

Regulatory Framework for the Participation of Demand Response in the Balancing Market

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What is Demand Response (DR) & Why DR is gaining attention?

*“**DEMAND RESPONSE** means the change of electricity load by final customers from their normal or current consumption patterns in response to market signals, including in response to time-variable electricity prices or incentive payments, **or in response to the acceptance of the final customer's bid to sell demand reduction or increase at a price in an organised market as defined in point (4) of Article 2 of Commission Implementing Regulation (EU) No 1348/2014 (17), whether alone or through aggregation**”*

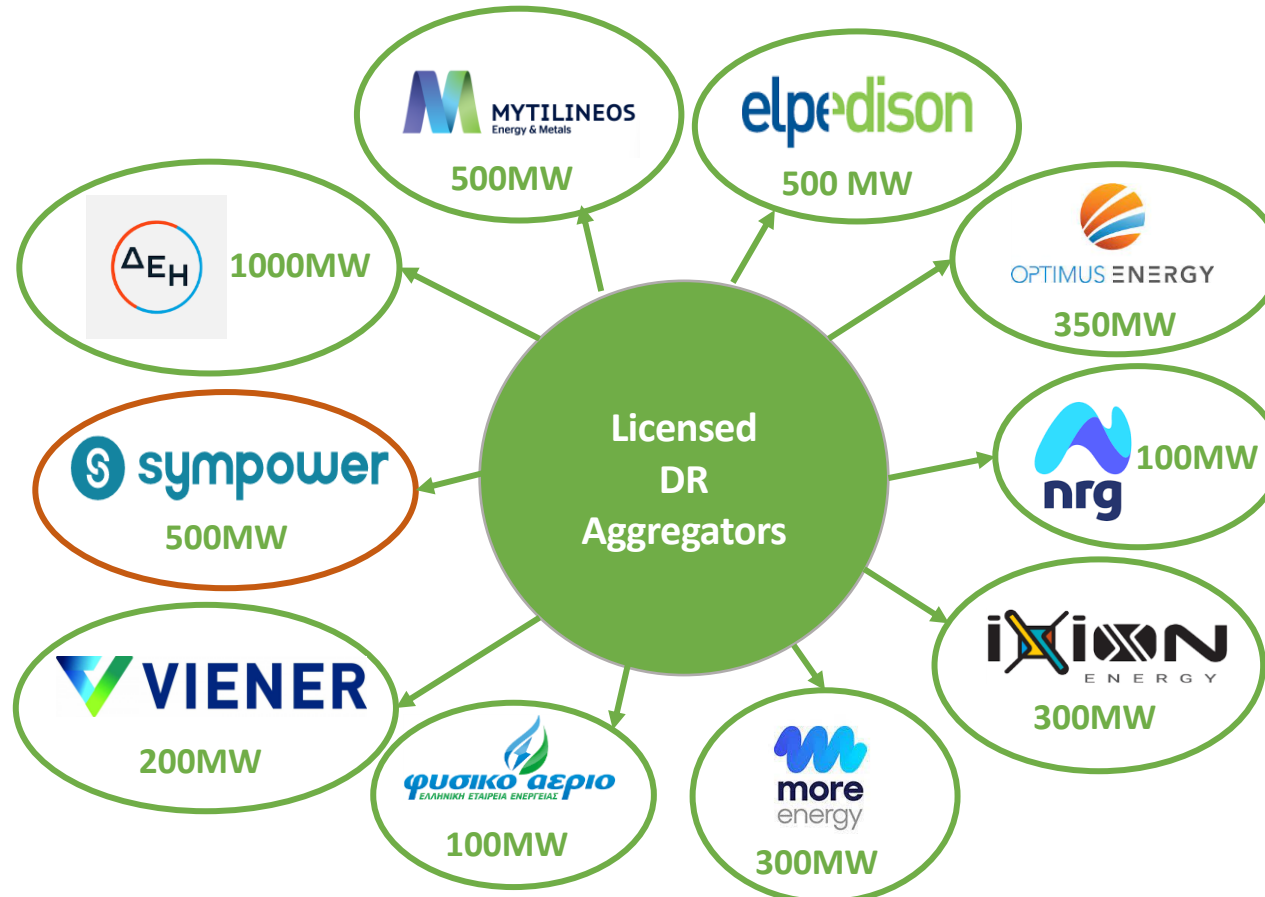
Recital (13) of Directive (EU) 2019/944: **In order to foster competition and ensure the supply of electricity at the most competitive price**, Member States and regulatory authorities should facilitate cross-border access for new suppliers of electricity from different energy sources **as well as for new providers** of generation, energy storage and **demand response**.

