Static Firm Frequency Response Service

Mock Auction: Results and Feedback

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Agenda

- SFFR Auction Process & SMP

- Mock Auction Overview

- EFA by EFA results

- What we've learned / FAQs

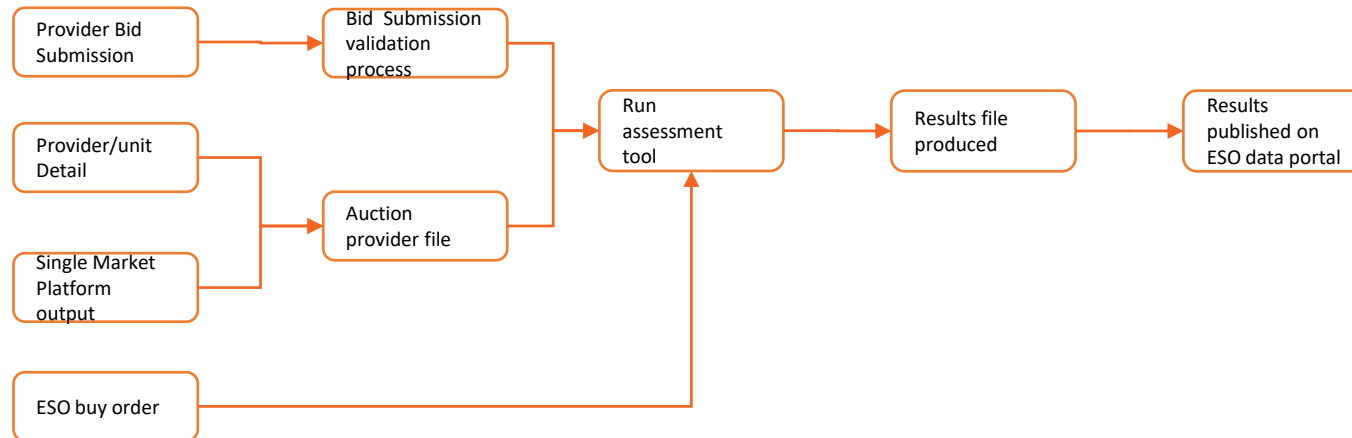- Q&A and Feedback Discussion

- Poll

- Next Steps

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SFFR Auction Process & SMP

As you should all be aware Static Firm Frequency Response will be procured through day ahead auctions, the first auction will be run on the 31st March for delivery on the 1st April. The auctions will be on a pay as clear basis and providers will be able to bid their registered Units into individual EFA Block(1-6), please note that providers can only submit 1 bid per EFA block for each registered unit and that there is no linking of bids. A high level view of the auction process can be seen below.

We will be using the Single Market Platform for provider onboarding, SMP is used for registering provider, asset and unit details along with signing up to contractual documents via DocuSign and uploading documents such as testing reports.

To test the process and auction tools on the 2nd March we ran the Static FFR mock auction as part of the preparation for moving to day a ahead procurement of the SFFR service.   As part of the mock auction we were looking to test the following areas.

- Provider submissions
- Submission validation
- Provider details database
- Assessment tool
- Buy order
- Results file and publication
- Single market platform (SMP)

```
Provider Bid          Bid  Submission
Submission     →      validation
                      process
                          │
                          ↓
Provider/unit                           Run
Detail         ┐                        assessment  →  Results file  →  Results
               │        Auction         tool            produced        published on
               ├──────→ provider file →                                 ESO data portal
Single Market  ┘                          ↑
Platform                                  │
output                                    │
                                          │
ESO buy order ────────────────────────────┘
```

