



HABITAT

ENERGY

BESS revenue maximization in ERCOT: The golden age?

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Co-founder and Chief Strategy Officer

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Agenda

- Introducing Habitat Energy
- The golden age of battery storage?
- How to maximize revenue from battery storage



Introducing Habitat Energy

Habitat Energy provides an end-to-end optimization service for grid scale storage and renewables

- Algorithmic trading platform (“software”)
- Route to market/QSE
- Human trader oversight and risk management
- Asset intelligence





Introducing Habitat Energy

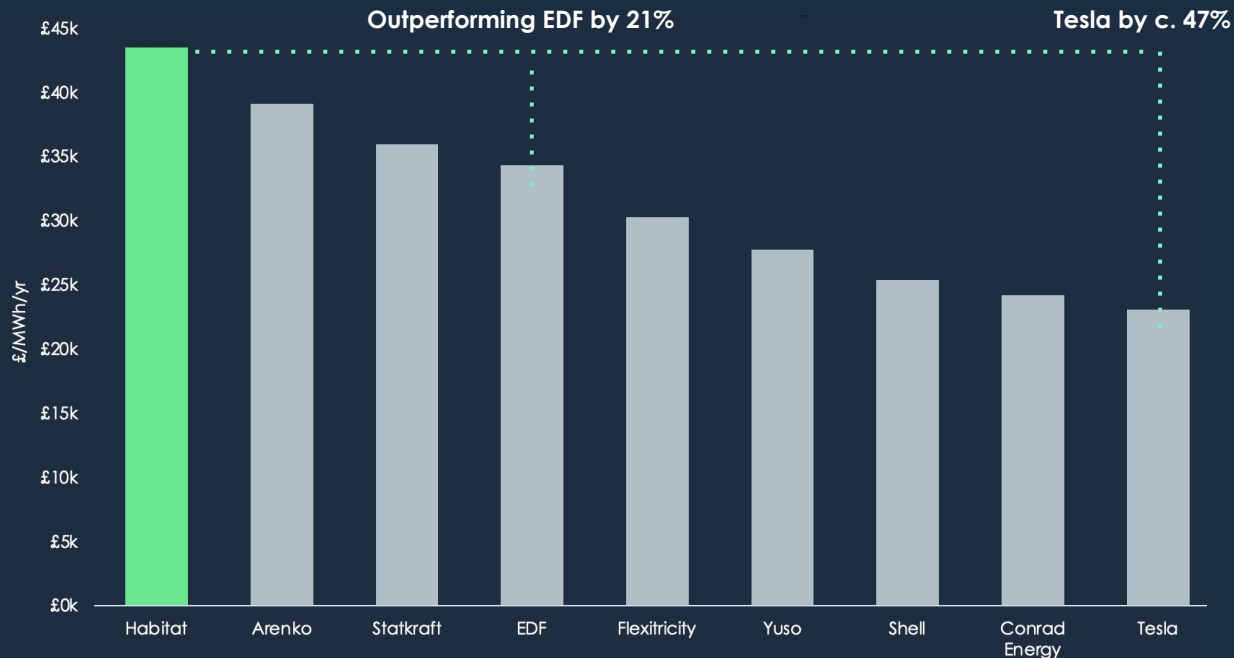
- **Founded in Oxford, England in 2017** with offices also in Austin, Texas and Melbourne Australia
- **~90 employees worldwide** including power traders, AI/ML data scientists, software engineers
- **Over 2.5 GW of capacity** coming under management globally in 2024





Habitat is established as a market leader in the UK

UK optimiser performance Feb 2023 - Jan 2024*

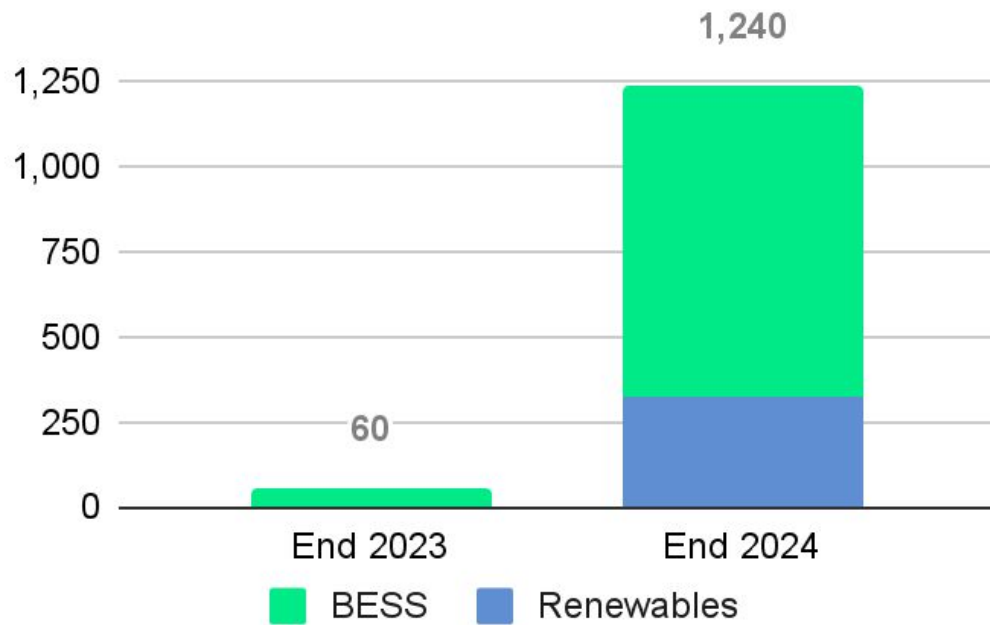


* Top 9 (of 20+) optimization service providers based on independent 3rd party data from LCP Enact UK BESS leaderboard