EU Regulatory Framework: Regulation (EU) 2019/943 & Directive (EU) 2019/944

- Recital (39) of Directive (EU) 2019/944: **All customer groups** (industrial, commercial and households) should have access to the electricity markets **to trade their flexibility** and self-generated electricity.....**Market participants engaged in** aggregation are likely to play an important role as intermediaries between customer groups and the market. Member States should be free to choose the appropriate implementation model and approach to governance for independent aggregation **while respecting the general principles set out in this Directive...**
- **Fair & transparent rules** for the participation of **Demand Response Aggregators** in Electricity Markets:
 - Participation alongside producers in a **non-discriminatory manner** in all electricity markets.
 - Possibility to enter electricity markets **without the consent of other market participants.**
 - **Financial responsibility for the imbalances** they cause in the electricity system.
 - Provision for final customers who have a contract with independent aggregators **not to be subject to** undue payments, penalties or other undue contractual **restrictions by their suppliers.**
 - **Conflict resolution mechanism** between market participants engaged in aggregation and other market participants, including responsibility for imbalances.

Licensing of DR Aggregators (RAE Decision 233/2022)

- DR Aggregators licenses are granted by the Regulatory Authority for Energy, Waste & Water (RAEWW) according to the provisions of the licensing rules set by RAE's Decision 233 issued in **March 2022**.
- **Minimum initial capital** requirement for licensing is **60.000 €**.
- The license is granted for a period of up to **20 years** and **can be renewed**.



RAEWW has approved the framework for DR participation in the Balancing Market

Balancing Market Rulebook, Terms & Conditions for BSPs and BRPs

- ✓ RAE's Decision 185/24.2.2022 – Modification of the Balancing Market Rulebook to include the necessary provisions for the participation of dispatchable load and RES in the balancing market as balancing service providers (voluntary participation)
- ✓ RAE's Decisions 481/26.05.2022 – Modification of terms and conditions for BSPs
- ✓ RAE's Decision 482/26.05.2022 – Modification of terms and conditions for BRPs
- ✓ RAE's Decision 585/23.06.2022 – Modification of the Balancing Market Rulebook and the Electricity Network Code

Baseline Methodology

- ✓ RAE's Decision 212/03.03.2022 – Modification of baseload methodology for the participation of dispatchable load and dispatchable RES in the balancing market (for mFRR)
- ✓ RAE's Decision 480/26.05.2022- Modification of baseload methodology for the participation of dispatchable load and dispatchable RES in the balancing market (for both mFRR and aFRR)

Non-compliance charges

- ✓ RAE's Decision 476/26.05.2022 – Approval of non-compliance charges for non-timely commitment
- ✓ RAE's Decision 477/26.05.2022 – Approval of non-compliance charges for non-compliance with manual FRR test instructions

