

### eSett News

Customer Committee Spring 2025

And Inclusions

Diana Welander

### **Events since last Customer Committee meeting**

### 2.10.2024 Connection to PICASSO platform in Denmark

PICASSO creates a common European market for aFRR energy and supports stable system operation. eSett handles invoicing of aFRR activations, based on reports from the TSO.

#### 4.3.2025 15 min Automated Nordic mFRR EAM

The Nordic mFRR Energy Activation Market (mFRR EAM) successfully launched on 4 March 2025, bringing automated 15minute bid selection and activation on a 15-min basis.

### 04.03.2025 Imbalance pricing change in Denmark

Denmark has introduced a change in imbalance pricing, altering how energy imbalances are settled and priced by incorporating a new pricing mechanism based on both mFRR and aFRR components.

#### 26.3.2025 Connection to PICASSO platform in Finland

PICASSO creates a common European market for aFRR energy and supports stable system operation. eSett handles invoicing of aFRR activations, based on reports from the TSO.

### 10.2.2025 Invoicing of BSPs in FCR-N activated reserves in Finland

Fingrid moved the energy invoicing for the FCR-N market to BSPs, with eSett handling energy fees directly with BSPs instead of the BRPs.

### 4.3.2025 Capacity Reserve invoicing in Norway

Statnett transferred the settlement of mFRR and mFRR-D balancing capacity procured in Norway to eSett.

#### 19.3.2025 15 min cross-border Intraday trading and 15 min Imbalance prices

Cross-border intraday trading and imbalance prices in the Nordics shifted to 15-minute time resolution, enabling more precise market alignment and better integration with European electricity markets.

### Upcoming events

#### 26.5.2025 Statnett transfers aFRR capacity 12.6.20 settlement to eSett trading

12.6.2025 15 min cross-border Day-ahead trading

Day-ahead trading will shift to 15-minute resolution from 12 June 2025 ?

eSett will stop converting hourly trades from 12 June 2025; BRPs must report in 15-minute resolution, or hourly BITI messages will be rejected.

### October 2025: Changes in Data Flow Contents

From October 2025, eSett will update the Bilateral Trade Process Type from Z05 to A59 for all data exchanges with BRPs.

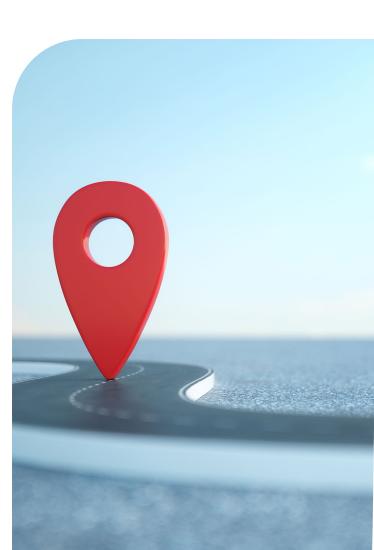
New PU asset type codes for: Hydro, Thermal Power and Onshore Wind will be used in data exchanges with market parties

5.6.2025: Independent Aggregator in Finnish aFRR Market

On 5 June 2025 at 12:00 CEST, Fingrid will introduce the Independent Aggregator role in the aFRR energy market, allowing BSPs to activate resources without agreements with the RE or BRP.

8.9.2025 Statnett transfers FCR capacity settlement to eSett

Differe	ent settlement services in eSett				
Imbalance settlement (BRP) Reconciliation settlement (BRP)			✓	√	1
			-	-	√
Complete	settlement & invoicing in different reserves' balancing	services for B	SPs (instea	d of the loc	al TSO)
mFRR	Activated reserves market Market parties which act also in BRP role	✓	<ul> <li>✓</li> </ul>	✓	√
	Activated reserves market Market parties which can act only in (individual) BSP role	<ul> <li>✓</li> </ul>	Q1 2026?	<b>√</b>	
	Capacity reserves market		~	$\checkmark$	$\checkmark$
	Independent Aggregator	2026?	Q2 2026?		
aFRR	Activated reserves market Market parties which act also in BRP role	✓	<ul> <li>✓</li> </ul>	✓	√
	Activated reserves market Market parties which can act only in (individual) BSP role	<ul> <li>✓</li> </ul>		5/2025?	
	Capacity reserves market		~	5/2025	√
	Independent Aggregator	6/2025			
FCR	Activated reserves market Market parties which act also in BRP role	<ul> <li>✓</li> </ul>	✓	✓	√
	Activated reserves market Market parties which can act only in (individual) BSP role	1		9/2025?	
	Capacity reserves market		✓	9/2025	√
	Independent Aggregator				
FFR	Capacity reserves market		?/2025?		



### Annual Review 2024 published in April

- Key Figures and Highlights of 2024
  - Overview of the year's achievements and significant metrics.
- Customer Satisfaction and Market Changes
  - Insights into customer feedback and recent market developments.
- Interview with Kari Suominen
  - Fingrid's CIO and the chairman of eSett's Board of Directors shares insights.
- Interview with Jesper Vestergaard
  - Customer Committee member and Head of Flexible Asset Management at Danske Commodities discusses key topics.



## Updated NBS Handbook published (May)

- Key Highlights:
  - Clearer distinction between imbalance, balancing service & Swedish reconciliation settlement
  - Changes due to independent aggregator model in Finnish aFRR market.
  - New terms: Aggregation, Compensation, Independent Aggregation, Regulation Imbalance.
  - Model explanation expanded to cover balancing service settlement and Swedish reconciliation settlement
  - Pricing of imbalances updated for Denmark
  - Collaterals chapter updated with new time schedule for provision of collateral
  - New BSP collateral for Finnish BSPs that are independent aggregators
- Full list of changes in the Change Log



### eSett Collateral Deposit update

#### What's changing?

Starting Friday, 25.4.2025, Balance Responsible Parties (BRPs) will have more time to fulfill collateral deposits:

- **New deadline:** Collateral must be provided by 11:00 CET the following day after updated collateral requirements are published.
- **Previously:** Collateral had to be provided on the same day as publication.

#### Important to note:

- No other collateral management procedures are affected.
- eSett will continue to publish updated collateral requirements on invoicing days by 13:00 CET.
- Same timeline applies for any recalculations during the week.

