

ELECTRON

How UK DSOs are taking flexibility market platforms to the next level



PRESENTED BY NICK HUNTBATCH

Meet the presenter

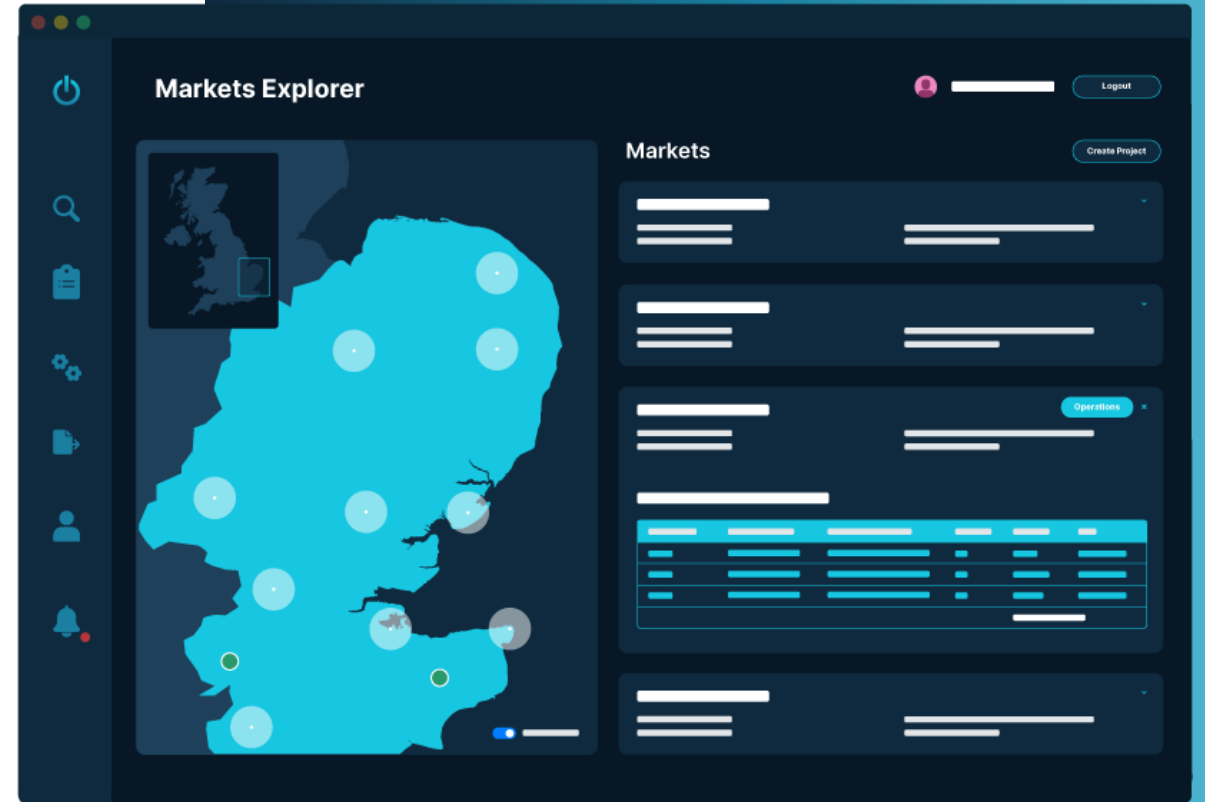
Nick Huntbatch
Head of Product, Electron