DR participation in the Balancing Market

Prequalification tests

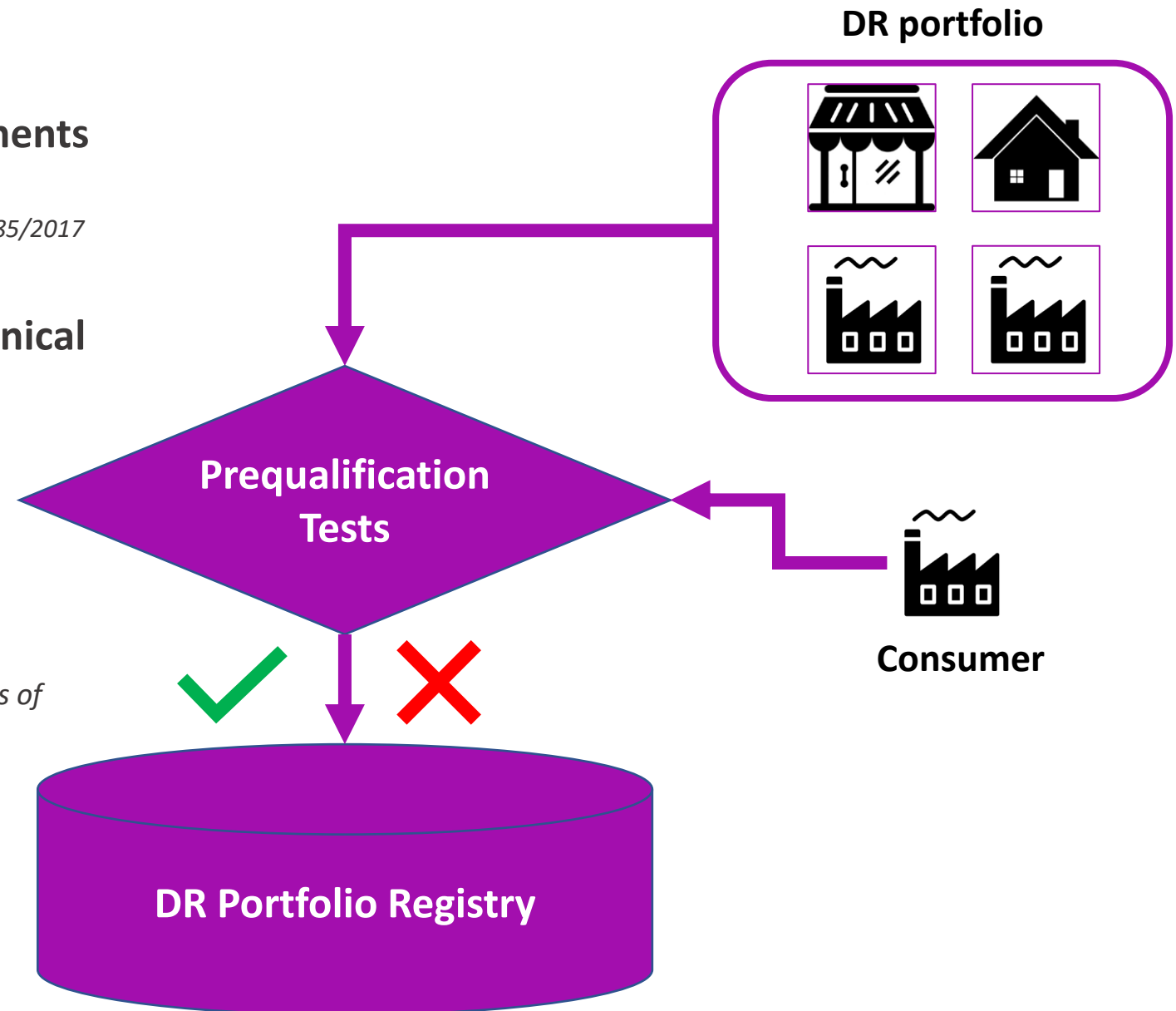
- Verify the **minimum technical requirements** for the provision of balancing services.

Balancing Market Rulebook & HETS Grid Code – as per EU REG 1485/2017 (System Operation Guidelines)

- Are **repeated** in case of **significant technical modifications** in the DR portfolio

- Portfolio \uparrow or \downarrow $>50\%$, and max mFRR contribution $\geq 10\text{MW}$
- \uparrow mFRR contribution $> 40\text{MW}$ (only mFRR)
- \uparrow FCR contribution $> 5\text{MW}$

(IPTO Technical Decision Procedure and Prequalification Tests of Balancing Service Providers)

