



Maximising Revenues of Flexible Energy Assets

Four Lessons for Asset Managers

Battery Asset Management Summit Europe

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entrixenergy.com



Intro Entrix: we're an optimiser and leading infrastructure investors use our solution to trade their batteries and VPPs

Customer spotlights



Aquila works with us on their **first two storage projects in Germany** (>100MW)



For Encavis, we optimise **batteries together with renewables**



We're the exclusive partner for **Europe's largest residential VPP**

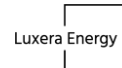
First project live since

2022

>800 MW

under management

Further project references



400 MW

going live in 12
projects in 2025

Lesson 1: Make sure that your optimiser maximises the full revenue stack and has a tailored concept for your market

HOW OPTIMISERS GENERATE RETURNS

TRADING
*Buying at low prices
Selling at high prices*

ANCILLARY SERVICES
Stabilising the grid

(CAPACITY MARKET)
*Ensuring future
reliability*



Revenues



Costs

DEGRADATION
of cells



Return

The devil is in the detail – **each country** needs a **tailored approach**.

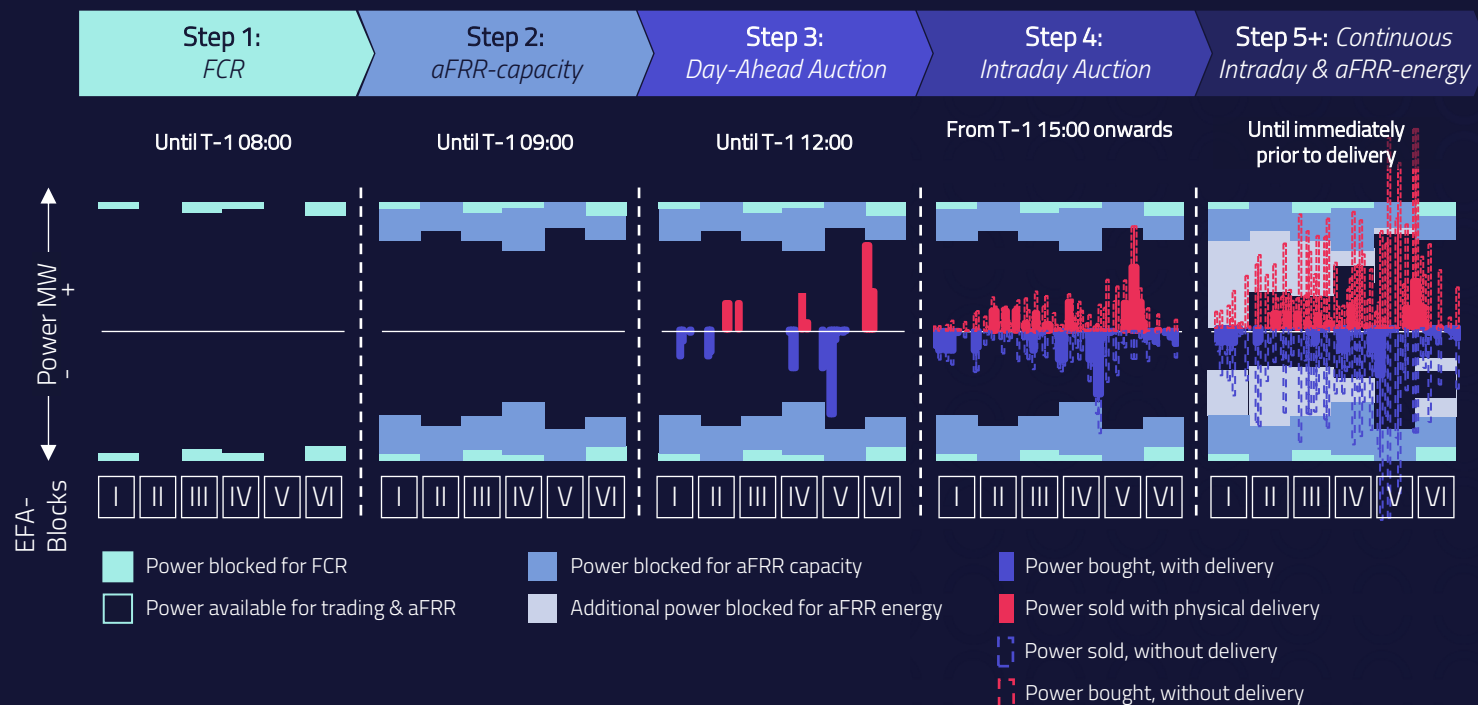
Particularities to be considered include:

- Available revenue streams
- Bidding times
- Market depth & liquidity
- Regulatory requirements

All those **requirements change frequently**.