Habitat's ERCOT portfolio will soon exceed 1.2 GW

Habitat Energy assets under management in ERCOT, MW



Glidepath Energy's 50 MW Byrd Ranch BESS asset, Sweeney, TX, optimized by Habitat Energy



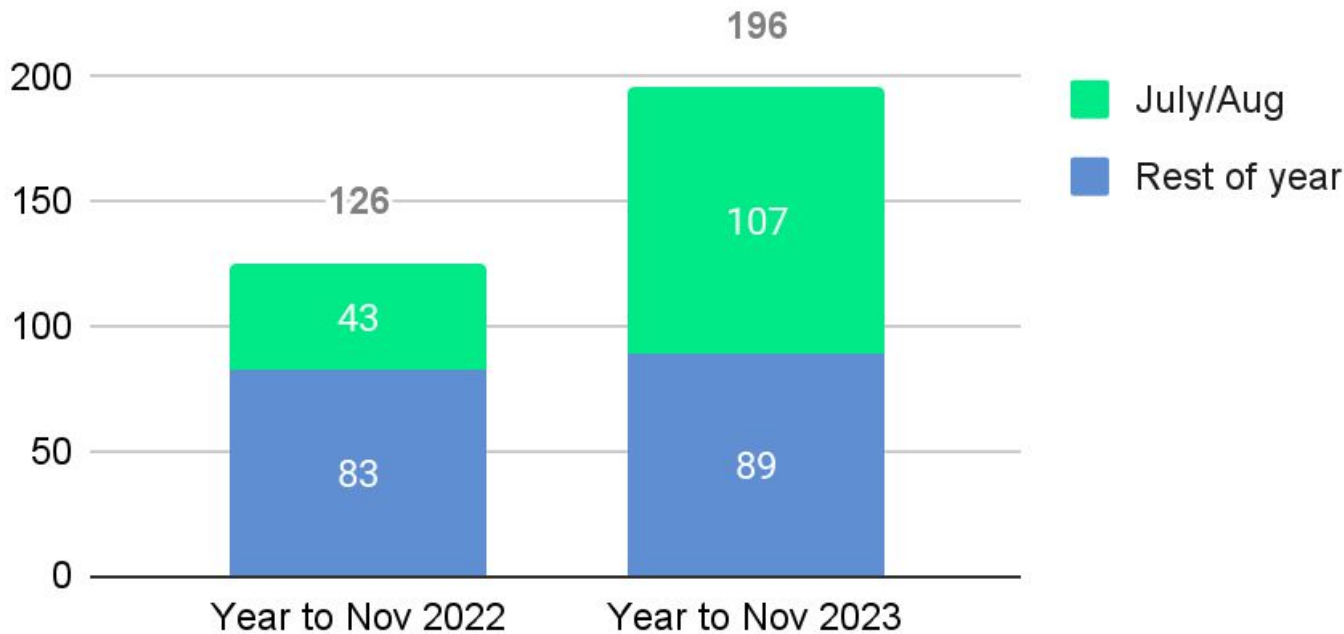
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Across ERCOT, average BESS revenue up 56% over previous year

Revenue per available kW per year

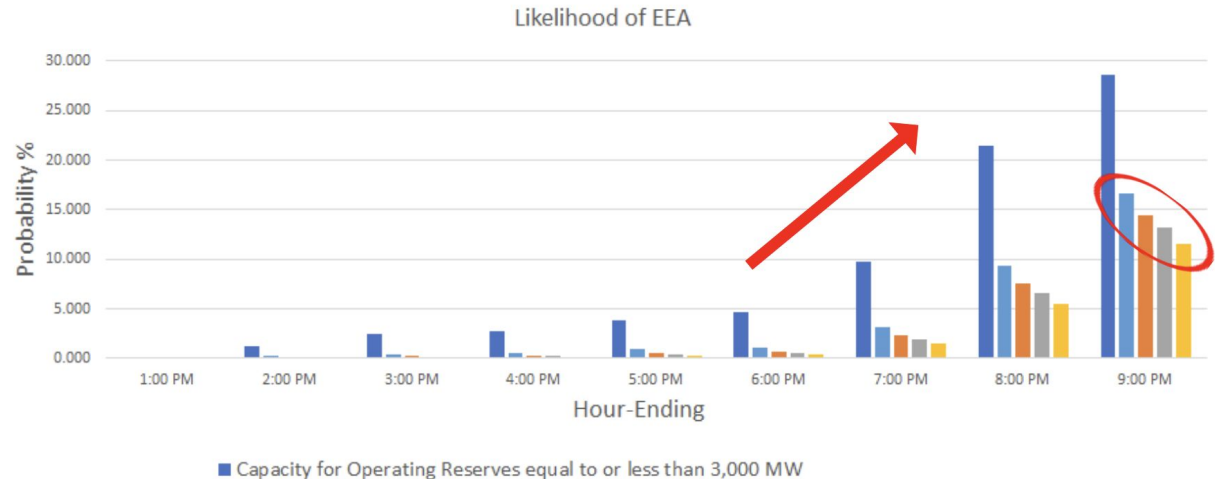




There are good reasons to believe that high volatility and BESS revenue will persist

- '23-'24 load growth in MW (3%) and MWh (6%) suggest strong fundamentals and a flatter demand profile
- New summer gen '23-'24 is 80+% solar (14 GW->20 GW)
- ERCOT Probabilistic Reserve Model (PRM) has net load peaks during sunset
- ORDC curve is ~3GW wide, small error in renewable forecast or gas ramping enough to stress system

