

DSO

DISTRIBUTION SYSTEM OPERATOR

Day-Ahead Launch Webinar

Wednesday 27th March 2024



Agenda

- | | |
|-------|---|
| 14.00 | Welcome & Introduction
Alex Howard, Head of Flexibility, UK Power Networks |
| 14.05 | You said, we did
Alex Howard |
| 14.10 | Update on upcoming opportunities
Rachel Stanley, Flexibility Markets Developer, UK Power Networks |
| 14.20 | Overview of the process on Localflex
Nicolas Métivier, Localflex Program Manager, EPEX Spot |
| 14.35 | Next Steps
Rachel Stanley |
| 14.40 | Q&A |

Introduction to UK Power Networks



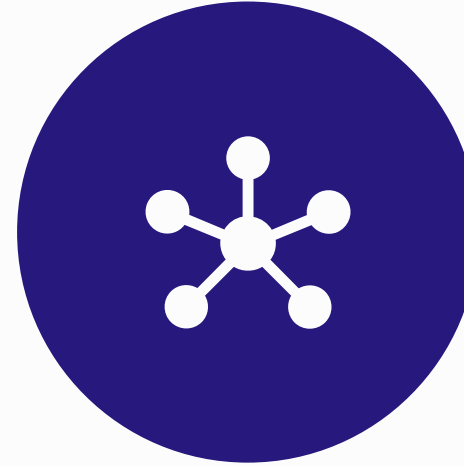
8.5M homes and businesses
10GW distributed generation
14GW peak demand
190,015km of network
More than 120,000 substations

Why do we need a DSO?



Old World

DO WHAT WE HAVE ALWAYS DONE: DELIVER ALL NEW CAPACITY USING NETWORK ASSETS



New World

NEW WORLD: EMBRACE DIGITAL, DATA AND FLEXIBILITY. NEW CAPACITY A MIX OF NETWORK ASSETS & FLEXIBILITY.

Electricity demand will double by 2035 as we electrify our economy. DNOs need to take a different approach that ensures we can protect consumers.

Why do we need Flexibility?



Increasing peak loads with EV and heat pump uptake

Procuring flexibility can be more cost-efficient than investing in infrastructure upgrades.



Increasing levels of inflexible renewable generation (like solar and wind)

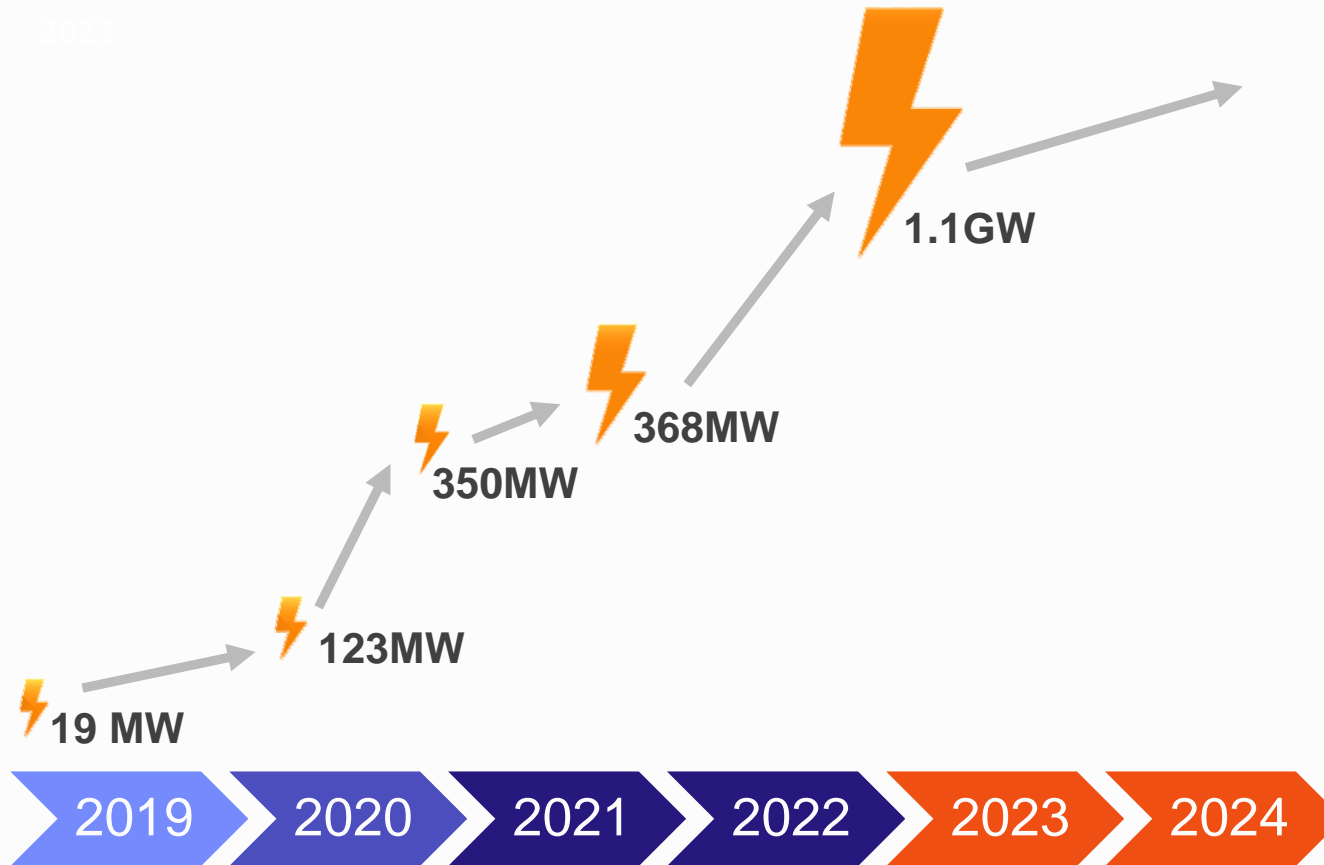
Flexible solutions needed to manage increasing unpredictability and magnitude of peak loads.



