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### **Executive summary**

- NextEnergy Solar Fund ("NESF") is a leading specialist solar<sup>+</sup> investment company in the renewable energy sector. NESF has 91 solar power projects in the UK, widely distributed along the distribution network.
- NESF has been investing in energy storage projects since 2018 and has built up considerable
  expertise in managing energy storage assets and running them in conjunction with solar plants. NESF
  is also progressing projects to retrofit energy storage assets onto its existing assets where feasible.
- Currently, NESF has two operating small-scale batteries, is finalising the construction of a 50MWh battery in Scotland, and is preparing the construction of a 250MWh battery in Norfolk.
- NESF intends to expand its energy storage activities and is consulting with shareholders to amend its existing investment policy to increase the limit in standalone energy storage systems (not ancillary to or co-located with solar PV assets owned by the Company) from 10% up to 25% of the Gross Asset Value ("GAV") (calculated at the time of investment). All other policy limits are to remain the same.
- This will enable NESF to take advantage of existing energy storage opportunities in the UK via its relationship with EelPower Ltd, which will complement and diversify NESF's existing large portfolio of solar assets.





A solar+ fund invests primarily in utility scale solar assets, alongside complementary ancillary technologies, like energy storage.

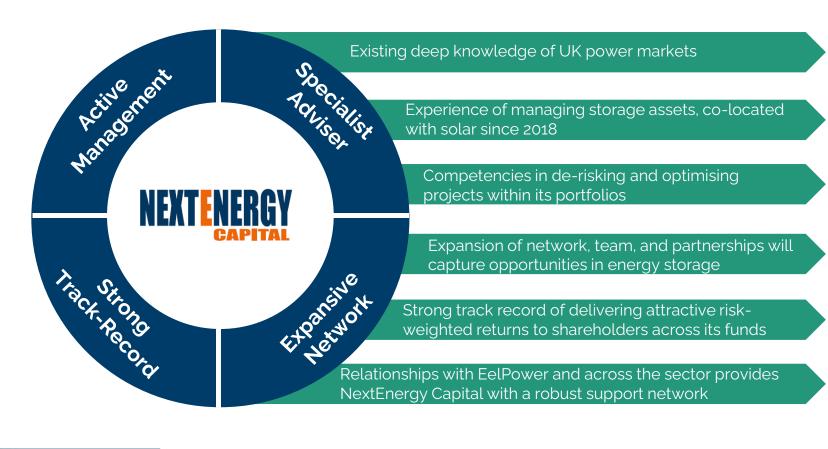
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## Five key reasons to increase energy storage in NESF

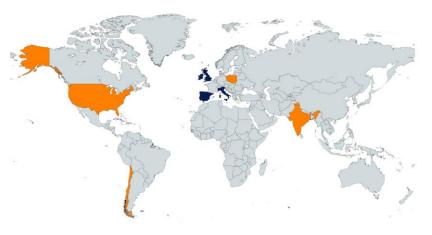
- Energy storage benefits from intermittency of renewables
  - As the UK decarbonises, renewables are expected to provide the backbone of the future energy mix. Energy storage provides essential flexibility to renewables and ensures supply of electricity across the grid matches demand fluctuations
  - National Grid's future energy scenarios forecasts UK energy storage capacity to increase from 1.6 GW in 2021 to as much as 20 GW by 2030
- Energy storage is highly complementary to NESF's solar portfolio
  - Solar exhibits a predictable generation profile during a single day
  - Batteries capitalize on wholesale market price fluctuations by charging when renewable output is high (and prices are low/negative) before dispatching at peak demand (when prices are highest)
- Co-location of batteries with solar assets multiplies benefits and cost savings
  - During peak output, batteries can store power when solar plants generates more than what is allowed for grid injection purposes;
  - Co-located batteries may also allow solar assets to achieve better terms in PPAs and enhanced pricing for solar-generated power through shifting
- NESF is well positioned to capitalise on the UK energy storage space
  - NESF has a strong portfolio of solar assets that provide a robust base revenue generation, inclusion of accretive return assets is sensible to continue the platforms' continued growth and evolution
  - The joint venture partnership with EelPower allows NESF to leverage expertise as well as access to pipeline projects
- 5 Energy storage generate revenues through multiple pathways
  - Revenues driven by volatility (potential to arbitrage and financially settle without cycling battery) and provision of ancillary stability/flexibility services to grid
  - Multiple revenue streams allows batteries to adapt easily to market changes, revenue stacking supported by the grid's adoption of energy storage as part of
    its plans for managing the future of the grid, valuing the stability that batteries can bring to grid infrastructure alongside their ability to arbitrage volatility.