EEA / Rotating Load Shed Probabilities by Hour Summer 2023



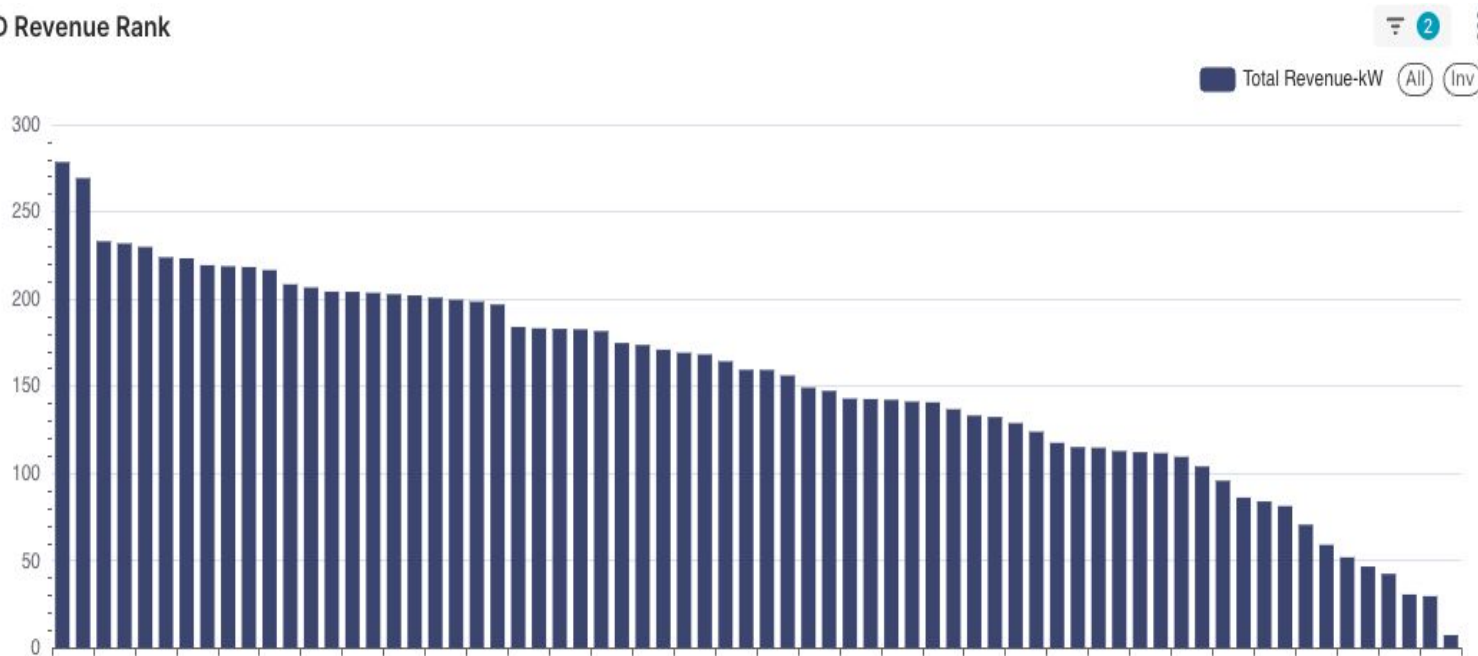
Key Takeaway: Due to higher solar penetration, EEA risk shifts from late afternoon to early evening as solar production diminishes



However, there is significant variation in revenue performance across BESS assets

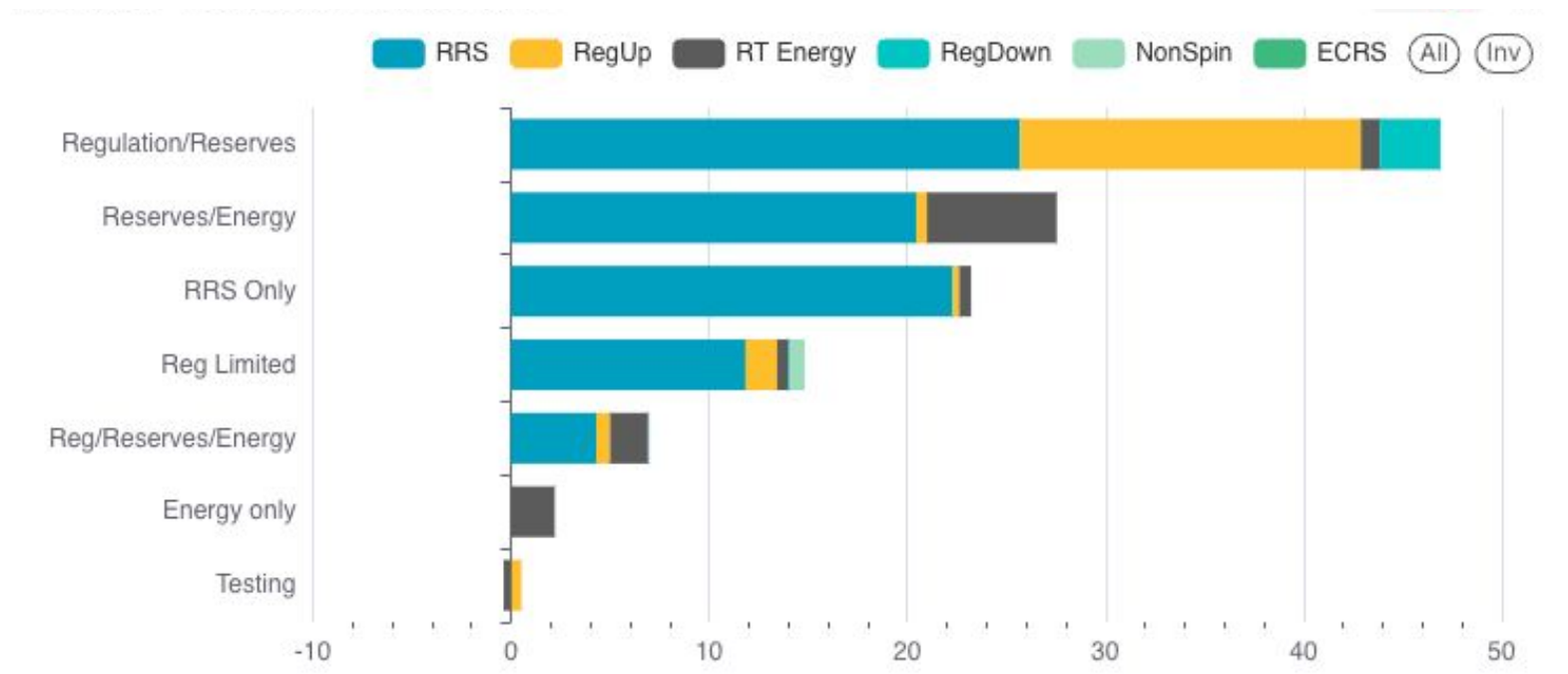
Revenue per available kW by asset, Dec 2022-Nov 2023