Lesson 1: Make sure that your optimiser maximises the full revenue stack and has a tailored concept for your market

WHAT ALGOS DO EVERY DAY (EXAMPLE: GERMANY)



AI helps to **distribute flexibility perfectly** across the various revenue streams

Re-optimisation in **real-time** based on the latest market data

95% of trades are virtual: generating revenue without degrading the battery

Lesson 2: Start planning your go-lives early and involve all stakeholders from the beginning

EXAMPLES OF KEY CONSIDERATIONS



Regulatory & Commercial Setup

Clarify and align on the regulatory requirements of the delivery concept (metering, market communication, tech for revenue streams) as well as the financing contract terms early on.



Data Access

During negotiations with OEMs, secure access to BESS data and ensure the right to share it with partners (e.g., data on available power, cell temperature, and inverter status).



EMS & Interfaces

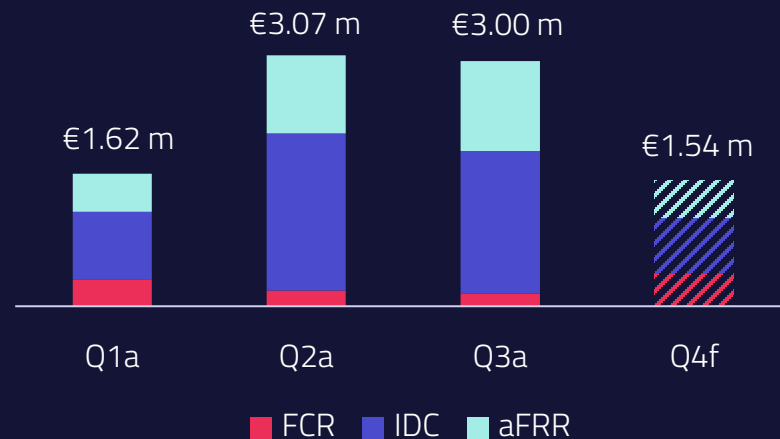
Reduce scope gaps between the plant control systems from the OEM to the market. And don't forget about the BOP.

Especially in new markets, seek partners with a holistic approach who are aware of other stakeholders.



Lesson 3: Be aware of the seasonality effects when structuring your debt services

EXEMPLARY REVENUES OF A 10 MW / 20 MWH ASSET (2024)



Revenues for BESS are typically highest during the summer months, driven by high renewable energy production and increased market volatility.

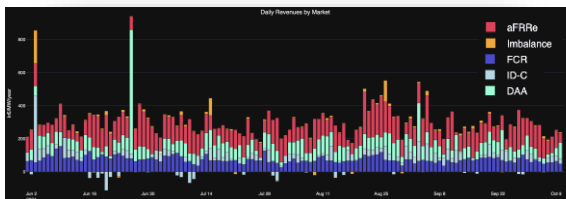
In contrast, winter months often see reduced revenues due to lower market volatility and decreased demand for ancillary services.

This seasonal revenue fluctuation must be carefully considered, particularly when the asset requires consistent debt repayments throughout the year.

Debt services must be structured to align with the asset's seasonal cash flow variations, ensuring that repayment obligations can be met.

Lesson 4: Carefully consider which offtake structure makes sense, i.e. what blend of merchant vs. contracted revenues fits your needs

Storage revenues already naturally hedge portfolios heavily weighted with renewables