During the mock auction we successfully tested all of the above bar the SMP output file. This didn't impact the running of the auction but did mean that data fields Generation type, location and BM/NBM status were missing from the published results file.   Throughout the mock auction we did discover learning points which were sent out in FAQ's and we will go through in Slide 15.
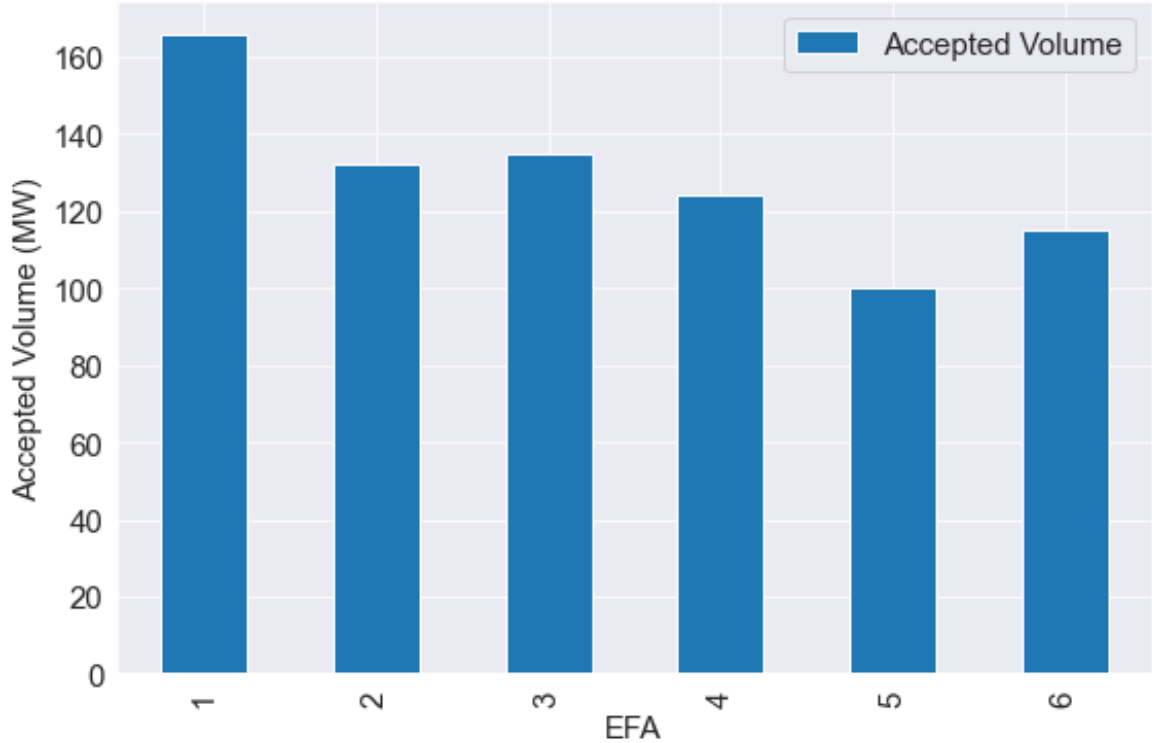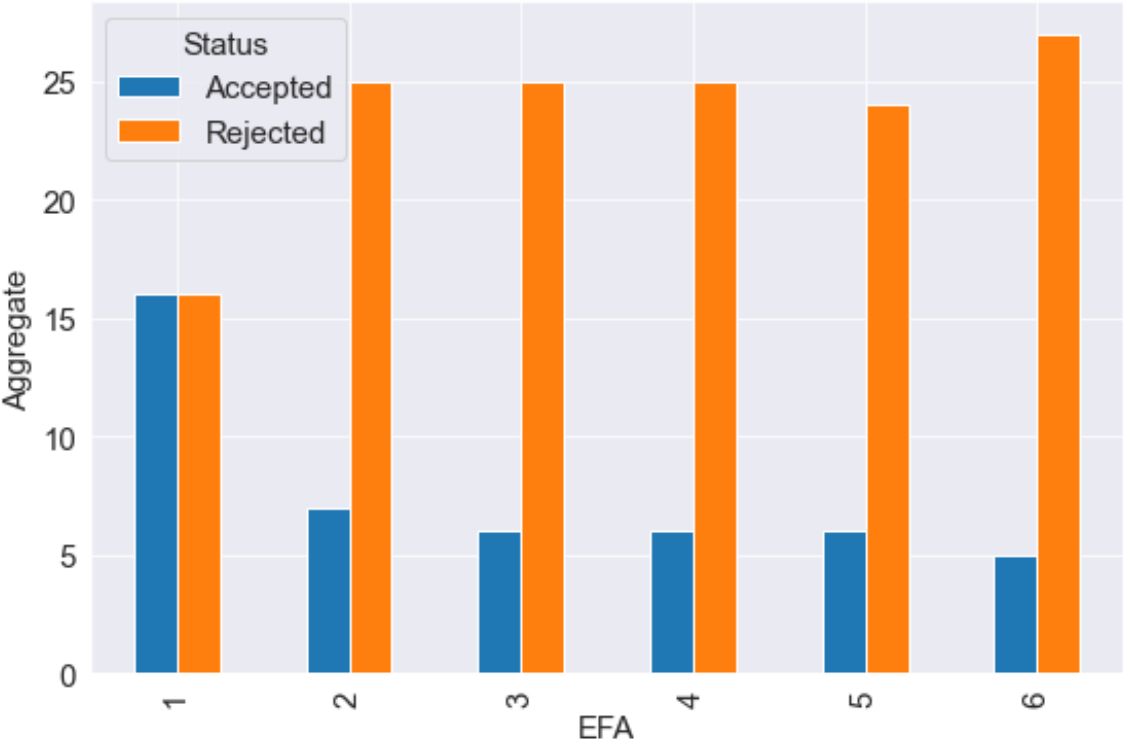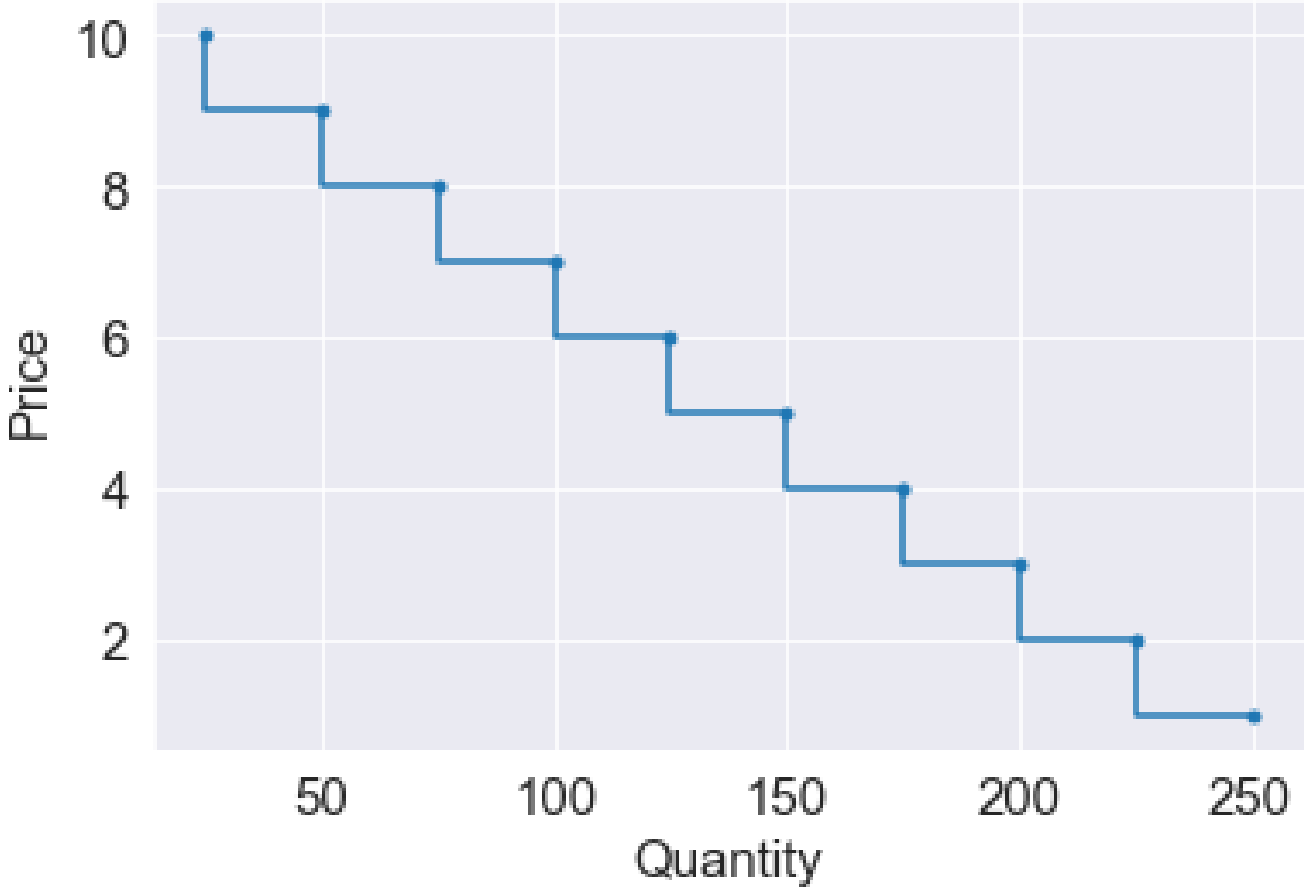
Mock Auction Overview
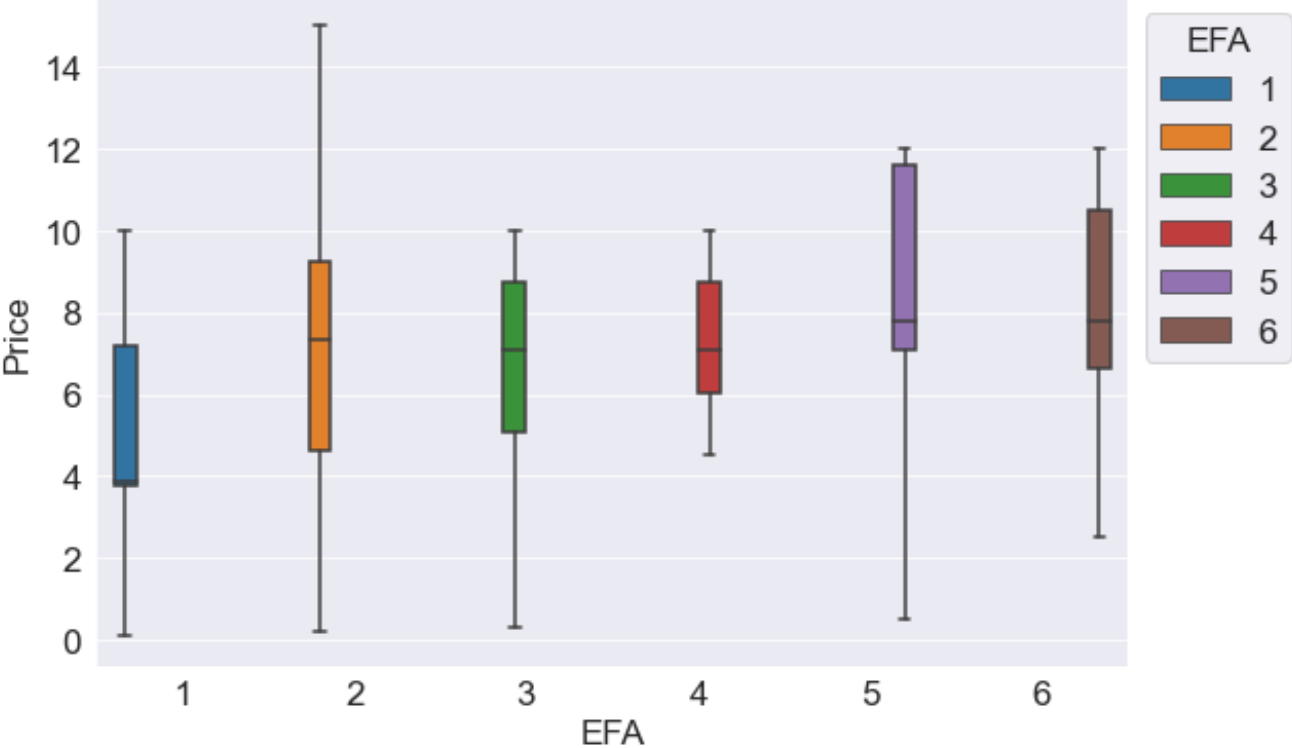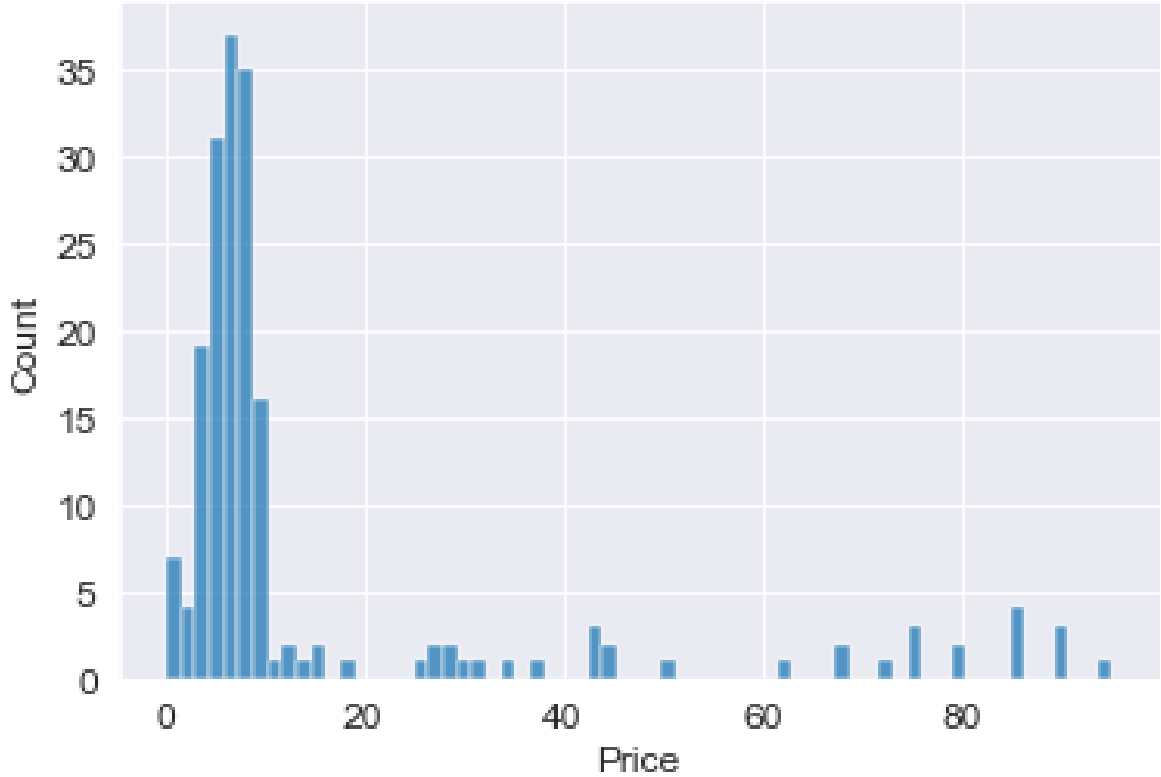
Mock Auction Overview

