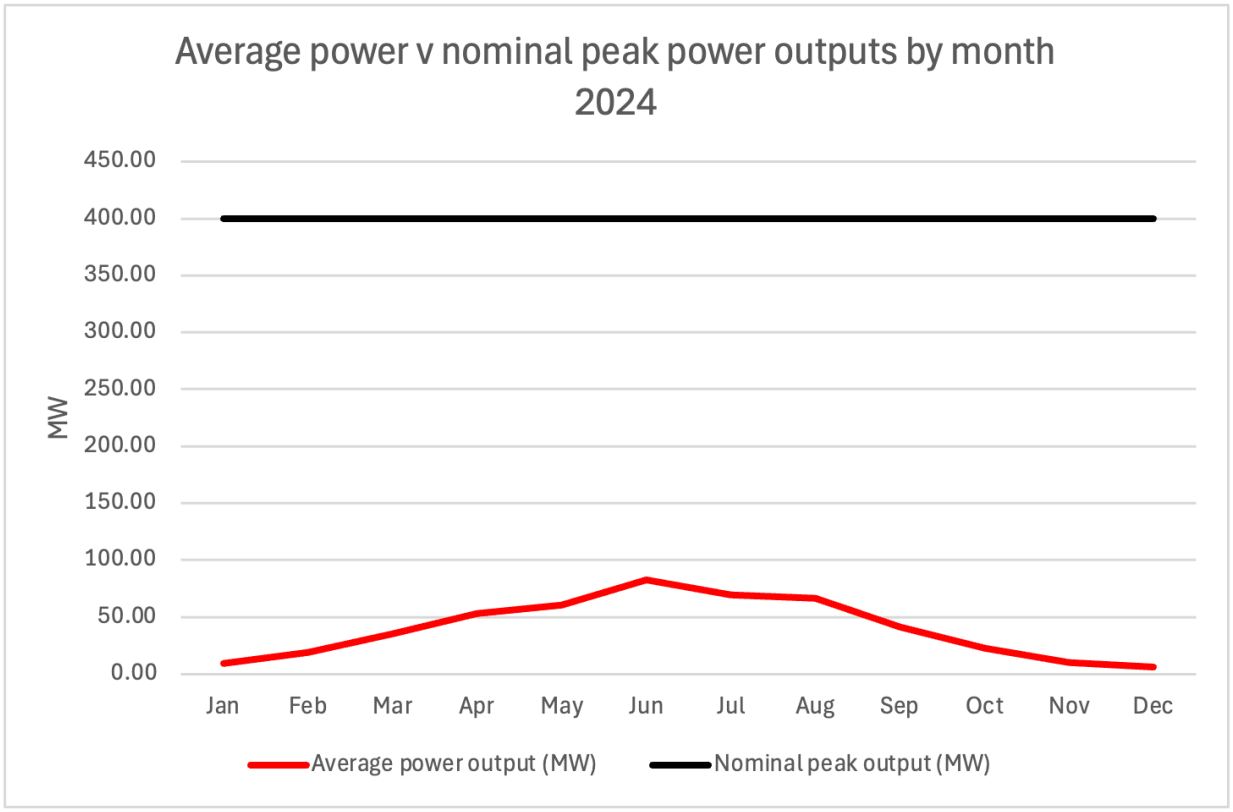

Figure 1a: 400MW capacity solar power facility showing actual output based on regional insolation data for 2024