## NextEnergy has the right platform to deploy NESF energy storage



- 14 years experience as a manager
- c.\$3.3bn solar AUM
- Over 350 solar assets acquired
- 2.4GW+ across UK, Italy, US, Portugal, Spain, Chile, Poland, and India



















## NESF has an established energy storage track record

2018

2019

2020

2021



First two co-located batteries



- **1. Salcey Farm**:
  Buckinghamshire, acquired May 2018
- 2. Pierces Farm:
  Berkshire, acquired May 2018





Strategic Relationship with EelPower







Target of **1GW** of storage under management



Unlocking up to £300m of energy storage investment opportunities for NFSF



Procured, constructed and operated 6 large-sale batteries over six years, including two of the UK's most profitable



Eelpower's in-house 'Eel-Dispatch' control, data and risk management platform helps deliver an efficient turnkey asset management

#### 2022



### Co-location retrofit across portfolio

NESF has an existing UK portfolio of **91 solar assets** and Investment Committee approval to develop **c.20MW** of co-located sites, with scope to identify additional colocated assets.

### **Current progress:**



NESF UK portfolio reviewed for available grid import capacity



Pilot project (North Norfolk) secured planning permission on 18 February 2022



 Planning applications in progress at four more sites, with a further three seeking grid capacity



Remaining sites to be reviewed periodically as grid capacity changes



### Opportunities secured through energy storage joint ventures

2022



Project Camilla

**Under Construction** 

Capacity: **50MW** 

Duration: 1hr

Energised: Q2 2023

The project is located adjacent to the Glenniston substation, well placed to benefit from volatility driven by high Scottish wind capacity, low local demand and constraints on National Grid interconnector capacity to areas of high demand.

**5** 

**Project Lion** 

**Project Rights Acquired** 

Capacity: **250MW** 

Duration: 2hr
Constructed: 2025

The project is adjacent to the Walpole substation, a key onshore hub for existing wind farms (Race Bank, Lincs and Inner Dowsing wind farms) and well-placed to benefit from expected additional wind capacity in the region.



2023 onwards



Investment Policy Increase

Look to increase the investment mandate **up to 25%**, in order to capitalise on existing pipeline & opportunities:

### Project Camilla blueprint:



### **Example project timeline:**



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## The strength of specialists: NextEnergy Capital & EelPower

### Background

- NESF sought an industry expert with demonstrable experience in delivery of construction and optimisation of energy storage
- Eelpower was identified as the leading entity in its field

### About Eelpower

- Founded to enable the UK to manage the increasing volatility created by non-dispatchable renewables and has become a leading battery developer with a target to have 1GW of storage under management
- Procured, constructed and operated six large-sale batteries over six years, including two of the UK's most profitable
- Eelpower's in-house 'Eel-Dispatch' control, data and risk management platform helps deliver an efficient turnkey asset management offering which maximises investor value
- In January 2021, SUSI Partners (one of the most experienced storage investors in the world) agreed to invest £90m alongside Eelpower in an equity JV covering 30MW operational, 60MW in construction and a development pipeline of c200MW

### NextEnergy Capital track record

- Consistently generated more electricity than acquisition budget (+4.8% p.a. since IPO for the full portfolio)
- The sustained portfolio outperformance demonstrates the robustness of NEC's active management processes

## Power Generation Performance above budget (%) for NESF's co-located projects



■ Pierces Farm ■ Salcey Farm

### Example site recently realised by Eelpower:



### NESF portfolio co-located battery asset, Salcey Farm:







## Now is the right time to deploy energy storage

### Previously

- Evolving, early-stage technologies
- Prohibitive capex, long return horizons
- Uncertain revenue streams
- Stable prices = narrow arbitrage
- First mover, not best mover

#### Summary

Uncertain IRRs on unproven technology with long return horizon

(Private Equity Investment Stage)

#### Now

- Technology established and tested
- Capex and return horizons reducing
- Revenue proven by pathfinder schemes
- Increased price volatility = wider arbitrage
- Fast followers benefit from lessons already learnt

### Summary

Attractive, reliable IRRs on proven technology with reasonable return horizon

(Institutional Investment Stage)



### **Revenue sources for NESF batteries**

### Key revenue drivers



#### **Volatility:**

Higher volatility of generation drives increased need for flexibility + arbitrage opportunities\*



#### Inflation:

Inflation applies to all revenue and cost lines; therefore, increased inflation drives greater nominal cash flows after debt services ("CFADS")



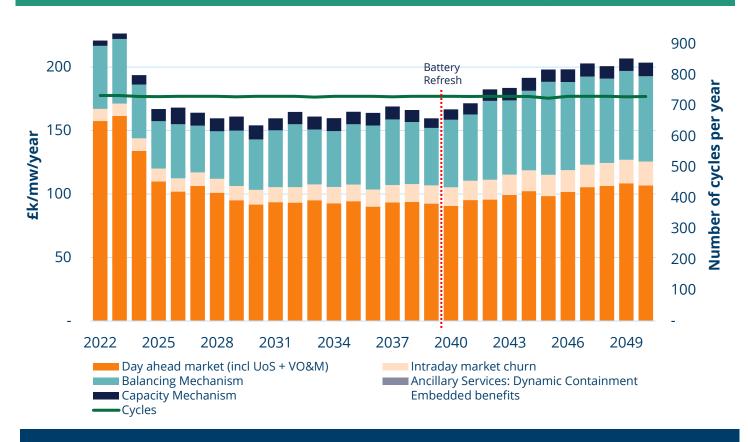
#### **Cycles**

Arbitrage revenue is earned through charge and discharge ("cycle") of electricity; therefore, revenue is largely driven by the number of annual cycles