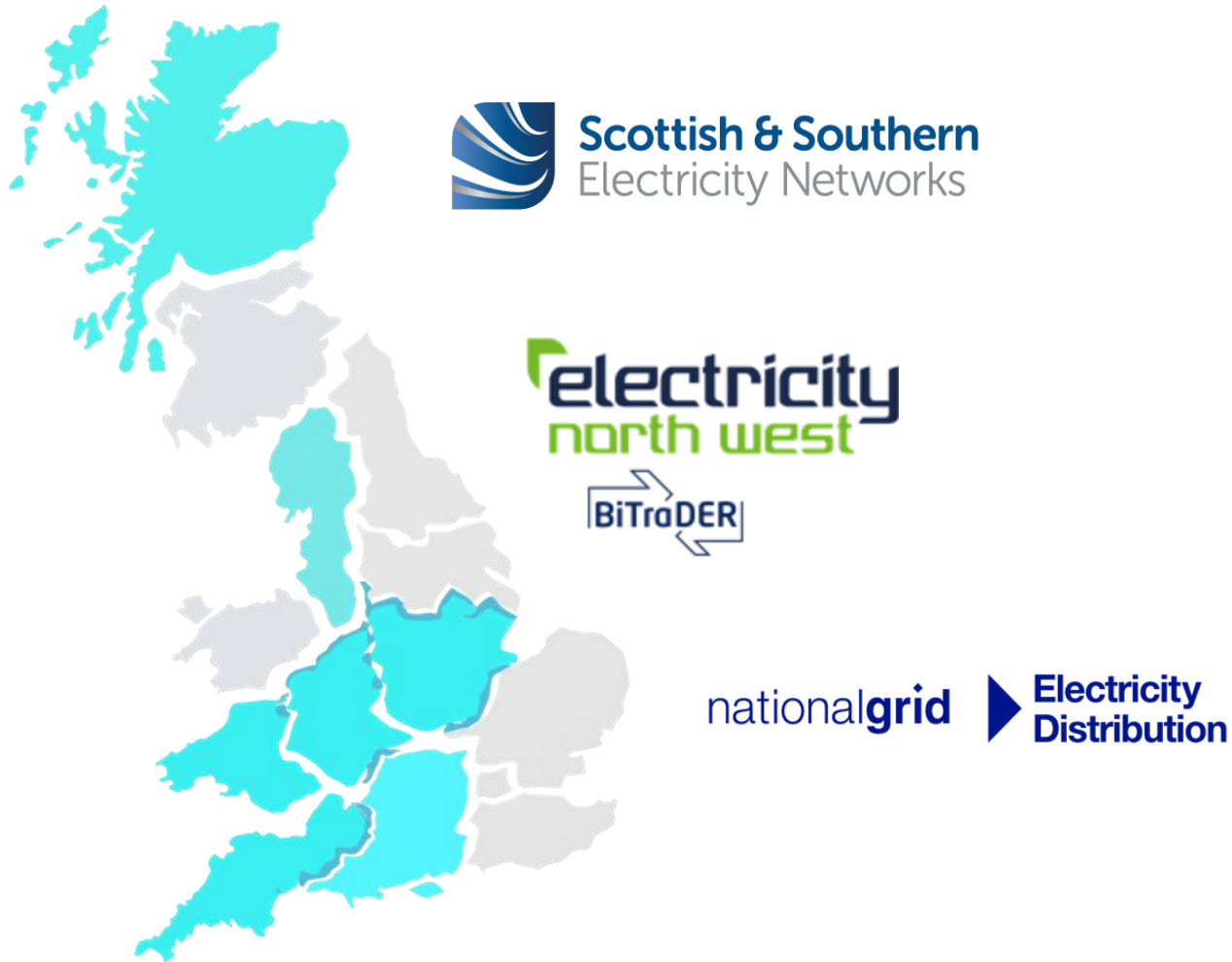
- > 15 years of experience in software product management in energy
- > Specialises in highly technical, multi-stakeholder B2B SaaS
- > Provided solutions to thousands of users across hundreds of organisations of all sizes

Summary

1. What we are doing in the UK
2. Currently live markets
3. The ElectronConnect platform
4. Future use cases for flexibility



Electron in the UK



What our customers say...

“...our latest step in making participation in distribution network flexibility more accessible for a wider range of customers”

nationalgrid

“Electron is a great partner for SSEN...with a well-aligned...vision, and a commitment to collaborative development”

Scottish & Southern Electricity Networks

“By harnessing digitalisation and prioritising customer needs...ensure that our customers have access to reliable, affordable, and sustainable energy solutions”

electricity north west

“...an extremely innovative project, and we really do expect the neutral market to transform the flexibility market”

electricity north west

Electron in the UK



Complete end-to-end flexibility platform
Integrated with Active Network Management



Modular approach
Onboarding, qualification, market matching
alongside existing systems



Innovation curtailment obligations trading
Informed by Active Network Management



**Providing new routes to market for
flexibility providers**

Electricity North West Limited

Bentham Operational Utilisation W24/25 Operations

28/06/2024, 16:00
Commercial Qualification Close

05/07/2024, 16:00
Technical Qualification Close

22/07/2024, 12:00
Bidding Window Open

02/08/2024, 17:00
Bidding Window Close

Market Details

Market Operator: Electricity North West Limited

Product Type: Operational Utilisation

Activity: Generation Turn-up, Demand Turn-down

Payment: Utilisation Only

Additional Information

Location Budget (per annum): £49759.00
Estimated Utilisation Hours: 100

Tender Information

01/11/2024
Contract Start Date

31/03/2025
Contract End Date

4 MW
Estimated Volume

Service Window (Local Time)