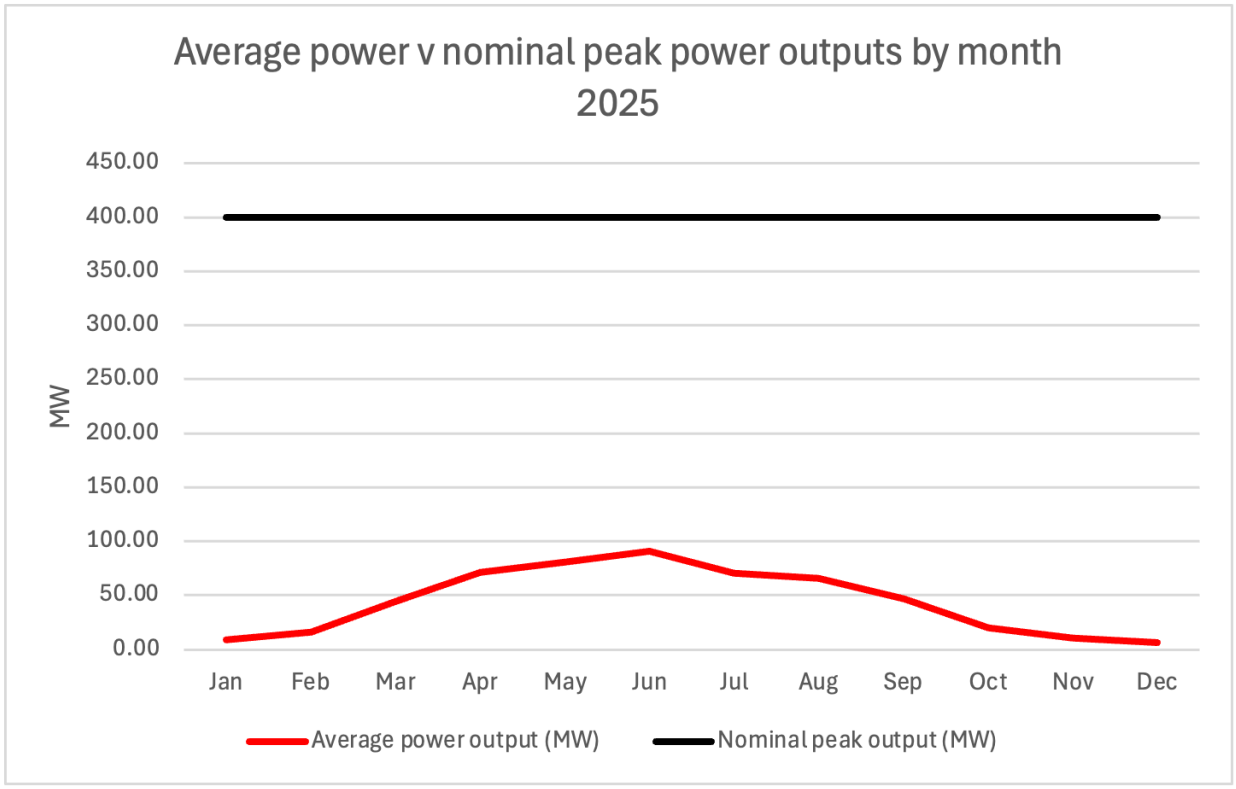

Figure 1b: 400MW capacity solar power facility showing actual output based on regional insolation data for 2025 (sunniest year on record)

This regional insolation data for 2024 and 2025 gives capacity factors of 9.88% and 11.09%, respectively. The Applicant claims that during the scheme's first year of operation it would generate 433.2 GWh of electricity, as a "conservative" estimate. This equates to a capacity factor of 12.4%. It is not clear how a solar installation operating in this region would secure a significantly higher capacity factor than what would have been achieved in the last two years, including the sunniest year since records began.

2. The proposal is not a "low-cost" solar scheme under EN-3

The Applicant relies on NPS EN-3, which implies that solar is a key component in low-cost decarbonisation, stating that the technology is "cost-effective." This claim is central to the Applicant's justification for extensive agricultural land-take and associated impacts. However, the claim does not withstand scrutiny when the full operational reality of the entire scheme is considered.

The proposed development includes a 100MW Battery Energy Storage System (BESS) with the ability to both export and import electricity from the grid. The Application states:

> "…associated on-site battery energy storage system (BESS)… would allow for the generation and export of 400MW of electricity to the National Grid from the solar photovoltaic energy generating station, and would be capable of exporting and importing up to 100MW via the BESS."

The inclusion of import capability is critical. It confirms that the battery is not limited to storing surplus on-site solar generation, but is instead designed to operate within the wider electricity market.