60D Revenue Rank



Assets with most flexible diverse product stack deliver highest revenues

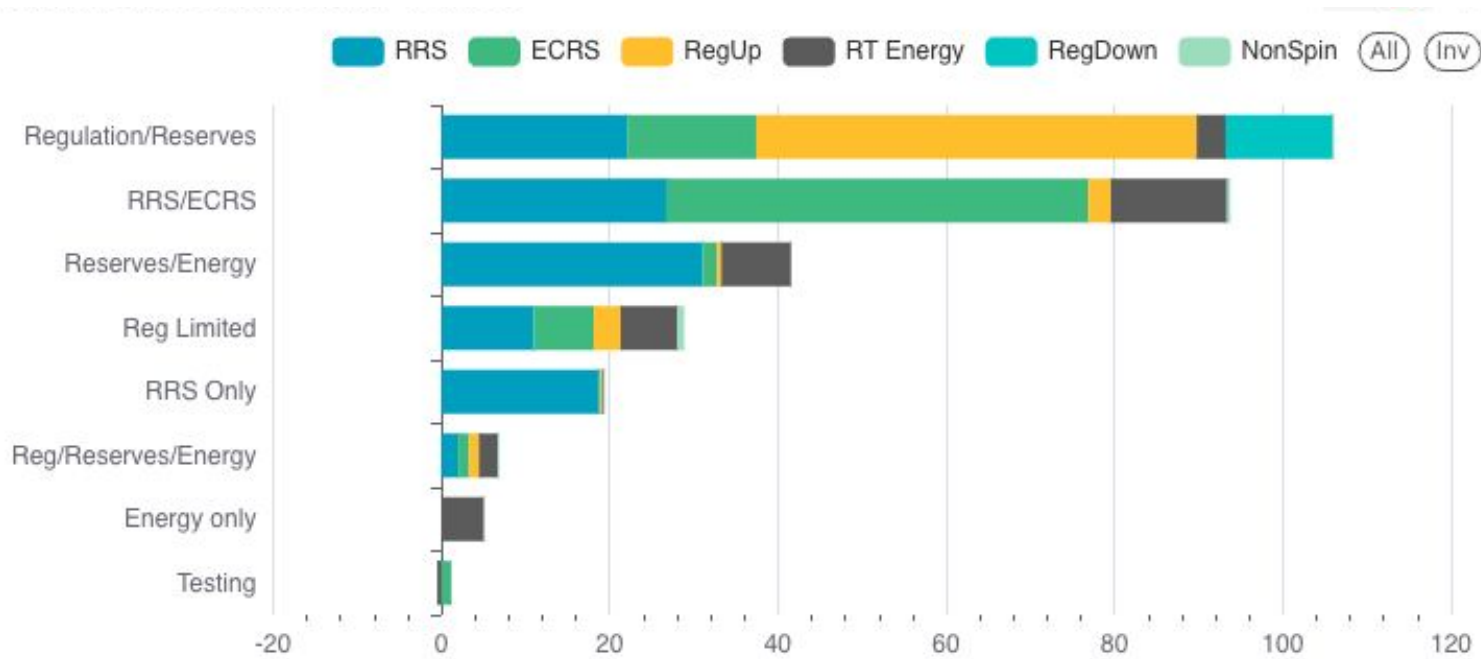
Revenue performance by product strategy June - Nov 2022, \$/kW



Source: ERCOT 60 day data

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Revenue performance by product strategy June - Nov 2023, \$/kW



Habitat stacks all products and balances risk/reward of ancillary vs energy participation





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There are four elements required to monetize a BESS asset in ERCOT

**1. Algorithmic
trading
platform**

**2. Level 4
QSE**

**3. Human
traders & risk
management**

**4. Asset
intelligence**

1. Algorithmic Trading Platform - Habitat approach



- AI/ML driven probabilistic forecasting
- Algorithmically-led client bespoke optimization
- Energy offer curves updated on 5 min granularity in RT
- Automated SOC management & updated min / max SoC bounds
- Customized trading and risk policy
- Backtest capability



