# TIMERA BATTERY SERVICE



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Empowering you with robust & configurable GB battery analysis



## TIMERA BATTERY SERVICE OVERVIEW

#### **About Timera Energy**

- Specialist energy consultancy focused on flexible asset investment
- Leading team of storage experts with extensive practical commercial experience
- Unique stochastic battery model widely used to support asset investment
- We advise many of Europe's leading battery investors

#### Timera's clients include



#### What does the Battery Service include?

A. Battery Investment Tool (Quarterly)
Highly configurable Tool to allow you to value wide range of GB BESS assets

B. Storage Report (Bi-annual)

Latest data driven analysis & conclusions to support commercial & investment decision making

C. Talk to the experts (Bi-annual)

'One on one' workshop with Timera's team of storage experts



Case: P90 energy arbitrage					
Values real 2022		2023	2024	2025	2026
Running					
Cycles per day		1.76	1.93	1.90	1.96
Charge	GWh	73.03	78.11	74.26	74.30
Discharge	GWh	63.54	67.96	64.61	64.64
Battery start of year	%	100%	98%	95%	92%
Cell replacement?		1.00	0.00	0.00	0.00
Battery state at end of year	%	99%	97%	94%	91%
Revenue					
Wholesale	£/kW	158.32	125.85	110.28	112.97
W-D & BM	£/kW	53.20	50.34	56.71	50.01
Energy	£/kW	211.52	176.19	166.99	162.98
DC	£/kW	5.20	3.80	2.32	1.49
FFR	£/kW	1.10	0.87	0.52	0.35
CM auction price	£/kW	5.67	22.50	22.50	22.50
CM achieved	£/kW	1.13	4.49	4.49	4.49
Other	£/kW	7.43	9.16	7.33	6.33
Total revenue	£/kW	232.05	217.01	204.15	198.15
	Values real 2022  Running Cycles per day Charge Discharge Battery start of year Cell replacement? Battery state at end of year  Revenue Wholesale W-D & BM Energy DC FFR CM auction price CM achieved Other	Values real 2022  Running Cycles per day Charge GWh Discharge GWh Battery start of year Cell replacement? Battery state at end of year  Wholesale £/kW W-D & BM £/kW Energy £/kW DC £/kW CM auction price £/kW CM auction price £/kW CM achieved £/kW Other £/kW CM CM cheeved £/kW CM cM cheeved £/kW CM cM cheeved £/kW	Values real 2022   2023   Running	Values real 2022         2023         2024           Running         8         1.76         1.93           Charge         GWh         63.54         67.96           Battery start of year         %         100%         98%           Cell replacement?         1.00         0.00           Battery state at end of year         %         98%         97%           Revenue         ***         ***         158.32         125.85           W-D & BM         E/kW         53.20         50.34           Energy         E/kW         211.52         176.19           DC         E/kW         5.20         3.80           FFR         E/kW         1.10         0.87           CM auction price         E/kW         5.67         22.50           CM achieved         E/kW         1.13         4.49           Other         E/kW         7.43         9.16	Values real 2022         2023         2024         2025           Running         T.76         1.93         1.90           Cycles per day         1.76         1.93         78.11         74.26           Discharge         GWh         63.54         67.96         64.61           Battery start of year         %         100%         98%         95%           Cell replacement?         1.00         0.00         0.00           Battery state at end of year         %         95         95%         94%           Revenue         Wholesale         £/kW         158.32         125.85         110.28         110.28           W-D & BM         £/kW         53.20         50.34         56.71         166.99           DC         £/kW         21.52         176.19         166.99           FFR         £/kW         1.10         0.87         0.52           CM auction price         £/kW         5.67         22.50         22.50           CM delived         £/kW         1.13         4.49         4.49           Other         £/kW         7.43         9.16         7.33

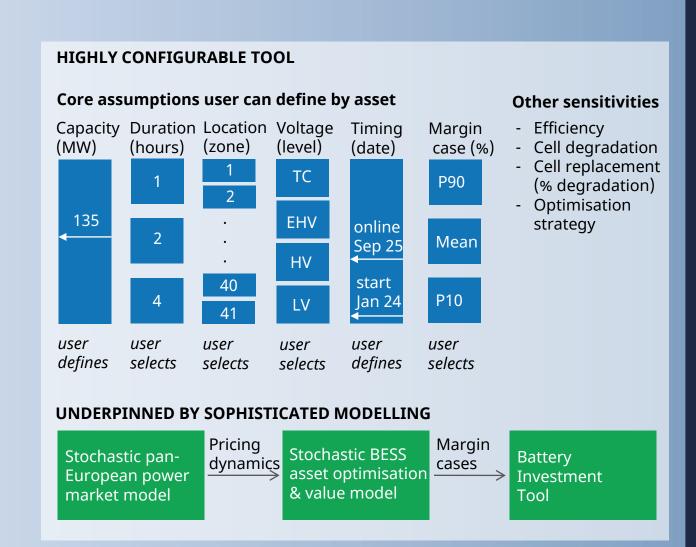
# A. TIMERA BATTERY INVESTMENT TOOL

## **Empowering investment decisions**

- Investors are faced with a broad & constantly evolving range of BESS project options & configurations
- Our Tool empowers investors with robust & configurable analysis to support effective investment decision making
- Data in the Tool is regularly updated using our industry leading stochastic battery model
- Many leading investors are using the Tool to develop & acquire BESS assets in the GB market