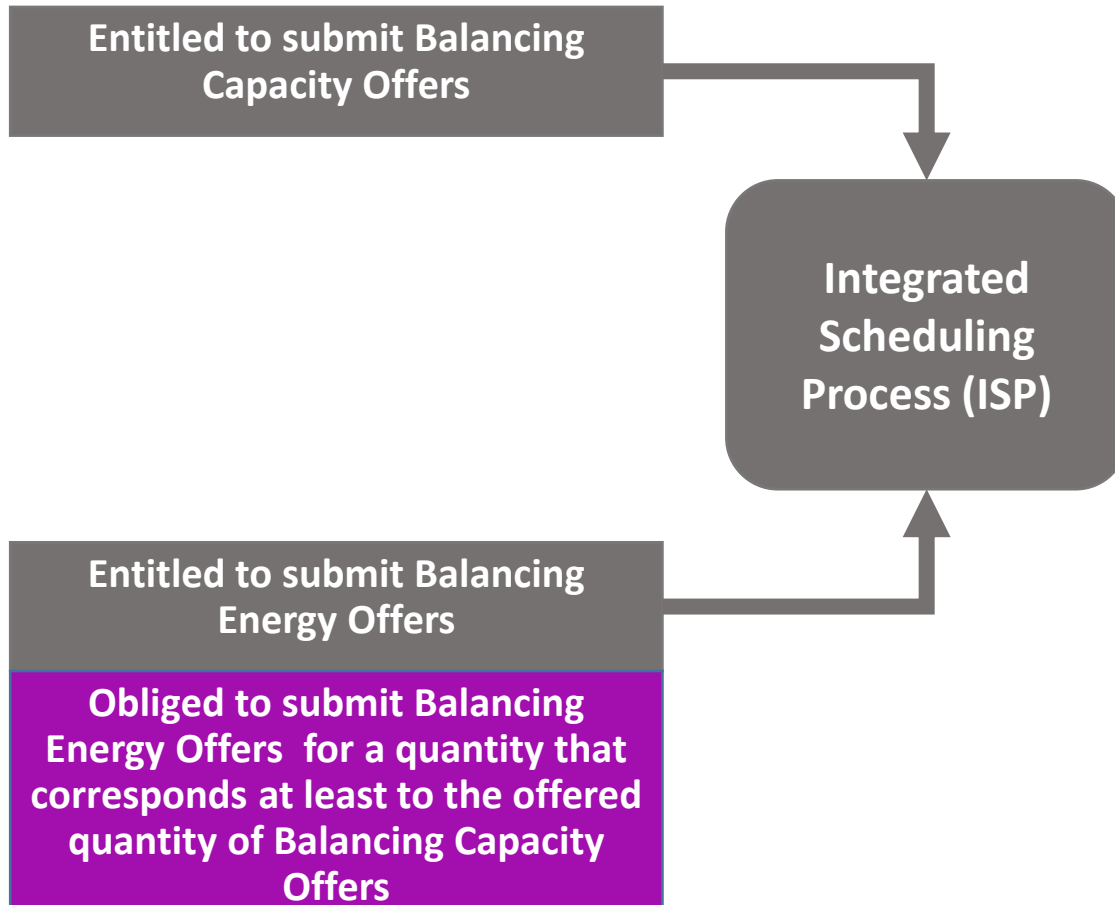


Manual FRR (mFRR) Test Dispatch Instructions

- Issued by the HETS Operator **without prior notice**.
- **Certify** the **activation of Balancing Energy** corresponding to the **full activation** of the **awarded Balancing Capacity** for mFRR.
- **Maximum** of **13** mFRR Test Dispatch Instructions in a **rolling 12-month period**.
- If the DR portfolio **fails** to comply, the number of mFRR Test Dispatch Instructions issued during the previous 12-month period is **set to zero**.
- If DR portfolio **complies** with **2 consecutive** manual FRR Test Dispatch Instructions, the maximum number is **reduced** from 13 to **6**.
- In the event of **non-compliance** with a manual FRR Test Dispatch Instruction, **Non-Compliance Charges** are imposed.