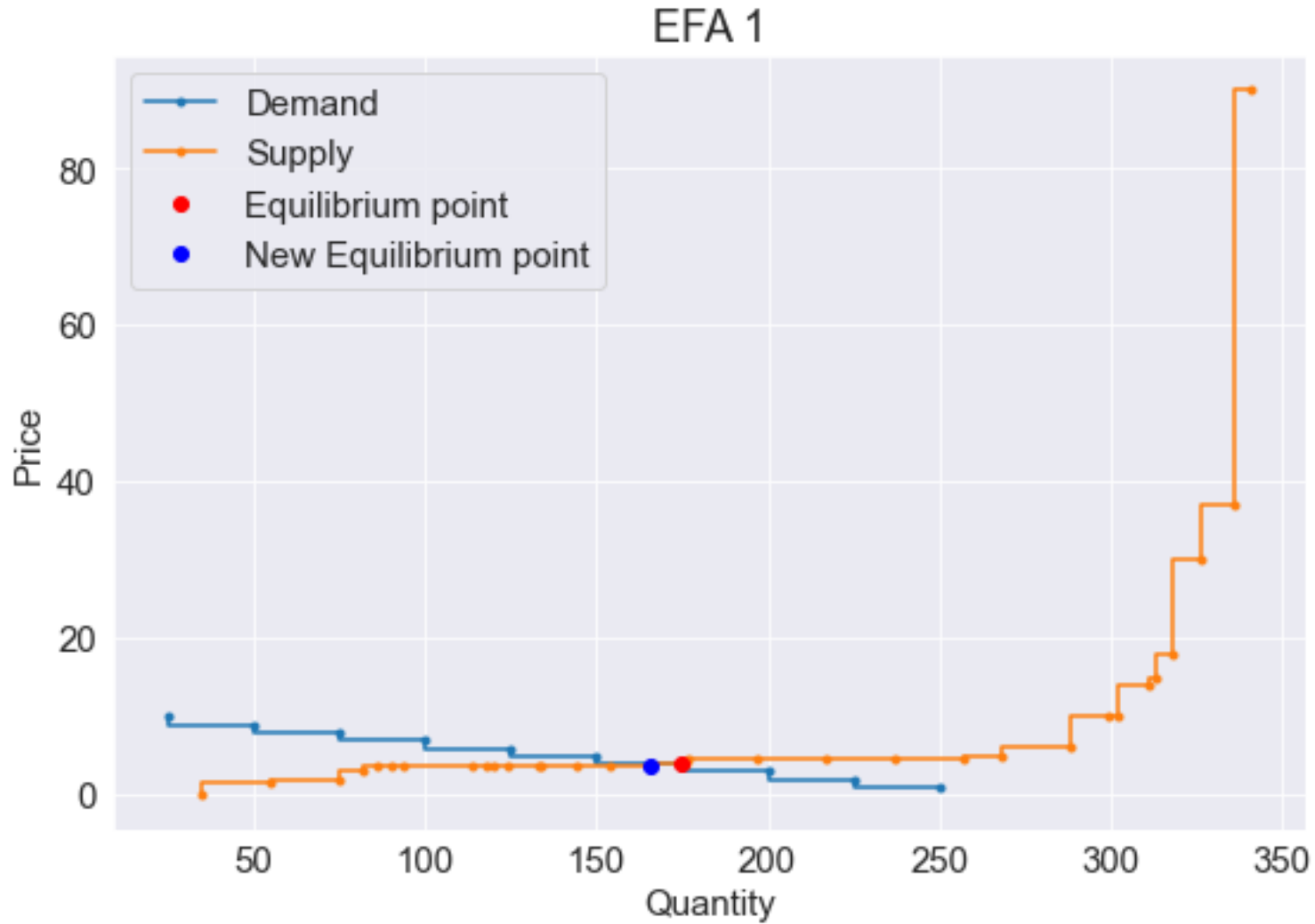| EFA	25%	50%	75%	Max	Min	Mean	Std
1	3.75	3.875	7.173	90	0.1	9.79	16.66
2	4.6	7.325	9.25	85	0.2	15.07	22.47
3	5.05	7.1	8.75	85	0.3	15.12	22.29
4	6.05	7.1	8.75	85	0.4	15.28	22.06
5	7.1	7.775	11.625	95	0.5	19.52	25.74
6	6.625	7.775	10.5	90	0.6	18.23	24.44
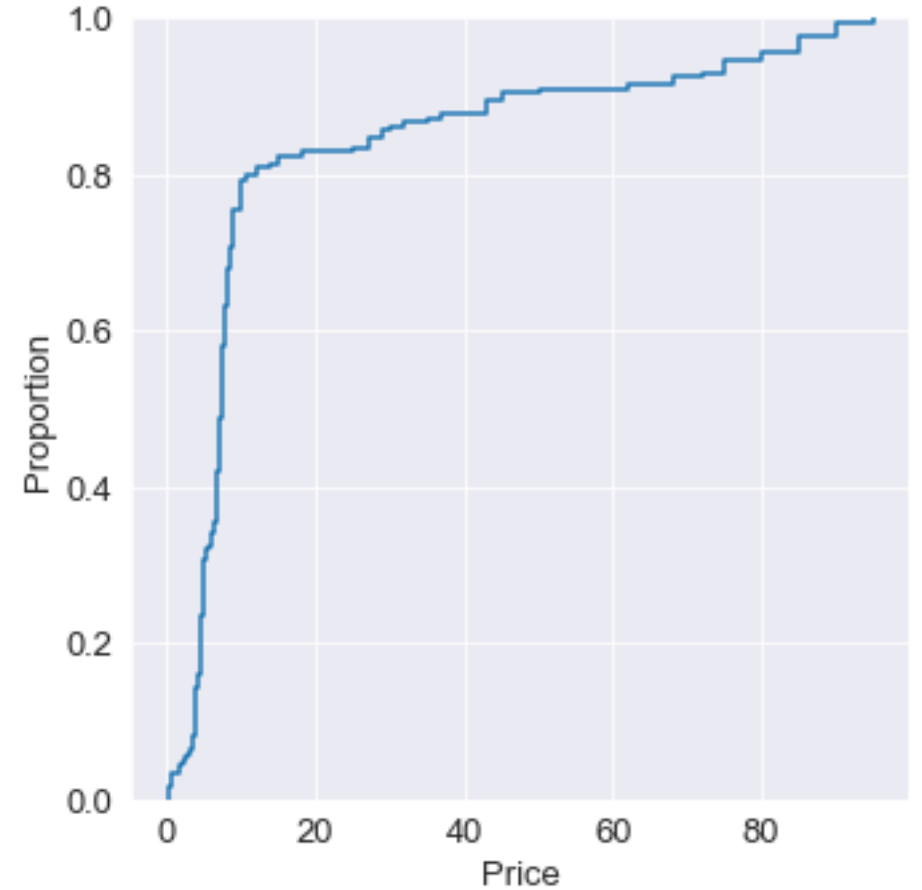
Mock Auction Overview