Facilitate a timely transition to zero carbon at minimum cost

Flexibility can deliver capacity at minimum cost to the consumer

Last year we awarded more than 1GW of contracts



We have demonstrated that flexibility works. Our challenge now is to scale up participation and benefits

Day-ahead auctions will complement long-term procurement

There are three different ways you can offer and deliver flexibility. You can choose the type of service that suits you.

Long term: We hold bi-annual long-term tenders for two different types of flexibility services – agreed for a period of up to 2.5 years

	Peak reduction	Scheduled availability + operational utilisation
Product Summary	<p><i>Flexibility providers commit to reduce their highest demand peaks during pre-contracted windows</i></p> <p><i>Suitable for time of use tariffs</i></p>	<p><i>Flexibility providers commit to being available during set contracted windows, but actual utilisation is confirmed the day before.</i></p>
Payment	Utilisation Fee (£/MWh)	Availability (£/MW/h) Utilisation Fee (£/MWh)
Required delivery / availability	Seasons & time windows specified in tender	Seasons & time windows specified in tender

Day-ahead: Now Launching Regular day-ahead auctions

Day Ahead Scheduled Utilisation

Flexibility providers can enter an auction to deliver flexibility at a day's notice.

Utilisation Fee (£/MWh)

Delivery as agreed at Day Ahead

For all:

- Minimum 10kW per zone (can be aggregated)
- Sustainable for 30 mins minimum

DSO

UK
Power
Networks
Delivering your electricity

Update on upcoming opportunities



Localflex Market Platform

- Localflex is powered by EPEX SPOT, bringing wholesale market expertise to local flexibility markets
- Covers registration, bidding, contract management, and settlements*
- Welcome Pack available which includes user guide, templates, APIs
- A step forward – one stop shop, fully automatable, increased transparency