This operational reality fundamentally changes the nature of the scheme. The BESS is not a passive adjunct to solar generation; it is commercial trading infrastructure, designed to generate revenue through:

- wholesale electricity arbitrage (buy low, sell high), and
- balancing and ancillary grid services

This model is now dominant across the sector and is widely recognised as the primary economic driver of large-scale battery deployment, confirmed by independent sector analysis.

As a result, the scheme should not be characterised as a single low-cost renewable energy project. It is more accurately understood as:

- a highly seasonal solar installation, and
- a stand-alone grid-connected battery trading asset

The Applicant's reliance on EN-3 "low-cost" claims is therefore misplaced. Electricity exported under this model is:

- not constrained by Contract for Difference pricing,
- typically more expensive than offshore wind, and
- influenced by trading strategies rather than generation cost

There is no evidence that the scheme would:

- reduce consumer bills,
- improve affordability, or
- deliver low-cost energy in the sense intended by EN-3

Accordingly, limited weight should be given to claims of low-cost decarbonisation.

3. The battery's primary function: grid trading and arbitrage, including fossil fuel-generated electricity

The Application does not clearly distinguish between batteries delivering public energy system benefits and those operating primarily for private trading revenue.

In practice, batteries of this type are financed and operated as merchant assets, with revenues driven by market volatility rather than renewable integration.

This is reflected in industry statements. For example, Ørsted has acknowledged that:

> "A section of the battery storage is more about storing electricity when it is cheap to buy."

This confirms that:

- the core operational logic is arbitrage, not renewable support
- the battery will routinely import electricity from the grid, including during periods of low prices

Crucially, electricity drawn from the grid is not necessarily renewable. The UK grid continues to rely significantly on gas-fired generation, particularly:

- in winter months
- during periods of low wind and solar output

Accordingly, the BESS will frequently:

- store electricity derived partly or wholly from gas, and
- re-export it at higher prices

This creates a clear operational pathway:

GRID (including gas generation)
⬇
BATTERY STORAGE (trading asset)
⬇
EXPORT BACK TO GRID (at higher prices)

This undermines the claim that the battery is inherently a decarbonisation asset. Instead, it functions as a price-driven intermediary, with environmental benefits that are:

- uncertain, and
- not directly linked to the solar installation

4. Seasonal limitations of solar and the battery as a stand-alone asset

The Application presents the BESS as supporting solar intermittency. However, this does not reflect actual system behaviour.

Solar generation in the UK is highly seasonal, with materially reduced output for approximately five to six months of the year. Actual regional insolation data for 2024 and 2025 demonstrates the collapse in solar power in quarters 1 and 4 (see Figure 2a and Figure 2b). During these periods:

- on-site generation is insufficient to charge the battery at scale
- the BESS is therefore likely to charge predominantly from the grid

This reinforces that the battery operates as a stand-alone grid trading asset for much of the year, rather than as an extension of the solar scheme.

In practical terms:

- the most economically active component of the development is likely to be the battery
- its operation is decoupled from solar generation for extended periods
- its revenue model depends on market conditions, not renewable output

This distinction is material to the planning balance. The scheme is presented as renewable infrastructure, but in reality includes a substantial non-renewable trading component.