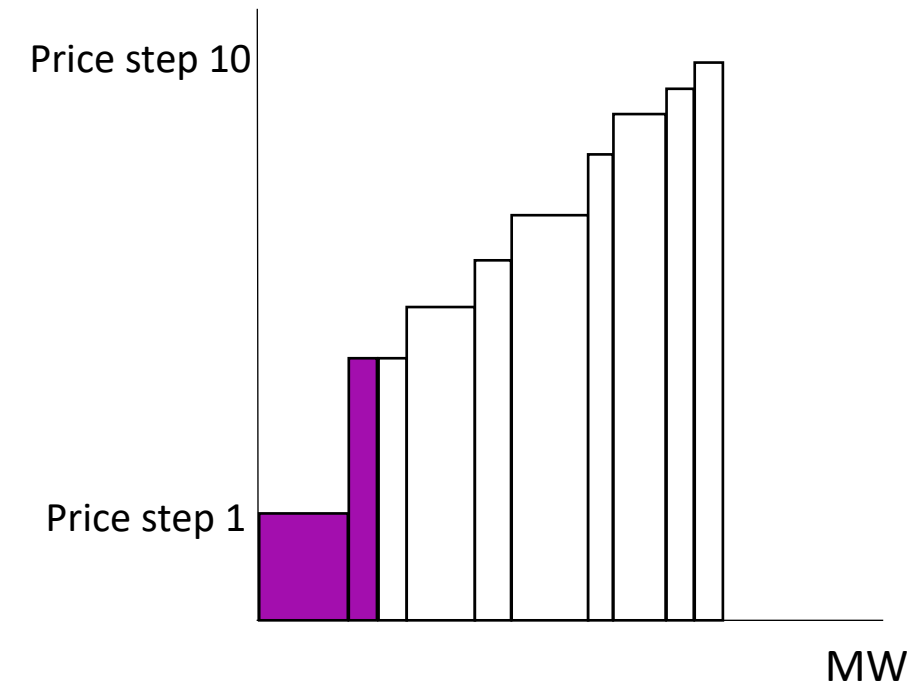
(Balancing Market Rulebook, IPTO Technical Decision Technical Decision Dispatch Instructions)

DR participation in the Balancing Market is Optional



Offer characteristics

- **Maximum 10 steps** per offer.
- The **minimum quantity** of the Balancing Capacity & Energy Offer shall be equal to **1 MW**.
- **Minimum accepted quantity** per step can be declared.



Imbalance Settlement Model

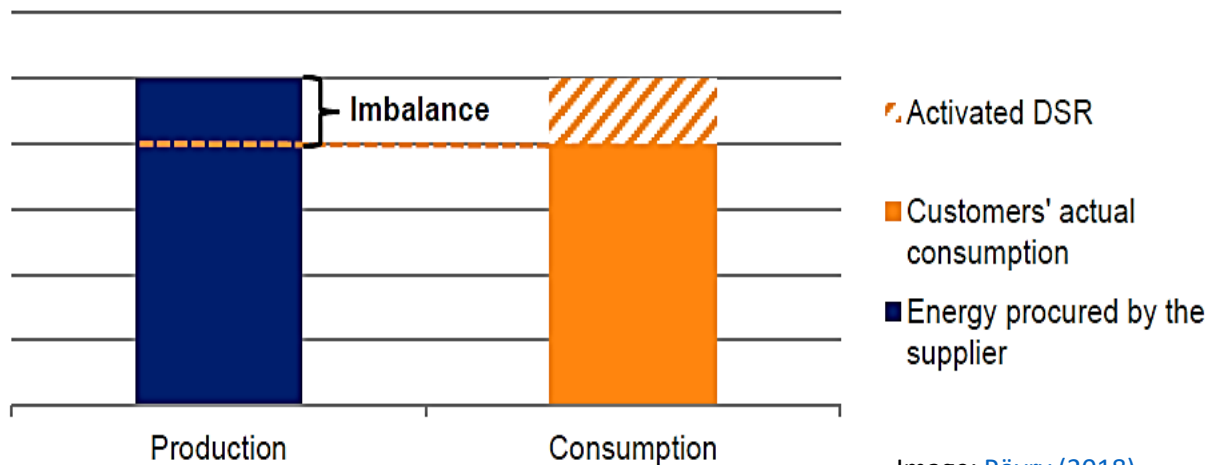
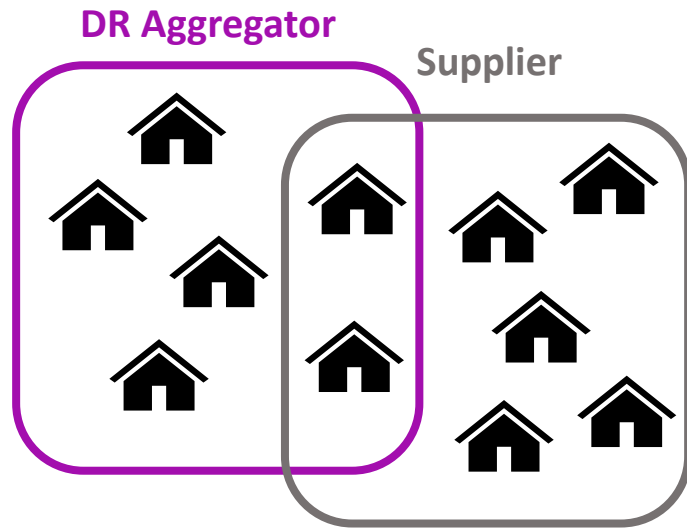