Footnote:

UoS: Use of System. See slide 28 for more details VO&M: Fixed and variable maintenance cost

### Example revenue stack a 2hr duration standalone battery project



A leading optimiser predicts single market (worst case) spreads concentrating around a "natural floor" in arbitrage revenues, with additional markets providing consistent upsides



### Energy storage joint venture breakdown

Joint Venture Partnership 1 ("JVP1")

JVP1

£100m

- Owned 70% by NESF and 30% by Eelpower
- The Company's first 50MW battery storage project through JVP1 is currently under construction in Fife, Scotland, and is expected to be energised and gridconnected in the first half of 2023

Joint Venture Partnership 2 ("JVP2")

JVP2

£200m

- Owned 75% by NESF and 25% by Eelpower
- First acquisition as part of JVP2 for £32.5m secured
- The project includes the development rights, permits, and initial grid milestones for a 250MW portfolio of high-quality battery storage projects and grid connections in the East of England





Battery storage investment opportunities

£300m

Total announced standalone battery storage projects to date

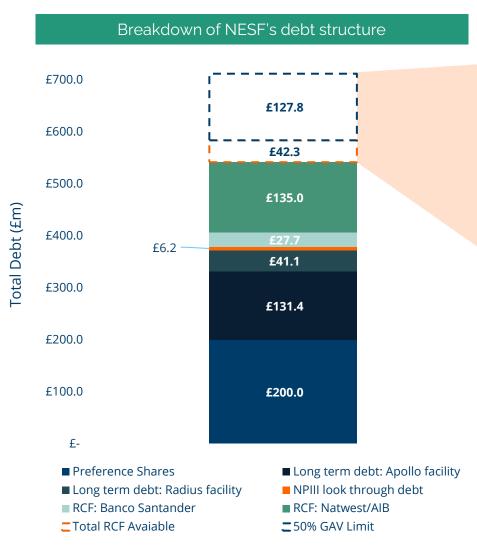
**300MW** 

**Energy storage pipeline** 

**500MW** 



## **NESF's firepower to fund pipeline**



Available firepower to be deployed in opportunities

c.£128m

RCF Debt/GAV 50% Limit Headroom

Immediate RCF Available

c.£42m

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**Immediate Cash Available** 

c.£2m

Existing commitments (including current battery projects)