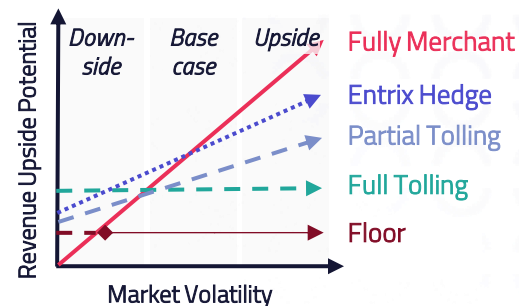


Level and origin of BESS revenues over the year

The **best days** for storage were the **worst for renewables**

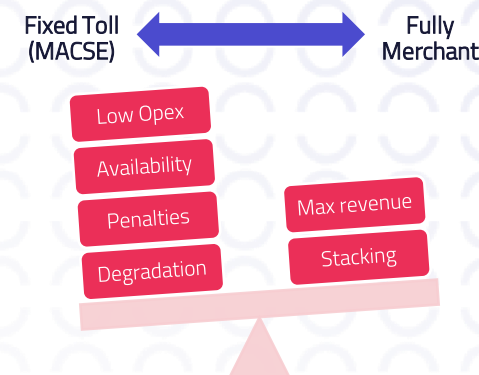
If needed, additional revenue contracting can help build the desired risk-return profile

Risk / return profile of commercial options



Avoid **unfairly priced** tolling agreements from **non-flex utilities**

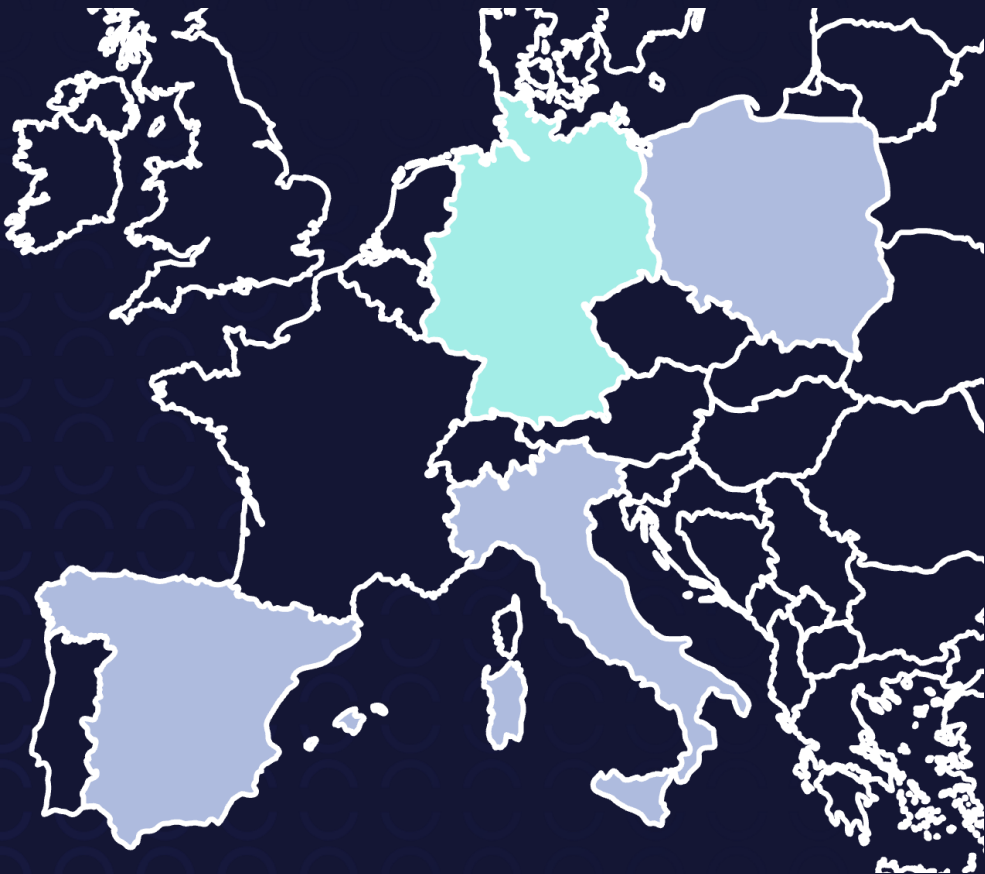
Depending on the market environment, additional contracted revenues might not be the main focus to maximise returns



Find an **optimiser** who structures revenues and operations according to your **risk-return profile**

Beware of tolling agreements backed by non-flex utilities, as those agreements might not be fairly priced.

Germany is our core market and we're launching our activities in Italy, Spain, and Poland



■ Assets under Management
 ■ Further activities

Get in touch



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