Demand curve

EFA 1

Equilibrium Price (£/MWh)	Equilibrium Volume (MWh)
3.75	166

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EFA 1

EFA 1

Additional Cost of procuring the higher bid
Cost = 81.5

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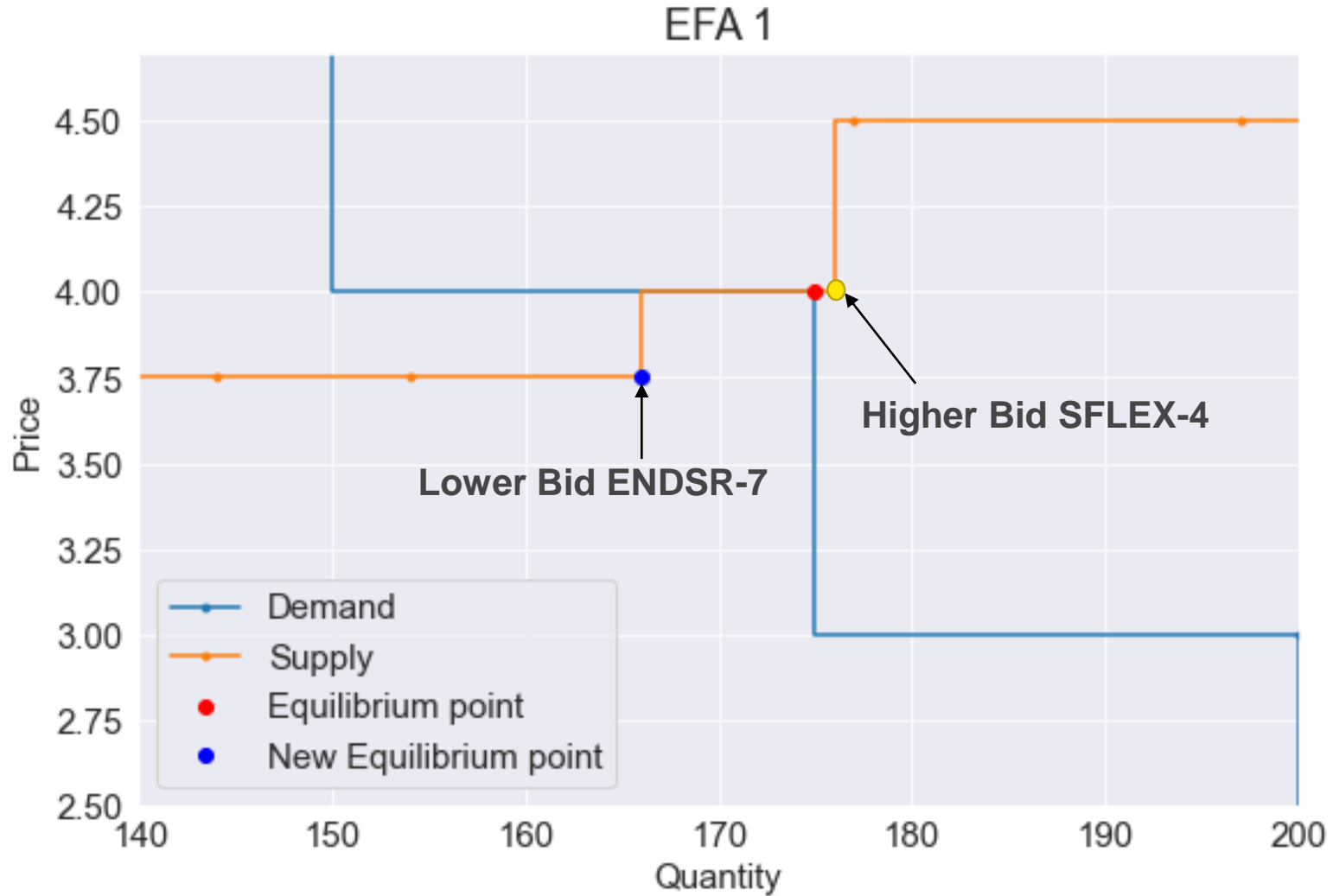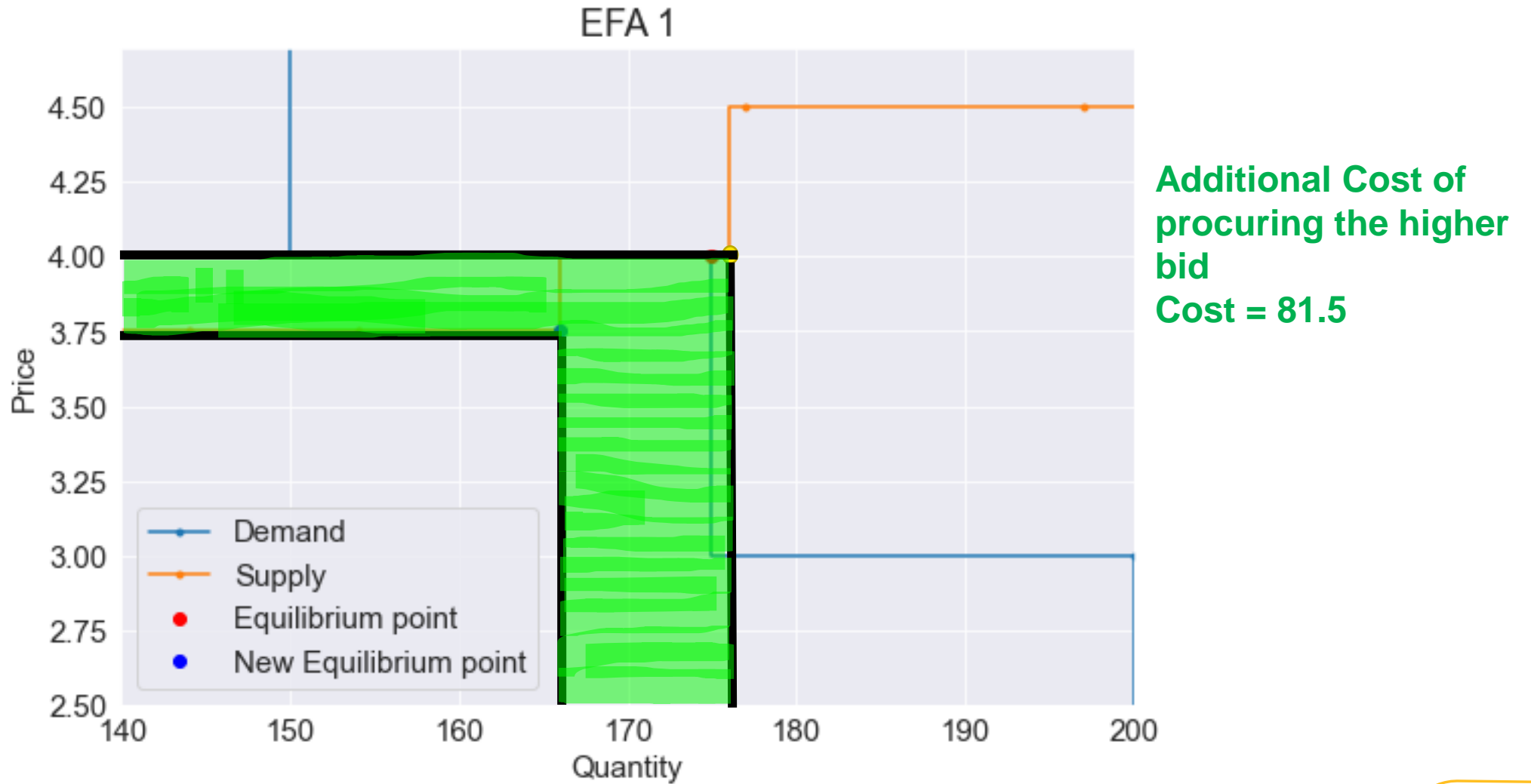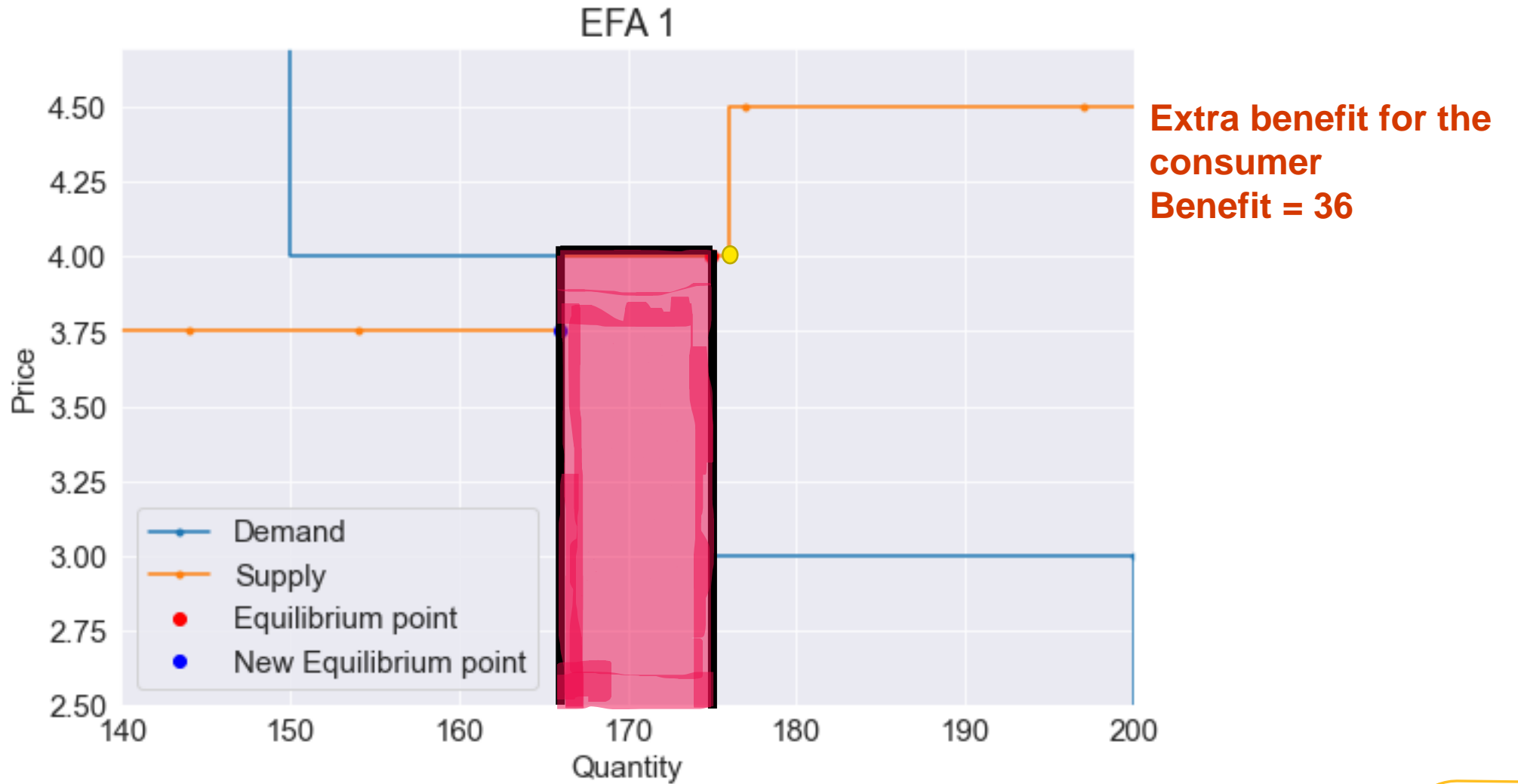
EFA 1