c.£64m

**Uncommitted Firepower** 

c.£108m

Footnote: All figures as at 31 December 2022

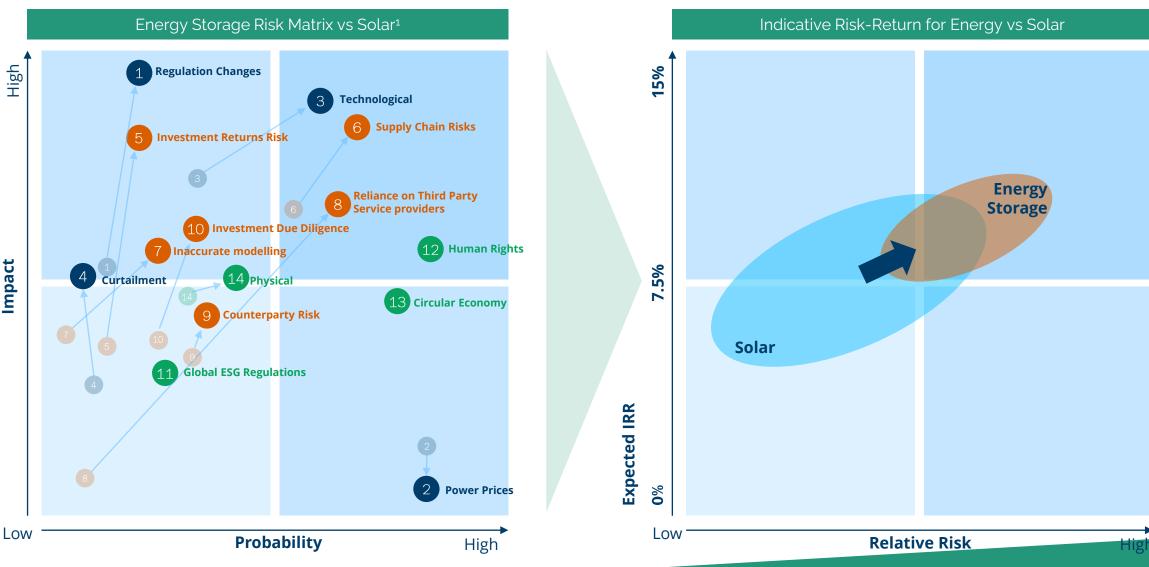


# Change to investment limits after <u>potential</u> energy storage increase

| Technological Limit  | <ul> <li>The Company may also invest in standalone energy storage systems (not ancillary to or colocated with solar PV assets owned by the Company) up to an aggregate limit of 10% of the Gross Asset Value (calculated at the time of investment)</li> </ul>  | <ul> <li>4.5% of GAV currently invested</li> </ul>   | From 10%, up to 25% |
|----------------------|---|--|---------------------|
| Private Equity Limit | <ul> <li>15% of the Gross Asset Value may be invested in solar assets through private equity<br/>structures (calculated at the time of investment)</li> </ul>   | <ul> <li>2.9% of GAV currently invested</li> </ul>   |                     |
|                      | <ul> <li>The Company is permitted to invest up to 30% of GAV (at the time of investment) in OECD countries outside the UK</li> </ul>  | <ul> <li>13.6% of GAV currently invested non-UK</li> </ul>   |                     |
| Geographical Limit   | <ul> <li>The Company may acquire an interest in solar PV assets located in non-OECD countries where those assets form part of a portfolio of solar PV assets in which the Company acquires an interest and where the Company's aggregate investment in any such assets is, at the time any such investment is made, not greater than 3% of the Gross Asset Value</li> </ul> | <ul> <li>0.2% of GAV currently<br/>invested outside OECD<br/>through NPIII</li> </ul>                            |                     |
| Development Limit    | <ul> <li>The Company mostly acquires operating solar assets, but it may also invest in solar assets<br/>that are under development (that is, at the stage of origination, project planning or<br/>construction) when acquired</li> </ul>  | <ul><li>Currently constitutes</li><li>4.7% of GAV</li></ul>  |                     |
|                      | <ul> <li>Such assets in aggregate will not constitute (at the time of investment) more than 10% of<br/>GAV</li> </ul>   |  |                     |
| Single Asset Limit   | <ul> <li>No single investment by the Company in any one solar asset will constitute (at the time of investment) more than 30% of GAV</li> <li>In addition, the four largest solar assets will not constitute (at the time of investment) more than 75% of GAV</li> </ul>  | <ul> <li>The largest investment<br/>in one solar asset<br/>currently constitutes</li> <li>3.5% of GAV</li> </ul> |                     |
| Gearing Level        | <ul> <li>Leverage of up to 50% of GAV</li> </ul>  | <ul> <li>Gearing (including<br/>preference shares)<br/>stands at 43.1%</li> </ul>                                |                     |



## Indicative risk return profile shift





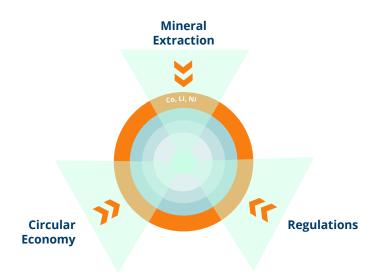


# **Energy storage risk matrix**

|    |            | Risk   | Description  |
|----|------------|--|--|
| 1  | Regulatory | Regulation Changes                           | Adverse changes to regulation of BESS assets, changes to or removal of future regulated revenues, etc. (e.g. Frequency response services: Enhanced Frequency Response, Dynamic Containment, etc.)  |
| 2  | Market     | Power Prices                                 | Electricity prices remain below Company's forward curve used in pricing/valuation models. This is a low risk for BESS, as revenues are based on arbitrage (i.e. the difference between low charging cost and high selling price)   |
| 3  | Market     | Technological                                | Emerging forms of energy storage technologies and alternative methods of balancing frequencies (such as international connection grids) could undermine the economics of our business cases for BESS   |
| 4  | Market     | Curtailment                                  | For batteries, curtailment impacts both charging and discharging phases. Given the nature of batteries as responsible for balancing grid frequencies, their installation is likely to reduce the likelihood of unforeseen curtailment  |
| 5  | Strategic  | Investment Returns Risk                      | As BESS becomes more commercially accepted, there is a risk that an increase in new developers, owners and operators leads to fewer attractive investments.  |
| 6  | Strategic  | Supply Chain Risks                           | Many of the raw materials, such as Cobalt, Lithium and Nickel are produced by just a few countries. Subsequently, this low diversification means that a single nation could greatly impact the cost of raw materials for development of future BESS assets   |
| 7  | Strategic  | Inaccurate modelling                         | NAV calculation portrays a false position (including the valuation of the portfolio). Currently discount rates are very varied (5-11% for GSF and GRID), which reflects the uncertainty of different revenue streams   |
| 8  | Strategic  | Reliance on Third Party<br>Service providers | Given NEC's relative inexperience in the field of BESS, it will need to rely on expertise from 3rd parties, such as Eel Power. Fund performances (and subsequent revenues) is directly impacted by the performance of service providers.   |
| 9  | Strategic  | Counterparty Risk                            | Fund performances (and subsequent revenues) directly impacted by companies with which NEC Ltd engage in contracts, such as contracts for frequency response services.  |
| 10 | Strategic  | Investment Due Diligence                     | Due diligence on investment process inadequate to identify key risks and problems in investments   |
| 11 | ESG        | Global ESG Regulations                       | Risk of environmental regulation, e.g. the European commission has stated that responsibly-sourced cobalt must be mandatory for new BESS assets. Some Chinese companies sell certified processed cobalt to Europe that is in fact mixed with material sourced from unregulated mines.  |
| 12 | ESG        | Human Rights                                 | <ul> <li>Human rights issues associated with supply chains.</li> <li>Cobalt: high risk of poor labour and H&amp;A conditions</li> <li>Lithium: risk of affecting indigenous people in Argentina, Bolivia and Chile. Extracting methods are potentially dangerous</li> <li>Nickel: risk of increased waste from mines (e.g. Indonesia)</li> </ul> |
| 13 | ESG        | Circular Economy                             | Durability: Battery lifespan and their capacity must be considered Recycling: End of life disposal/recycling of materials and potential use for future BESS assets is currently unclear  |
| 14 | ESG        | Physical                                     | Fire and noise pollution. Existing assets may have higher insurance premiums and maintenance costs due to likelihood of fires. New development assets may have delays as these risks cause difficulties in planning stages.  |