1. Algorithmic Trading Platform - Habitat approach



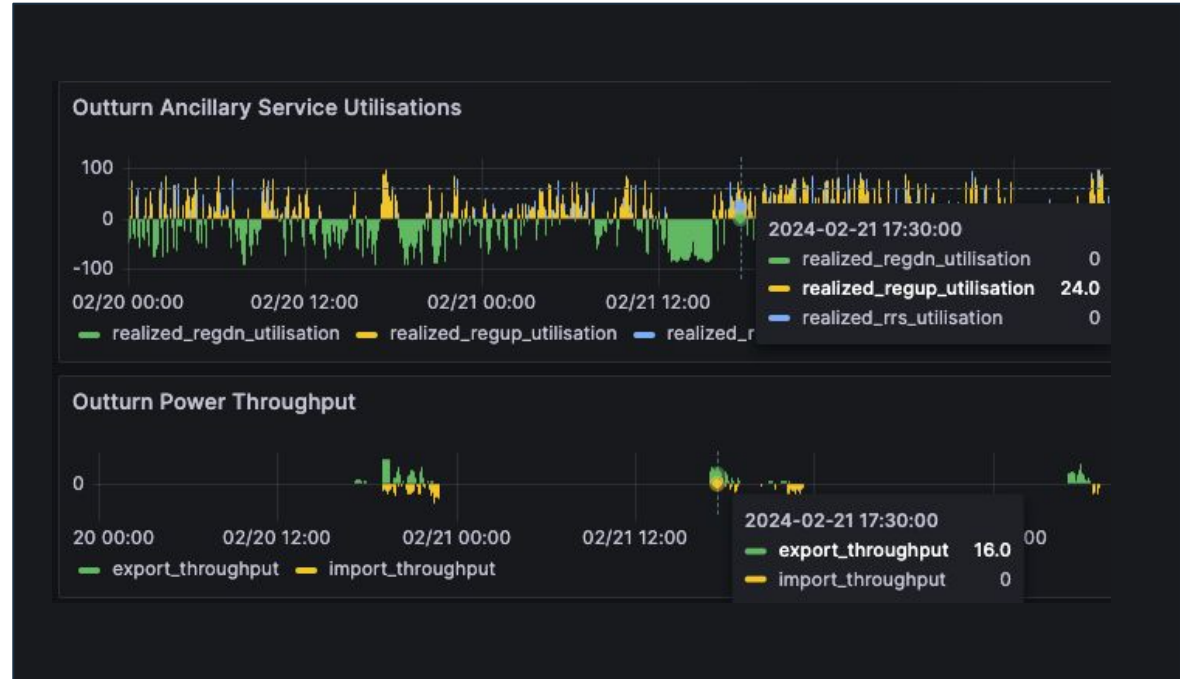
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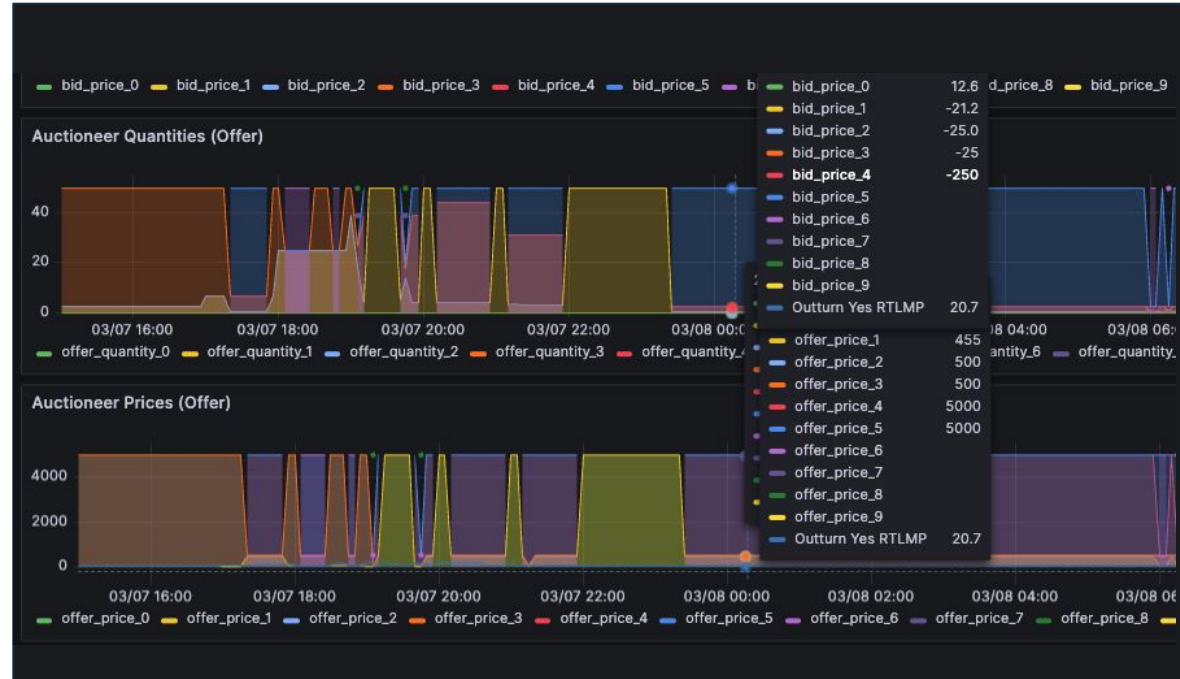
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