

# eSett News

Customer Committee meeting 22.5.2024

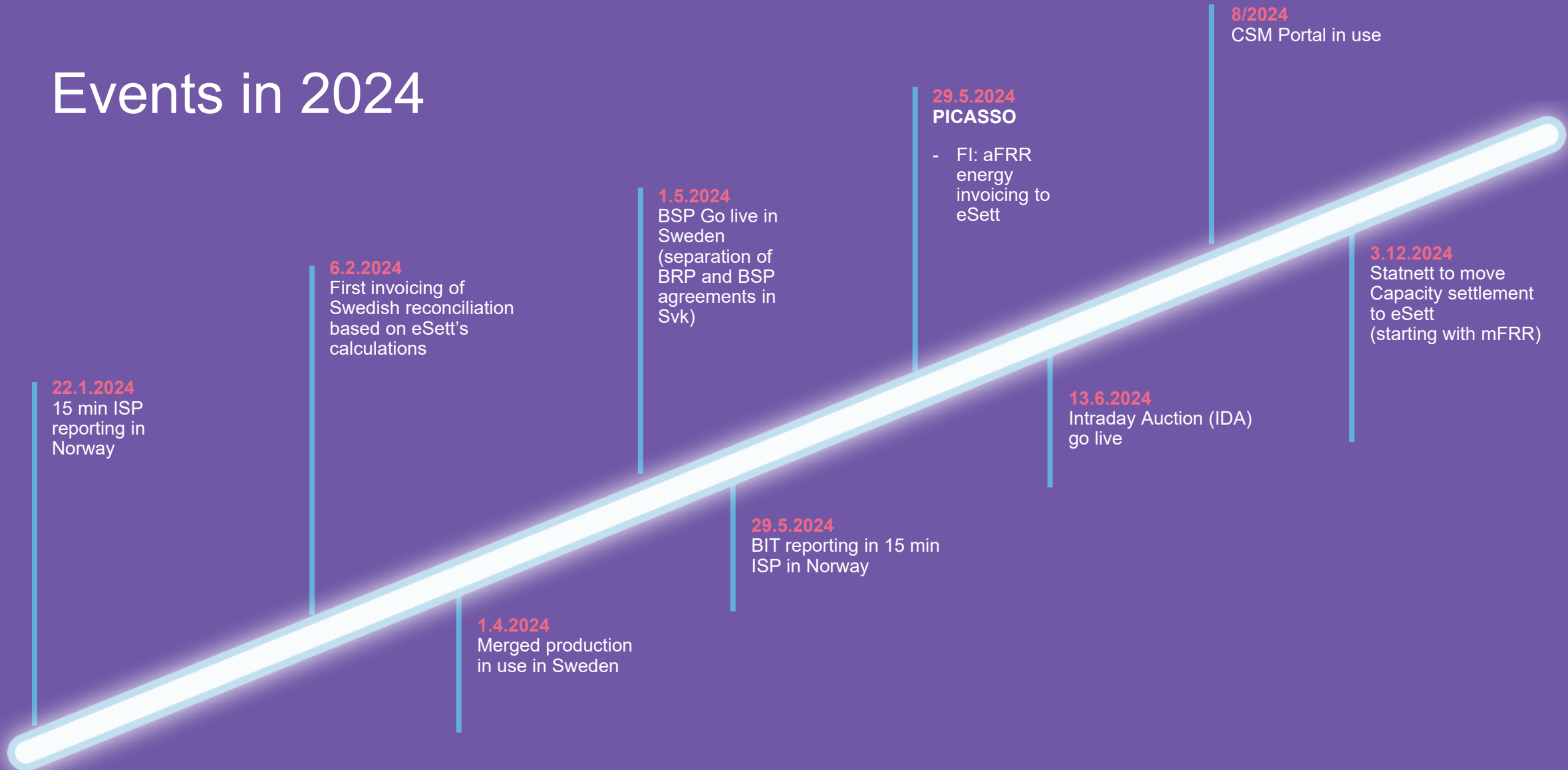
Diana Welander | 22.5.2024



# Autumn Achievements: Go Live Events



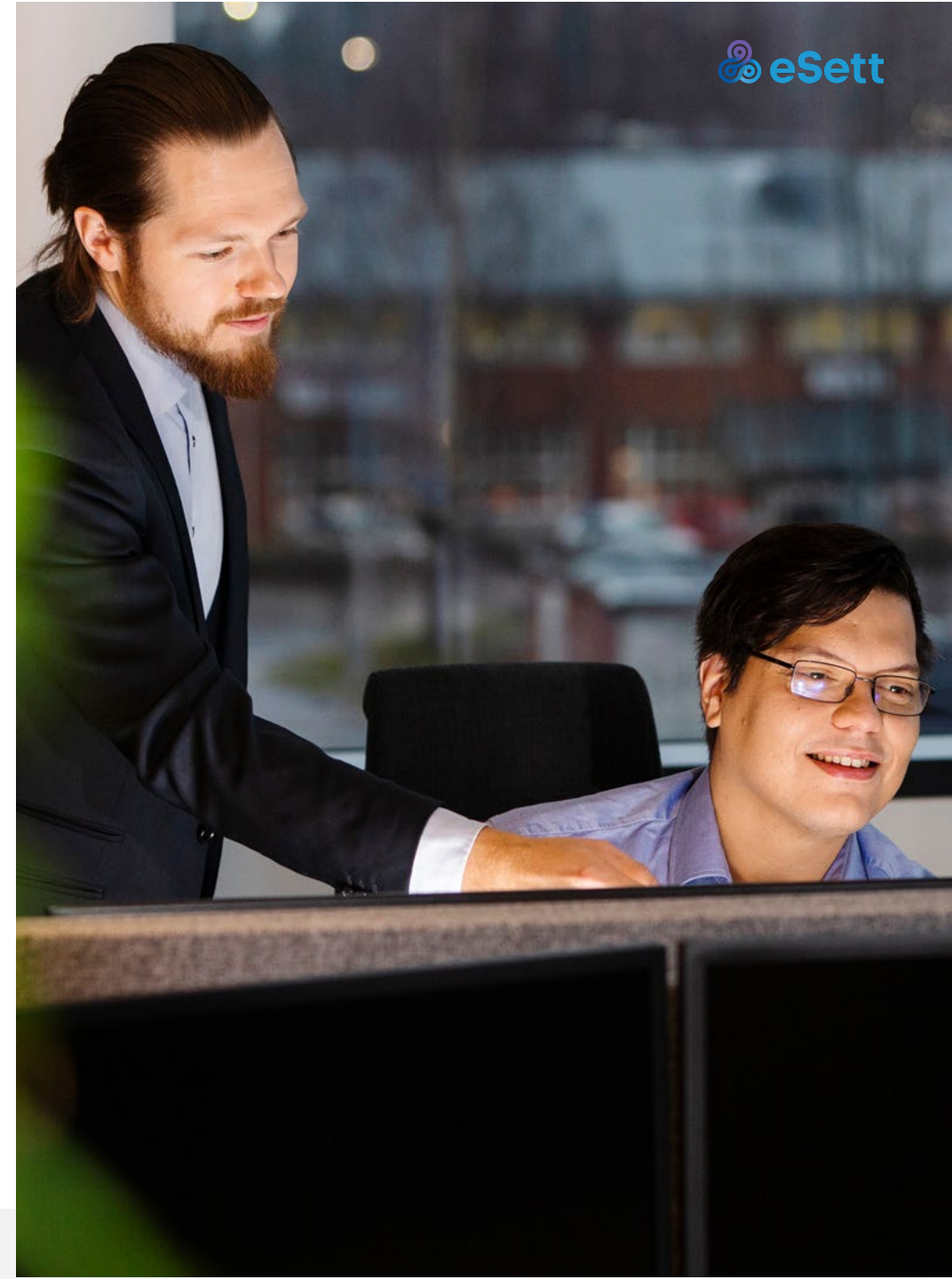
# Events in 2024



# Cybersecurity Exercises

## TIETO24

- eSett will participate in the national TIETO24 training to enhance its incident management capabilities and leadership in cyber security.
- The exercise will allow eSett to engage in practical cooperation training together with various critical infrastructure sectors.
- The training will gain hands-on leadership experience in incident situations and improve information exchange structures for better situational awareness and unified practices.



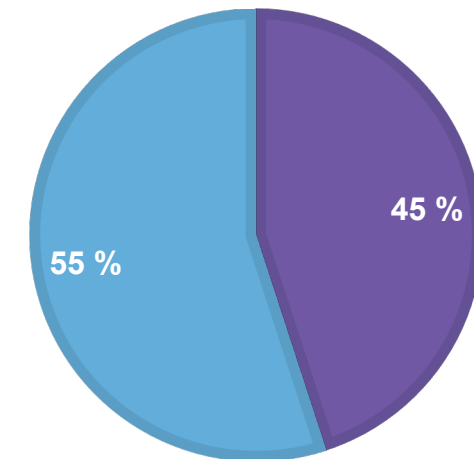


# Transition to the New Cash Account Model

- Nine banks have successfully transitioned to the cash account model
- DNB and SEB are now fully on board, with 90% of customers already migrated to the new model.
- Danske Bank has started the process to update to the new model
- All settlement bank have been contacted and informed about the option of using the Cash account model
- Central European banks are showing interest, reflecting the model's growing appeal beyond the Nordic region.
  - Oesterreichische Kontrollbank AG (**OEKB**) has finalized the process, currently accepting only Austrian and German clients.

## BANK ACCOUNT MODEL

- Cash account model
- Pledged settlement account model



# CSM model – Upcoming improvements

## Some key aspects:

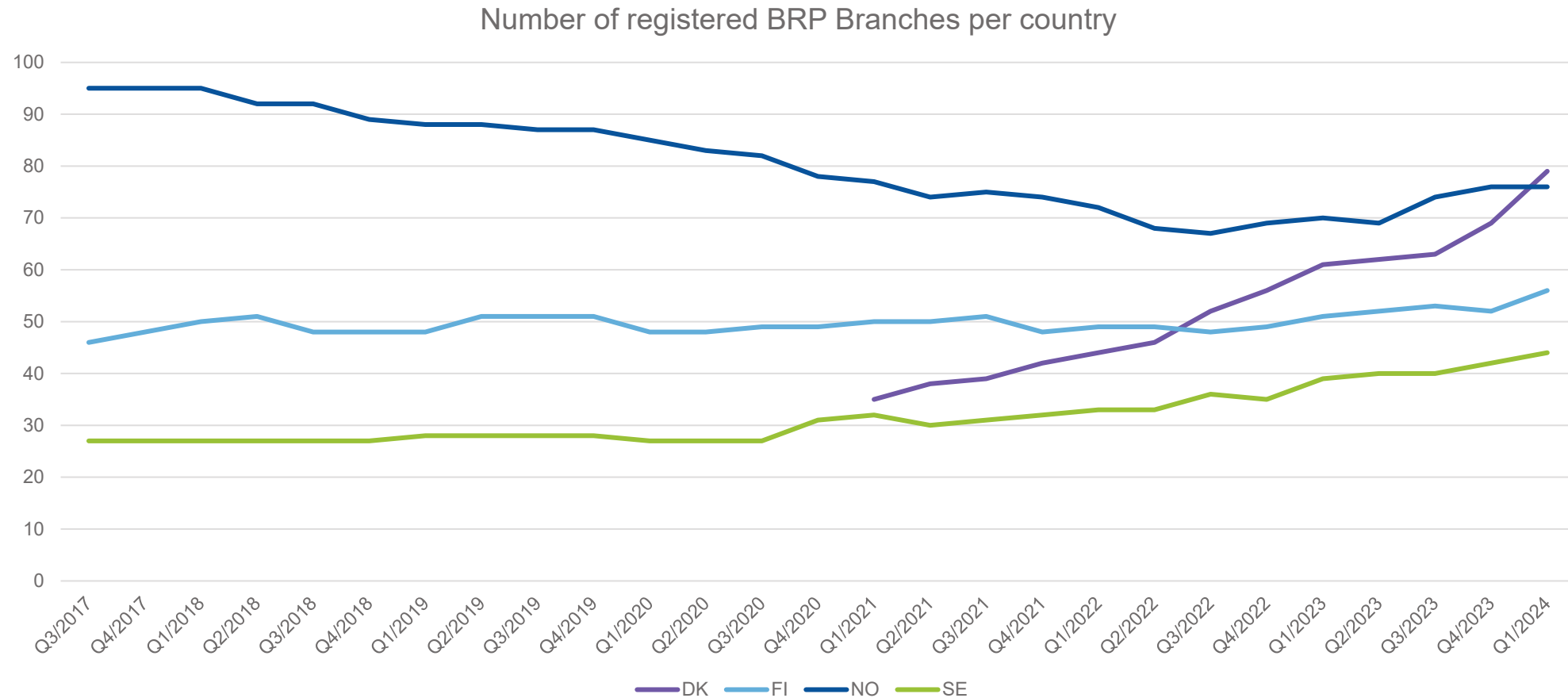
- **Self-Service Portal:** Implementation of a self-service portal for eSett customers. This portal will allow customers to log in and view their own cases.
- **Automated Service Management:** The current excel-based BRP/BSP process will be converted to an automated service management-based system. This will streamline the process, reduce manual errors, and increase efficiency.





# The Continuous Growth of BRPs in Operations

No TSO owned BRPs or NEMOs included.



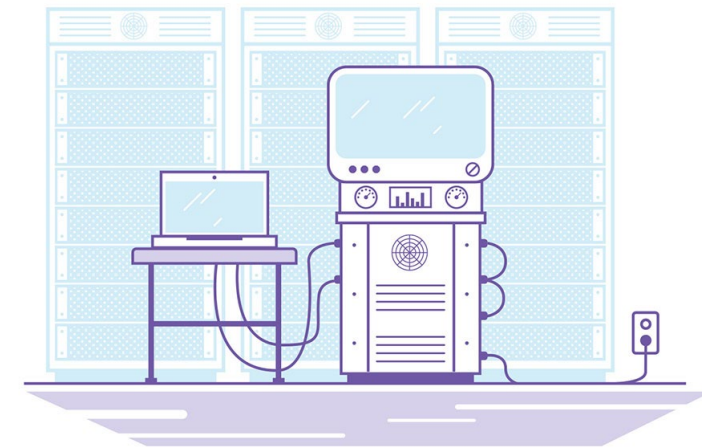
# Data exchange solution - project overview

## Project Aim:

- The project is a study to create a roadmap for eSett's next-generation data exchange solution.
- The focus is on harmonizing APIs and ensuring the solution is modern and customer-centric.