Monday

Tuesday

Wednesday

Thursday

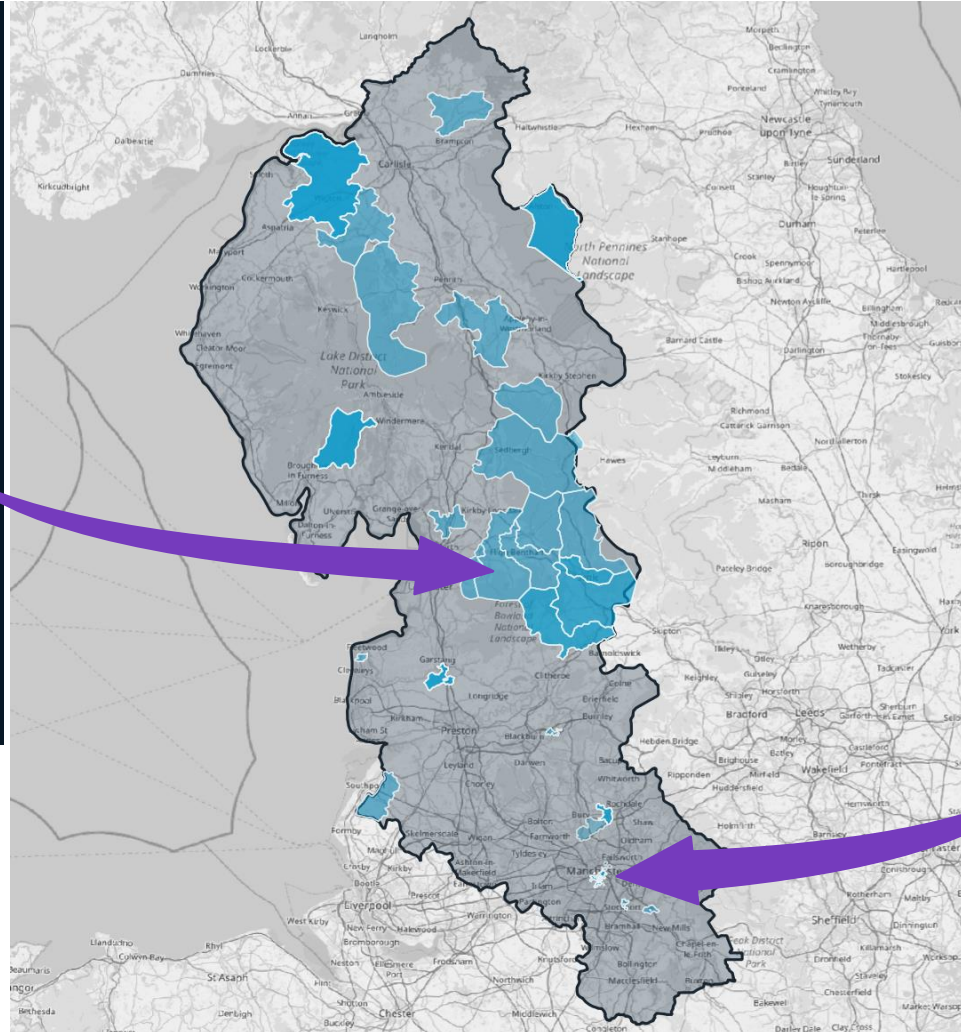
Friday

Saturday

Sunday

00:00
Start Time

00:00
Stop Time



~100 markets
~30 CMZs

Ardwick Operational Utilisation Variable Availability W24/25 Operations

28/06/2024, 16:00
Commercial Qualification Close

05/07/2024, 16:00
Technical Qualification Close

22/07/2024, 12:00
Bidding Window Open

02/08/2024, 17:00
Bidding Window Close

Market Details

Market Operator: Electricity North West Limited

Product Type: Operational Utilisation Variable Availability

Activity: Generation Turn-up, Demand Turn-down

Payment: Availability And Utilisation

Additional Information

Location Budget (per annum): £226903.00
Estimated Availability Hours: 54
Estimated Utilisation Hours: 48

Tender Information

01/12/2024
Contract Start Date

31/03/2025
Contract End Date

0.7 MW
Estimated Volume

Service Window (Local Time)

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

10:00
Start Time

19:30
Stop Time

Scottish and Southern Electricity Networks

Lytchett VAOU (WA) April 25 SEPD Operations

12/08/2024, 10:00 Commercial Qualification Close
 12/08/2024, 10:00 Technical Qualification Close
 12/08/2024, 10:00 Bidding Window Open
 26/08/2024, 12:00 Bidding Window Close

Market Details

Market Operator: Scottish and Southern Electricity Networks
 Product Type: Operational Utilisation Variable Availability
 Activity: Generation Turn-up, Demand Turn-down
 Payment: Availability And Utilisation