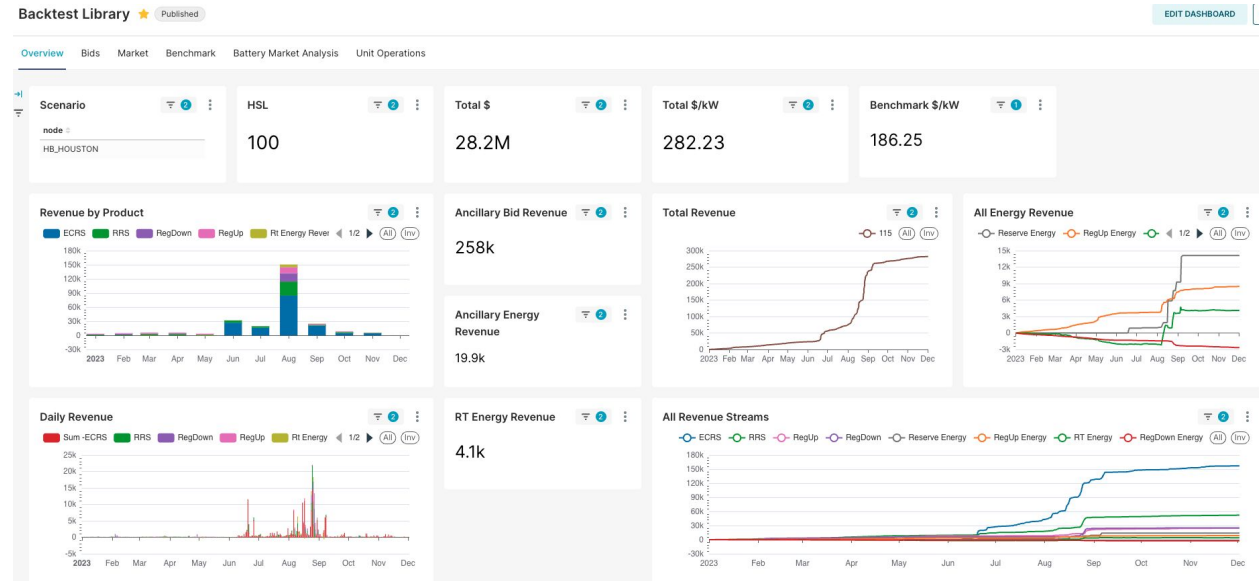
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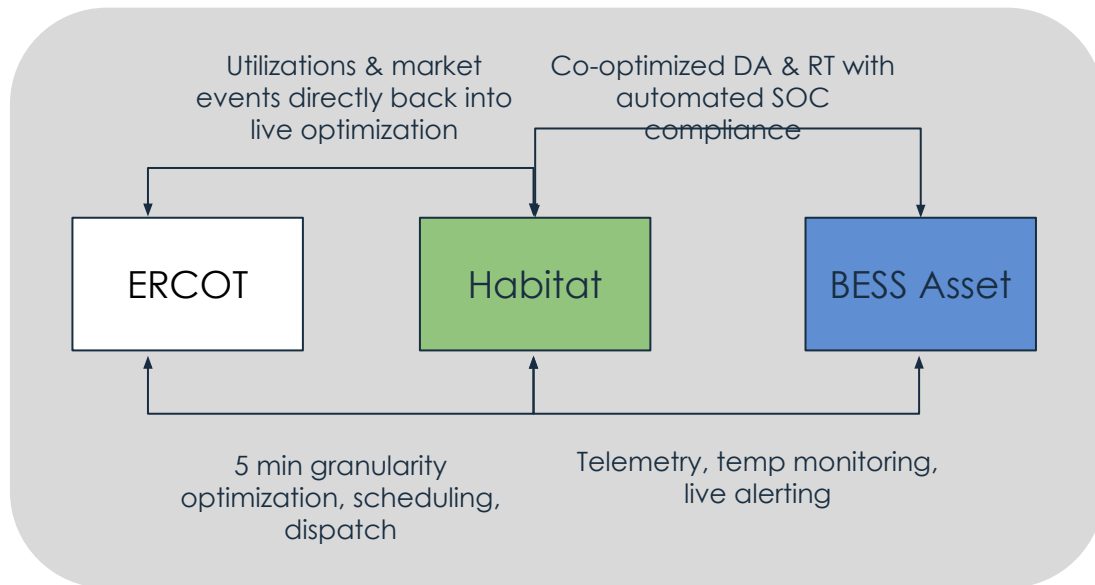
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2. QSE Services - Habitat approach