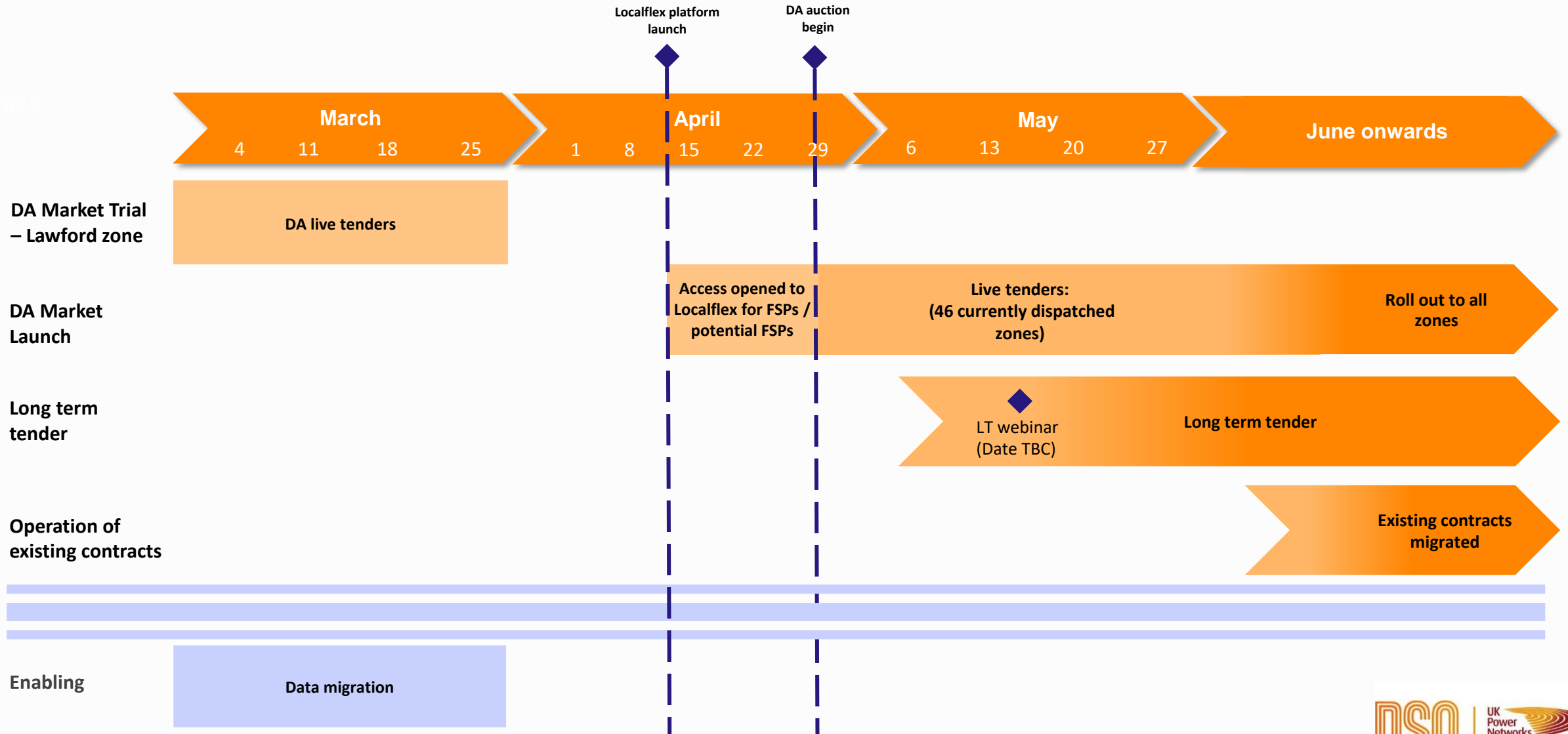
Welcome Pack

> epexspot



* Payments will be made directly from UK Power Networks

Timeline for upcoming tenders



How to participate

Day ahead registration is rolling. You can participate from the day you are fully onboarded

Prequalification

Onboarding

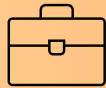
Company and asset registration

Contracting, setup and testing

Commercial



Set up Localflex account



UKPN Company checks



Company approved



Sign framework agreement



Provide bank details

Technical



Register assets



Assets approved



Create asset portfolios



API integration (optional)



System tests

Begin participation in DA tenders

NOTE:

- Steps completed previously can be skipped
- Any data, where approved for data transfer, will be transferred

The day ahead auction process

9.30am

10am

10.30am

11am

11.30am

12pm

12.30pm

1pm

1.30pm

Competitions
published

UKPN publishes
competitions by
10am
(‘pay-as-bid’)


FSP submits
offers

FSPs offer utilisation by 12pm

- Min 10kW
- Can be submitted before competitions published
- Recurring offers can be submitted
- Changes allowed up to 12pm gate closure