Additional Information

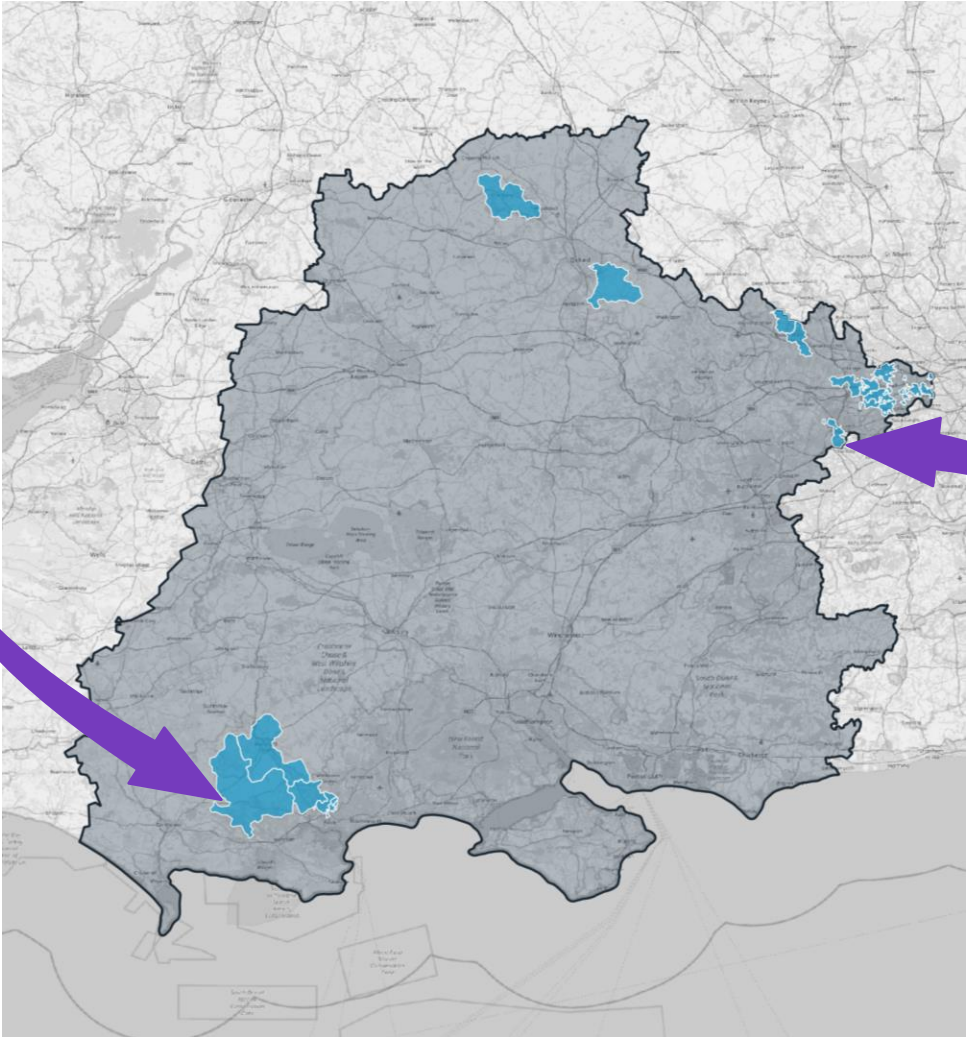
Maximum Voltage: 33kV
 Expected Budget (over contract period): £40,000
 Estimated Availability Hours (over contract period): 10.5
 Estimated Utilisation Hours (over contract period): 0.5

Tender Information

01/01/2025 Contract Start Date
 04/05/2025 Contract End Date
 4.71 MW Estimated Volume

Service Window (Local Time)

Monday 18:30 Start Time
 Tuesday
 Wednesday
 Thursday
 Friday 19:00 Stop Time
 Saturday
 Sunday



~50 markets
 ~16 CMZs

Beaconsfield VAOU (WA) April 26 SEPD Operations

12/08/2024, 10:00 Commercial Qualification Close
 12/08/2024, 10:00 Technical Qualification Close
 12/08/2024, 10:00 Bidding Window Open
 26/08/2024, 12:00 Bidding Window Close

Market Details

Market Operator: Scottish and Southern Electricity Networks
 Product Type: Operational Utilisation Variable Availability
 Activity: Generation Turn-up, Demand Turn-down
 Payment: Availability And Utilisation

Additional Information

Maximum Voltage: 11kV
 Expected Budget (over contract period): £14,000
 Estimated Availability Hours (over contract period): 21
 Estimated Utilisation Hours (over contract period): 0.5

Tender Information

01/01/2026 Contract Start Date
 03/05/2026 Contract End Date
 3.49 MW Estimated Volume

Service Window (Local Time)

Monday 18:00 Start Time
 Tuesday
 Wednesday
 Thursday
 Friday 19:00 Stop Time
 Saturday
 Sunday