## **ESG** considerations for energy storage



#### Mineral Extraction

- COBALT: most of global supply originates from the DRC, of which c. 30% derives from small-scale miners working in poor labour and H&A conditions.
- LITHIUM: mining is affecting indigenous people in the Lithium Triangle (Argentina, Bolivia and Chile) which currently holds over 60% of known global lithium reserves. This region uses a unique method of extracting lithium from saltwater brines, a technique with potentially dangerous environmental consequences.
- NICKEL: demand is expected to increase 6-fold by 2030, with the world's largest producer, Indonesia, already upping production to meet this. Indonesia is currently dumping mine waste (tailings) into the ocean.

#### Circular Economy

- DURABILITY: of the batteries lifespan and their capacity to be recycled should be considered. Suppliers selection to consider product lifecycle and aspects relating to the circular economy. Participation in industry initiatives such as the Global Battery Alliance is a way NEC can foster stewardship and uphold company standards.
- METAL RECYCLING: such as cobalt, lithium and nickel are key battery components will enter a shortfall of supply before 2025. A domestic recycling programme would minimise the volumes of mineral extraction (hence the labour and water conflict risk associated with it).

### Regulations

- The European Commission ("EC") has released a strategic battery action plan which identifies ways in which responsible sourcing can be upheld and solve supply chain issues. For example, some refining companies in China have been found to sell certified processed cobalt to Europe that is in fact mixed with material sourced from unregulated mines.
- In Feb 2022, the EU issued a new Directive on Corporate Sustainability Due Diligence which will require DD on ESG aspects throughout business's supply chain.

### Due diligence

 NextEnergy Capital ("NEC") carries out due diligence process of batteries suppliers to ensure that human rights risks, including those of labour, H&S, or impact on environment and ecosystem services fundamental to the livelihood of communities and Indigenous People. NEC also require them to sign our Supplier Code of Conduct and ensure suppliers abide by it when working with us.

### Audits

 NEC plans to adopt the third party audit and chain of custody approach that is being considered with SEUK for modules and will be the standard to promote industry-wide traceability.

### Compliance

- NEC seeks to ensure compliance with applicable regulations such as the OECD due diligence guidance for responsible mineral supply chains (3rd edition), as well as voluntary principles such as the UN Guiding Principles on Business and Human Rights
- NEC carries out supplier reviews to ensure circular economy elements are considered as per the EU taxonomy; the WEEE directive on recycling and disposal; and/or the EC Batteries Directive (2006), by embedding alignment with these frameworks in the original procurement contracts.

#### Green inputs

- NEC is investigating how we can obtain green inputs to our battery facilities from suppliers that are also both economically viable and large enough to meet demand.
- This is a challenging goal, but we are committed to improving our input supply transparency, with the aim of having the greenest possible input. Not only does this reinforce the delivery of NEC's mission with the smallest footprint feasible, but it will direct investment to green suppliers, pushing the demand for better solutions and increasing the appetite for storage in the UK in a virtuous cycle.

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## **Summary of attractions for energy storage**



Batteries provide essential flexibility to the UK national grid



Revenues are driven by volatility, which is forecast to increase with electrification



Batteries are complementary to solar due to its predictable generation profile



Co-located batteries may also enhance solar assets through better PPA terms



The joint venture partnership with EelPower allows NESF to leverage expertise



Inclusion of accretive return assets is sensible to continue the NESF's growth





















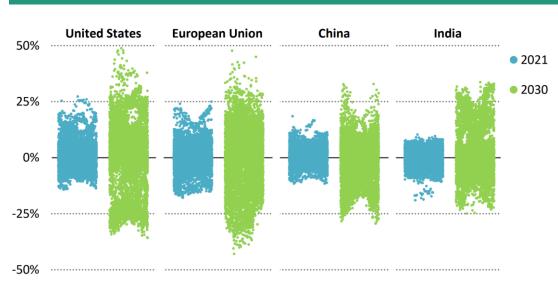


## Batteries enhance energy security by balancing supply & demand

The provision of flexibility in power systems is a cornerstone of electricity security today and in the future. Cornwall Energy forecasts a **significant increase in wholesale price volatility** in the coming five to ten years.