Notification of
award

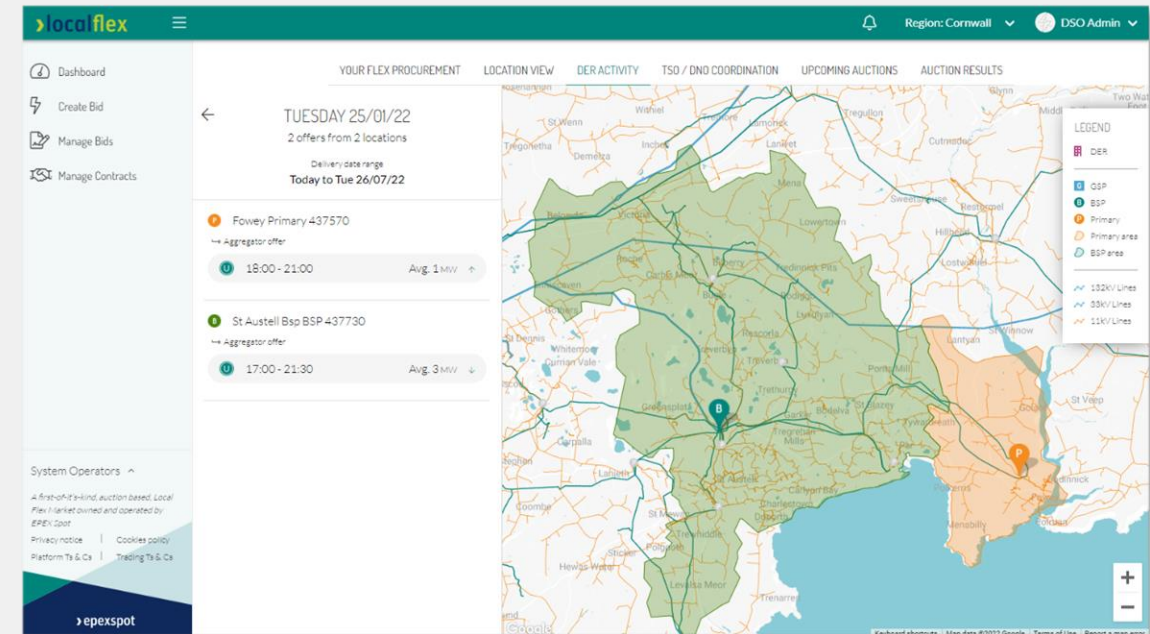
FSPs notified of
award by 1.30pm

A photograph of an offshore wind farm at sunset. The sky is a mix of orange, red, and blue, with the sun low on the horizon. The wind turbines are silhouetted against the sky, and their reflection is visible in the water. The turbines are arranged in a long line extending from the foreground into the distance.

EPEX SPOT Localflex Solution – Overview of the process

Our Flexibility Solution with Localflex GB – UKPN

- **User friendly platform** fit for FSPs and SOs needs.
- Supports **auctions** for :
 - long-term reservation
 - short-term utilization (day-ahead timeframe).
- **Algorithm** can accommodate simple and complex auctions (incl. constraints of network and/or assets) and handle T&D coordination
- Focused on the future with large **community** of FSPs, assets and orders/transactions
- Available Localflex FSPs Support desk
- In line with **ENA** standards
- **No EPEX SPOT fees**



End-to-end Flexibility Service Provider (FSP) user journeys

Pre-trading (prequalification & onboarding)

1. Commercial stream: Market access and company onboarding
2. Technical stream: Registration of assets, tests and creation of portfolios

Trading

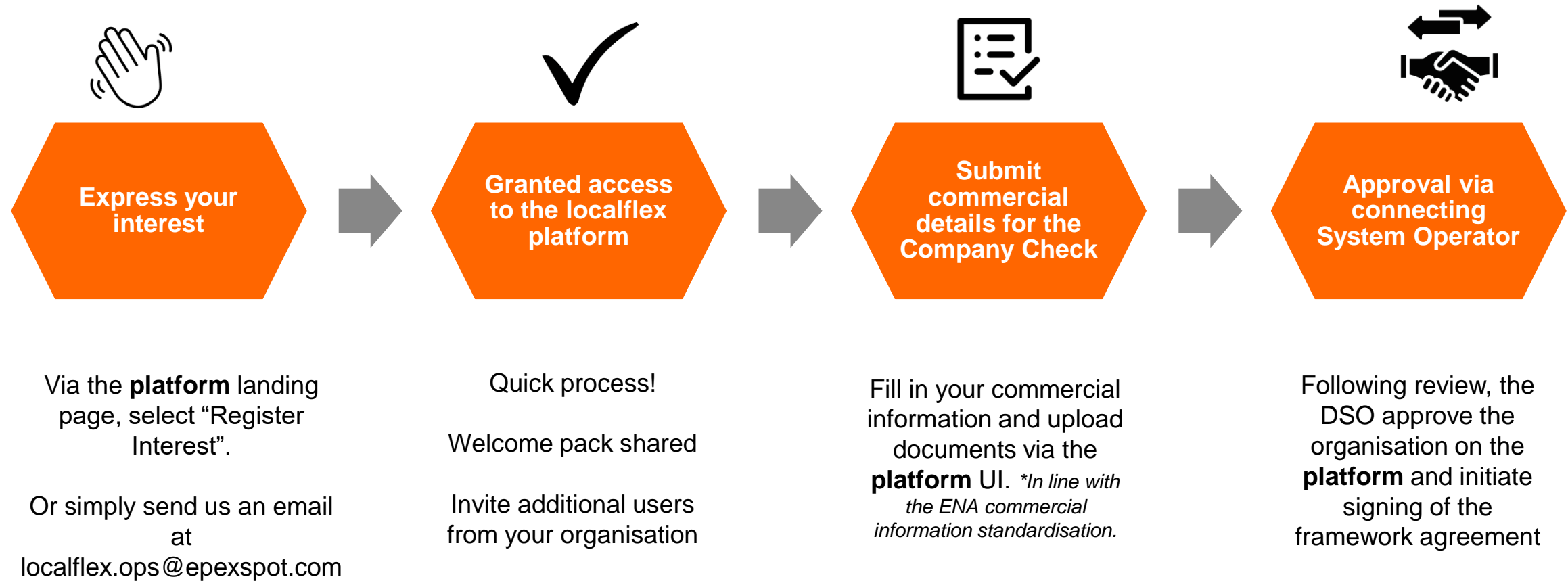
3. View the DSO's flexibility requests
4. Order submission
5. Trade management and notification for dispatch