## Key Focus:

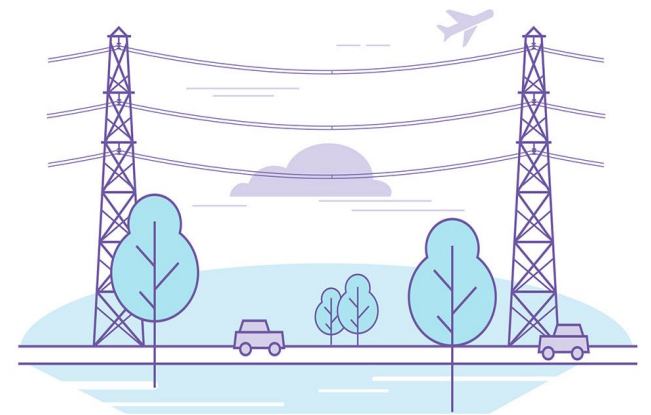
- The project emphasizes delivering concrete outcomes early by understanding customer needs, defining problems clearly, exploring viable solutions, and developing with a short time to value and feedback.
- It aims to provide solutions that enable market parties to succeed in their business, making sure investments bring real benefits for eSett and their customers.





# Data Readiness: Studying a shorter reporting period

- During last Fall's Customer Committee eSett presented results from a Data Readiness study, which aimed to investigate the quality of settlement data within the current reporting period.
- Based on this Data Readiness study, the quality of settlement data is not significantly changed on the last days of the reporting window
  - Shortening the reporting window would seem to have a relatively low impact on imbalance settlement.
  - Operating on a tighter reporting window could allow invoicing to be concluded some days earlier.
- eSett and a TSO working group has started a study on the potential effects on a shorter reporting period for the Nordic electricity market.
  - Study includes aspects, such as impact assessment for different market participants
  - Study will be completed during 2024



# Merged Production in Sweden

- Merged Production was implemented in Sweden from 1st of April 2024
  - The change was mandatory for all Swedish DSOs
  - For production with capacity under 1 MW
  - Production type “Minor” was implemented simultaneously
- Relatively smooth go-live
  - Some miscommunication with production type codes in MEPI messages, which was eventually resolved by accepting all codes and allowing DSOs to report missing values for April 1-5.
  - Bug in the system due to summertime change
- Status 6.5.2024
  - 80% of Swedish DSOs have sent at least one MEPI message, meaning that the majority of DSOs have adopted the new reporting method.
  - 98% of minor production in Sweden is reported by Merged Production.
  - Over 9000 PUs have been terminated in Sweden, either on March 31 or later, and over 8000 Merged Production series have been started from April 1







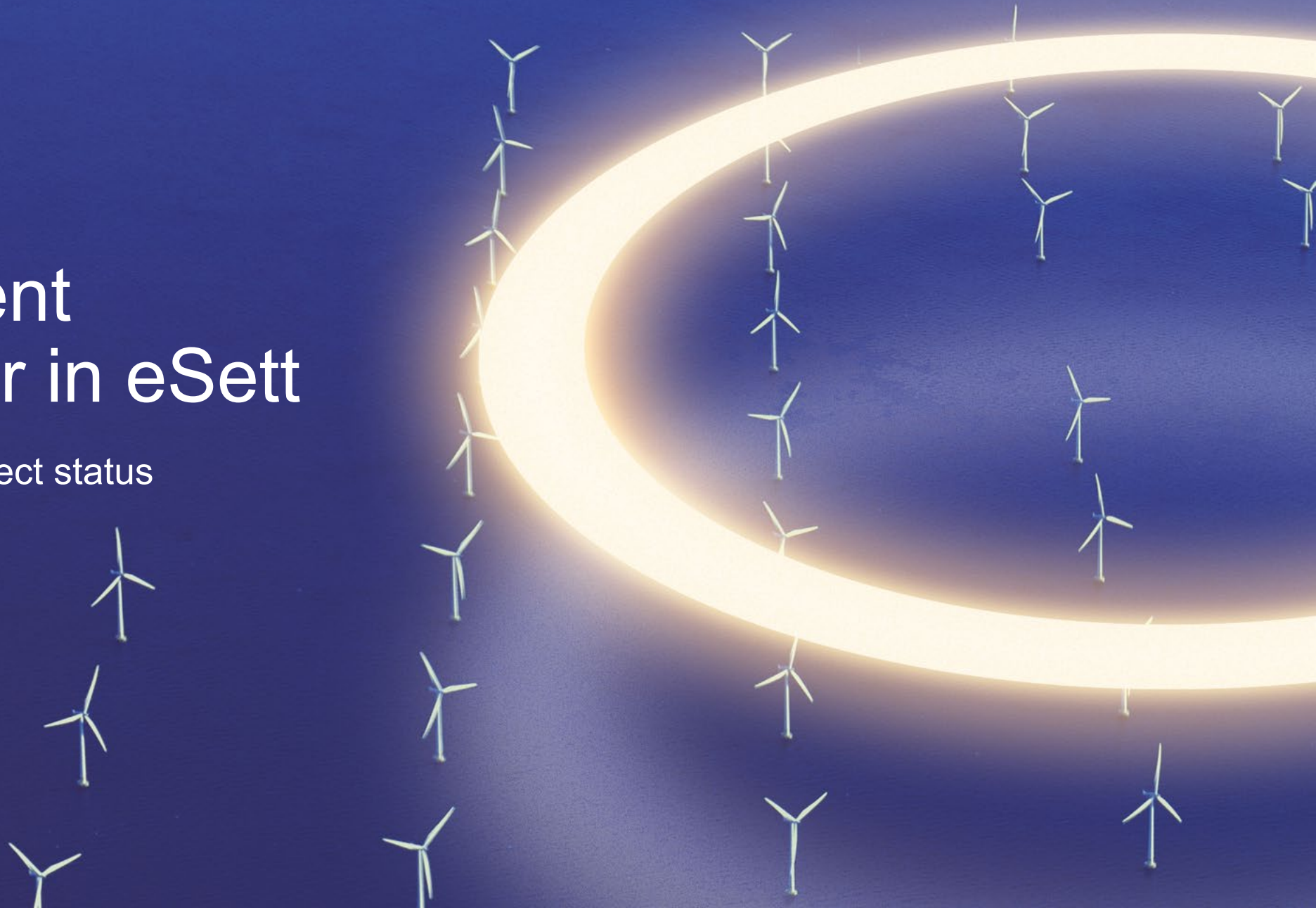
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# Independent Aggregator in eSett

Draft model and project status





# Disclaimer

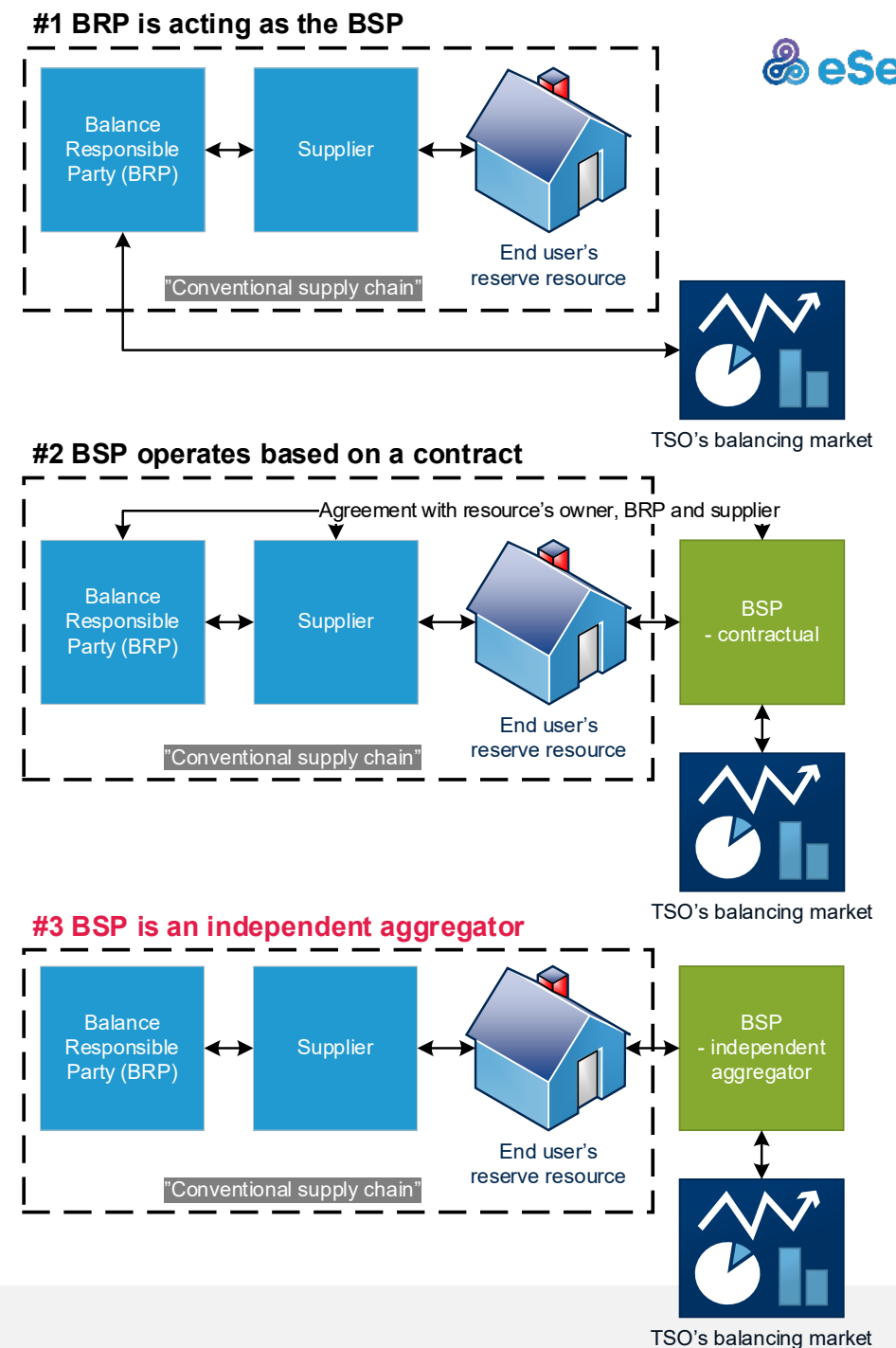
The presented model is still a draft.

- There are several open questions regarding e.g. compensation and regulation imbalance in many countries.
- There is no applicable regulation in all countries.
- The presented parts will most likely be implemented gradually.
  - Some parts won't be ready, and they are implemented after the first phase.
- Changes may be introduced during and after the project.



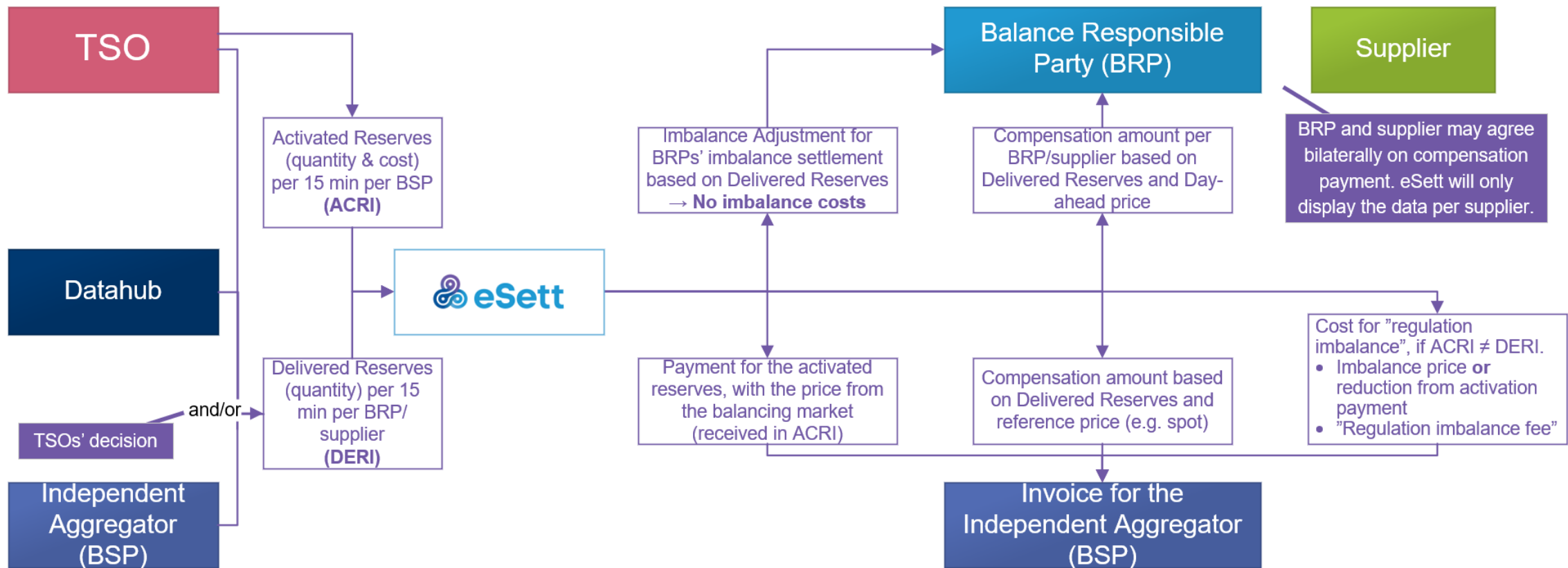
# Independent Aggregator

- Balancing Service Provider (BSP) which activates resources from another supplier or BRP (without explicit agreement)
  - Imbalance adjustment for the BRP
  - Compensation for the BRP
- New message for data exchange: *Delivered Reserves (DERI)*
- Development ongoing together with TSOs (EN, FG, SN, Svk & eSett)
- Step-wise delivery per country and balancing service
  - E.g. Independent aggregator for *aFRR energy in Finland* with a target go-live around Q1/2025





# Planned process for imbalance adjustment and compensation with independent aggregator model



# Planned changes in NBS structures

- One company can have multiple BSP roles in one (1) country
- Regulation Objects (RO) to support relations to
  - multiple BRPs (regarding reserves)
  - multiple REs
  - → only one BRP for *production plans* (as currently)
- Possibility for BSPs to add and terminate RO-BRP and RO-RE relations
- Both BRP and RE will be able to see the Regulation Objects for which they have been linked to
  - This includes RO name and code, BSP and related RE/BRP (depending which role is used for viewing)
  - BRPs can see the Retailers from their balance responsibility
  - REs can see their own BRP
  - BRP and RE **will not** see other unrelated BRPs and REs on the RO

Days	23.01.2024 00:00 - undefined
Valid From	23.01.2024 00:00
Valid To	undefined
Name	REGULATION_OBJECT_NAME
Code	44W-RO-BSP-0001X
Coding Scheme	EIC
Direction Type	Production
Production Type	Normal
BRP (Production Plans)	BRP 01
BSP	BSP 01
BRP	BRP 01
BRP	BRP 02
RE	Retailer 004
RE	Retailer 005
MBA	MBA