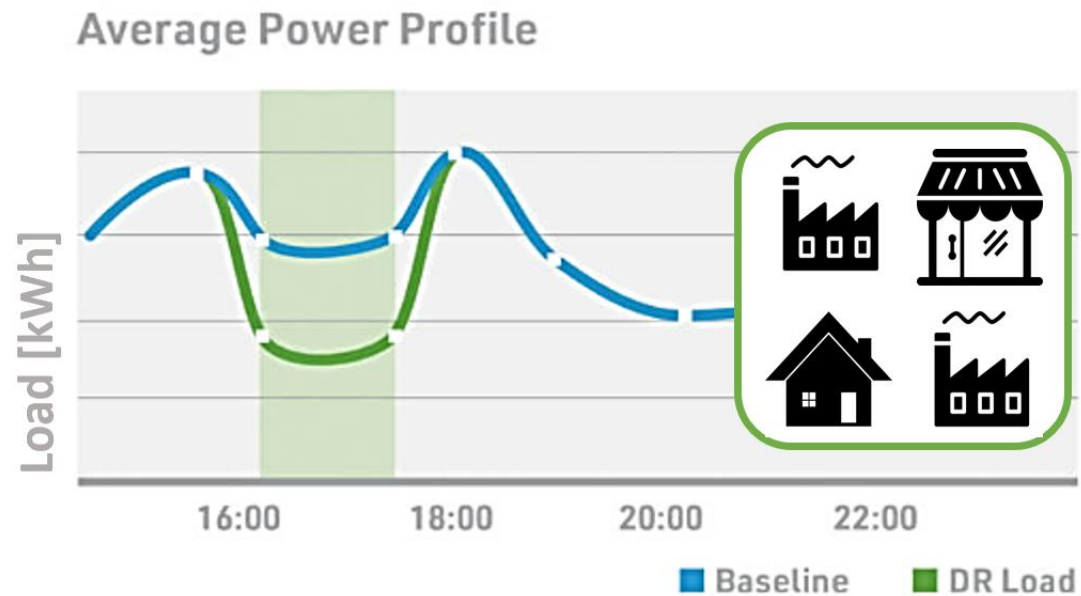
Image: [Pöyry \(2018\)](#)

- **There is no correction** of Supplier's imbalance volumes.
- The Supplier is compensated through the imbalance settlement (i.e., **Supplier's compensation is socialized**)
- **Non-compliance charges** are not applied to the **suppliers** for **significant deviation** between Metered Quantity and Market Schedule when a DR event takes place.

Baseline Methodologies

Baseline

- *“The load that corresponds to the electricity that would have been consumed by the DR Portfolio if it hadn’t received a Dispatch Instruction to activate a Balancing Energy Offer”*
- Baseline serves as the reference load for the **calculation** of the **activated balancing energy** and the performance of **imbalance settlement**.