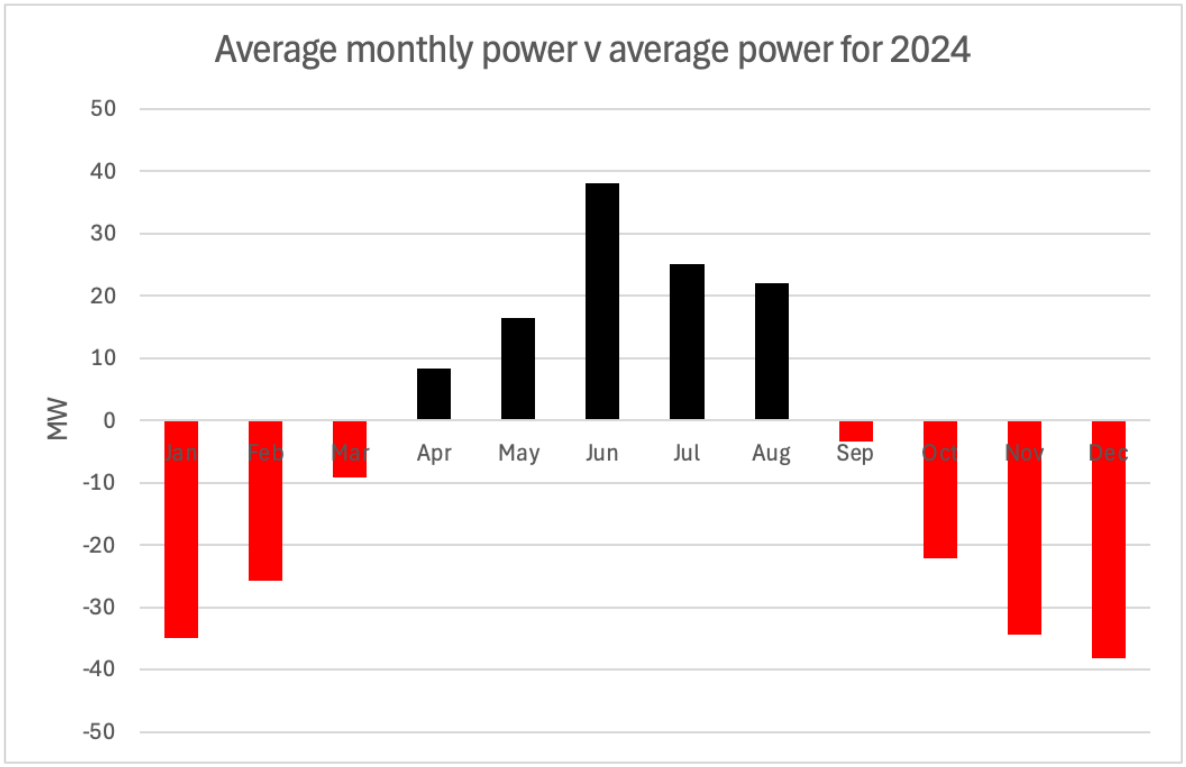

Figure 2a: 400MW capacity solar power facility showing actual output based on regional insolation data for 2024, average monthly power v average power across the year (39MW)