# Data Exchange changes

- New incoming data flow: Delivered Reserves (DERI)
  - Sender may be TSO, Datahub **and/or** BSP
  - Based on the ENTSO-E Activation Market Document
  - CIM format – documentation is published in <https://ediel.org/nordic-balance-settlement-nbs/>
- Multiple new outgoing data flows:
  - DP – Delivered Reserves (for BRP and BSP)
  - DP – Reserve Compensations (for BRP and BSP)
  - DP – Regulation Imbalances (for BRP and BSP)

## Approximate contents of a DERI file

### *Header (one per file):*

- Sender & Receiver
- BSP (if not sender)

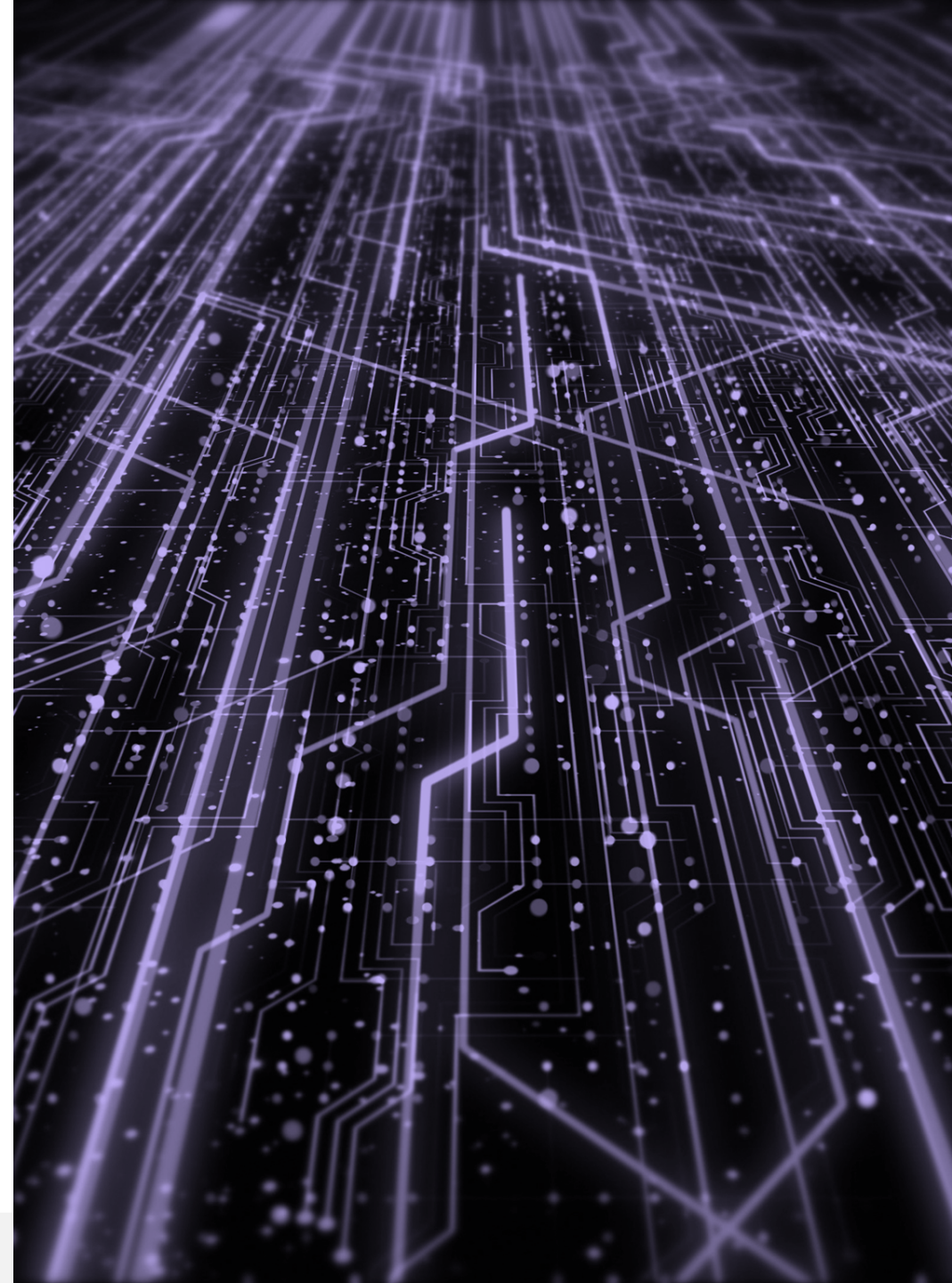
### *Timeseries (multiple per file):*

- Related party (RE or BRP)
- Business type
- Direction (Up or Down)
- Status (Activated or Delta)
- Regulation object
- Balancing sub-service (e.g. aFRR)
- Activation method
  - Independent aggregation, or
  - Contractual reserves, or
  - BRP activating own resources
- Quantity

# Input Data changes

One new input data type: Delivered Reserves

- Very similar to Activated Reserves, but there are no amounts
- Independent aggregation data is reported per retailer
- In case of activation of contracted resources, a misdelivery may be reported
  - Relevant only for Finland
  - If the misdelivery (difference between activation and delivery) is due to a BRP instead of BSP
  - BSP allocates a volume of under or over delivered reserves to BRPs responsibility
- Reporting responsibility depends on country, but is
  - BSP, and/or
  - TSO, and/or
  - Datahub





# Settlement views for verifying reserve data

## Overview of reserve data – example for BRP

Refresh Export to Excel Save Settings Restore Default View Columns						
Period	Delivered Reserves Up [MWh]	Delivered Reserves Down [MWh]	Compensation Up [MWh]	Compensation Down [MWh]	Compensation Amount Up	Compensation Amount Down
16.05.2024 00:00-01:00					0,00	0,00
16.05.2024 01:00-02:00					0,00	0,00
16.05.2024 02:00-03:00					0,00	0,00
16.05.2024 03:00-04:00					0,00	0,00
16.05.2024 04:00-05:00					0,00	0,00
16.05.2024 05:00-06:00					0,00	0,00
16.05.2024 06:00-07:00					0,00	0,00
16.05.2024 07:00-08:00					0,00	0,00
16.05.2024 08:00-09:00					0,00	0,00
16.05.2024 09:00-10:00					0,00	0,00
16.05.2024 10:00-11:00					0,00	0,00
16.05.2024 11:00-12:00					0,00	0,00
16.05.2024 12:00-13:00					0,00	0,00
16.05.2024 13:00-14:00					0,00	0,00
16.05.2024 14:00-15:00					0,00	0,00
16.05.2024 15:00-16:00					0,00	0,00
16.05.2024 16:00-17:00					0,00	0,00
16.05.2024 17:00-18:00					0,00	0,00
16.05.2024 18:00-19:00					0,00	0,00
16.05.2024 19:00-20:00					0,00	0,00
16.05.2024 20:00-21:00					0,00	0,00
16.05.2024 21:00-22:00					0,00	0,00
16.05.2024 22:00-23:00					0,00	0,00
16.05.2024 23:00-24:00					0,00	0,00
Min	0,000	0,000	0,000	0,000	0,00	0,00
Max	0,000	0,000	0,000	0,000	0,00	0,00
Total	0,000	0,000	0,000	0,000	0,00	0,00
Peak values for filtered time period						
Rows count: 24 of 24						

## Drill-down view of reserve data – example for BRP

Refresh Export to Excel							
Period	Up Regulation				Down Regulation		
	BSP 01	BSP 02		BSP 04	BSP 02		BSP 03
	RO A01	RO G05	RO G06	RO P66	RO G05		RO X99
	-	RE 21	RE 22	RE 44	RE 20	RE 21	RE 38
	Contractual Reserves	Independent Aggregation	Independent Aggregation	Independent Aggregation	Independent Aggregation	Independent Aggregation	Independent Aggregation
16.05.2024 00:00-01:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 01:00-02:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 02:00-03:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 03:00-04:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 04:00-05:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 05:00-06:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 06:00-07:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 07:00-08:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 08:00-09:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 09:00-10:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 10:00-11:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 11:00-12:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 12:00-13:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 13:00-14:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 14:00-15:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 15:00-16:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 16:00-17:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 17:00-18:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 18:00-19:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 19:00-20:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 20:00-21:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 21:00-22:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 22:00-23:00	0,000	0,000	0,000	0,000	0,000	0,000	
16.05.2024 23:00-24:00	0,000	0,000	0,000	0,000	0,000	0,000	
Min	0,000	0,000	0,000	0,000	0,000	0,000	
Max	0,000	0,000	0,000	0,000	0,000	0,000	
Total	0,000	0,000	0,000	0,000	0,000	0,000	

# Calculations with independent aggregation

- Activated Reserves
  - Coming from TSO – no changes
  - Aggregations – no changes
- Delivered Reserves
  - As reported in the new data flow DERI
  - Aggregations – similarly as with activated reserves
- Imbalance Adjustments
  - Calculation from **Delivered Reserves** if used for the balancing sub-service (e.g. mFRR Balancing Power)
  - No changes in calculation logic
- Compensation →
- Regulation Imbalance →
- Regulation Imbalance Fee
  - Applied for regulation imbalance similarly as BRPs' imbalance fee for imbalances
- Collateral demand for BSP
  - At least initially only for Finland and only regarding activations done as independent aggregator

## → Compensation

- Energy: aggregation of compensated energy (e.g. volume of independent aggregation)
- Amount:

$$\text{Compensation energy} \times \text{Reference price}$$

## → Regulation imbalance

- Calculated as sum of all balancing sub-services
- Energy:
  - $Qty_{delivered\ reserves} - Qty_{activated\ reserves}$
  - National thresholds may be applied, so small differences might not end up being regulation imbalance
- Amount:

$$Qty_{regulation\ imbalance} \times \text{Imbalance price}$$

or

$$\text{Payment threshold} \times \text{Activation amount}$$

# Invoice example

Draft plan for invoice products for BRP and/or BSP

- Activated Reserves per type
  - No change
- Compensations per type
- Regulation Imbalance
  - Joint product for all balancing sub-services
- Regulation Imbalance Fee
  - Missing from the example figure



## INVOICE CREDIT POSITION

ISSUER:

eSett Oy  
Läkkisepäntie 23  
00620 Helsinki  
Finland

FI25824997

RECIPIENT:

BSP 10

Notice date:  
Notice number:  
Customer number:  
Terms of payment:  
Due date:  
Invoice settlement:  
Total sum:  
Payment id:  
Interest on arrears: 7,50 %  
Contract id:  
Our reference:  
Your reference:

Invoiced volumes and amounts

Period: Week 45, 6.11.2023 - 12.11.2023

Sales by eSett Oy	Quantity	Price [EUR]	Amount [EUR]
BRP Sold FRR-A, Production Imbalance	92,000000	60,00	5 520,00
BRP Sold FRR-A compensation, Production Imbalance	2,932500	75,00	219,94
BRP Sold regulation imbalance, Production Imbalance	5,467500	129,87	710,04
Total sales by eSett Oy, VAT 0%			6 449,98
Purchases by eSett Oy			
BRP Bought FRR-A, Production Imbalance	-98,000000	90,00	-8 820,00
BRP Bought FRR-A compensation, Production Imbalance	-49,470000	75,00	-3 710,25
BRP Bought regulation imbalance, Production Imbalance	-3,970000	125,73	-499,14
Total purchases by eSett Oy, VAT 0%			-13 029,39
Grand Total, VAT 0%			-6 579,41

Sales by eSett Oy  
Purchases by eSett Oy

VAT 0% (Reverse Charge, Buyer is liable for VAT Directive 2006/112/EY art. 38))  
VAT 0% - Selfbilling applies (Reverse Charge, Buyer is liable for VAT Directive 2006/112/EY art. 38))

Period: Weeks 16 - 26, 18.4.2023 - 2.7.2023

Total sales by eSett Oy:	6 449,98 EUR
Total purchases by eSett Oy:	-13 029,39 EUR
Total sum excluding VAT	-6 579,41 EUR

# Project time schedule plan

- eSett aims that the basic solution will be ready in Q1/2025
  - Support for all the main features for the aFRR energy go-live in Finland
  - External testing phase is planned before the go-live
- Development continues also after the Q1/25
  - New balancing services and countries
  - Introduction of potential new national features
  - Other further development of the model
- Other "go-lives" are estimated earliest at the end of 2025 and will be communicated later once there is more information available.





# Responsibilities with the new model

In addition to existing responsibilities, the new independent aggregator model will bring some new responsibilities.

## **Balancing Service Provider (BSP)**

- Managing correct RE/BRP information on regulation objects
- Reporting of delivered reserves (in some cases)
- Verifications of reported data and calculation results

## **Balance Responsible Party (BRP)**

- Verifications of reported data and calculation results
- Handling of compensation payments with own retailers bilaterally (outside of eSett)

## **Retailer (RE)**

- Handling of compensation payments with own BRP bilaterally (outside of eSett)

## **Transmission System Operator (TSO)**

- Reporting of delivered reserves (in some cases)
- Model design and commissioning time schedules





WE SETTLE, TOGETHER!