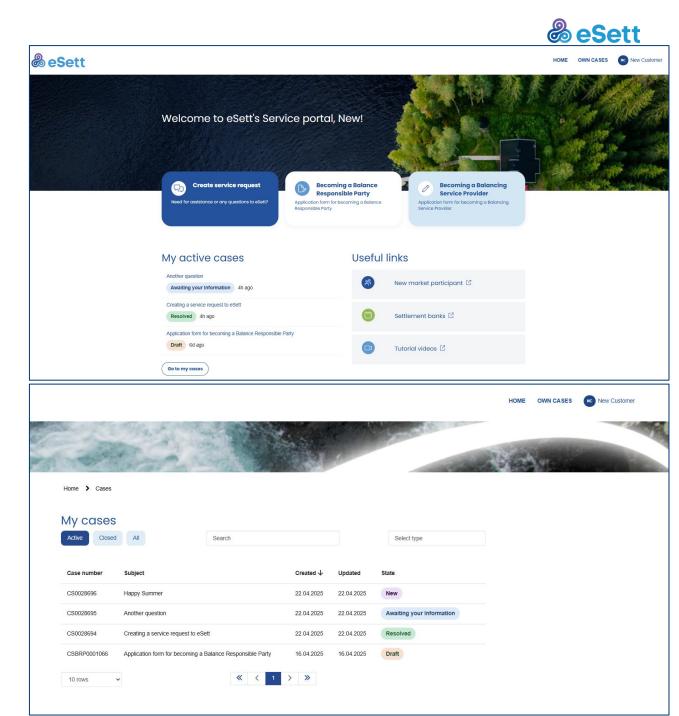
#### More information:

- Imbalance Settlement Agreement <u>Appendix 2 Collaterals</u>
- <u>Nordic Imbalance Settlement Handbook (Chapter 9 Collateral and Risk</u> Management)



### eSett's Customer Portal

- Automatic User Setup
  - Existing users automatically have accounts created.
- New User Registration
  - Simple and quick registration process.
- Access to Previous Customer Cases
  - Comprehensive view of past communications and cases.
- Streamlined Onboarding Process
  - Interactive and user-friendly onboarding for BRP and BSP roles.



### New! Tips and Tricks from eSett



- eSett started sharing helpful tips to make the customers' work easier:
  - Find your way around the Online Service faster
  - Use Open Data in smarter ways
  - Get the most out of different views and features
- These tips will help customers save time and work more efficiently.
- Distributed via Newsletter and Online Service News widget

#### **Tell Us What You Think!**

Is there something that feels tricky or confusing? Let us know what you'd like tips about – we're happy to receive your ideas and feedback!

### New! eSett Q & A – Find answers fast

- eSett launched a comprehensive Q & A section to help customers get the answers they need.
  - Covers the most frequently asked questions from our customers
  - Data from customer tickets in 2024
  - Aims to improve service efficiency and save time
  - Helps to better understand how things work in practice
- Available in the Online Service and on eSett's website
  - Website: Customers FAQ
  - Online Service Dashboard

#### Help/Service Requests

In case of any issues or questions please contact eSett's support:

- Create Customer Service Request
- Send email to settlement@esett.com
- Call +358 10 5018500 Open hours 09-15 CET
- Online Service tutorial videos
- Frequently asked questions



### Strengthening collaboration across the NBS

- Visiting Balance Responsible Parties in All NBS Countries
  - Build trust and establish personal connections to deepen our understanding of customer needs.
  - Customize visits based on customer feedback and align with the latest trends in the electricity market.
  - Foster stronger relationships and enhance tailored services through direct, meaningful dialogue.
- Sharing knowledge between eSett and the TSOs
  - eSett hosted an "eSett Experience" day to introduce TSO professionals to our work and capabilities.
  - Facilitated visits from TSO experts to share insights on different TSO operations.





We settle, together!



# eSett: Market overview

Customer committee 14.5.2025

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## eSett: Market overview

#### <u>Contents</u>

- Market Parties
- Prices
- Activated reserves
- Trading volumes

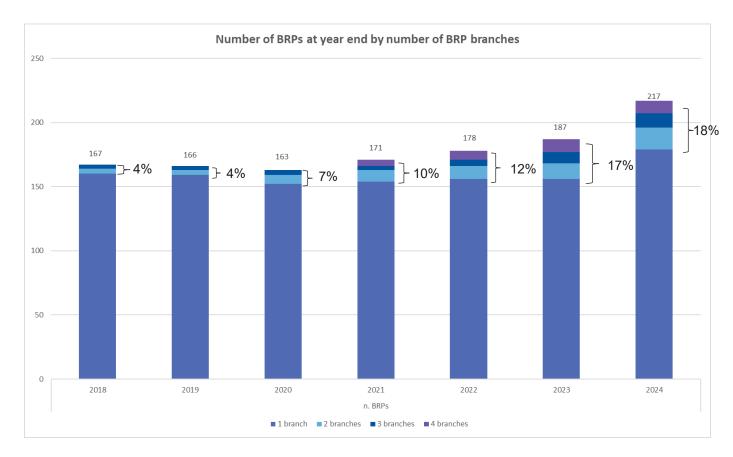
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## eSett: Market overview

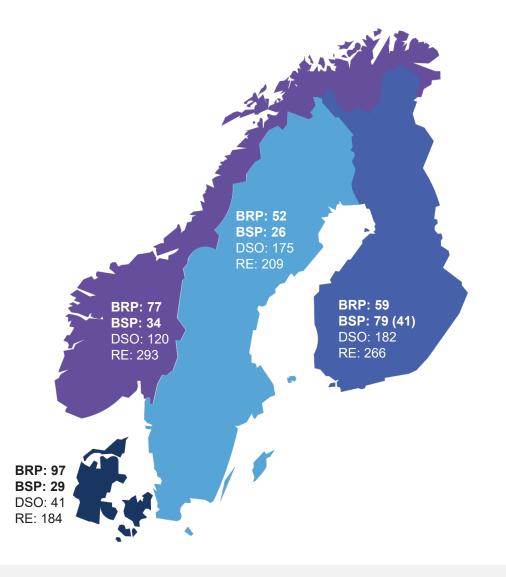
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## Active market party roles in imbalance settlement