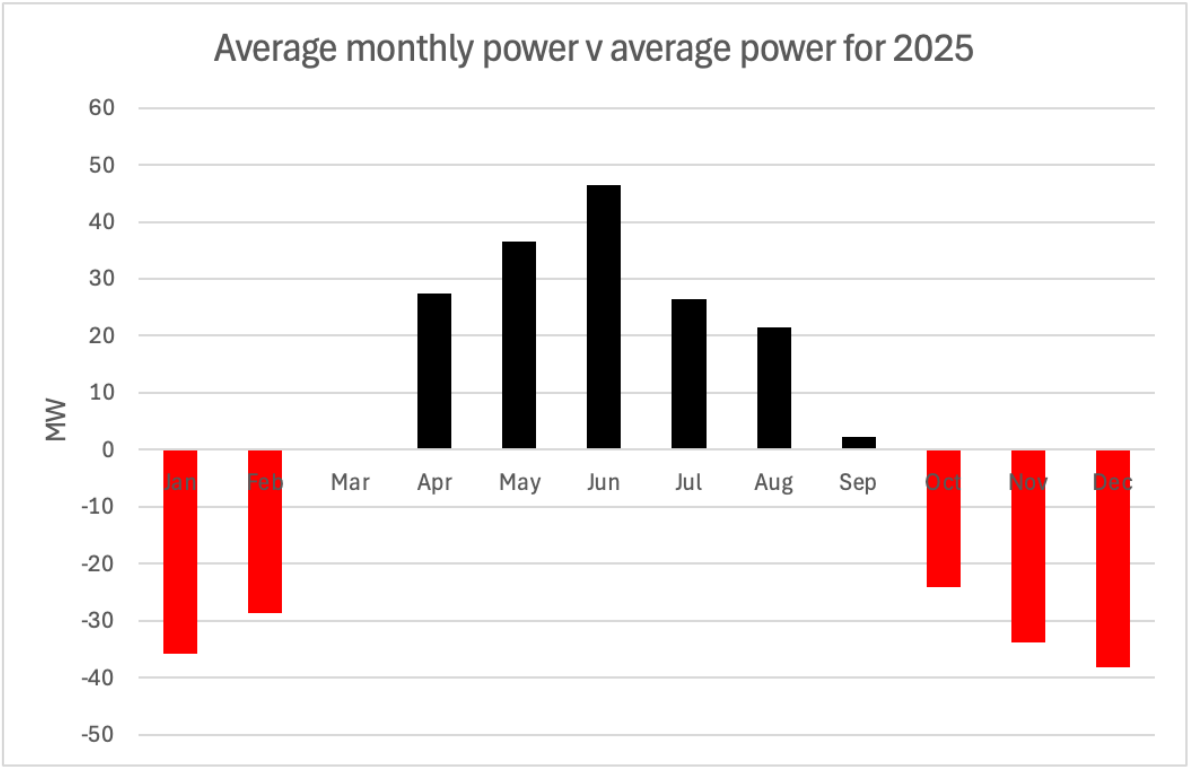

Figure 2b: 400MW capacity solar facility showing actual output based on regional insolation data for 2025 (sunniest year on record), average monthly power v average power across the year (44MW)

5. Battery storage does not resolve intermittency or deliver energy security (EN-1)

The inclusion of battery storage is presented as addressing intermittency and enhancing energy security. This is not supported by technical evidence or policy context.

Under NPS EN-1, energy infrastructure must contribute to secure, reliable and dispatchable supply. Battery storage does not meet this requirement:

- Lithium-ion batteries provide storage over hours, not days or seasons
- They cannot address prolonged winter shortfalls of renewable output
- They do not convert solar into a firm or dispatchable energy source

Where batteries are operated for arbitrage:

- charge–discharge cycles are driven by price signals, not system need
- there is no guarantee of availability during peak demand
- they may discharge when prices are high, rather than when supply is constrained

Accordingly, the BESS cannot be relied on to:

- enhance winter resilience
- reduce system stress during low renewable output
- provide meaningful security of supply benefits

6. Implications for planning policy and assessment

Taken together, these factors materially affect how the scheme should be assessed under national policy:

- Under EN-3, the scheme cannot credibly be described as “low-cost” solar once battery-stored electricity trading dynamics are included
- Under EN-1, the development does not deliver firm, dispatchable or secure supply
- The battery component operates substantially independently, with a commercial function distinct from renewable generation

The Application does not adequately distinguish between:

- genuine public benefit from renewable generation, and
- private revenue generation through electricity trading

This lack of clarity risks overstating benefits and understating impacts.

The decision-maker should therefore:

- treat the proposal as a hybrid development, not a pure solar scheme
- give reduced weight to claims of affordability and decarbonisation
- recognise that a significant proportion of activity relates to grid electricity trading, including gas-derived power

7. Planning balance and conclusions

The central issue for the Examining Authority is not the headline description of a co-located solar and battery scheme, but its actual operational behaviour and real-world contribution. When assessed on this basis, the benefits relied upon by the Applicant are materially overstated.

The proposal does not function as a coherent renewable energy solution. Rather, it comprises two distinct and only loosely connected elements:

- a very large-scale solar installation delivering highly seasonal and limited output, and
- a grid-connected battery system operating primarily as a commercial trading asset, frequently importing electricity – including gas-derived power – from the grid.

This distinction is critical. The Application is presented as an integrated, low-cost renewable energy project, yet in practice the scheme’s most economically active and commercially valuable component is not likely to be the seasonally-restricted on-site solar generation, but rather the battery storage system, whose operation is largely driven by market arbitrage rather than renewable generation.

7.1 Limited and uncertain benefits

When examined in operational terms rather than installed capacity:

- The scheme’s contribution to national electricity demand would be negligible, particularly during winter periods when energy security is most critical.
- It would not provide secure or reliable energy in the sense required by NPS EN-1, as neither solar nor battery storage delivers firm, dispatchable supply.
- It cannot credibly be characterised as low-cost energy infrastructure under NPS EN-3, given the role of speculative battery trading and exposure to wholesale price dynamics.