# eSett- Review collateral management

Discussion paper 22.5.2024



**pwc**



**eSett**



# Welcome

- ✓ Short background on the project
- ✓ What we have done to improve the current situation
- ✓ We want to find a good solution for all stakeholders **together**
- ✓ The workshop will be conducted and moderated by PwC
- ✓ **Your input is a decisive factor** for the direction of the next steps

**Thanks a lot for your cooperation!**



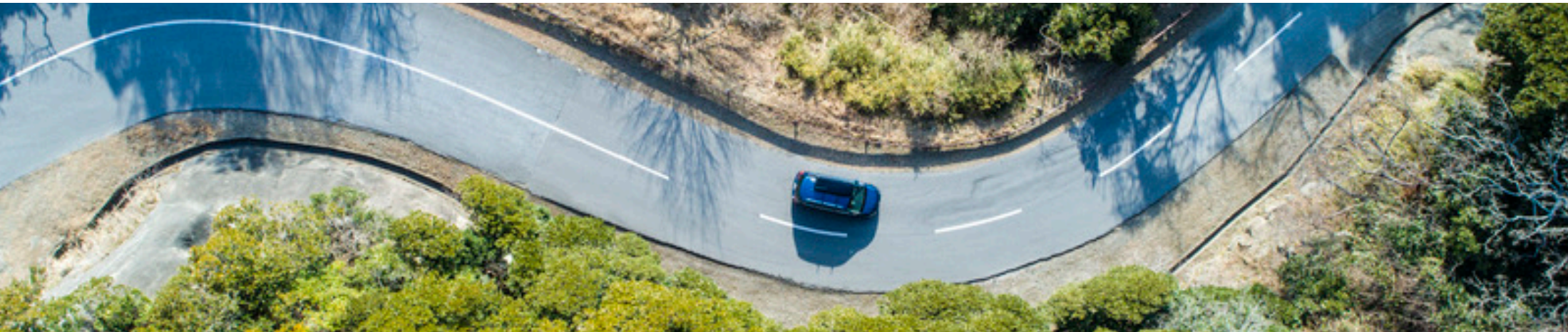
# Table of Contents

## eSett Collateral Management, Workshop

Topic	Responsible	Time
<b>Introduction</b> <ul style="list-style-type: none"><li>• What targets we want to achieve with the workshop today</li><li>• How we want to achieve our goal</li><li>• Work performed so far &amp; Takeaways</li><li>• Focus working areas</li></ul>	eSett & PwC	20 Mins
<b>Group Discussions</b>	All	30 Mins
<b>Presentation of Results &amp; open Discussion</b>	All	45 Mins
<b>Break</b>		5 Mins
<b>Key Takeaways &amp; Next Steps</b>	All	20 Mins

# Introduction





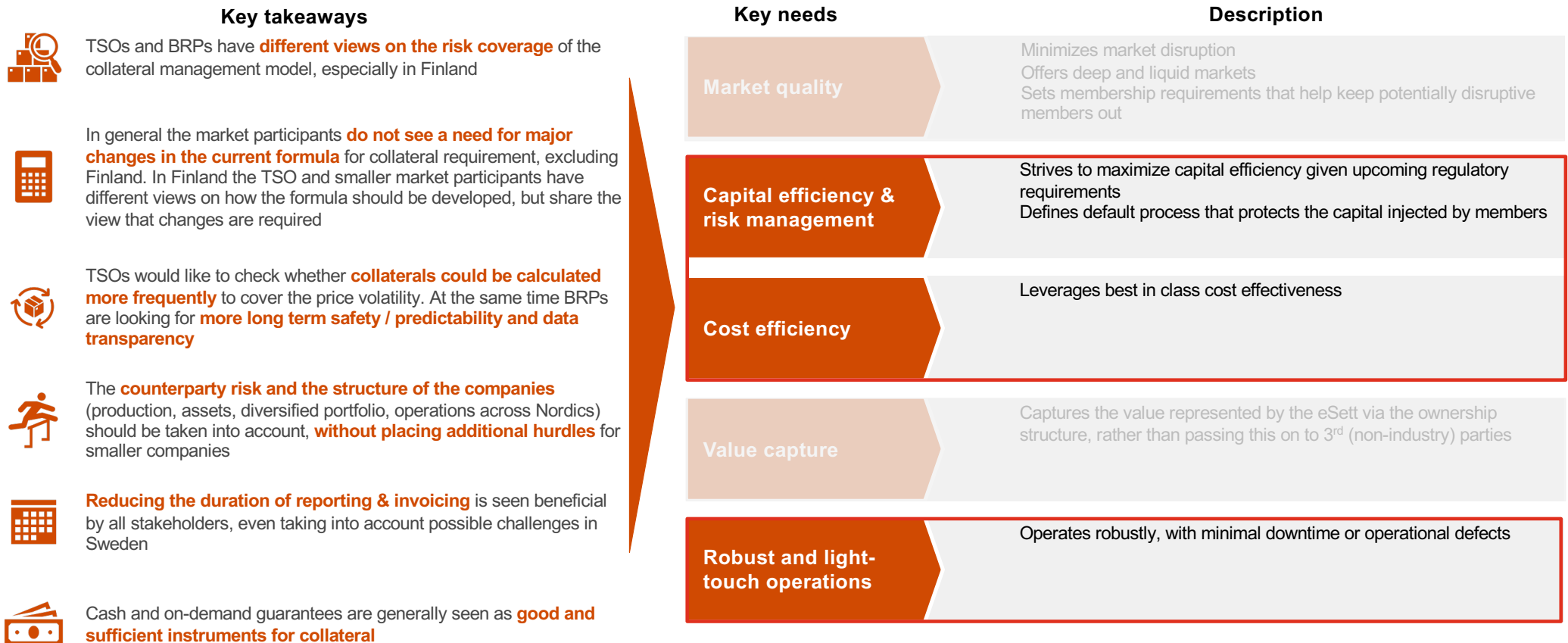
# Combining the knowledge and experiences of all relevant stakeholders to achieve improvements



# Effective collateral management in general should address these five key needs for Market Participants

Key needs	Description	Key risks if not addressed
<b>Market quality</b>	Minimizes market disruption Offers deep and liquid markets Sets membership requirements that help keep potentially disruptive members out	Higher spreads in the market lead to higher hedging costs – and eventually potentially reduced liquidity
<b>Capital efficiency &amp; risk management</b>	Strives to maximize capital efficiency observing the regulatory requirements now and in the future Defines default process that protects the capital injected by members	Increased collateral requirements reduce overall capital efficiency Inadequate risk management increases probability of default or significant P&L impact
<b>Cost efficiency</b>	Leverages best in class cost effectiveness	Increased cost of trading could drive out smaller market players reducing overall market volume and attractiveness of eSett
<b>Value capture</b>	Captures the value represented by eSett via the ownership structure, rather than passing this on to 3 <sup>rd</sup> (non-industry) parties	Third parties (e.g. exchanges, banks) capture value from the energy industry
<b>Robust and light-touch operations</b>	Operates robustly, with minimal downtime or operational defects	Operational issues would hurt trading capabilities and risk operational losses – eventually decreasing eSetts attractiveness

# Key takeaways from the interviews indicate three key needs for further discussion



# These three key needs form the main focus areas for our workshop today

1

## Capital efficiency & risk management

- How to reduce the overall risk in the market?
- Increased collateral requirements can reduce overall capital efficiency
- Should counterparty risks be involved in the collateral model?
- How many and what lines of defense are appropriate for the market?

2

## Cost efficiency

- What are the biggest drivers for cost efficiency and could they be influenced?
- Increased cost of trading could drive out smaller market players reducing overall market volume and attractiveness for being a BRP
- How much could implementing monitoring practices also during weekends decrease the risk/total time from detection to termination and of notifying the respective parties (TSO's, NEMO's and NRA's)

3

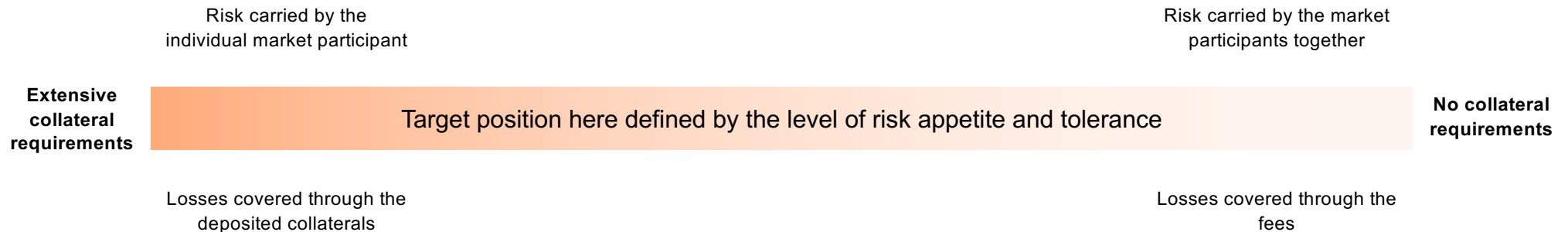
## Robust and light-touch operations

- Operational issues would hurt trading capabilities and risk operational losses – eventually decreasing eSetts credibility and attractiveness for being a BRP
- A more frequent invoicing/shorter reporting interval would reduce the proportion of outstanding settlement amounts that have accumulated until the current day but not been paid yet.
- A more frequent invoicing/shorter reporting interval could also compromise the accuracy of settlement



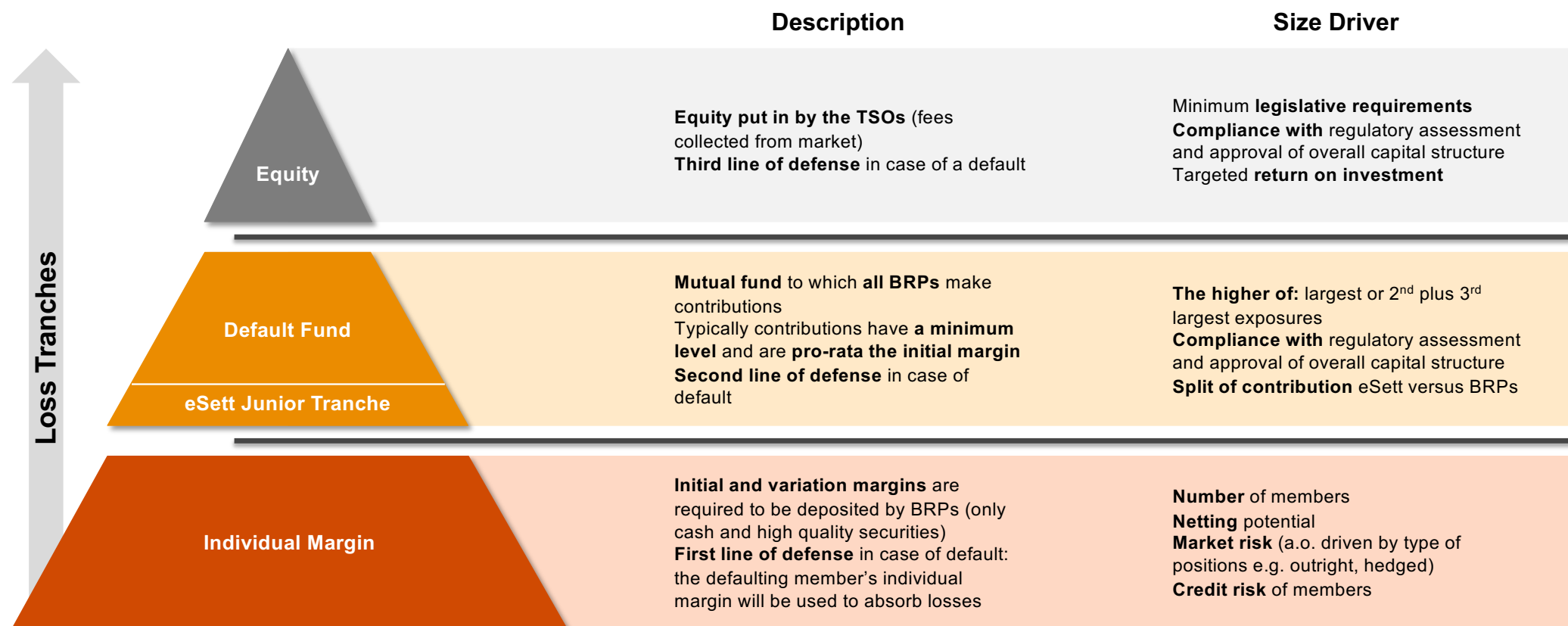
# Defining and agreeing acceptable levels for risk appetite and risk tolerance is essential for addressing the three key needs

Risk appetite can be defined as the amount and type of risk that an organization is willing to take in order to meet their strategic objectives. While risk appetite is about the pursuit of risk, risk tolerance is about what an organization can actually cope with. Risk tolerance is related to the acceptance of the outcomes of a risk should they occur, and having the right resources and controls in place to absorb or “tolerate” the given risk, expressed in qualitative and/or quantitative risk criteria



We need to **understand our target position** here, before we can **propose changes** to collateral management operating model and to the calculation formula

# The three lines of defense included in collateral management can be considered to form the basis for defining risk appetite and tolerance







# eSett: electricity market overview

Customer committee 5/2024



# eSett: electricity market overview

## Contents

- Market Parties & Imbalance volumes
- Prices
- Production & consumption
- Trading volumes



# eSett: electricity market overview

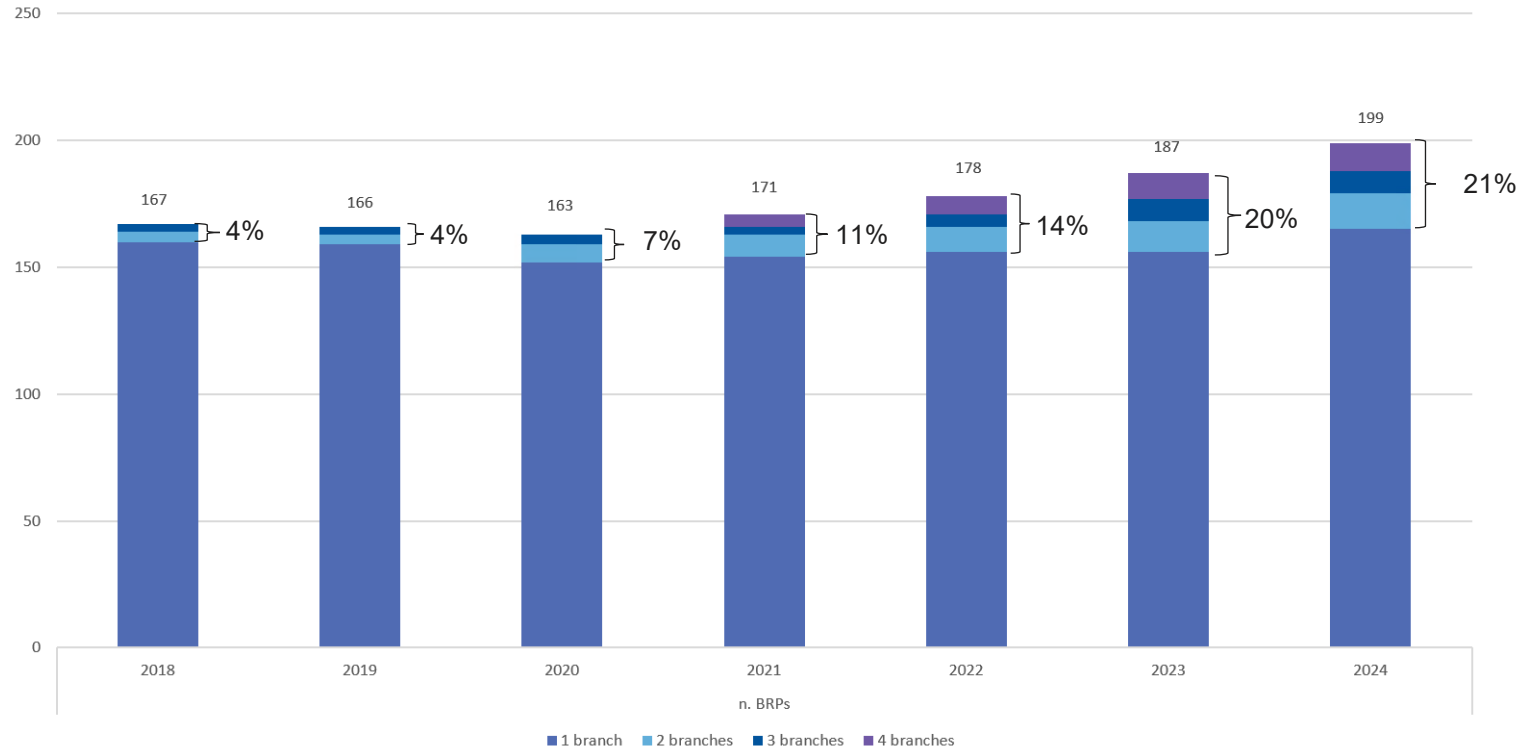
## Contents

- **Market Parties & Imbalance volumes**
- Prices
- Production & consumption
- Trading volumes