Post-trading

6. Settlement computing and data sharing
7. Reporting



1. Commercial: Market access and company onboarding



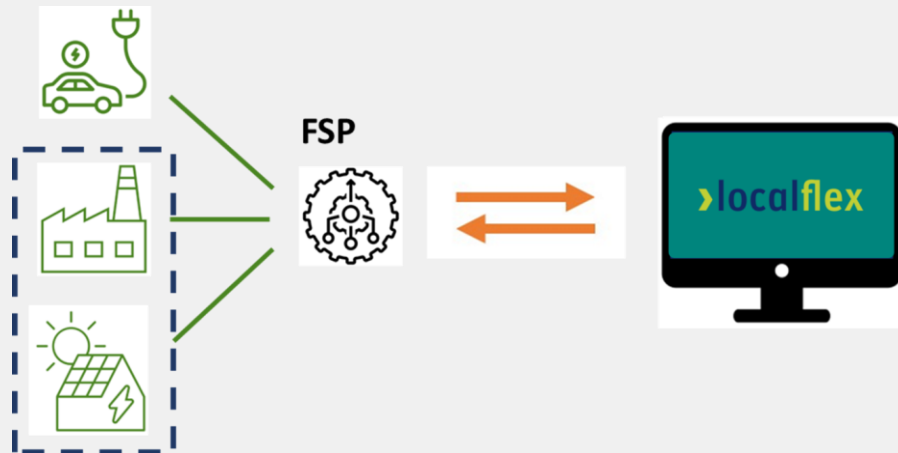
Simply reach out to us and we'll get you started on your flexibility journey.



2. Technical: Registration of assets and flexible units

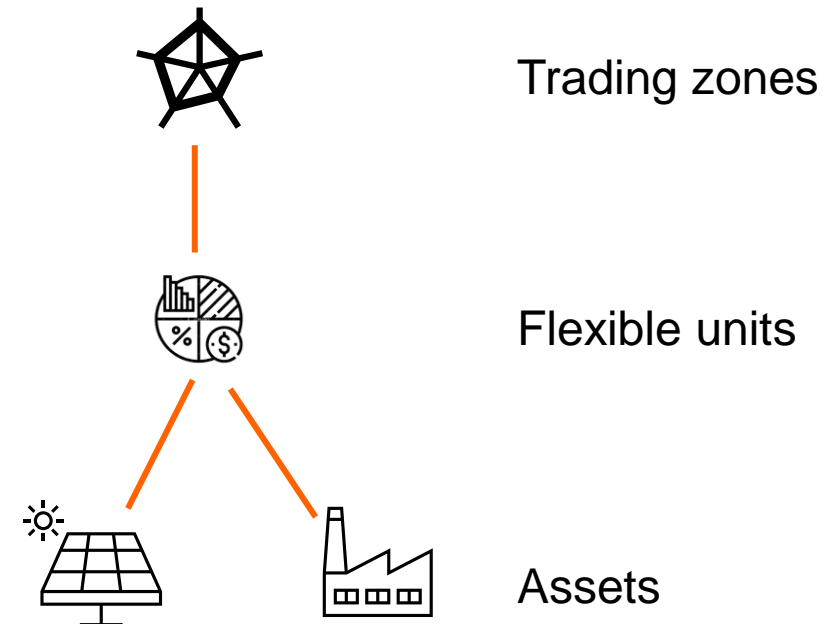
1. Assets registration and prequalification

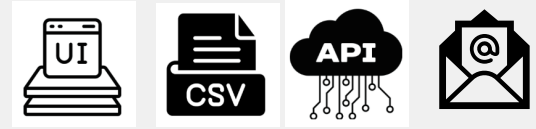
- Upload the assets on the platform (**simple user journey, CSV import or API**).
- Once uploaded, await the approval of the assets (by DSO and EPEX SPOT)



2. Flexible units (portfolios of assets) creation

Once approved, assets can be grouped into flexible units (all assets within a flexible unit should be connected to the same trading zone)