EFA 1

Provider	Unit	Status	Volume	Accepted Volume	Price	Clearing Price	Rank
Moyle Interconnector	Moyle	Accepted	35	35	0.1	3.75	16
Equivalence Energy	IPSWA-2	Accepted	20	20	1.5	3.75	4
Precise Energy	STOWA-1	Accepted	20	20	1.9	3.75	11
Centrica Business Solutions Uk Optimisation UK Ltd	CBSO-2	Accepted	7	7	3.1	3.75	31
GRIDBEYOND LIMITED	ENDSR-4	Accepted	4	4	3.75	3.75	1
GRIDBEYOND LIMITED	ENDSR-2	Accepted	4	4	3.75	3.75	2
GRIDBEYOND LIMITED	ENDSR-10	Accepted	4	4	3.75	3.75	6
GRIDBEYOND LIMITED	ENDSR-6	Accepted	20	20	3.75	3.75	7
GRIDBEYOND LIMITED	ENDSR-3	Accepted	4	4	3.75	3.75	8
GRIDBEYOND LIMITED	ENDSR-11	Accepted	2	2	3.75	3.75	9
GRIDBEYOND LIMITED	ENDSR-1	Accepted	4	4	3.75	3.75	12
GRIDBEYOND LIMITED	ENDSR-5	Accepted	9	9	3.75	3.75	18
GRIDBEYOND LIMITED	ENDSR-12	Accepted	1	1	3.75	3.75	19
GRIDBEYOND LIMITED	ENDSR-9	Accepted	10	10	3.75	3.75	22
GRIDBEYOND LIMITED	ENDSR-8	Accepted	10	10	3.75	3.75	24
GRIDBEYOND LIMITED	ENDSR-7	Accepted	12	12	3.75	3.75	28
Flexitricity Limited	SFLEX-4	Rejected	10	0	4	3.75	15

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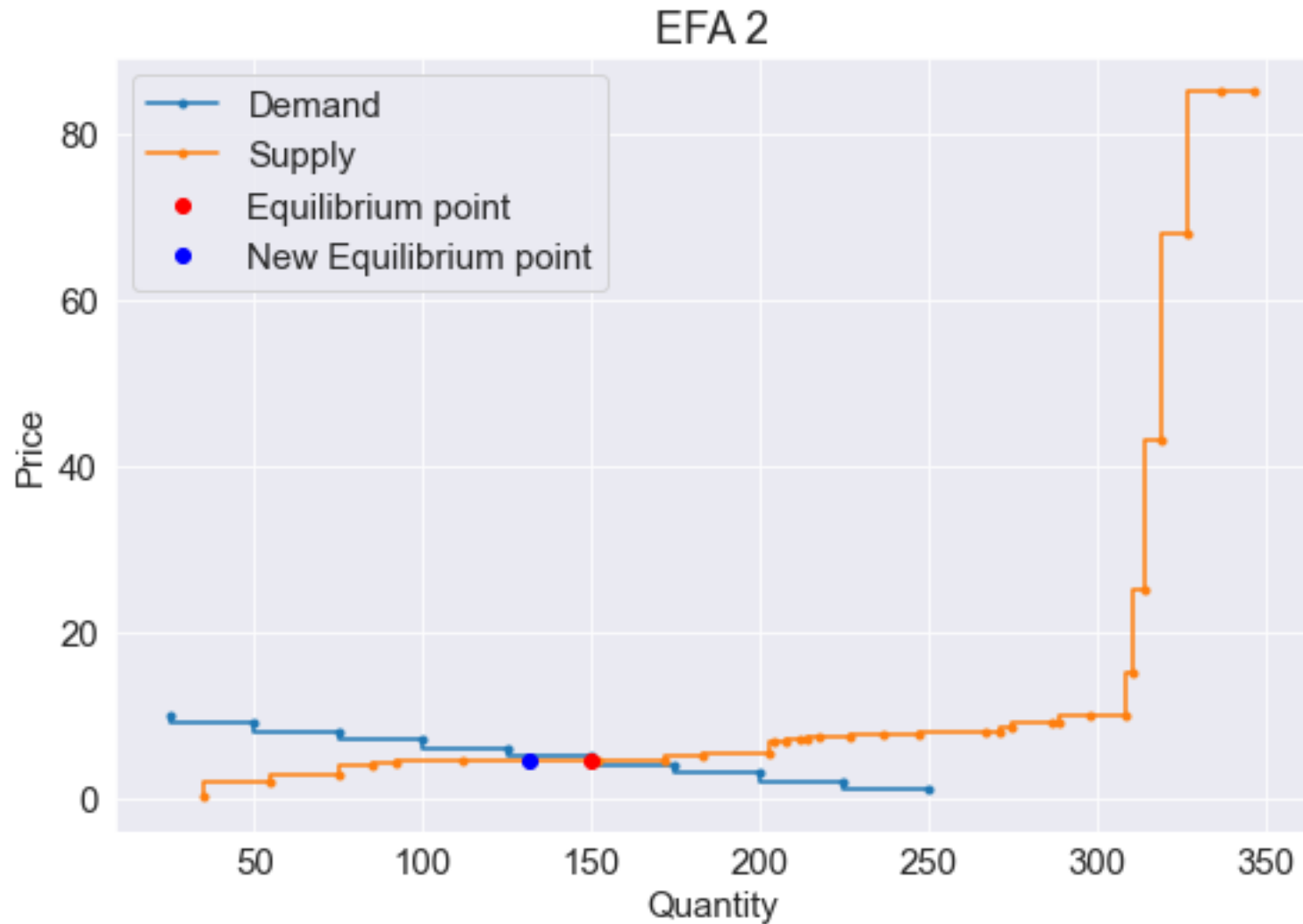
EFA 2