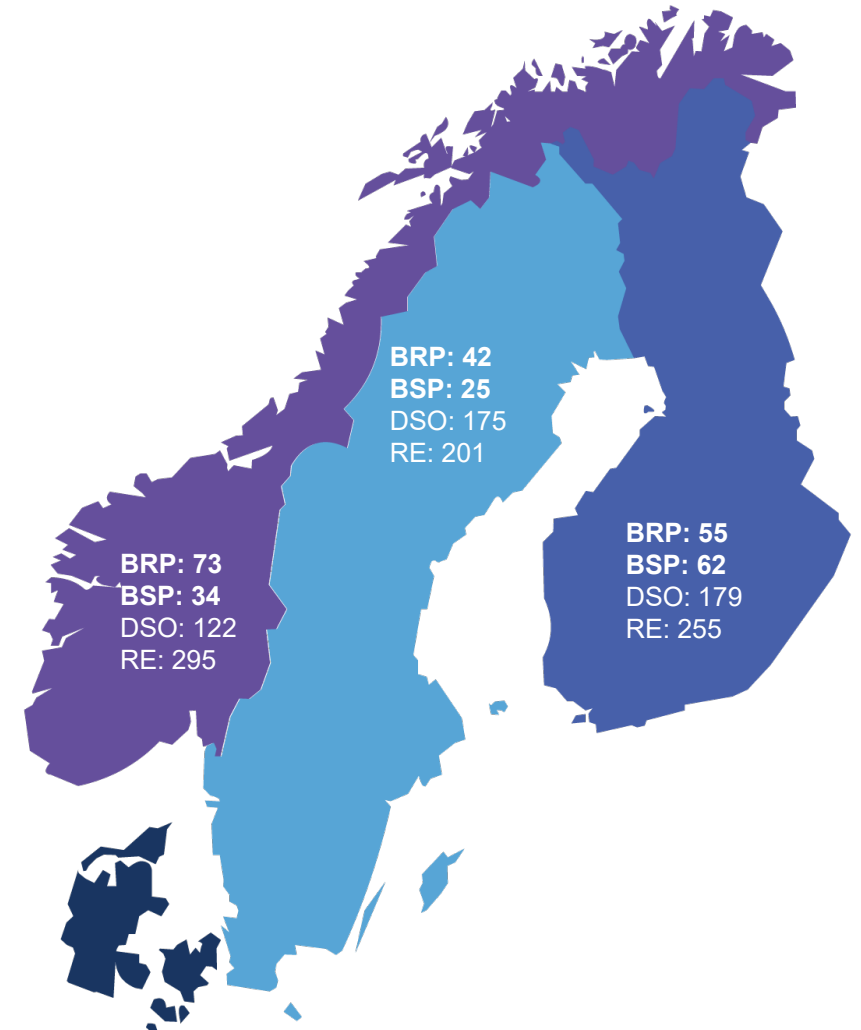
# Active market party roles in imbalance settlement

Number of BRPs at year end by number of BRP branches

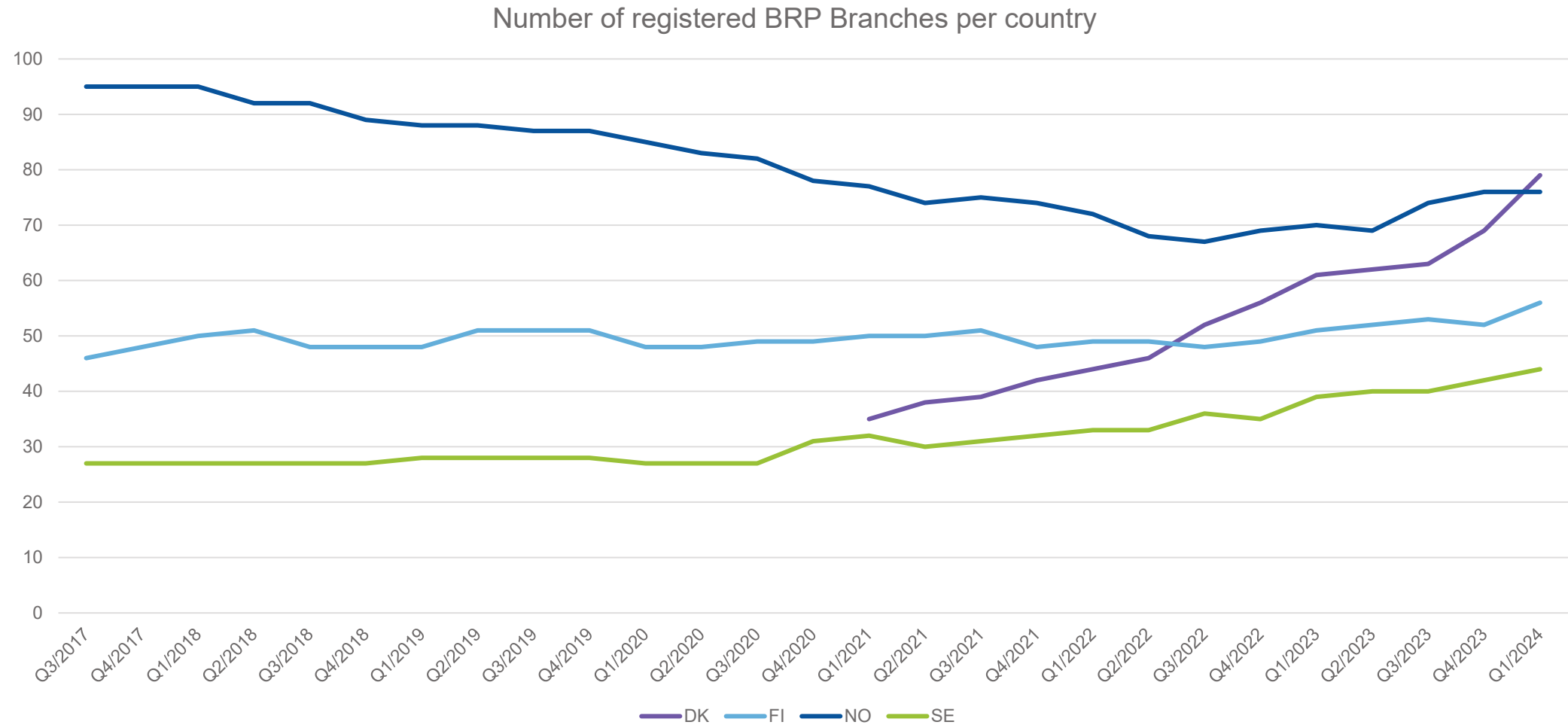


- Number of BRPs with branches in several countries increased from 2020 to 2024  
11->17->22->31->34

**BRP: 78**  
**BSP: 23**  
**DSO: 41**  
**RE: 158**

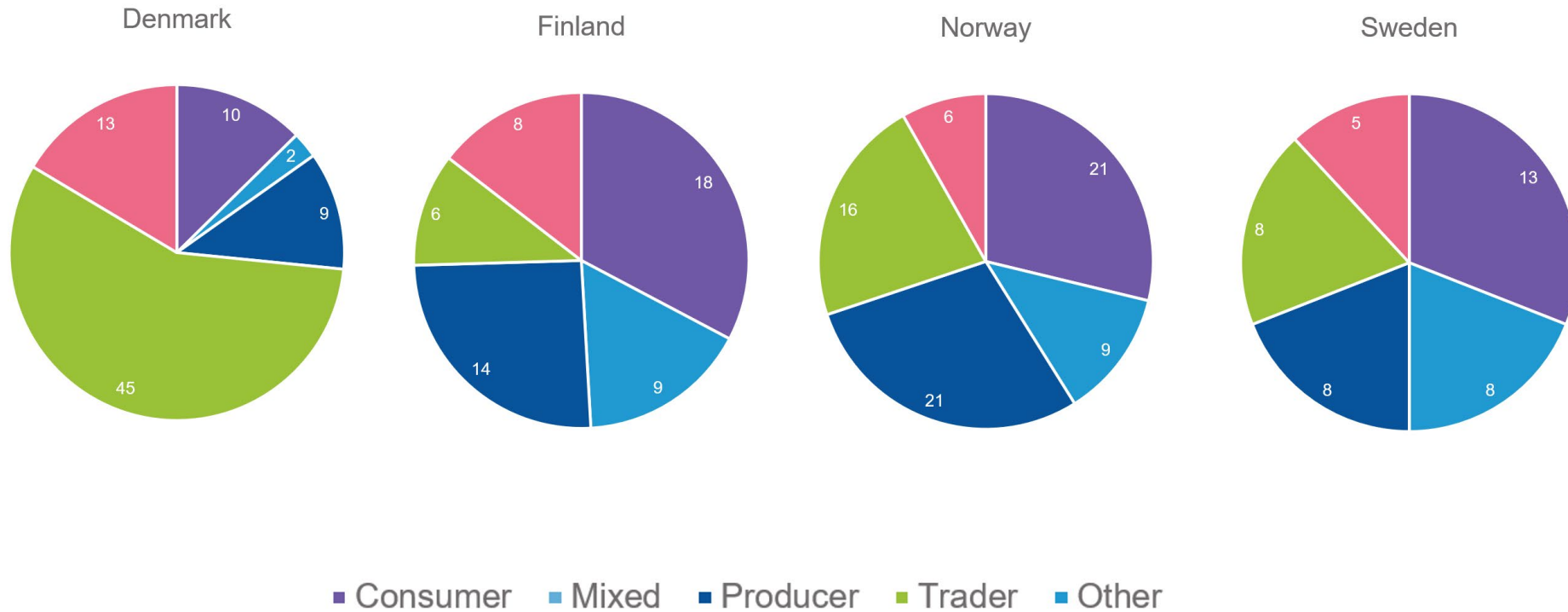


# BRPs per country in imbalance settlement



# BRPs classified per portfolio

Number of BRPs per country classified based on portfolio.



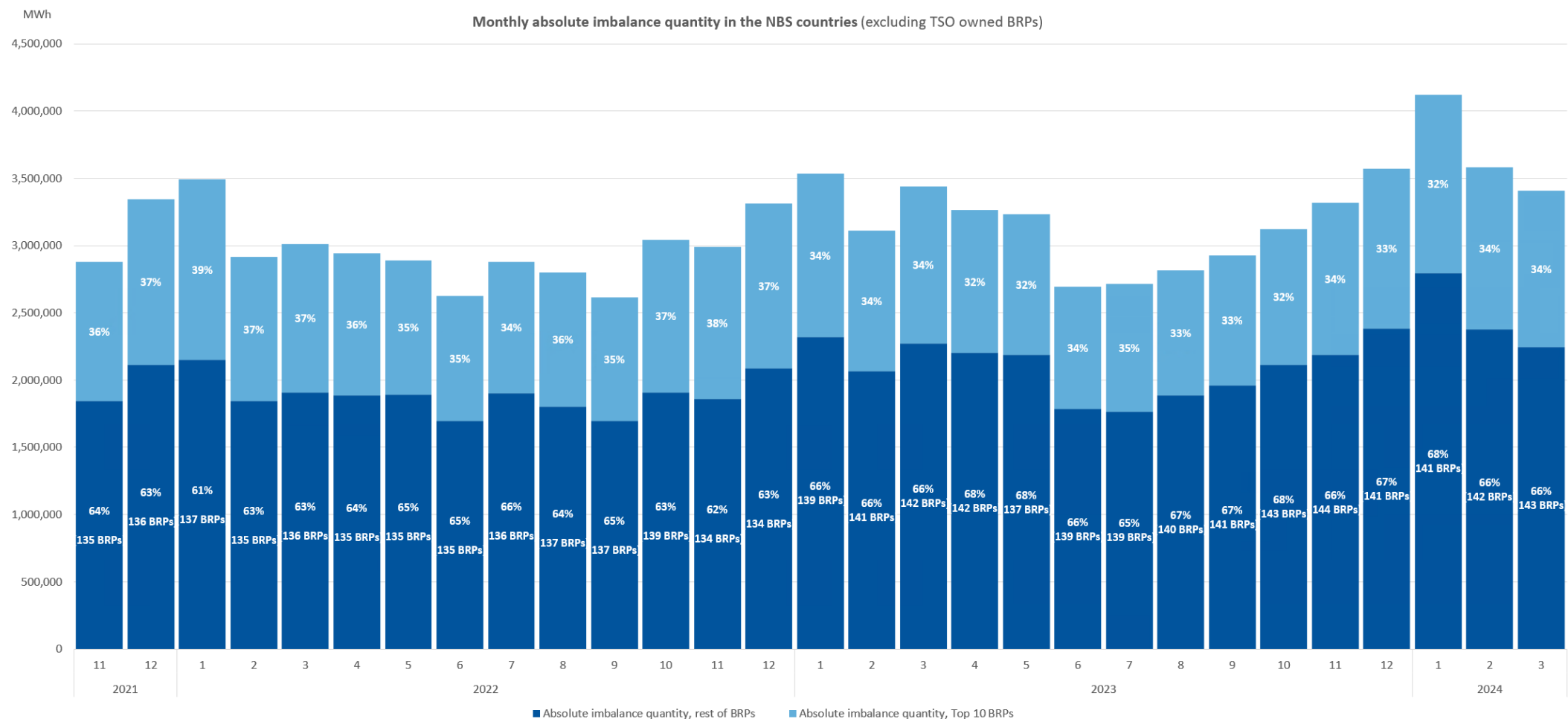
\*Data from 4/2024

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.