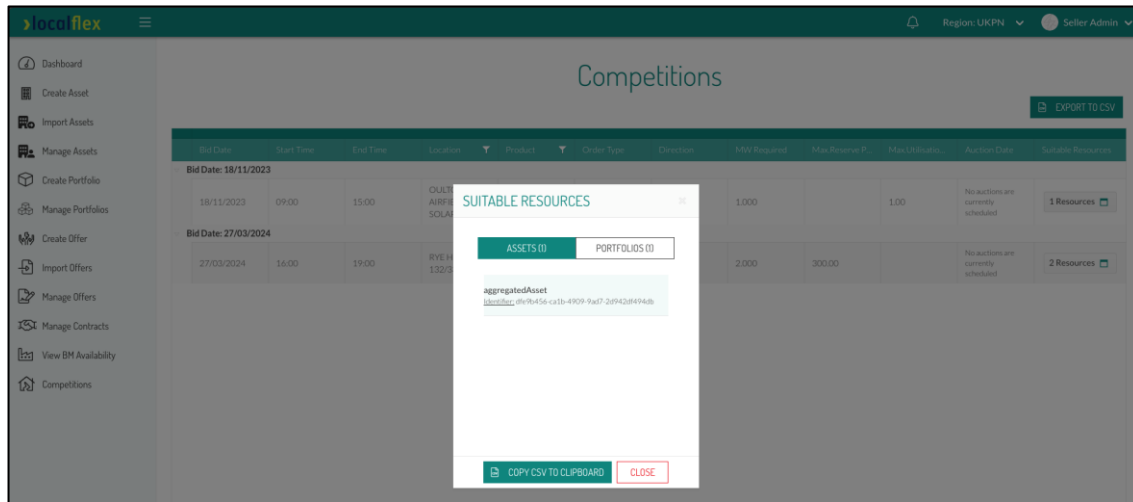




3. Be notified and view the DSOs upcoming flexibility needs

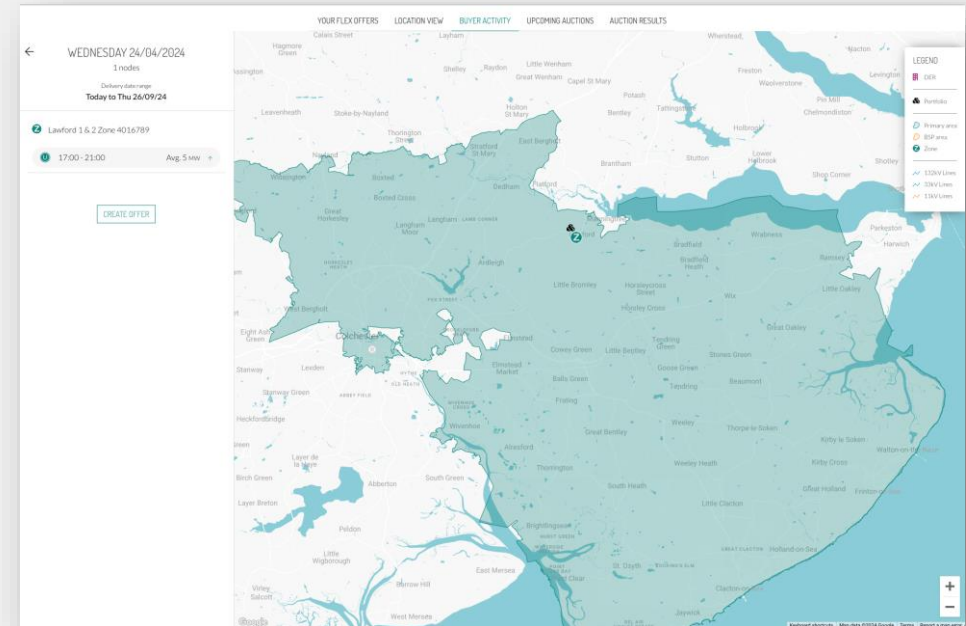
Competitions page for data grid view

- All the flexibility needs (buy orders) submitted on the platform are displayed in a sortable, filterable and downloadable table



Map View for short-term needs to highlight immediate actions

- FSPs can view all day-ahead and short-term needs via the map view



4. Order submission



Submit your sell orders (offers) on the platform via **simple user journeys, CSV import, or API integration.**