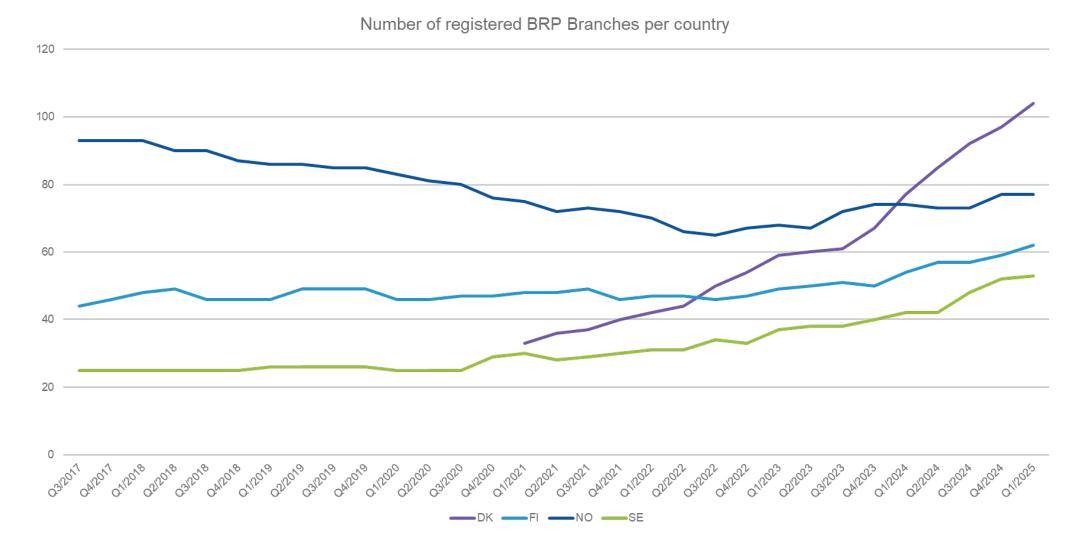


Number of BRPs with branches in several countries increased from 2020 to 2024
 11->17->22->31->38



& eSett

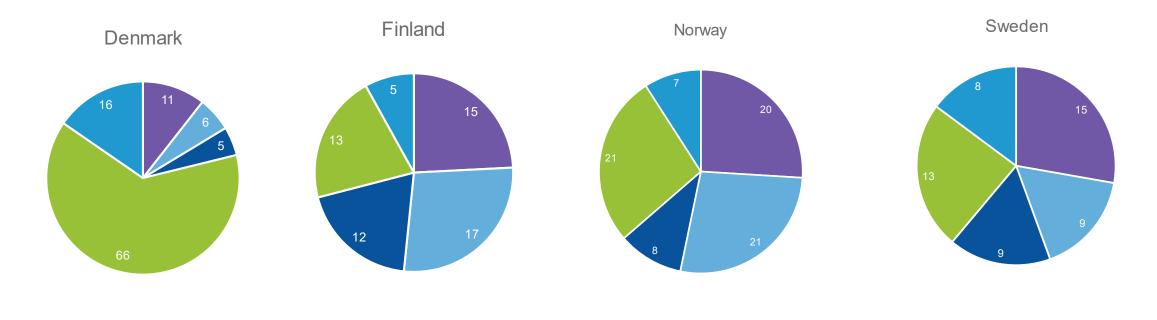
### Number of BRPs continue to grow





### Active market party roles in imbalance settlement

Number of BRPs per country classified based on last three months portfolio.



Consumer Producer Mixed Trader Other

PCR = Ratio of Production / Consumption for the BRP branch.

Classes: 1) Consumer: PCR < 0,5. 2) Producer: PCR > 2,0. 3) Mixed: 0,5 < PCR < 2,0. 4) Trader: If only PX Market or Bilateral Trades. 5) Other: Only reserves / no settlement data for the month.

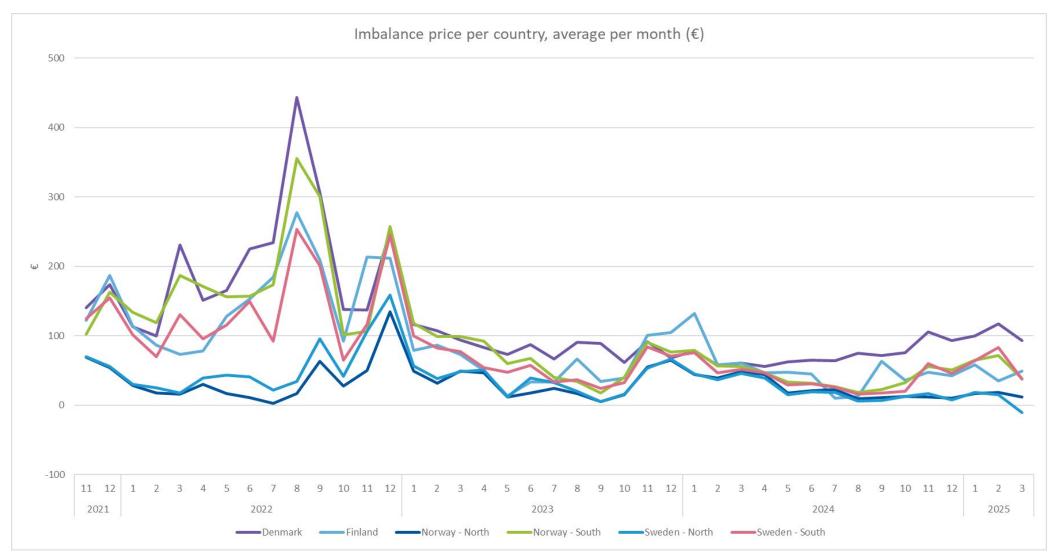
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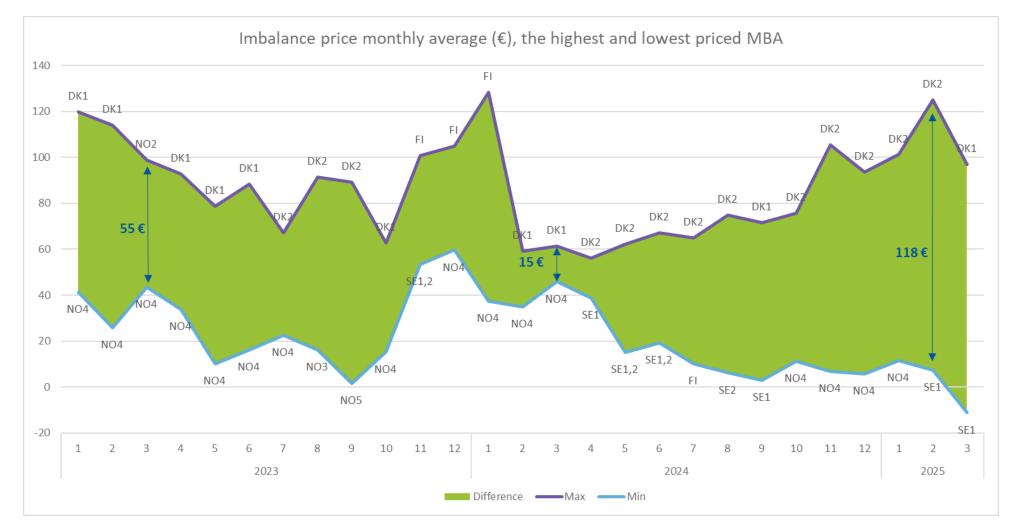
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### Average monthly imbalance price per area