- Level 4 qualified
- 24/7 operational oversight
- Asset configuration, qualification and registration with ERCOT
- Manage COP & price curve submissions as well as scheduling & dispatch
- Bilateral trades to cover SASM events
- Dynamic credit management
- Comprehensive settlement and operational reporting





3. Human Traders & Risk Management - Habitat approach

- Enhance value capture by overseeing and steering algorithmic tools
- Visibility into software 'black box', two way feedback
- Create RT flexibility and access to vital liquidity
- Short term hedging to capture full value of asset
- Long term risk management eg tolls/floors structuring and origination



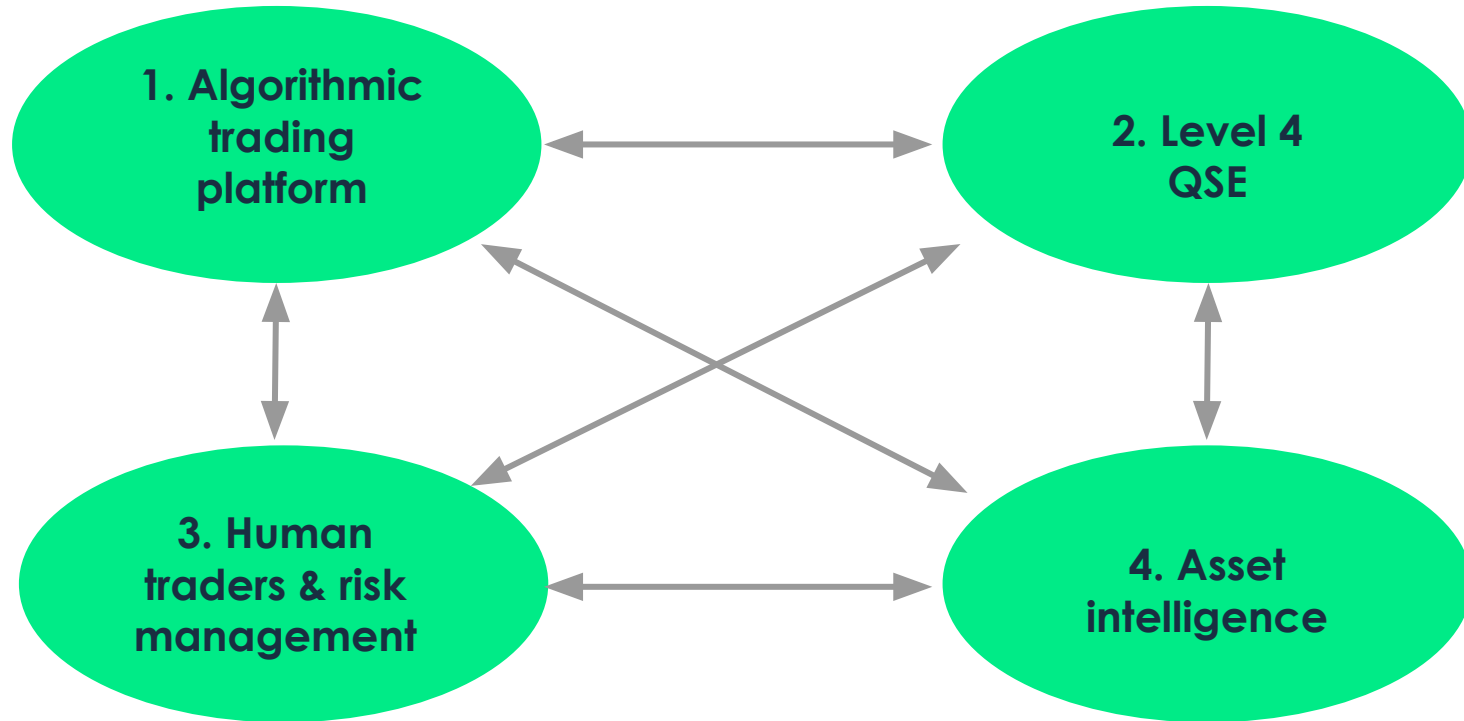


4. Asset Intelligence - Habitat approach

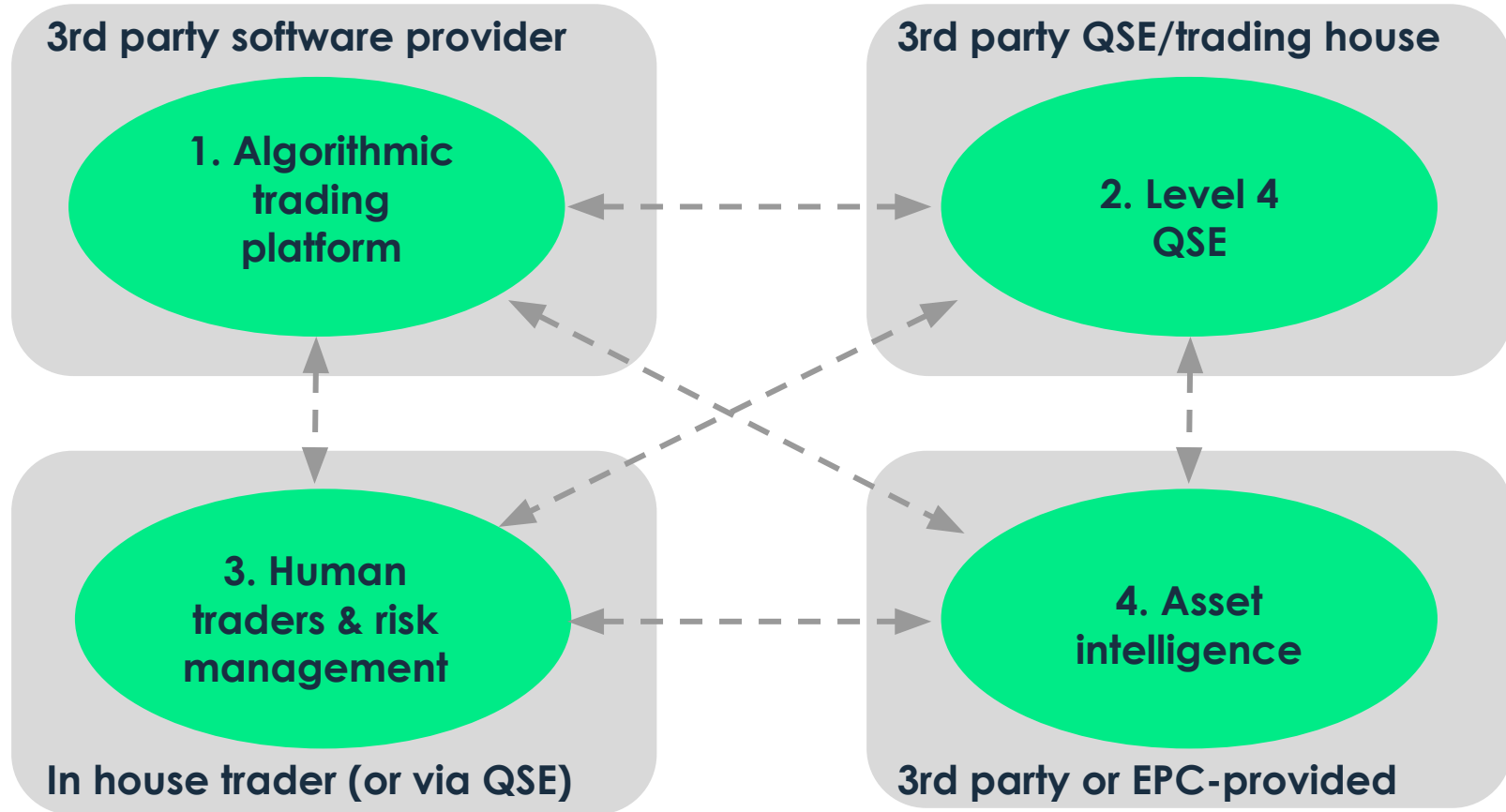
- Alerting & alarming based on live telemetry'
- Integrated with site SCADA for SoC bounds, temperature limits, market events (e.g., AS deployments)
- Outage management
- Full alignment of operational capabilities with trading & dispatch
- Coordination between market conditions and O&M
- Predictive thermal models, dynamic degradation mgmt