# Monthly absolute imbalance quantity in the NBS countries





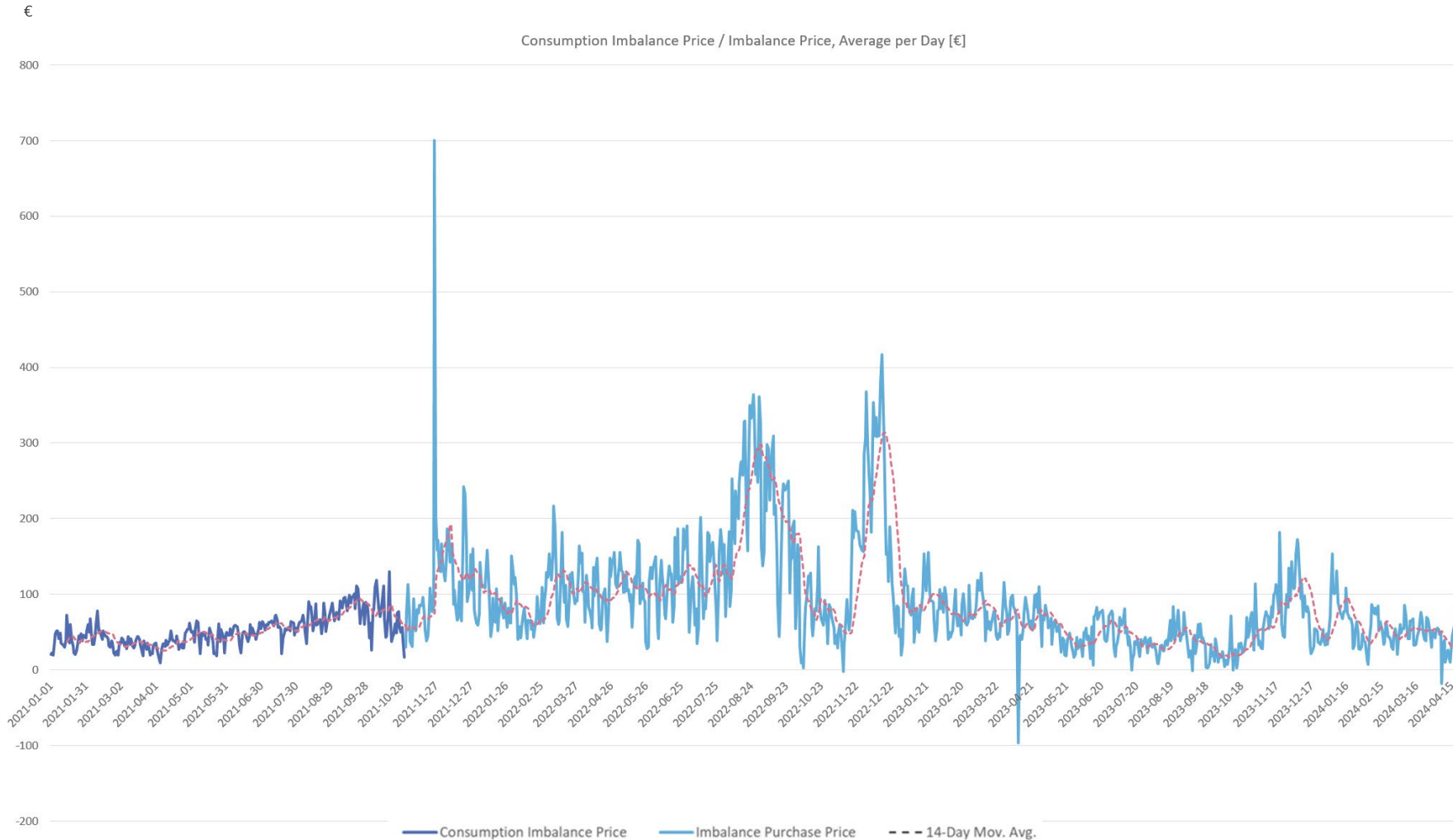
# eSett: electricity market overview

## Contents

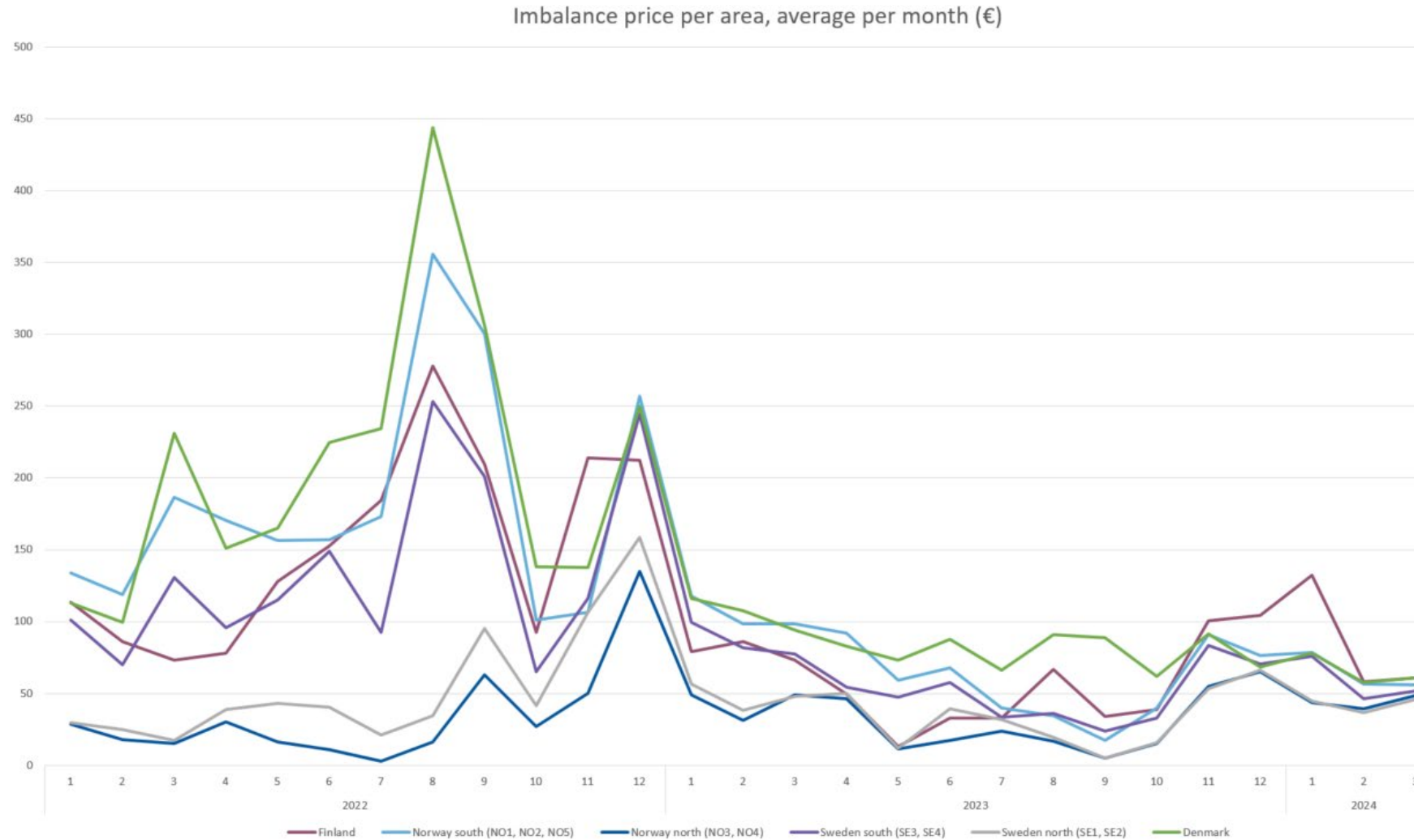
- Market Parties & Imbalance volumes
- **Prices**
- Production & consumption
- Trading volumes



# Average imbalance price per day (FI, DE, NO, SE)



# Average monthly imbalance price per area





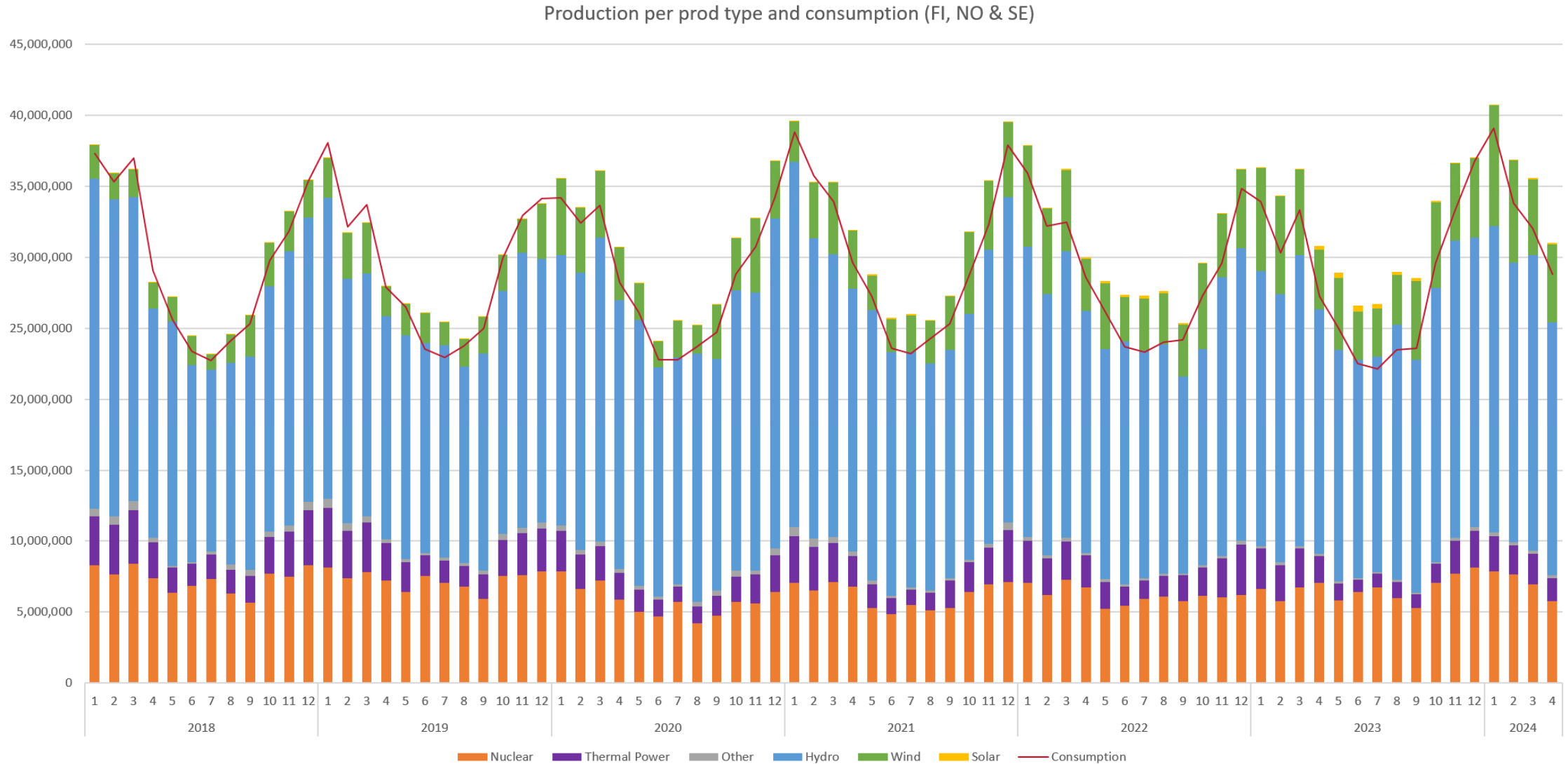
# eSett: electricity market overview

## Contents

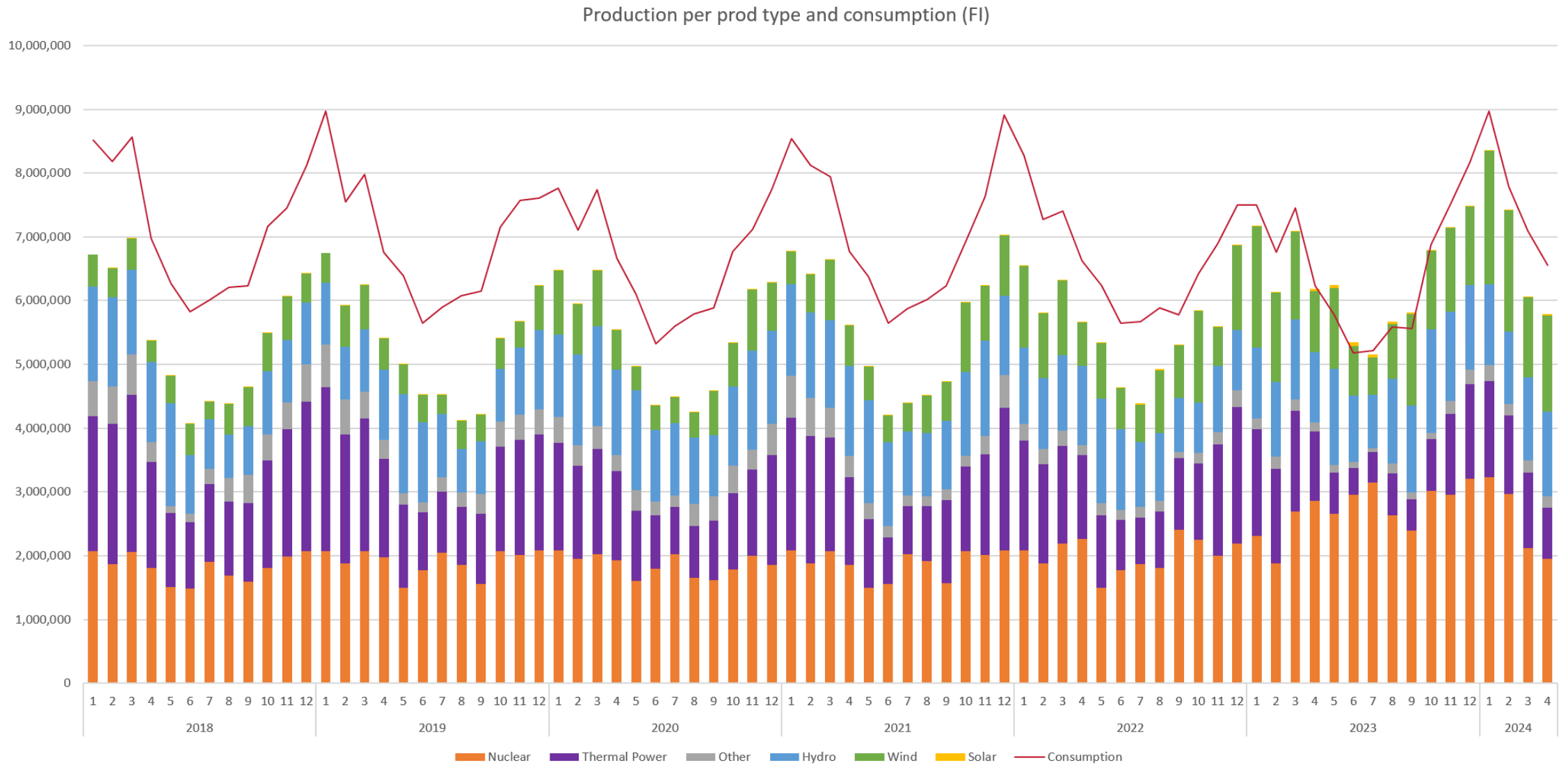
- Market Parties & Imbalance volumes
- Prices
- **Production & consumption**
- Trading volumes