## Imbalance price spread growing between MBAs



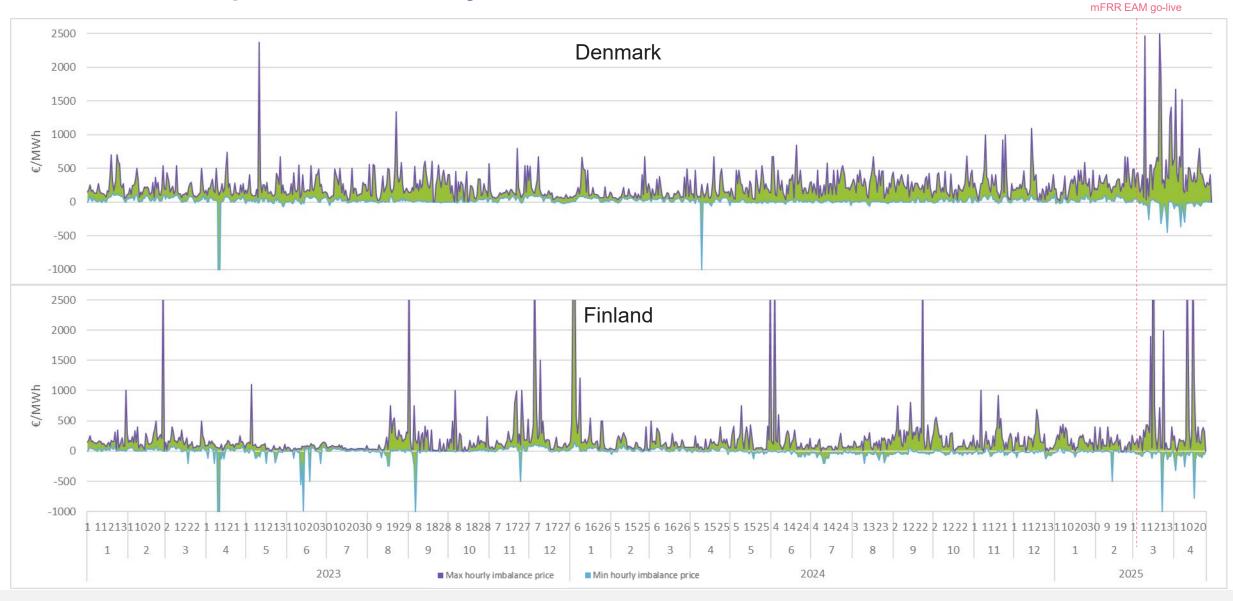


## Imbalance price volatility increased



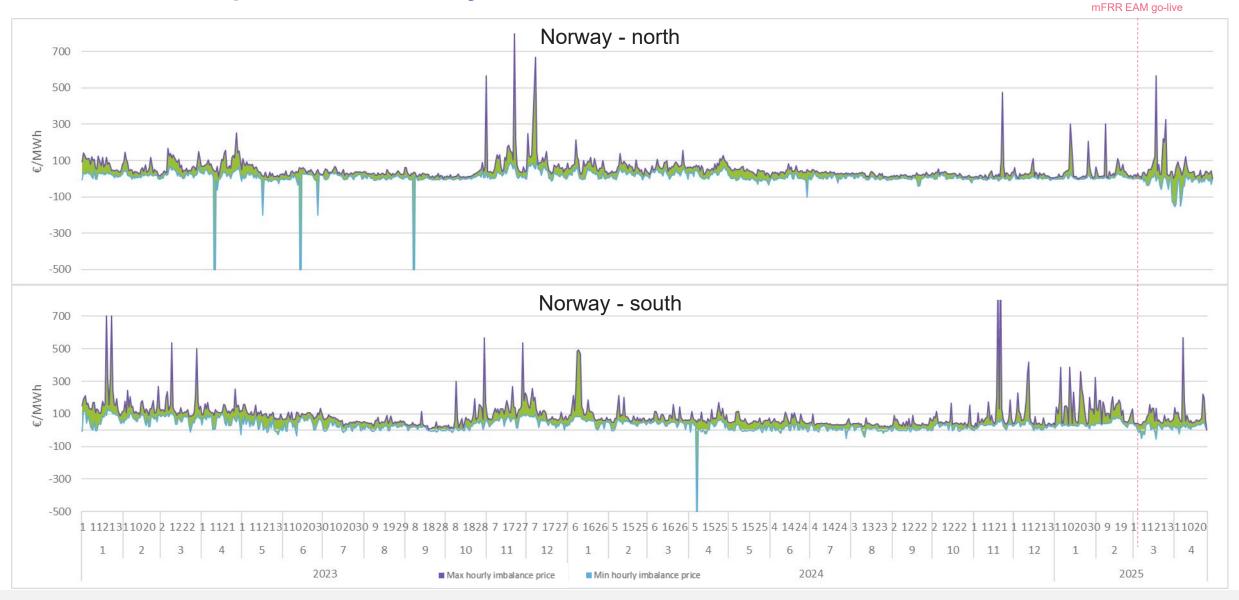


## Imbalance price volatility increased





## Imbalance price volatility increased



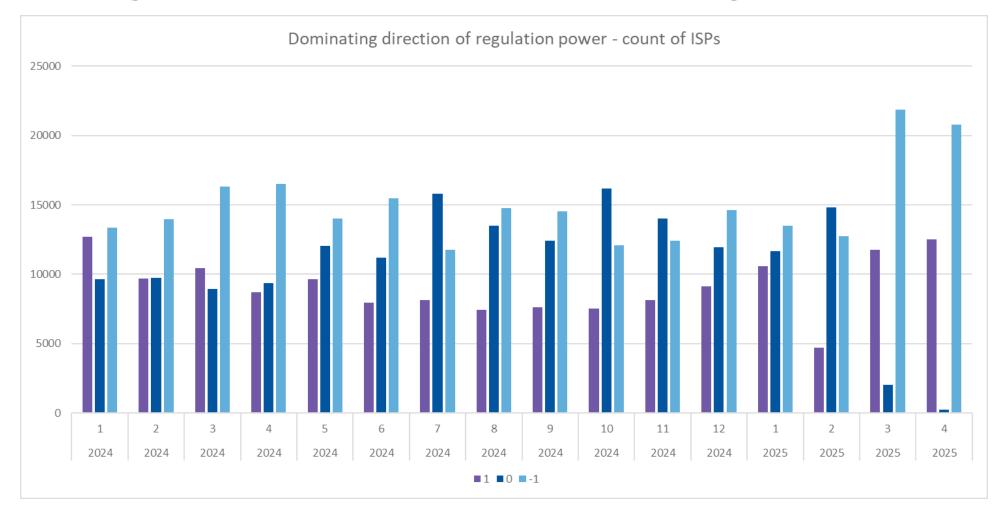
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## eSett: Market overview