C	D	E	F	G	H	I
Asset Name	Date	Start Time	End Time	Product Code	Order Type	Order Type
Enter the name of the asset or portfolio you intend to use to create the order. (Must match maps to an Asset in the Assets sheet). Drop-down selects are filtered based on the resource level selected in column B	Must be a valid date format	Use the drop-down select to set the order start time	Use the drop-down select to set the order end time	Select the intended product for the order	Select if the order is a utilisation or reservation order	UP = Upward increase DOWN = Downward decrease (an increase or decrease)
Drop-down Select	26/08/2023	00:00	22:30	DYN	Utilisation	
Metal Forge	01/12/2024	17:30	20:00	SEC	Reserve	
Battery 1	01/12/2024	17:00	18:00	SEC	Reserve	
Logistic Vehicle Chargers	01/12/2024	15:30	22:00	SEC	Reserve	
Rock crushers	01/12/2024	17:00	20:30	SEC	Reserve	
Cold Storage Rooms	01/12/2024	15:00	22:00	SEC	Reserve	
Charge Stations	01/12/2024	16:30	21:00	SEC	Reserve	
Kiln Units	01/12/2024	16:30	22:00	SEC	Reserve	
Large-Capacity Freezing Units	01/12/2024	07:30	08:30	SEC	Reserve	
EV Fleet - Little Chart	01/12/2024	15:00	22:00	SEC	Reserve	

```

{
  "mrid": "{{ $guid }}",
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  "currency": "GBP",
  "direction": "UP",
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  "measureUnitEnergyQuantity": "MWh",
  "pricePeriodUnit": "Hr",
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  "bmAvailable": "false",
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  "orderSchedule": { "mrid": "e1f77d3a-9973-49f5-84a2-5",
  "status": "Draft",
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          "price": 1,
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          "energyQty": null,

```

PRODUCT TYPE
OFFER TYPE
LOCATION
DATE
OFFER DETAILS
REVIEW & PUBLISH

Define an offer asd

📅 Thu Mar 21 2024

▼ Offer period 09:00 to 16:00 (7 hrs 0 mins)

▼ Flexibility service Up 5 MW

^ Minimum selling price

Reserve price

✓ €/MWh
32

Utilisation price (optional)

✓ €/MWh
400

Utilisation price can be changed up until the utilisation auction.

NEXT

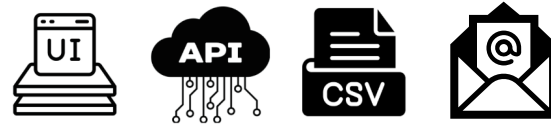
SAVE OFFER AS DRAFT

Back to date

5. Trade management and notification for dispatch

These offers will be matched with DSOs buy orders via the state-of-the-art clearing engine. When buy and sell orders are matched, a flex contract is created on the Localflex platform.