Equilibrium Price (£/MWh)	Equilibrium Volume (MWh)
4.6	132

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EFA 2

Provider	Unit	Status	Volume	Accepted Volume	Price	Clearing Price	Rank
Moyle Interconnector	Moyle	Accepted	35	35	0.2	4.6	6
Equivalence Energy	IPSWA-2	Accepted	20	20	1.8	4.6	22
Precise Energy	STOWA-1	Accepted	20	20	2.8	4.6	28
Flexitricity Limited	SFLEX-4	Accepted	10	10	4	4.6	29
Centrica Business Solutions Uk Optimisation UK Ltd	CBSO-2	Accepted	7	7	4.1	4.6	15
Flexible Generation	CRMU-1	Accepted	20	20	4.51	4.6	14
Attune Energy	ERNES-1	Accepted	20	20	4.6	4.6	4
Balance Power	IPSWA-1	Rejected	20	0	4.6	4.6	12
Valence Power	STOWB-1	Rejected	20	0	4.6	4.6	25

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EFA 3
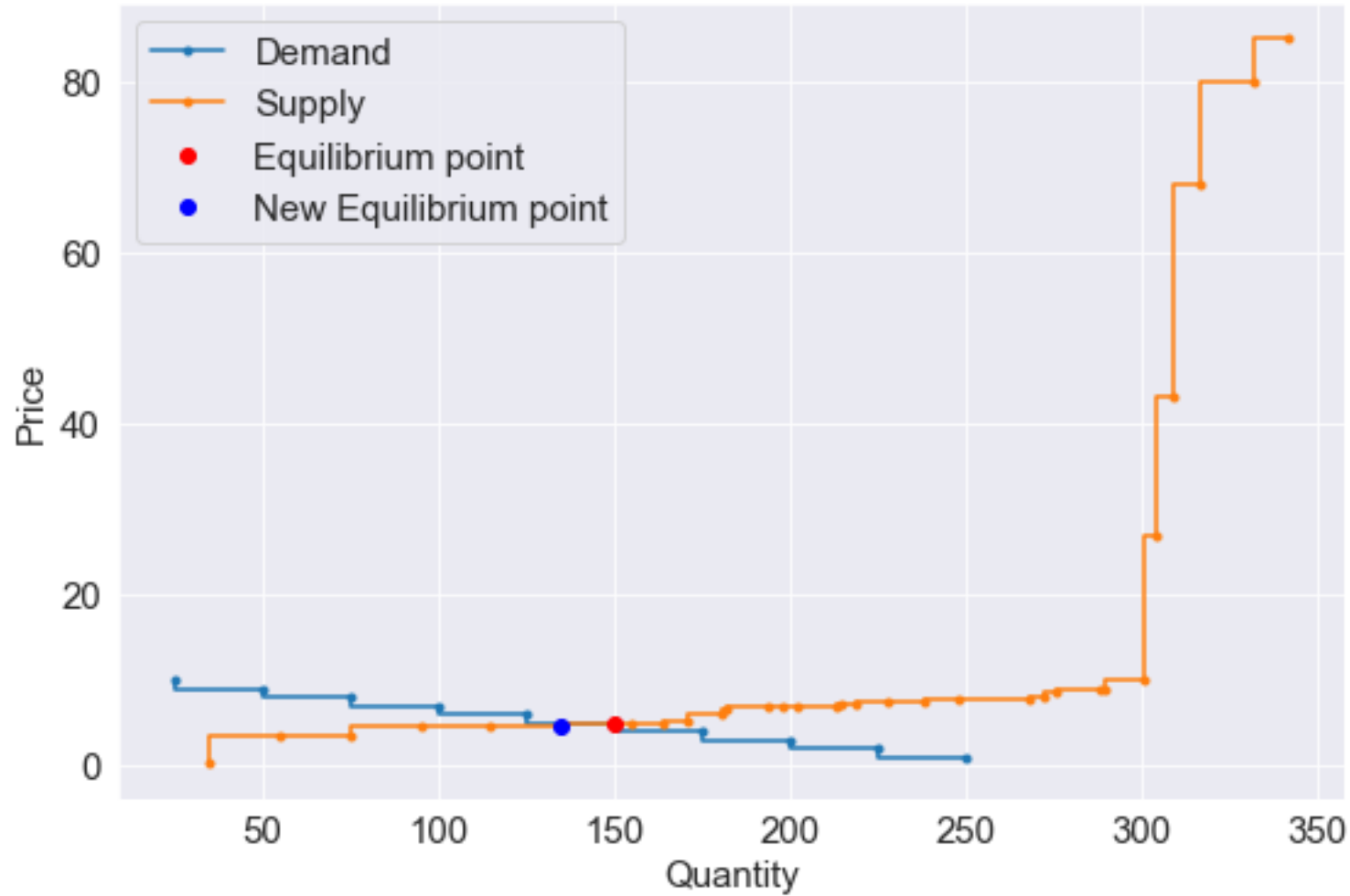
Equilibrium Price (£/MWh)	Equilibrium Volume (MWh)
4.7	135