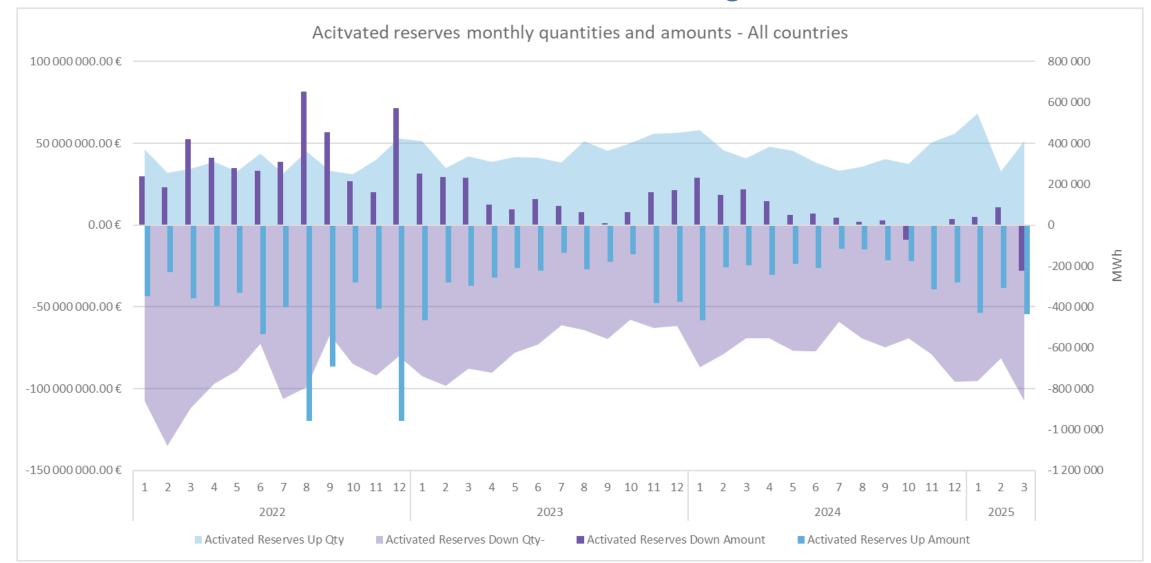
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- Market Parties & Imbalance volumes
- Prices
- Activated reserves
- Trading volumes

### Dominating direction – end of ISPs with no regulation?



### Activated reserves net amount turned negative



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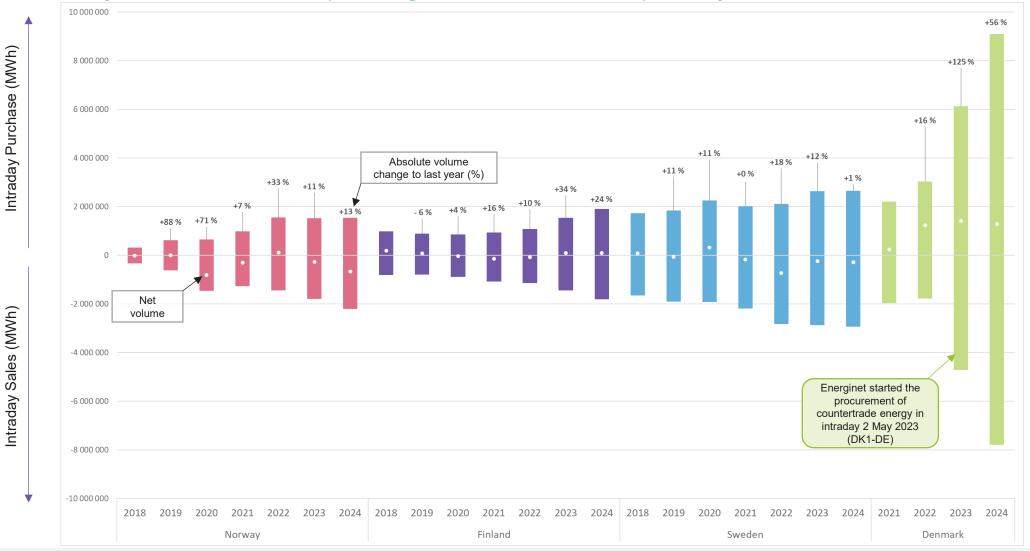
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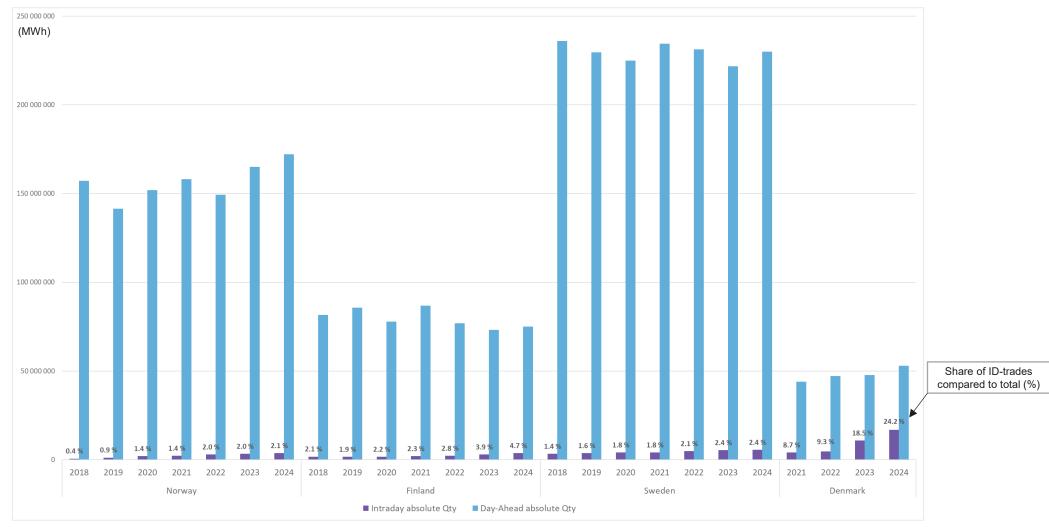
## Yearly intraday trade volumes per country