The electrification of additional end-uses, e.g. electric heating, road transport or industrial processes, raises peaks and increases the hourly, daily and seasonal variability of electricity demand.

### Hour-to-hour flexibility needs rise significantly by 2030

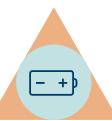


#### Battery Storage is an essential solution to flexibility requirements

Battery storage is projected to be the fastest growing source of power system flexibility in all scenarios detailed in IEA's world energy outlook 2022 as well as all scenarios published by Aurora Future Energy Scenarios 2022 based on the UK government's energy security strategy.

#### **Modular:**

allows batteries to be deployed and scaled up rapidly in almost any location.



#### Flexibility:

provision of localised flexibility may also reduce the need for investment in new transmission and distribution infrastructure.

### **Provide system services:**

utility-scale batteries can offer important system services, for example by helping with the restoration of grid operations following a blackout, supporting short-term balancing or providing operating reserves.



## Batteries benefits from volatility created by solar

Batteries essential to bridge energy demand with solar generation

Solar generation exhibits large fluctuations throughout the space of a day, which create opportunities for flexible technologies



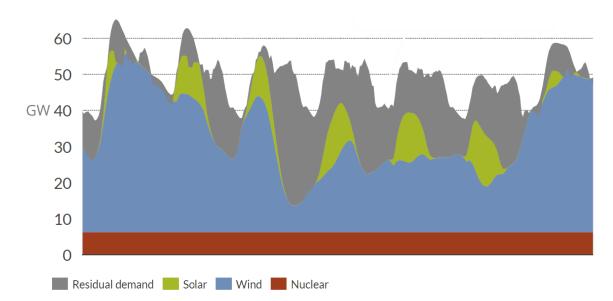


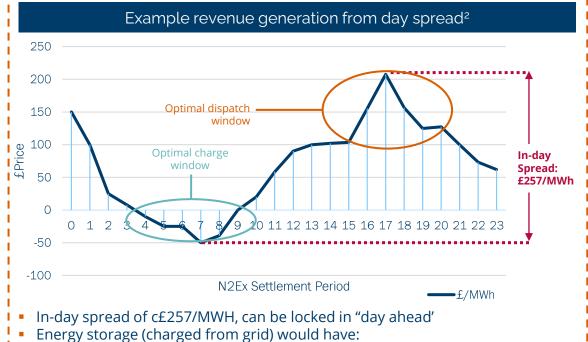
Battery charges during periods of low prices (due to low demand or high generation)

Battery sells it during evening price peaks (due to high demand or low generation)

### Example of UK energy mix fluctuations during a week<sup>1</sup>

The UK Government's Energy Security Strategy proposes ambitious plans to reduce gas consumption and emissions. Battery storage is an essential part as it meets residual demand otherwise achieved through fossil fuels.





- - Generated income of c£50/MWh for absorbing excess supply
  - Generated income of c£207/MWh for dispatching at peak demand



## Co-located storage solves issues of grid connection scarcity

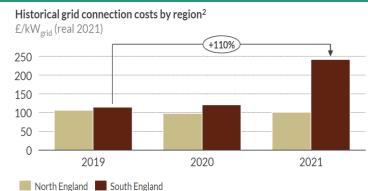
Grid connection scarcity has led to increasing costs over time, which is set to increase as available grid connections are used up

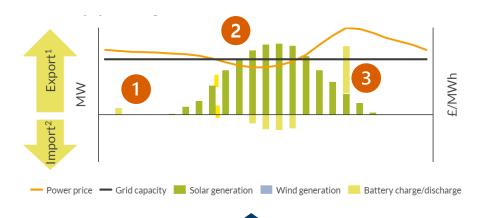


The largest hurdle to getting connected is the lead time - obtaining an unconstrained grid connection typically takes a minimum of five Years



Most available grid connections are closer to demand where there is low availability of suitable land for renewable projects





- The battery charges when prices are low and discharges when prices are high to capture this highest prices
- When the asset is oversized relative to the grid, the battery absorbs this power with nil direct costs to prevent curtailment/spill
- The battery dispatches when prices are highest. If the solar asset is still generating, the discharge may be limited by to the grid capacity.