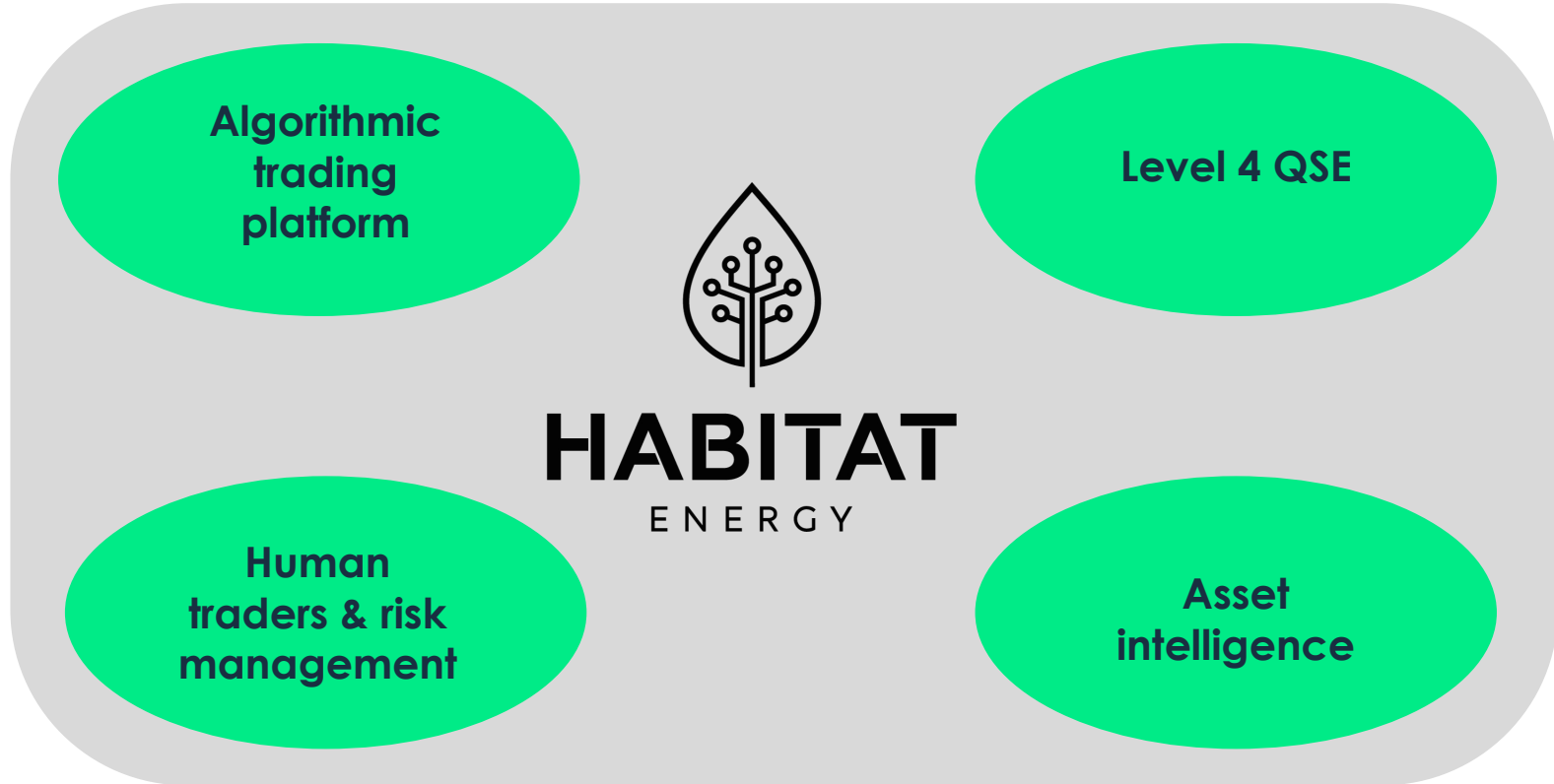
The four elements of revenue generation are closely interlinked



A piecemeal approach to sourcing can cause misalignment and leak value at interfaces



The Habitat approach: a single, fully integrated service covers all four elements





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