Intraday trade volumes kept rising in all countries, especially in Denmark

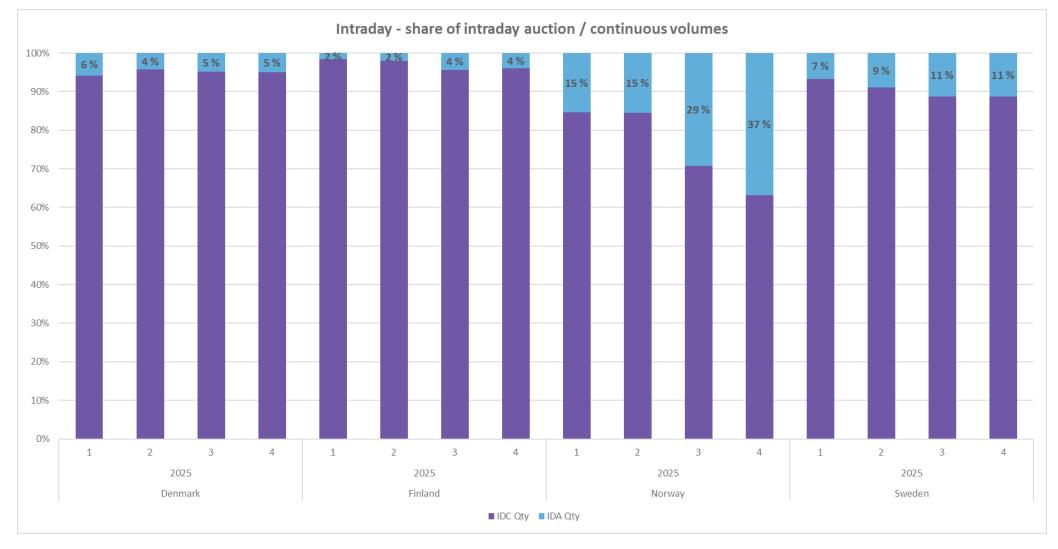


### Yearly PX market trade volumes per country

Relative to Day-ahead, ID volumes are significantly greater in Denmark



### Intraday auction volumes increasing especially in Norway





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## Open Data

### Customer Committee Presentation

Sasu Saalasti ⊨ 14.5.2025

### **Motivation**

As an ISR, eSett produces and manages large amounts of electricity market data. eSett promotes the transparency and efficiency of the electricity market. Our Open Data platform provides electricity market data and structural data on electricity market participants free of charge and in machine-readable format to support our goals. All data is provided in accordance with the <u>Creative Commons CC Zero License</u>.

## Open Data = Web app and API

Providers	NO2 -	Start Date CEST 07.04.2025	End Date CEST 13.04.2025	15 min Hour Day Week	k Month Year	Search	
Table	Chart						
15	Date/Time CET/CEST	Date/Time UTC	MBA	Consumption Total	Metered	Profiled	Flex-settl
	07.04.2025/00:00	06.04.2025/22:00	NO1, NO2	-1 881,88	-1 878,13	-3,75	
	07.04.2025/00:15	06.04.2025/22:15	NO1, NO2	-1 864,00	-1 860,30	-3,70	
	07.04.2025/00:30	06.04.2025/22:30	NO1, NO2	-1 854,66	-1 851,00	-3,66	
	07.04.2025/00:45	06.04.2025/22:45	NO1, NO2	-1 843,90	-1 840,29	-3,61	
	07.04.2025/01:00	06.04.2025/23:00	NO1, NO2	-1 841,22	-1 837,60	-3,62	
rs	07.04.2025/01:15	06.04.2025/23:15	NO1, NO2	-1 828,90	-1 825,30	-3,60	
	07.04.2025/01:30	06.04.2025/23:30	NO1, NO2	-1 826,69	-1 823,11	-3,58	
	07.04.2025/01:45	06.04.2025/23:45	NO1, NO2	-1 819,80	-1 816,24	-3,56	
	07.04.2025/02:00	07.04.2025/00:00	NO1, NO2	-1 813,47	-1 809,92	-3,55	
	07.04.2025/02:15	07.04.2025/00:15	NO1, NO2	-1 808,81	-1 805,26	-3,55	
			Rows per page: 10 - 1-	-10 of 672  < < > >			

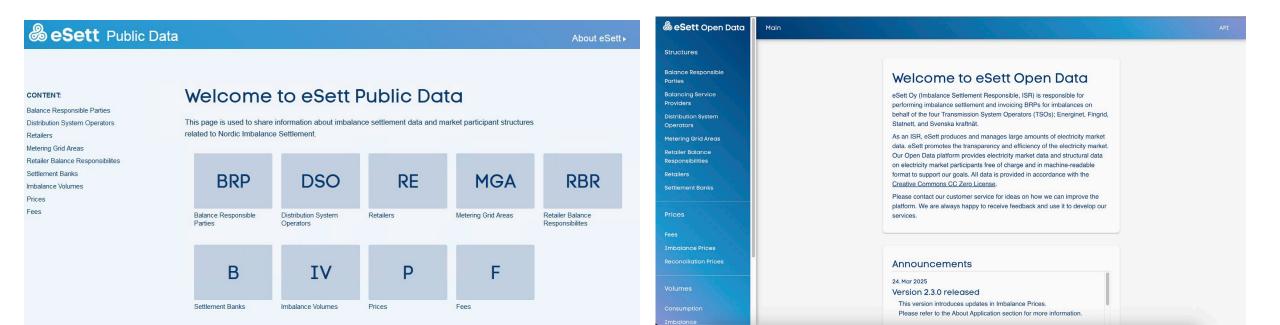
eSett     https://api.opendata.esett.com/openapi?format=json	Explore
eSett open data API COM OASS https://epi.opendata.eseti.com/openapi?format-json	
Servers https://api.opendata.esett.com v	
Market Parties	^
GET /EXP01/BalanceResponsibleParties Get Balance Responsible Parties	$\sim$
GET /EXP01/BalanceServiceProviders Get Balancing Service Providers	~
GET /EXP01/DistributionSystemOperators Get Distribution System Operators	~
GET /EXP01/Retailers Get Retailers	~
Metering Grid Areas	^
GET /EXP03/MBA0ptions Get Available MBAs for Metering Grid Areas	$\checkmark$
GET /EXP03/MeteringGridAreas Get Metering Grid Areas	$\sim$