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EFA 4
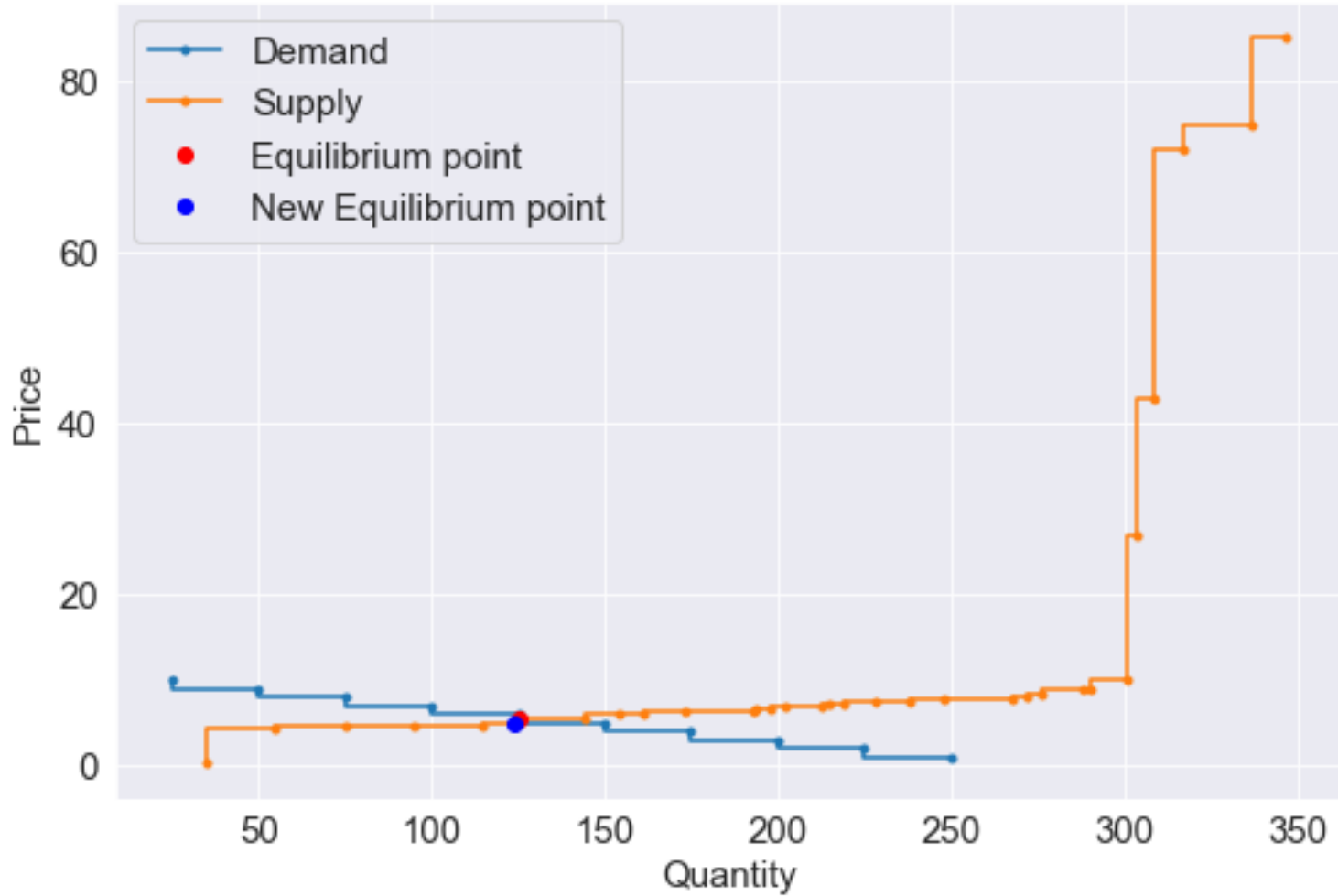
Equilibrium Price (£/MWh)	Equilibrium Volume (MWh)
5	124

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EFA 5
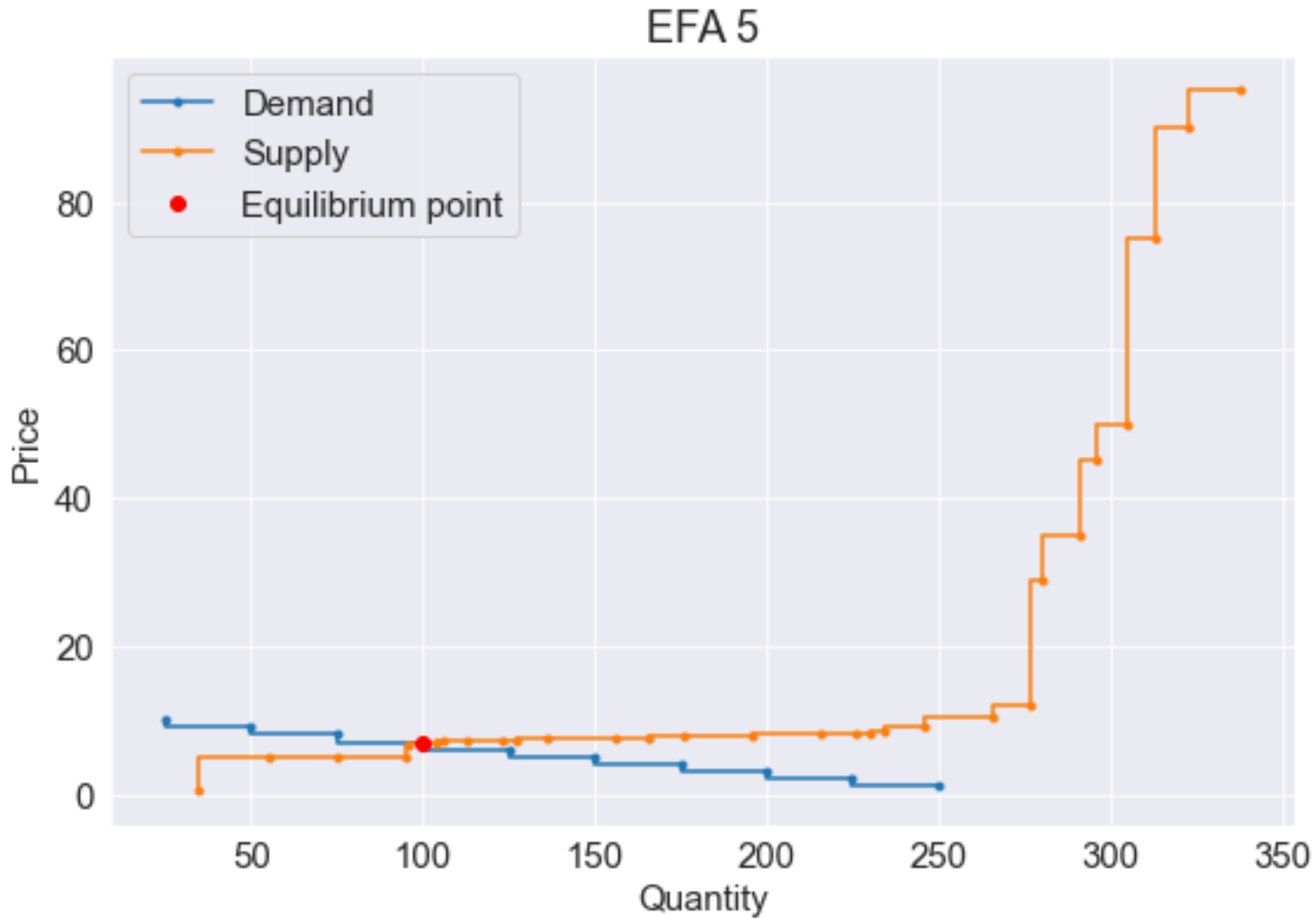
Exact Match

Equilibrium Price (£/MWh)	Equilibrium Volume (MWh)
6.8	100

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EFA 6
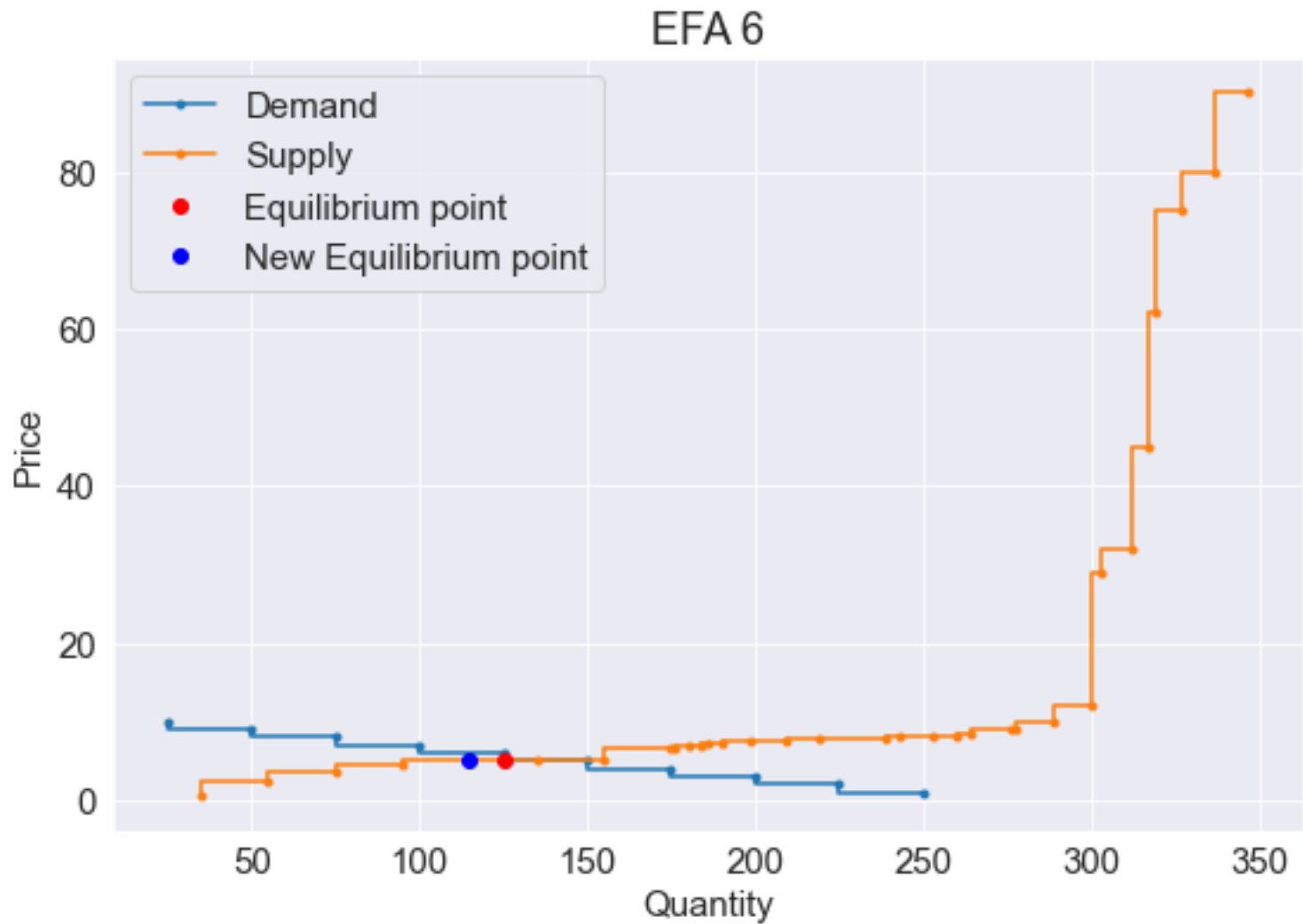
Equilibrium Price (£/MWh)	Equilibrium Volume (MWh)
5	115