Scottish and Southern Electricity Networks

Abernethy VAOU (WA) Winter 25/26 SHEPD Operations

12/08/2024, 10:00 Commercial Qualification Close 12/08/2024, 10:00 Technical Qualification Close 12/08/2024, 10:00 Bidding Window Open 26/08/2024, 12:00 Bidding Window Close

Market Details

Market Operator: Scottish and Southern Electricity Networks

Product Type: Operational Utilisation Variable Availability

Activity: Generation Turn-up, Demand Turn-down

Payment: Availability And Utilisation

Additional Information

Maximum Voltage: 11kV
 Expected Budget (over contract period): £18,000
 Estimated Availability Hours (over contract period): 104
 Estimated Utilisation Hours (over contract period): 2

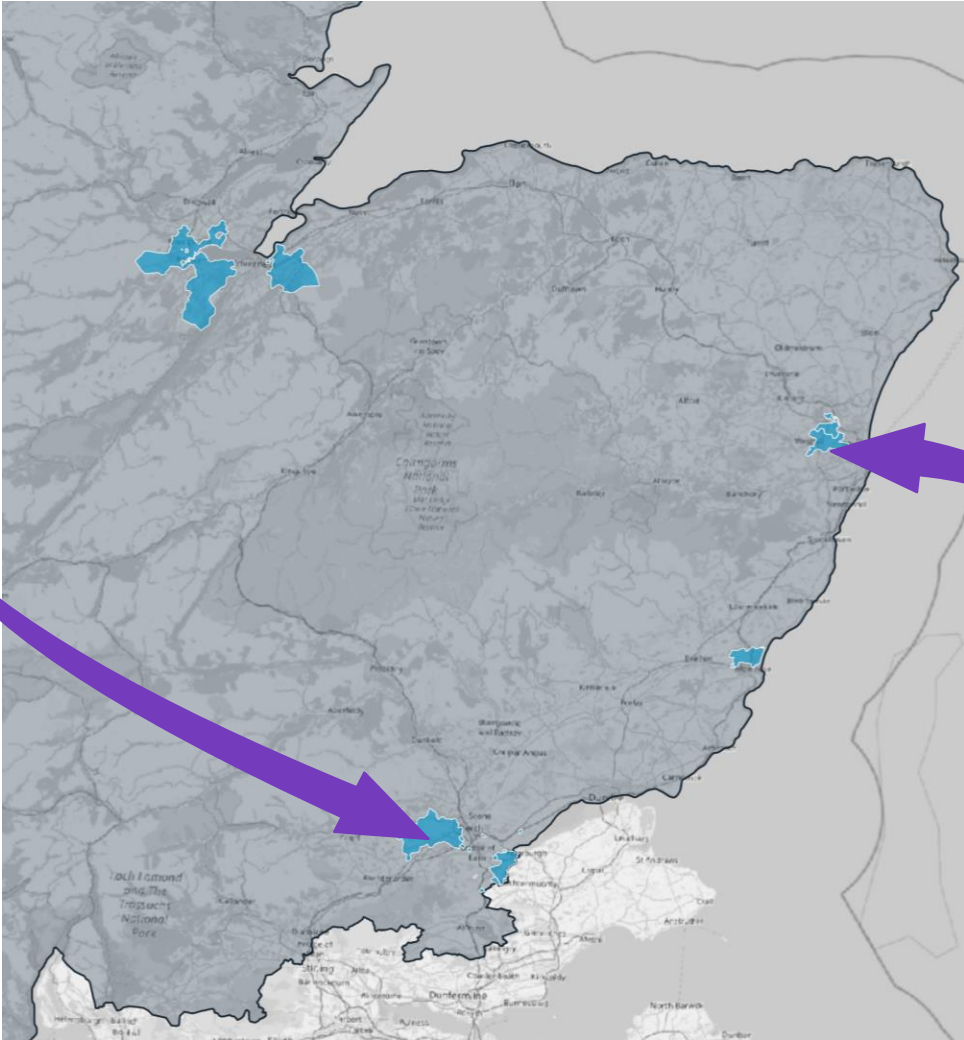
Tender Information

01/09/2025 Contract Start Date 29/03/2026 Contract End Date 0.94 MW Estimated Volume

Service Window (Local Time)

Monday Tuesday Wednesday Thursday Friday Saturday Sunday

17:30 Start Time 18:30 Stop Time



8 markets
6 CMZs

Stoneywood VAOU (WA) Winter 25/26 SHEPD Operations

12/08/2024, 10:00 Commercial Qualification Close 12/08/2024, 10:00 Technical Qualification Close 12/08/2024, 10:00 Bidding Window Open 26/08/2024, 12:00 Bidding Window Close