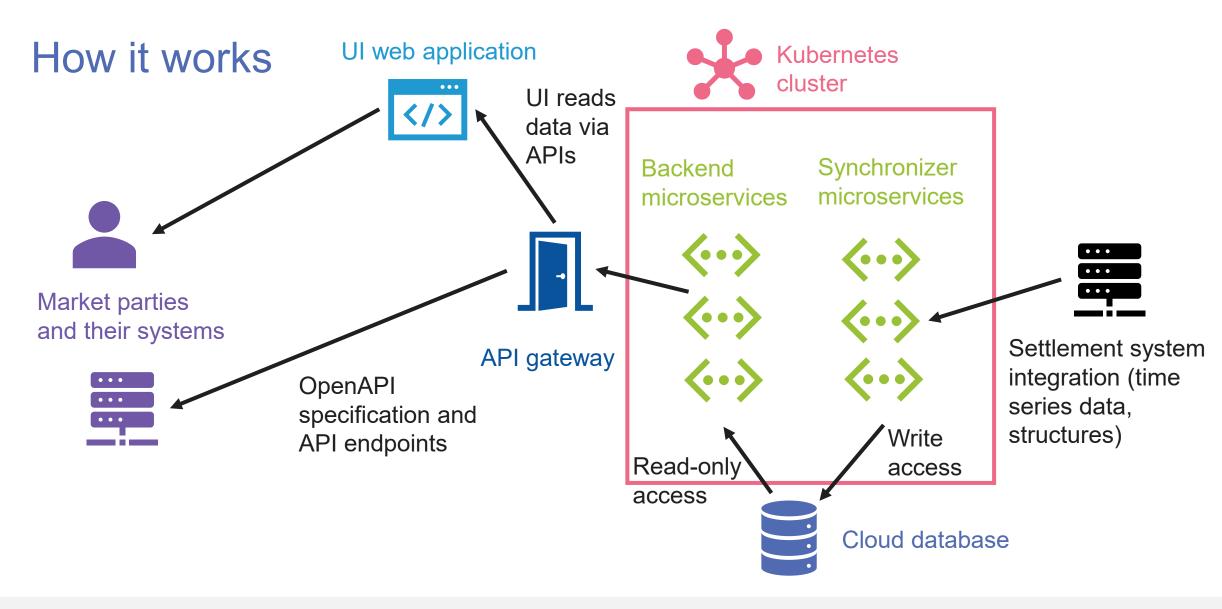
### Some history

- September 2020 Launch of Public Data
- November 2021 Single Balance Volumes and Prices
- May 2022 eSett starts developing a renewed solution
- October 2022 BSP view (old solution)
- November 2022 Consumption and Production views and API endpoints (old solution)
- May 2023 Launch of Open Data 1.0, OpenAPI specifications, 15 min ISP
- November 2023 Load Profile and Reconciliation views
- April 2024 Open Data 2.0
- ...monthly releases

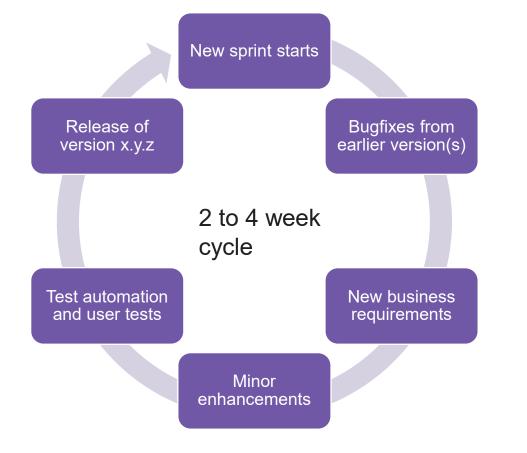
24. Mar 2025						
2.3.0						
Features:						
The following u	he following updates concern the Imbalance Prices view. lata is updated once an hour (previously once a day).					
	Ip and Down Regulation Price columns for MBAs DK1 and DK2.					
	nfo due to mFRR EAM Go-Live. In names: Up/Down Regulation Price -> mFRR Up/Down Regulation Price, Imbalance and Spot Price					
	malance and Day-ahead Price Difference, Main Direction of Regulation Power per MBA -> Dominating					
	Direction of Regulation Power per MBA.					
29. Jan 2025						
2.2.2						
Features:						
Updated date	picker component to show time zone.					
Improved date	picker usability.					
Updated Abour	the View modal.					
21. Nov 2024						
2.2.1						
Features:						
Updated Single	Balance Prices and Load Profile view descriptions.					
Fixes:						
Fixed aFRR D	own Regulation Price series in Imbalance Prices Chart. Previously both aFRR Up and Down values					
were incorrect						
Fixed EXP17 a	nd EXP17 Aggregate endpoints that returned inconsistent date intervals compared to the request.					
22. Oct 2024						
2.2.0						
Features:						
	Balance Prices view description about VoAA and IC data synchronization.					
	Balance Prices graph to display more price series.					
Added Sweder	n Total view and API endpoint (/EXP17/Aggregate) for Reconciliation Prices.					
Manufana						
Maximum retu Fixes:	ned data rows is now 100 000 for RBR data.					

#### First version vs Current one





#### How we work





#### Future development...

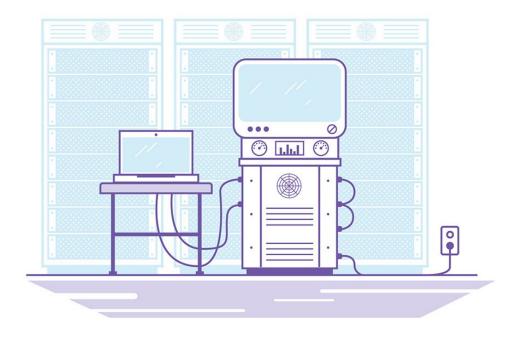
- General UI improvement (usability, accessibility)
- More advanced graphs
- Backend performance improvements
- Continuous security and dependency version upgrades
- Rigorous daily/weekly automated tests for API data

Our goal is to keep the application light, high-quality and available 24/7.



#### Let's see this in action!

#### https://opendata.esett.com





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# eSett API development workshop

#### **Customer Committee**

Rami Ayoub, Tuomas Pulkkinen, Ville Rahkonen + 14.5.2025

### Agenda of the workshop

- Introduction 30 min
  - eSett API project plan
  - including review of the INFS scope, current state of INFS usage
  - Demo of eSett API
  - Summary of questionnaire results
- Workshop 60 min
- Summary 30 min

## eSett API Introduction and Project Plan

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# Objectives

- Introduction
- Scope
- Planned timeline

#### Introduction

- We have received a lot of feedback from market parties over the years and we have identified the need for an API.
- The settlement system is being renewed and as part of the renewal, the information service will be phased out.
- We identified an opportunity to build a modern solution and rethink the way we offer data.
  - By separating the API layer from the core system, we gain flexibility in the way data is presented and in implementing new features