Summary of benefits and savings associated with co-located battery storage CAPEX & OPEX: **Costs** Grid connection costs by using the same grid connection for both assets. OPEX through sharing site infrastructure and maintenance (e.g. inverters) Portfolio Diversification of risk and revenues: Full portfolio benefits due to protection from technology related downsides **Diversification** Oversize renewables asset relative to grid connect: Asset oversizing Solar can be over-sized and battery is able to capture spilled power **Ancillary** Opportunities (e.g. dynamic containment): service Solar profile more suited for allowing the battery to enter the Dynamic Containment market revenue

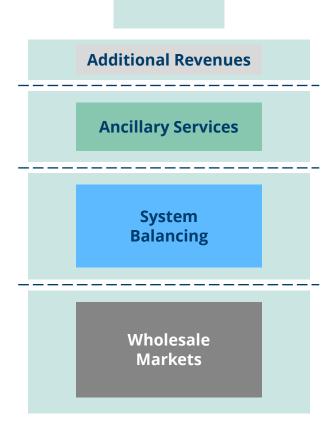
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## Batteries generate revenue from multiple sources

### Merchant trade is the backbone of a diversified revenue stack

- Wholesale markets are deep, liquid and will exist over the course of project lifetime
- Returns from wholesale markets alone make battery projects investable now
- Other streams simply add upside



### Ancillary services offer strong nearterm value

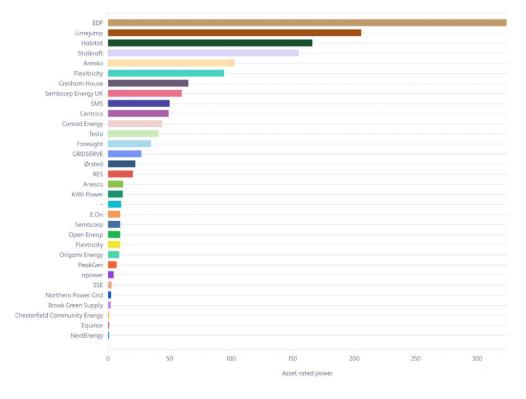
- But, with new assets coming online, these markets will saturate
- In medium-to-long term, ancillary service pricing will revert to opportunity cost of merchant trade
- Long term, ancillary services will offer opportunistic upside revenue



### **Route to market**

#### Overview

- Optimiser market continues to evolve, with EDF, Limejump (Shell) and Habitat currently the three largest providers by managed BESS capacity.
- Optimiser market dominated by two contract models:
  - "Floor" contract:
    - · 'guaranteed' minimum revenue (material caveats)
    - · limits future flexibility to maximise revenue
    - high fees (~13%)
  - "Route to Market" contract:
    - no floor/'guaranteed' minimum revenue
    - maximum flexibility to capture upside potential
    - lower fees (~6%)



#### **Tender Process**

• To evaluate performance and capabilities of optimisers in a less ancillary service rich environment, providers will be challenged to provide access to data from a 'digital twin', trading in real-time in day ahead, intraday and imbalance (cash out) markets. This is expected to provide a more realistic view of optimiser performance (i.e. not back-casted with perfect hindsight) to inform selection across key criteria.





## Overview of UK energy storage revenue streams

Years Hours Minutes Seconds

#### Capacity Market

- Ensures national security of supply by procuring a sufficient level of firm capacity to meet peak electricity demand
- Contracts are awarded either one or four years in advance for lengths of 1-15 years
- Payments are made on a capacity basis in £/kW/year and de-rated based on contribution to security of supply

#### Wholesale Market

- Provides platform to buy and sell power to meet demand every half-hour
- Contracted from years ahead to T-1 hour trading

### Balancing Mechanism

- Ensures balance is maintained in the power system in each daily half-hour trading period as well as other system operational needs e.g., thermal and voltage constraints
- Contracted over a variety of timescales, including within delivery periods

### **Ancillary Services**

- Maintains operational grid requirements and provides secondary balancing through sub second to minutes long response. Contracted in advance on monthlyyearly basis
- E.g. Dynamic containment (formerly fast frequency response)

#### Embedded and Behind-the meter (BTM) Benefits

- Benefits that embedded/BTM assets or demand consumers receive for reducing net demand on the system by avoiding certain costs
- Transmission Network Use of System (TNUoS): Payments for relieving peak transmission network demand. Split into the Embedded Export Tariff (Distribution connected) and Gross Half-hourly Tariff (BTM)
- Generator Distribution Use of System (GDUoS): Payments for relieving peak distribution network demand
- Balancing Service Use of System (BSUoS): Payments for reducing balancing charges
- CM Supplier Ch/arge: Payments to maintain yearly CM contract obligations



### Local Flexibility Markets

- Maintains operational grid requirements and provides secondary balancing through sub second to minutes long response
- Contracted in advance on monthly-yearly basis



# **Understanding duration terminologies**

Three key terms are important in understanding battery assets: Rated Power, Energy Capacity, and Duration **Rated Power Energy Capacity** Duration the maximum amount of power a BESS the maximum amount of stored energy the length of time for which a BESS that a BESS asset can hold asset can charge or discharge at any asset can discharge at its full Rated given time Power MegaWatts (MW) **MegaWatt Hours (MWh)** Hours (h) Examples **Rated Power** Duration **Energy Capacity 10MW** 10MWh 1h (a 10MW BESS asset with an Energy Capacity of 10MWh can discharge at its full Rated Power for 1hr) **10MW** 20MWh 2h (a 10MW BESS asset with an Energy Capacity of 20MWh can discharge at its full Rated Power for 2hrs)



## Benefits of increased battery storage duration

A battery's 'duration' is the ratio between the stored energy capacity (MWh) and rated power (MW) of an asset. It defines how long it takes a battery to discharge from full to no charge

#### **Ancillary Services:**

power (MW) is the determining factor for how much BESS assets can make in ancillary services. This is important because ancillary services have been the dominant revenue stream for BESS. The reason BESS assets are so well suited to these services is their fast response time, not their ability to provide power for long durations. Since the energy throughput required to provide ancillary services is relatively low, a 2h system has limited additional benefit.