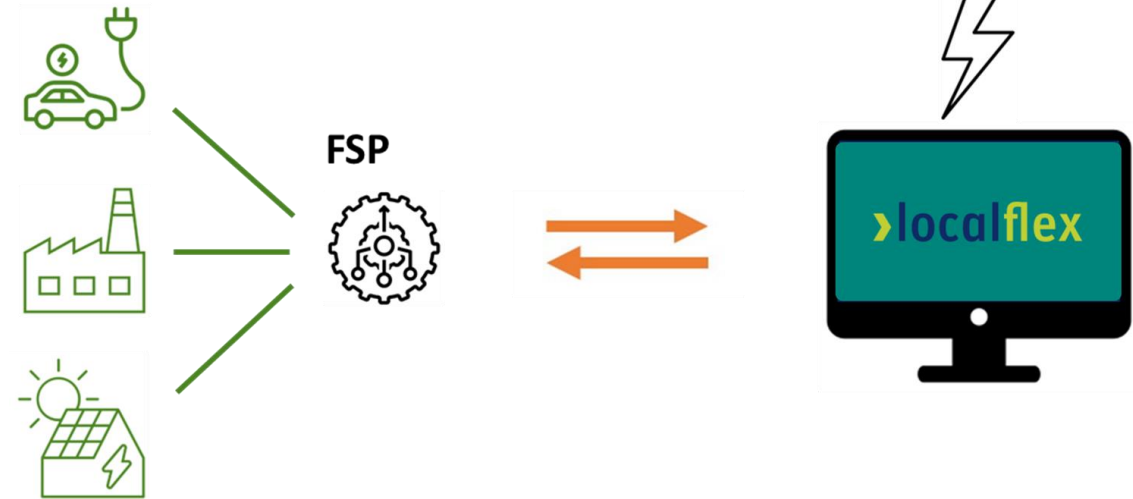
Trade management



- Trade (or contracts) are then created within the platform

Notification for dispatch

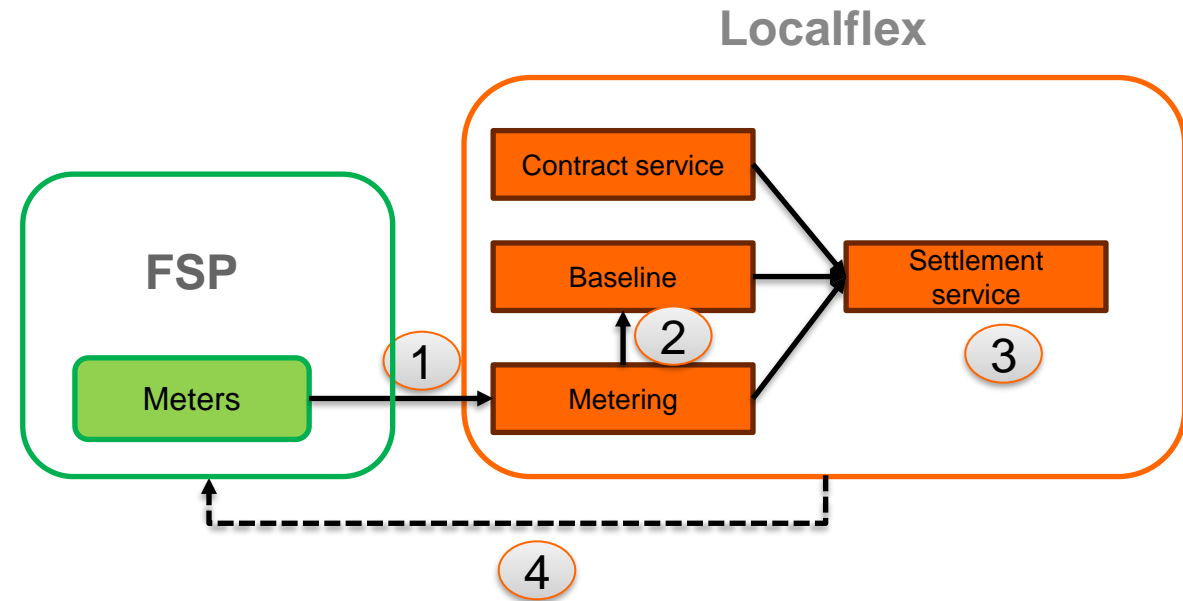
- Email notifications are sent to successful participants
- Automation via API with DSO dispatch system



6. Settlement computing and data sharing

The settlement process compares the resources baselines and traded capacities with the actual consumption or production data of the resource(s). The steps are as follows:

- 1 Metering**
 Metering data are submitted by FSP (before the 10th of the following month)
- 2 Baseline**
 Consumption/production of each asset or flexible unit, for each period, if no flexibility event had occurred.
**Several methodologies are supported.*
- 3 Automatic settlement**
 Localflex compares baseline value with metering data and computes the **settlement** results
- 4 Reporting & data distribution**
 Results are reviewed by the EPEX SPOT Market Operations team, before being distributed externally



Payment then flows directly from UKPN to the FSP

5

7. Reporting



After each auction, every contract is anonymised and visible through the platform

Every historical contract (i.e., every order matched) is visible to any market participant within the Localflex platform. All data is anonymized by grid location.

HISTORIC CONTRACTS EXPORT TO EXCEL SELECT CO

Drag a column header and drop it here to group by that column

Date			Contract					Reserve		
Year	Month	Date	Seller Location	Buyer Location	Type	Direction	Product	Quantity [MW]	Seller Price [€/MWh]	Buyer Price [€/MWh]
2023	Nov	09	Falmouth Bickland HI	Falmouth Bickland HI		↓	Active Power 30min	5	£15.00	
2023	Nov	18	Falmouth Bickland HI	Falmouth Bickland HI		↓	Active Power 30min			
2023	Nov	18	Bugle	St Austell		↓	Active Power 30min	10	£20.00	
2023	Nov	19	Bugle	St Austell		↓	Active Power 30min	8	£18.00	
2023	Nov	21	St Austell	St Austell		↓	Active Power 30min	8	£18.00	

Monthly results publication

Monthly results and statistics will be published through UKPN channels

Available channels - Summary



Pre-trading

1. Commercial stream: Market access and company onboarding	✓			✓
2. Technical stream: Registration of assets, tests and creation of portfolios	✓		✓	✓

Trading

3. View the DSO's flexibility requests	✓	✓	✓	✓
4. Order submission	✓	✓	✓	
5. Trade management and notification for dispatch	✓	✓	✓	✓

Post-trading

6. Settlement computing and data sharing		✓	✓	✓
7. Reporting		✓		✓



Next steps & Q&A



Next Steps

New flexibility providers:

Now:

1. Register interest via www.localflex.co.uk

Mid April: Following receipt of email from Localflex

2. Set up password
3. Complete remaining prequalification and onboarding steps
NOTE some steps completed previously can be skipped

For those who have approved data share:

1. Set up password following receipt of email from Localflex in mid-April
2. Check data and familiarise yourself with the site
3. Complete any remaining prequalification and onboarding steps

Participate in Day Ahead tenders from end April onwards



Thank you

Contact us:

EPEX Localflex: for platform information & support
localflex.ops@epexspot.com

UKPN: for tender information & register to our mailing list
flexibility@ukpowernetworks.co.uk