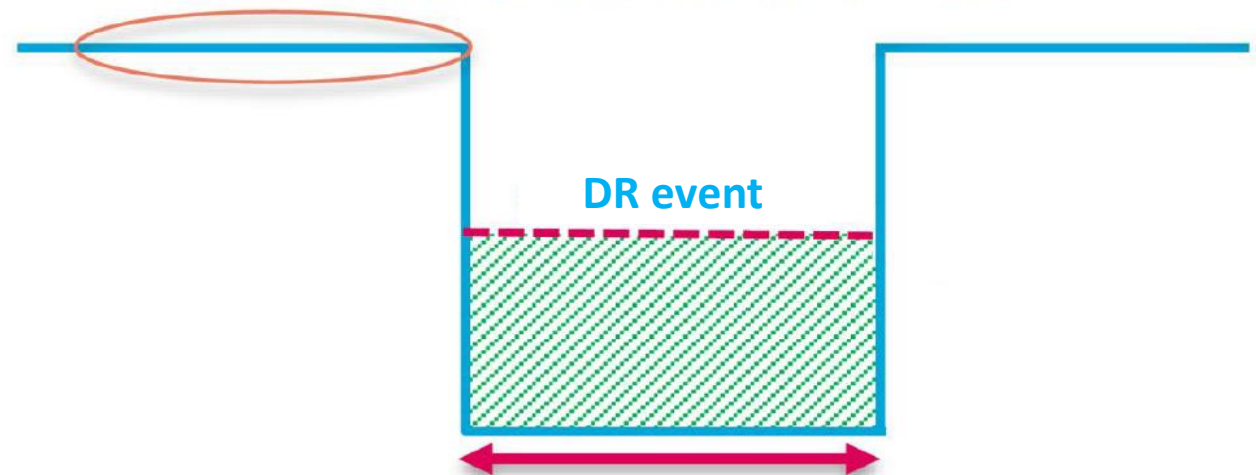


Baseline Methodology (RAE Decision 480/2022) - mFRR

➤ High X of Y Method:

- Considers **Y (10) non-demand response weekdays** preceding the demand response event.
- The baseline is estimated using the **average load** of the **X (5) weekdays** with the **highest electricity consumption** within those Y (10) weekdays.
- **Adjustment** based on most **recent metering data** before the DR event.
- For nonworking days **High 2 of 3 Method** is applied.

Verified metering data before the DR event



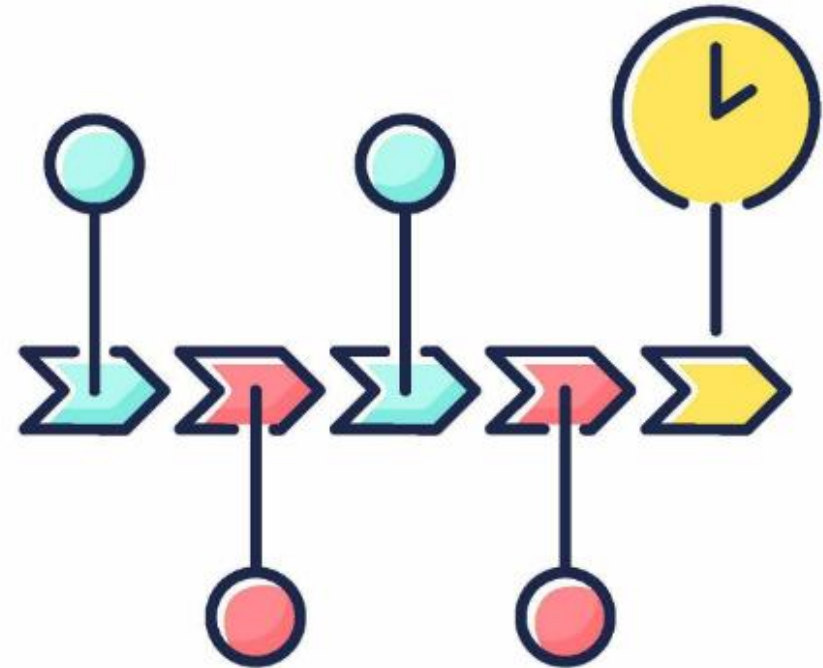
➤ Meter Before-Meter After:

Baseline Methodology (RAE Decision 480/2022) - aFRR

➤ Declaration Method:

- The baseline is **estimated** by the **DR Aggregator** for **every aFRR activation** i.e., every 4sec, and sent to **IPTO 1min before** every aFRR activation.
- **Prequalification tests** take place for **24 consecutive hours** for a Dispatch Day. BL must be equal or higher than 50% of max aFRR contribution.
- The DR Aggregators that have successfully completed the prequalification tests for the participation in aFRR process, are **obliged to submit the baseline even if they have not submitted orders** for balancing energy/capacity.