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What we've learned / FAQs

Throughout the SFFR mock auction the following was observed:

- **SMP -** Originally, we were intending to use the output file from the Single market platform as part of the process for running the mock auction, unfortunately this was not possible due to issues that were encountered by providers when trying to register in SMP. As a result of this we decided to run the mock auction without using SMP output files. We are confident that all providers will be able to fully onboard assets prior to go live

- **SMP –** Minimum MW allowed when registering assets is 1MW – The SMP update on the 10th March will allow you to enter correct size of asset e.g. 0.39MW

- **Bid Submission -** Additional line created at the bottom of the csv file caused some files to be rejected. We are looking at a rejection code for this error and the guidance of how to resolve this will be in the revised guidance document

```
Auction_Day,Auction_Month,Auction_Year,Unit,Provider,Volume,Price,EFA
31,1,2023,PQR-1,PQR Energy,8,10,2
31,1,2023,PQR-2,PQR Energy,14,71,4
1,2,2023,PQR-3,PQR Energy,19,30,6
```

- **Bid Submission –** in the bid submission csv file, in column A titled auction day you enter the day of the auction and not the day of delivery, for example a file submitted for the mock auction would have has a 2 in column A . The example bid submission file has been updated with explanations of what should be entered in each column, this will also be reflected in the revised guidance documents .

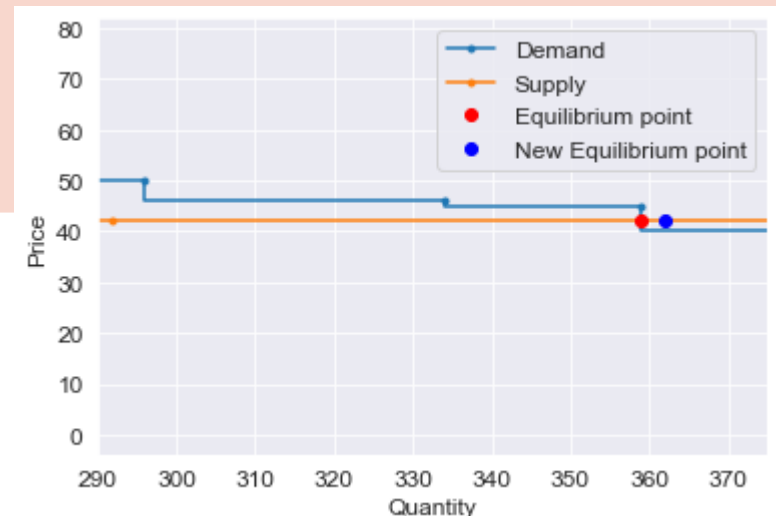|	A	B	C	D	E	F	G	H
	Auction_Day	Auction_Month	Auction_Year	Unit	Provider	Volume	Price	EFA
	28	2	2023	ABC-1	ABC Energy	9	70	1
	28	2	2023	ABC-1	ABC Energy	5.25	80	6
	28	2	2023	ABC-1	ABC Energy	8	90	5

- **Bid Submission –** Embedded emails signatures were picked up by validation as additional attachments and would reject the file. For go live we are asking that providers remove these from their signature when sending in their bids

- **Bid Submission –** Bids received in an invalid format. All bis must be sent in the required csv format.

- **Provider details file-** Providers need to have sent the provider details prior to the Bid submission for validation to be set up. Guidance will be amended although as this a one time or update activity this will not be an issue in the live auctions. All updates

- **Bid Submission –** Incorrectly titled emails caused some emails to be rejected – format of email titles for live auctions will be provided

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Feedback Discussion and Q+A

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Q&A write up

Question	Answer
Can we please get some clarification on why BM units cannot participate?	It is not our intention to restrict BM Units from providing Static FFR however as there are no existing BM providers of the Static FFR service we need to confirm that our systems and processes can correctly reflect BMUs on Static FFR in the control room and through settlement rather than relying on the existing processes. We are currently undertaking this assessment and will be in touch with interested units to support their onboarding.
How is the rank calculated exactly if the price and volume are the same?	A rank for each bid is randomly assigned to all valid bids participating in an auction just before the auction is run. There is no link between the rank a bid is assigned and when the bid was submitted or any of the bid characteristics. This rank is used to settle ties where bids have the same price.
Total cost (green area) is super set of additional benefit (red area). Wouldn't that always be the case and the solution will always be to underhold?	Underholding is more likely than overholding but the solution will not always be to underhold. Overholding is tends to happen when there are big steps in the ESO demand curve and the two units on the margin are very close in price. The example here shows an overholding solution where the two bids at the margin have the same price.

Q&A write up

Question	Answer
Can we have paradoxical rejections?	No, there is no linking allowed between bids for different EFA blocks. This means that the solution for each EFA is independent from the solution for other EFAs. As no welfare subsidisation is allowed then all units which submitted bids that are lower than the clearing price will be accepted.
Will the buy curves be published? If so, how far in advance will these be released?	We will publish the buy curves on the ESO data portal ESO Data Portal: Static Firm Frequency Response Auction Results - Dataset| National Grid Electricity System Operator (nationalgrideso.com) after the auction with the results file. We will also publish expected requirements for Static FFR in the ESO's Market Information Reports.
So providers need to amend the provider details sheet before the live auctions, or can the one submitted from the mock auction be used going forward if there are no amendments?	The one from the mock auction can be used going forward and we will use it as our starting point but providers are also free to submit new details.
Also can you please confirm we can use the alternative email address to send the bids?	Yes, either of the email addresses (primary or secondary) can be used to submit bids.

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Q&A write up

Question	Answer
For the live auctions, can we submit tenders for a full week at a time or is bid submission day by day?	Bids can be submitted up to 14 days in advance of the specific delivery day. If availability from those units changes then bids can be resubmitted up until the Auction Gate Closure which is at 11:00 on the EFA Day before the Delivery Day.
Will the bidding for the live auction be through emails?	Yes, bids following the defined bid submission template must be submitted to our dedicated bid submission .box. More information can be found in the guidance documents.
What role does SMP play in the auction process?	The Single Markets Platform is used to help validate that bids submitted are for the actual tested and compliant volume of Static FFR (referred to as Tested MW) as recorded against the unit bidding into the auction. Data from SMP is also used to report fuel type and location of all of the assets in the results file that will be published on the website.

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Next Steps

- Providers to continue to onboard using SMP – Please be reminded that API bulk uploads is available

- 10th March – Latest SMP release allowing sub 1MW assets to be registered correctly

- Week Commencing 13th March publish revised SFFR guidance

- 31st March 1st Live Auction – gate closes at 11:00am

- 1st April (23:00 31st March) first SFFR delivery

If you have any further questions regarding the mock auction feed back or the live SFFR service please email these to Commercial.Operation@nationalgrideso.com

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