Market Details

Market Operator: Scottish and Southern Electricity Networks

Product Type: Operational Utilisation Variable Availability

Activity: Generation Turn-up, Demand Turn-down

Payment: Availability And Utilisation

Additional Information

Maximum Voltage: 11kV
 Expected Budget (over contract period): £14,000
 Estimated Availability Hours (over contract period): 156.5
 Estimated Utilisation Hours (over contract period): 3

Tender Information

01/09/2025 Contract Start Date 29/03/2026 Contract End Date 0.09 MW Estimated Volume

Service Window (Local Time)

Monday Tuesday Wednesday Thursday Friday Saturday Sunday

17:30 Start Time 19:00 Stop Time

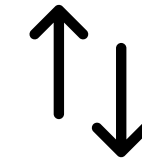
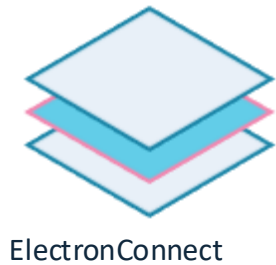
The importance of market design

Flexibility providers cohorts



'Business and technology' needs

Market platform



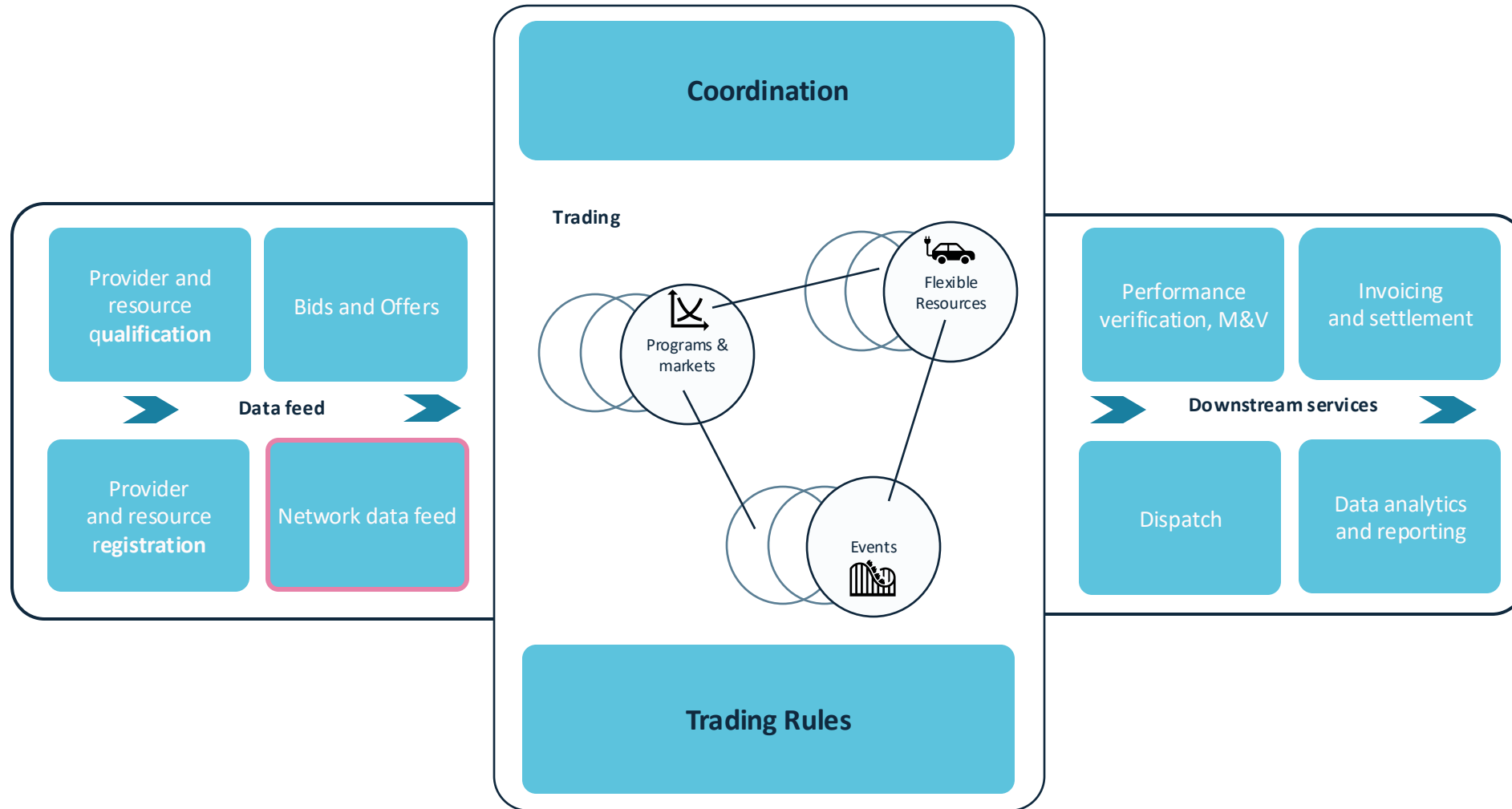
Market design

Utilities and System Operators

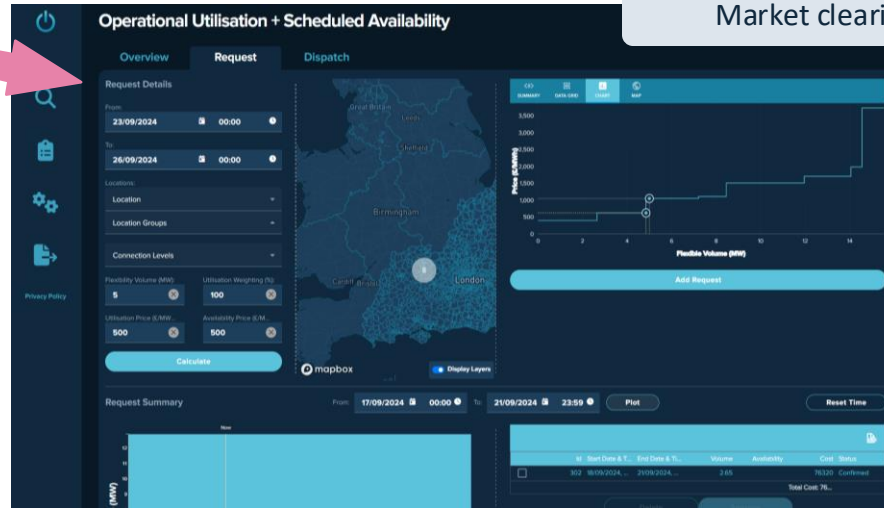
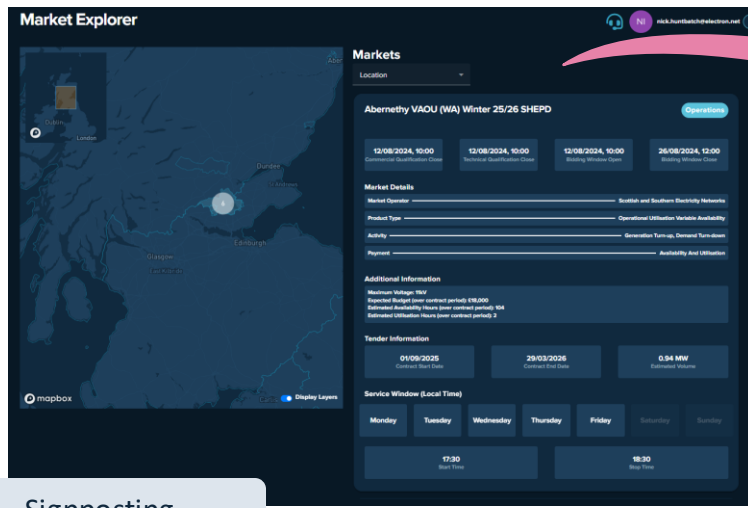