There is no clear or evidenced pathway by which the scheme would materially improve affordability, system resilience, or decarbonisation outcomes.

7.2 Mischaracterisation of the development

The Application blurs the distinction between:

- public benefits associated with renewable generation, and
- private commercial benefits arising from electricity trading.

This results in an overstatement of policy compliance and an inflation of the scheme's claimed contribution to national objectives. Properly understood, the development should be treated as a hybrid scheme, not a pure solar project, with correspondingly reduced policy weight.

7.3 Substantial and enduring harms

Set against these limited benefits are significant, long-term harms, including:

- Loss of high-quality, productive agricultural land for relatively low energy yield
- Industrialisation of rural landscape character
- Noise, visual and community impacts
- Health and safety risks and rural community disruption associated with the long duration initial construction phase, subsequent replacement of infrastructure components across the operational life of the project, eventual decommissioning if it is not 'repowered', and grid-scale lithium-ion battery energy storage
- Potential increases in system and consumer costs

These impacts cannot be characterised as "temporary", they are not easily reversible and many would persist for at least the lifetime of the development.

7.4 Overall planning balance

When this land-intensive scheme is assessed realistically:

- the benefits are limited, uncertain, and in some cases mischaracterised, while
- the harms are clear, substantial, and enduring

The planning balance therefore weighs decisively against the proposal.

7.5 Conclusion

The Application fails to demonstrate compliance with the core requirements of national policy. It does not deliver:

- secure or reliable energy,
- demonstrably low-cost electricity, or
- meaningful contributions to energy security or decarbonisation.

Accordingly, it does not meet the tests required for development consent as a Nationally Significant Infrastructure Project.

8. Request to the Examining Authority

For the reasons set out above, I respectfully request that the Examining Authority considers the following key questions during the Examination:

8.1 Nature and characterisation of the development

1. **Characterisation of the development**
   How should the proposed development be properly characterised in planning terms: as a renewable energy generating station, or as a hybrid scheme comprising solar generation and a commercially-operated battery trading asset?
2. **Operational reality vs description**
   To what extent does the Application accurately reflect the actual operational behaviour of the scheme, particularly the independence of the BESS from on-site solar generation?

8.2 Energy security – NPS EN-1

3. What evidence demonstrates that the scheme would contribute meaningfully to a "secure and reliable" energy supply, given the seasonal and non-dispatchable nature of solar generation?
4. Has the Applicant quantified the scheme's electricity output during winter periods of peak demand, and if not, how can its contribution to energy security be assessed?
5. Given that battery storage operates over short durations and is driven by market signals, what assurance exists that it would be available during periods of system stress?
6. Can the scheme be said to meet EN-1 requirements where it does not deliver firm or dispatchable capacity?

8.3 Cost and affordability – NPS EN-3

7. On what evidential basis is the scheme described as "low-cost", particularly where electricity pricing from the East Park installation would be influenced by battery trading and wholesale market conditions?
8. Has the Applicant demonstrated that the scheme would reduce consumer costs or improve affordability, as required by EN-3?

8.4 Battery operation and decarbonisation

9. What proportion of electricity stored and exported by the BESS is expected to originate from grid imports rather than on-site solar generation?
10. To what extent will the BESS store and re-export electricity derived from gas-fired generation, particularly during the periods of very low solar power output?
11. How should the Examining Authority treat claims of decarbonisation where a significant element of the scheme involves trading grid electricity of mixed (including fossil) origin?

8.5 Assessment of benefits

12. Should greater weight be given to actual energy output and seasonal performance, rather than installed capacity, when assessing the scheme's benefits?
13. In the absence of clear evidence of material contributions to energy security, affordability, or decarbonisation, what weight should be attributed to the scheme's claimed benefits?

8.6 Planning balance

14. How should the planning balance be struck where the benefits are limited, uncertain, or overstated, and the harms are significant, long-term and irreversible?

9. Appendix – relevant information

'The reality of low power UK solar: the numbers don't stack up', Professor Peter Dobson OBE and Professor Mike Alder

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