### Introduction – What is the eSett API

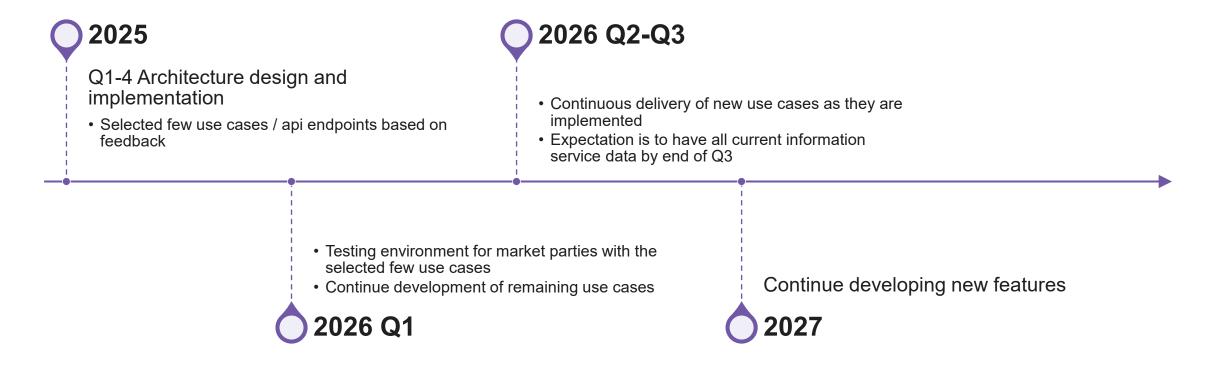
- A modern way for market parties to retrieve their data
  - Using the standard OpenAPI specification, RESTful API endpoints
- Initially the scope is to replace the current Information Service
  - The same data will be made available, but in a different format (JSON) and a more efficient, improved structure
- Continuous development and improvement based on feedback, questionnaires and workshops
  - More use cases
- Longer term plans include bidirectional communication
- It is not intended to replace our core messaging, dataflows or data packages.

#### Scope

- Initially planned to replace the current Information Service
  - The same data will be made available, but in a different format (JSON) and a more efficient, improved structure
- Future plans to include more data, based on feedback received, questionnaires and workshops.
- Continuous development and improvement
- Longer term plans include bidirectional communication
- It is not intended to replace our core messaging, dataflows or data packages.

#### & eSett

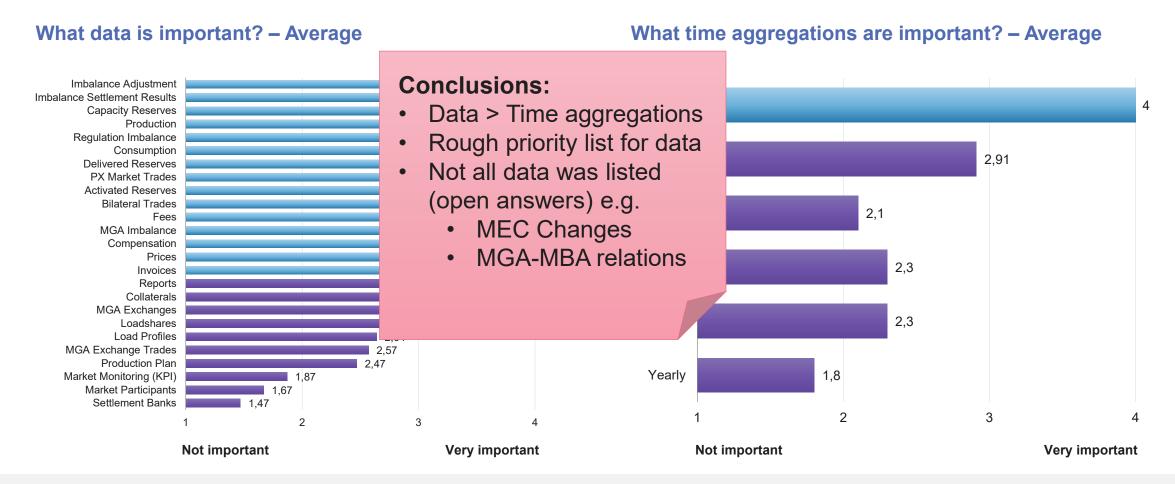
### Timeline



### Summary of Questionnaire Results

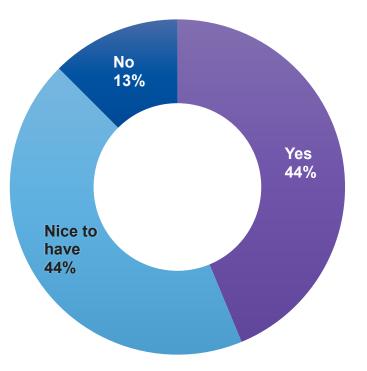
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#### Data types to be reported to eSett:

• Bilateral Trades (multiple same answers)

#### **Conclusions:**

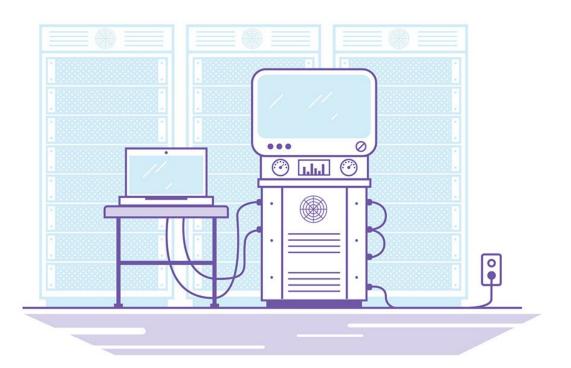
- A two-way API should be developed within some time frame.
  - However, it's not the first priority.
- Needed at least the for BRPs and BSPs.
  - Usage for other parties needs to be evaluated further.

#### & eSett

## First version of API

Based on the answers so far...

- It's better to deliver something already sooner than everything later.
- Prioritize variety of data over the different time aggregations.
  - E.g. 15-minute resolution data for the top 10-20 data types.
- Well structured API and endpoints that can be expanded.





# Workshop

### Workshop plan

- We will divide into 3 groups, where we'll have individual thinking and group discussions
  - 10 min per question: first 2 min individually writing down thoughts and then 8 min sharing of the ideas in the group

#### - Questions

- 1. What is your feedback on the eSett API project plan?
- 2. Detailed questions on eSett API usage:
- 1. When fetching data what identification codes are preferred, MEC ID or market party ID or PU/RO code?
- 2. How long into the past you would need to fetch the data and why?
- 3. What information is critical and what is less critical? Why?
- 3. What is your expectation on the testing of the new eSett API?
- 4. What risks do you see in the eSett API project and how could we mitigate them?
- 5. What is the best possible vision for eSett API and data exchange with eSett in the long run?
- 1. What would be reasonable to manage through a bidirectional API in the long term?
- 6. Open data: How do you perceive its role and is it beneficial to you or more useful to others? Is there enough awareness about it and if not, how should it be marketed?



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