System needs

Modularity



ElectronConnect: Functionality

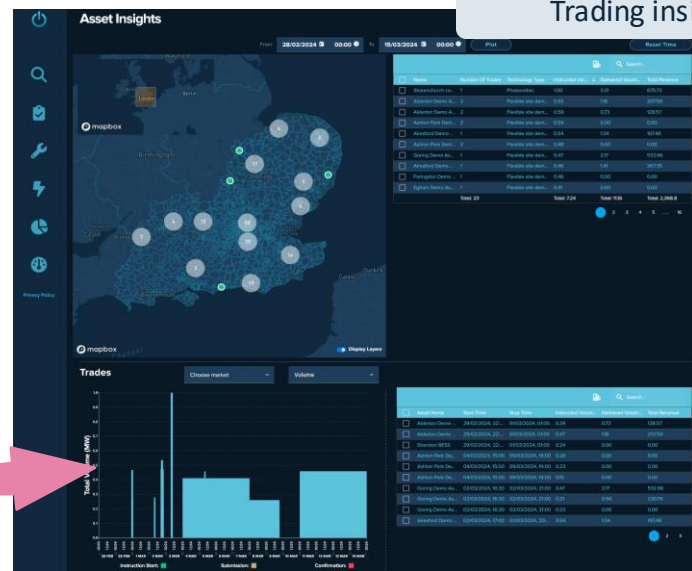


Market clearing

Signposting



Performance verification



Trading insights

Innovation: Project BiTraDER



Investigate, develop and trial bilateral trading of curtailment obligations

Reduce barriers for the uptake of RES and choice for connected customers

Encourage use of flexibility and reduce whole system costs

Enable Distribution Network Operators to meet the challenge of Net Zero

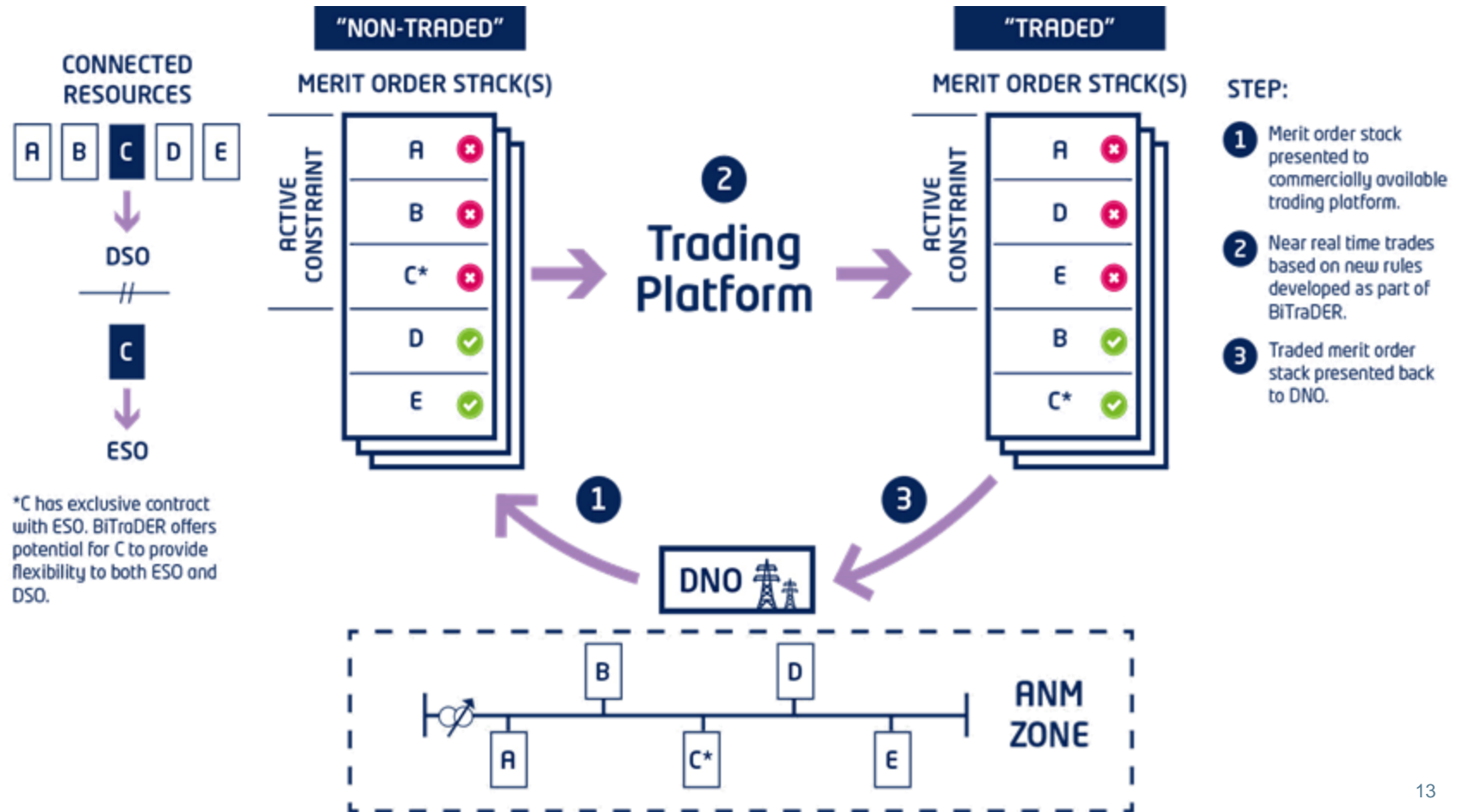
Idealised solution

BiTraDER will deliver a specification detailing the requirements for facilitating bilateral trading

ELECTRÓN

AFRY
AF PÖYRY

LCPDelta



Conclusions

In the UK we are seeing...

- > A wide set of use cases for system operators **AND** for flexibility service providers.
- > Market Design as key to bringing those use cases together.
- > 'Modularity' to promote improvement, and a holistic 'joined-up' approach.
- > Innovative uses for flexibility in future market constructs.

Market Design is a key part of **attracting new sources of flex**, as well as **solving different challenges for system operators and utilities**.



Opportunities to provide flexibility services in the UK



Scottish & Southern
Electricity Networks



Thank you



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