# Production per prod type and consumption (FI, NO & SE)

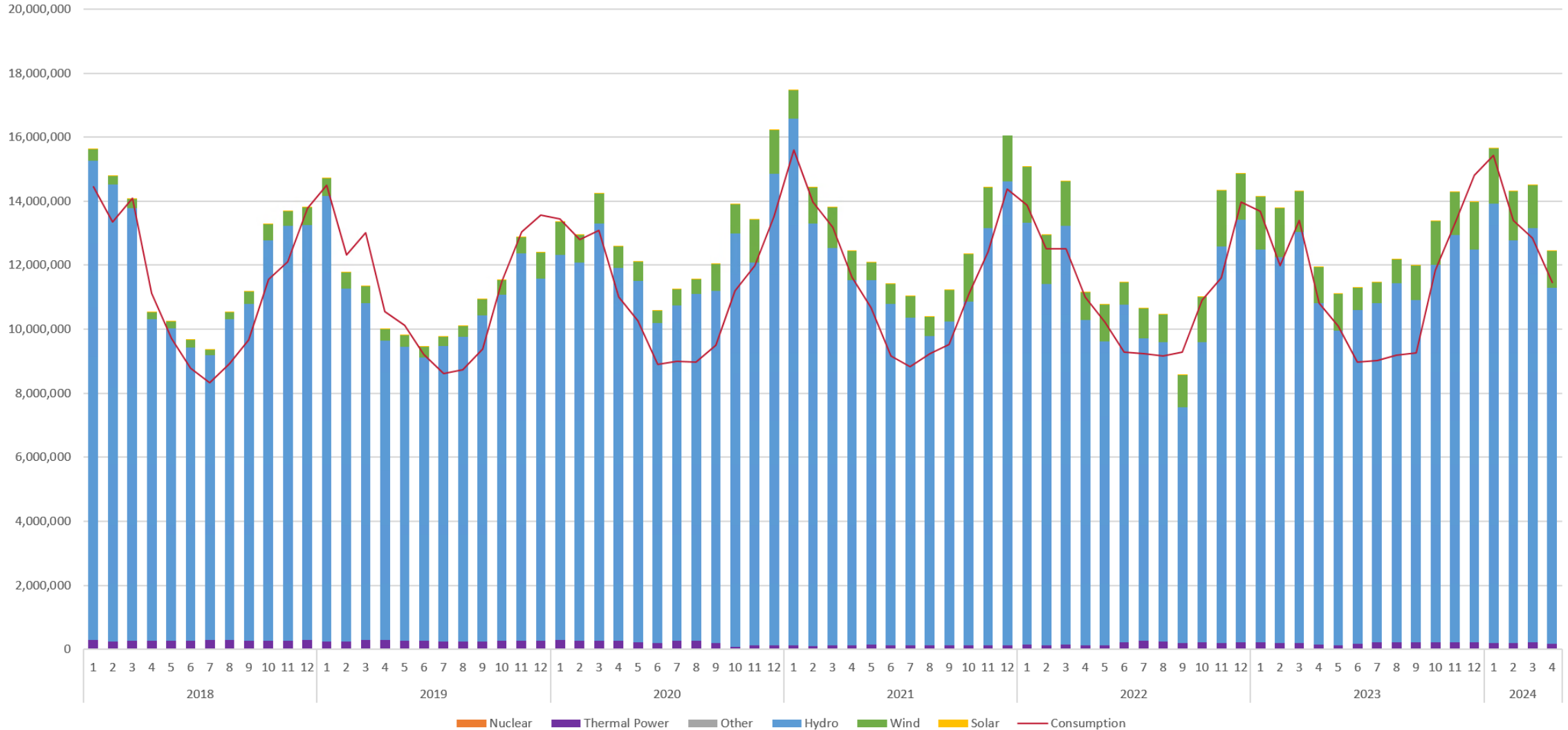


# Production per prod type and consumption (FI)



# Production per prod type and consumption (NO)

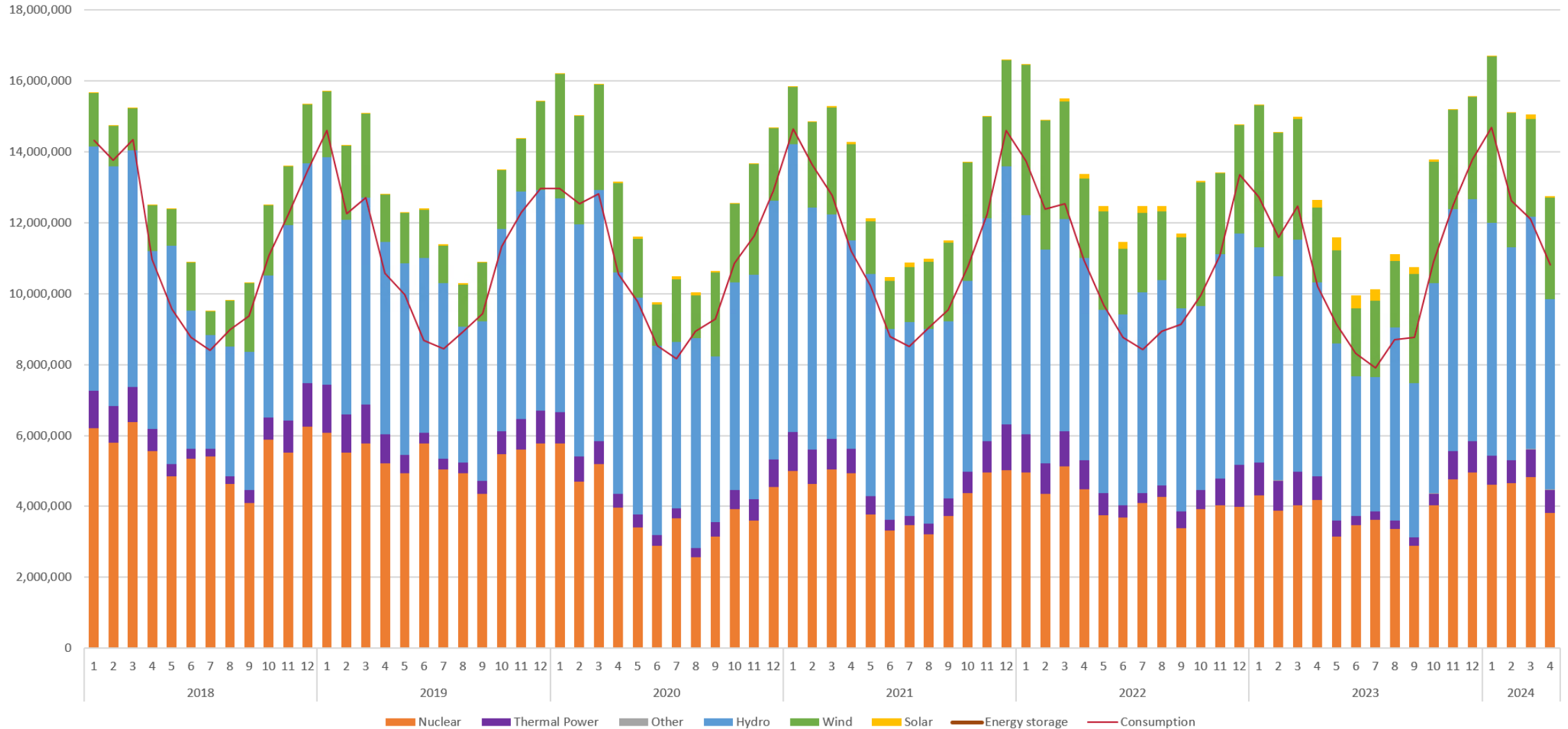
Production per prod type and consumption (NO)





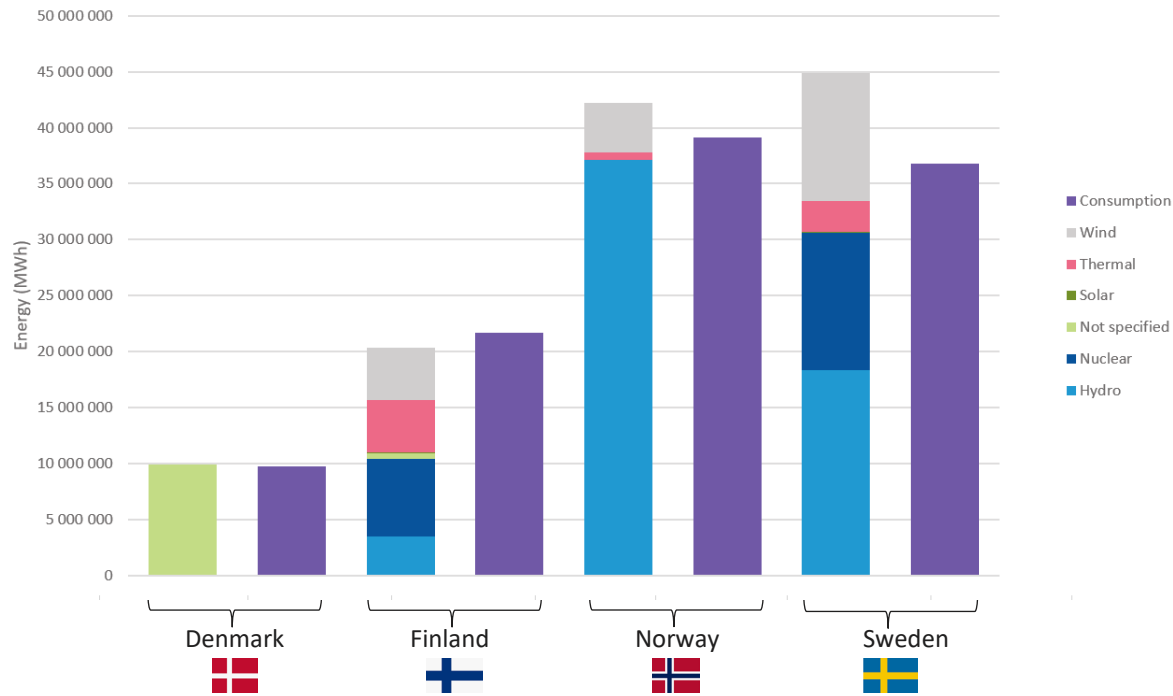
# Production per prod type and consumption (SE)

Production per prod type and consumption (SE)



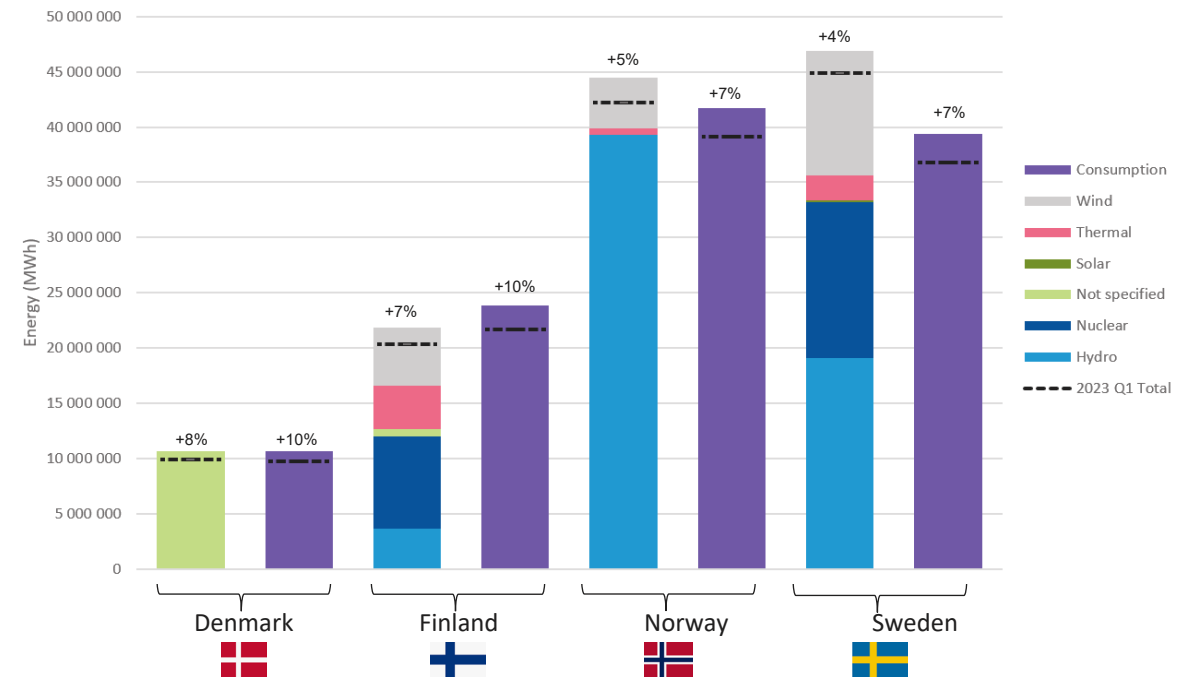
# Production vs consumption

Q1 2023



Average SPOT Price	81,1 €
Total Production	117 TWh
Total Consumption	107 TWh
Difference	10 TWh

Q1 2024



Average SPOT Price	58,8 €
Total Production	124 TWh
Total Consumption	116 TWh
Difference	8 TWh