#### Wholesale Markets:

The ability to trade over multiple auction blocks in wholesale markets means that 2h assets can capture larger revenues than 1h assets. The fact that 2h systems can earn more in merchant markets may sound appealing, but price spike events haven't historically happened very often.

#### Balancing Mechanism:

Longer-duration assets are theoretically capable of procuring larger revenues in the BM than shorter-duration assets. However, due to the lack of consistent BM opportunities, it is difficult to make the commercial case for a BESS asset of any duration based significantly on its suitability in this market.

#### Capacity Market:

The CM provides long-term contracts for BESS assets, paying them on a £/MW basis for their availability to provide capacity if a system stress event occurs.

- 2h assets can earn ~2x that of 1h assets in CM revenues (for contracts awarded in the same auction).
- On average, CM revenues make up 13% of income.





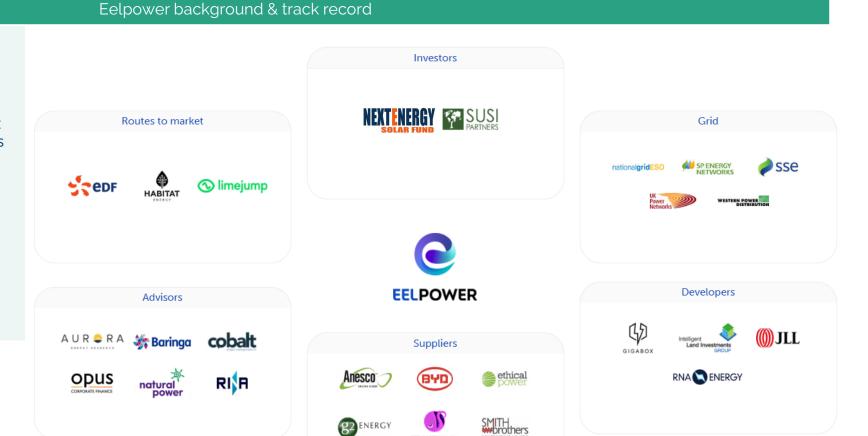






## **Eelpower partner selection**

- Eelpower is a specialist in the UK battery market with a strong track record and extensive experience in the delivery, management, and optimisation of battery storage assets in the UK
- Eelpower will provide EPC and ongoing specialist asset management services to the storage assets and will source further acquisition opportunities for the JVP
- Very well connected in the energy storage universe, unlocking opportunities for NESF
- Eelpower's in-house 'Eel-Dispatch' control, data and risk management platform helps deliver an efficient turnkey asset management offering which maximises investor value for NESF





Energy storage co-location retrofit programme

- NESF has held two co-located battery assets since 2018 (Salcey Farm & Pierce Farm)
- Introduced co-located retrofit programme across the UK portfolio of 91 solar assets, with existing grid connections
- First site for a co-located battery project already identified with planning permission secured - 11MW North Norfolk solar farm, to include a 6MWh/12MWh battery system.
- Planning applications in progress at 4 more sites
- Looking at behind the meter co-located installations







## **Abbreviations**

| Term      | Definition  |
|-----------|---|
| BESS      | Battery Energy Storage System   |
| CapEx     | Capital Expenditure   |
| DNO       | Distribution Network Operator   |
| EPC       | Engineering, Procurement, Construction  |
| ESG       | Environmental, Social, Governance   |
| IDNO      | Independent Distribution Network Operator (private entity licensed by Ofgem to manage discreet sections of distribution networks and interface with National Grid transmission network) |
| IRR       | Internal Rate of Return   |
| LFP       | Lithium ferro-phosphate   |
| NEC       | NextEnergy Capital  |
| NESF      | NextEnergy Solar Fund   |
| NGESO     | National Grid Electricity System Operator   |
| NMC       | Lithium-Nikel-Manganese-Cobalt-Oxide  |
| O&M       | Operation & Maintenance   |
| OpEx      | Operational Expenditure   |
| Optimiser | Entity that manages the route to market, ensuring the battery is able to generate anticipated revenues  |
| OtL       | Option to Lease   |
| ROFO      | Right of First Offer  |
| RTB       | Ready to Build  |
| RTM       | Route to Market (contracts that allow battery to take part in revenue generating services)  |
| SHA       | Shareholder Agreement   |
| SHL       | Shareholder Loan  |
| TA        | Technical Advisor   |



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