#### Features of the tool

- 1. Highly configurable to value broad range of BESS sites
- 2. User can define a range of value sensitivities
- 3. Full set of revenue, opex & capex lines for asset valuation
- 4. Robust capture of degradation impact on cell opex / capex
- 5. Underpinned by sophisticated market & asset modelling



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# **B. TIMERA BATTERY REPORT**

## **Industry leading Battery Report**

- Our bi-annual Report provides battery investors with unique analysis of market & asset value drivers
- It contains extensive data driven analysis to support commercial & investment decision making
- The report draws on our unique market intelligence & practical experience working with storage investors, traders & offtakers

## **Summary of contents**

- Key value drivers & risks impacting storage asset value & investment
- 2. Detailed analysis of storage market drivers (spreads, volatility, balancing & ancillary prices)
- 3. Investment drivers (policy, offtake contracts, financing conditions, project pipeline)
- 4. Extensive BESS asset margin stack analysis
  - Back testing of range of BESS asset margins
  - Projections of BESS revenue stack to 2050 & market drivers
- Timera GB Central Market Scenario (S&D balance, prices / spreads / volatility, CSS, RES capture prices)

#### **REPORT FEATURES**

Concise & engaging narrative & conclusions

Highlighting emerging trends & risks

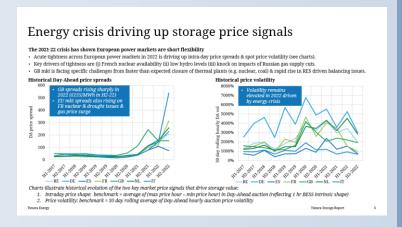
Data driven analysis of market & value drivers

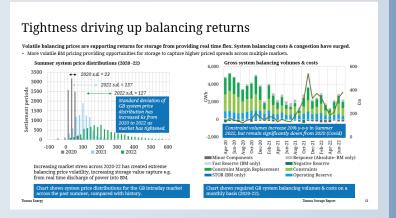
Unique stochastic analysis & modelling

Historical & projected BESS margin analysis

Key takeaways to support decision making

#### Two example pages\*





\*Copy of a sample version of Report available on request

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# WHY CHOOSE TIMERA'S SERVICE?

We set out 5 factors below that we believe differentiate our service from other available products

Differentiator	Summary
1. Storage expertise	<ul> <li>You get regular access to our team of leading storage experts</li> <li>We have extensive commercial expertise dispatching, optimising &amp; investing in storage assets</li> </ul>
2. Unique model	<ul> <li>Our analysis is backed by Timera's sophisticated stochastic BESS optimisation &amp; valuation model</li> <li>Co-optimised full revenue stack capture across ancillaries, Day-Ahead, Within-Day &amp; BM</li> </ul>
3. Configuration	<ul> <li>Our Battery Investment Tool empowers you to configure analysis to support your decision making</li> <li>You gain the ability to quantify value &amp; sensitivities across a wide range of BESS assets &amp; sites</li> </ul>
4. Unique analysis	<ul> <li>Our Report contains extensive data driven analysis specifically focused on BESS assets</li> <li>We provide you with unique distribution analysis of revenue stack &amp; market value drivers</li> </ul>
5. Track record	<ul> <li>Our client base includes a wide range of Europe's leading BESS investors</li> <li>Our analysis and Battery Investment Tool has a strong track record supporting capital deployment</li> </ul>

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## TIMERA BATTERY SERVICE SUBSCRIPTION

## What do I get if I subscribe?

Our service includes

- A. Battery Investment Tool populated with latest projections of revenue stack, opex & capex to 2050 covering all BESS configurations (Quarterly)
- B. Timera Battery Report with detailed up to date analysis of market & asset value drivers (Bi-annual)
- C. 'One on one' workshop with Timera's team of storage experts to review & challenge Tool & Report (Bi-annual)

#### Contact us to find out more

We are happy to provide a working version of the Tool and a copy of a sample version of Storage Report for you to review.

We can then discuss your requirements and configure a subscription service offer to suit your needs.

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