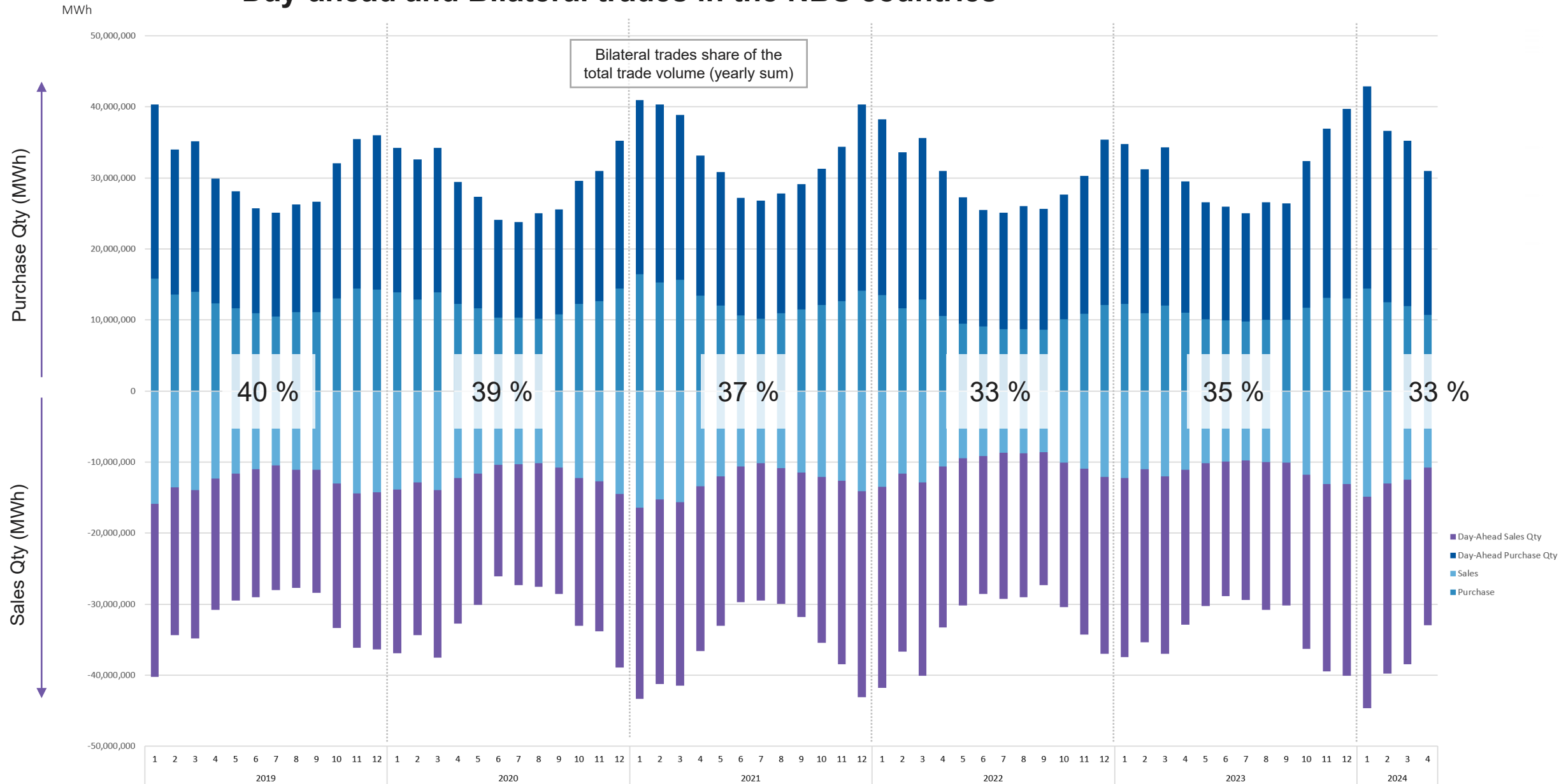
# eSett: electricity market overview

## Contents

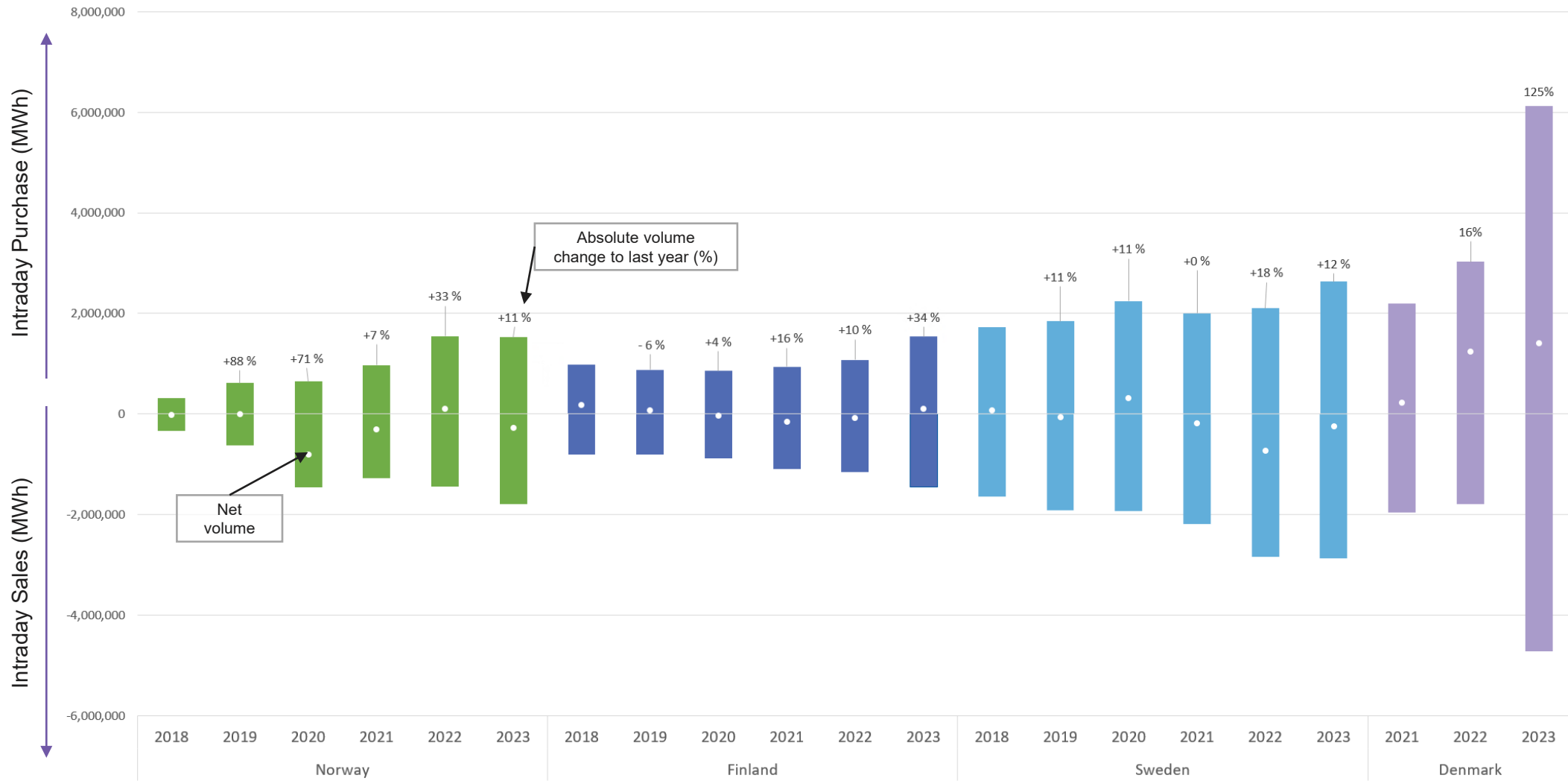
- Market Parties & Imbalance volumes
- Prices
- Production & consumption
- **Trading volumes**



# Day-ahead and Bilateral trades in the NBS countries



# Yearly intraday trade volumes per country





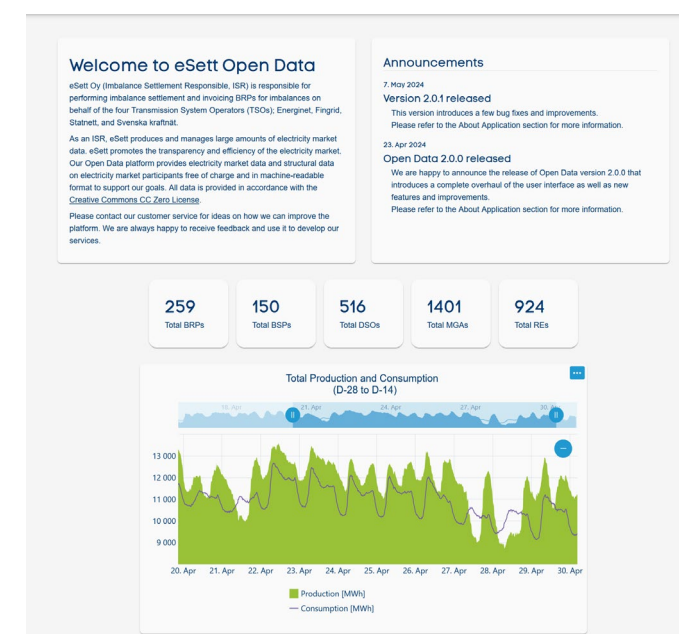
# eSett Open data



# Open data news

New version 2.0.0 deployed 7.5.2024. [Link](#)

- **New User Interface Design:** A fresh, user-friendly interface that enhances usability and accessibility.
- **Redesigned Main Page:** The main page now boasts new widgets for announcements and market party counts, offering a more engaging and informative dashboard.
- **Enhanced Data Selection:** Users can now select different time-level aggregations for Volumes and time-level averages for Prices, providing more flexibility in data analysis.



LAST UPDATE: 14.05.2024 02:31 CEST AVAILABLE DATA: 01.11.2021 - 13.05.2024

MBA: FI Start Date: 30/04/2024 End Date: 13/05/2024

15 min Hour Day Week Month Year Search

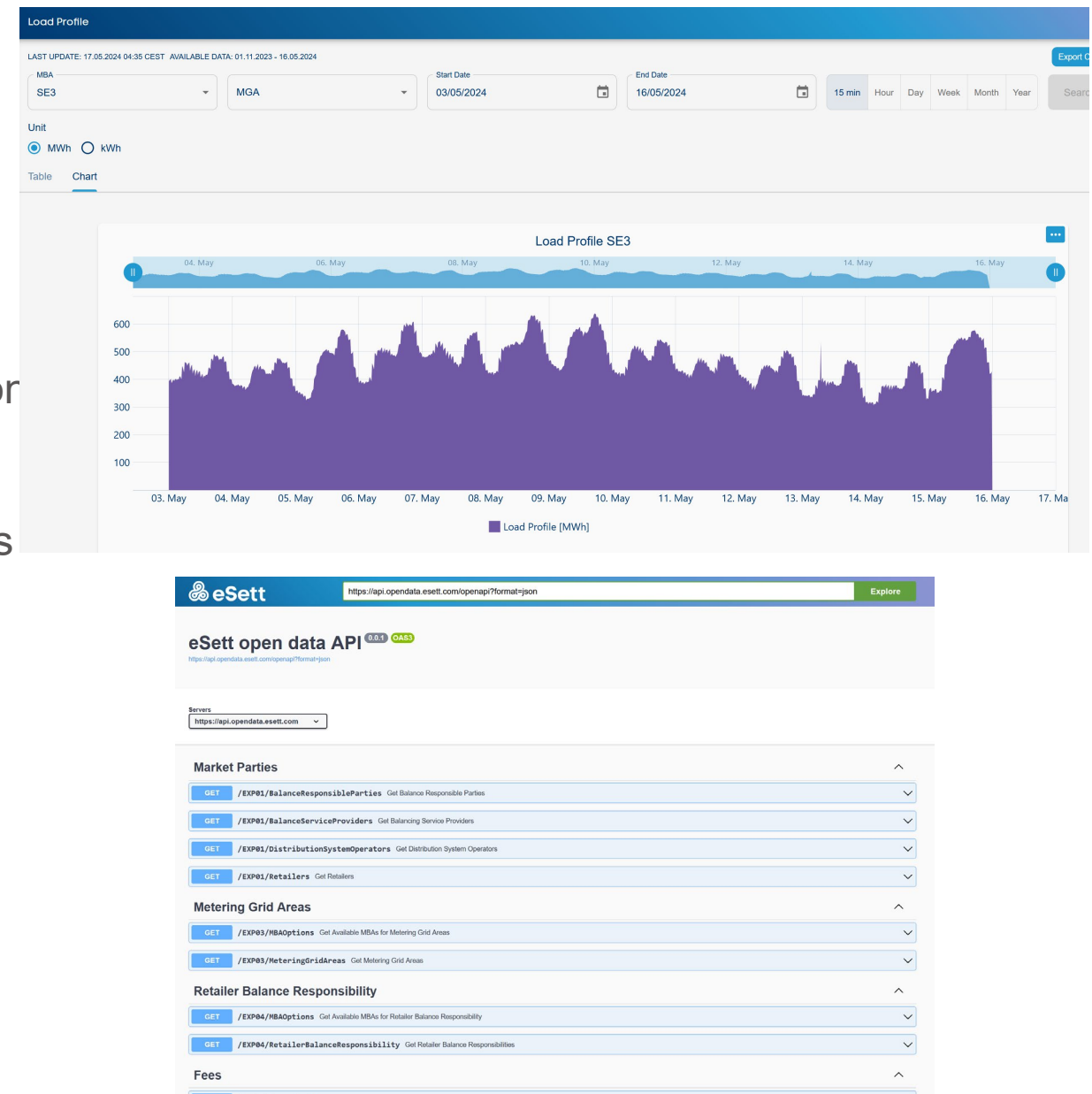
Table Chart

Date/Time CET/ CEST	Date/Time UTC	MBA	Imbalance Purchase Price	Imbalance Sales Price	Up Regulation Price	Down Regulation Price	Imbalance and Spot Price Difference	Value Of Avoided Activation	Incentivising Component	Main Direction of Regulation Power per MBA
30.04.2024/00:00	29.04.2024/22:00	FI	22,00	22,00	30,92	22,00	-8,92	0,00	0,00	✓
30.04.2024/01:00	29.04.2024/23:00	FI	18,00	18,00	31,09	18,00	-13,09	0,00	0,00	✓
30.04.2024/02:00	30.04.2024/00:00	FI	18,00	18,00	33,07	18,00	-15,07	0,00	0,00	✓
30.04.2024/03:00	30.04.2024/01:00	FI	18,00	18,00	35,75	18,00	-17,75	0,00	0,00	✓
30.04.2024/04:00	30.04.2024/02:00	FI	38,62	38,62	38,62	38,62	0,00	38,62	0,00	-
30.04.2024/05:00	30.04.2024/03:00	FI	44,58	44,58	44,58	44,58	0,00	44,54	0,04	-
30.04.2024/06:00	30.04.2024/04:00	FI	47,00	47,00	51,82	47,00	-4,82	0,00	0,00	✓
30.04.2024/07:00	30.04.2024/05:00	FI	46,00	46,00	60,03	46,00	-14,03	0,00	0,00	✓
30.04.2024/08:00	30.04.2024/06:00	FI	49,50	49,50	84,45	49,50	-34,95	0,00	0,00	✓
30.04.2024/09:00	30.04.2024/07:00	FI	45,00	45,00	62,66	45,00	-17,66	0,00	0,00	✓

Rows per page: 10 1-10 of 336

# Open data news

- **Swedish Load Profile Graphical View:** A new graphical representation for the Swedish load profile is now available, making data visualization more intuitive.
- **UTC Timestamp via API:** The API now includes a UTC timestamp feature, allowing for precise time tracking.
  - <https://api.opendata.esett.com>





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