Timeline



Go Live



30/06/2022



Participation of DR Aggregators as Balancing Services Entities in the ISP, for the **mFRR** processes.



26/10/2022



Participation of DR Aggregators as Balancing Services Entities in the **aFRR** process.

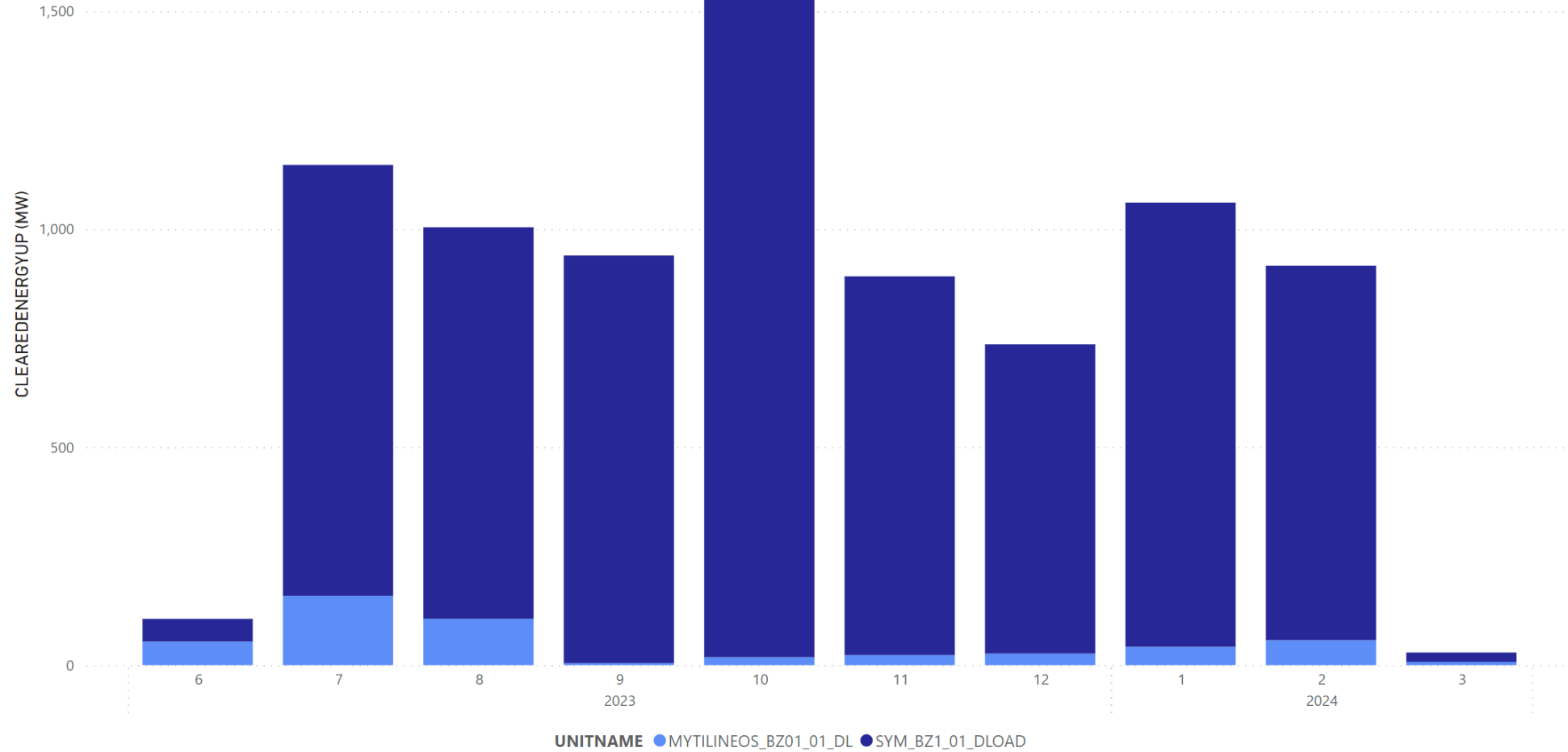


03/2024



Participation of DR Aggregators in **Day Ahead & Intraday** Markets

DR Activations



Thank you for your attention!

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