



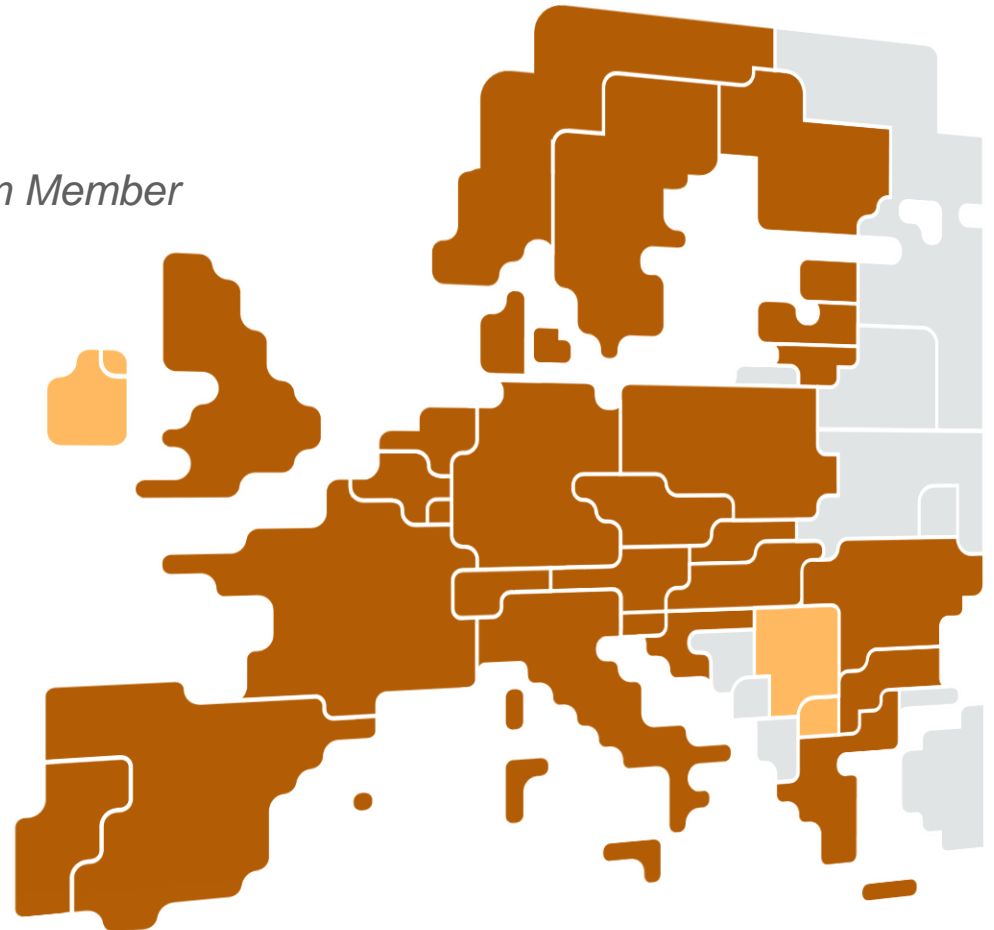
MARI

Project Planning and Progress

Ulf Kasper

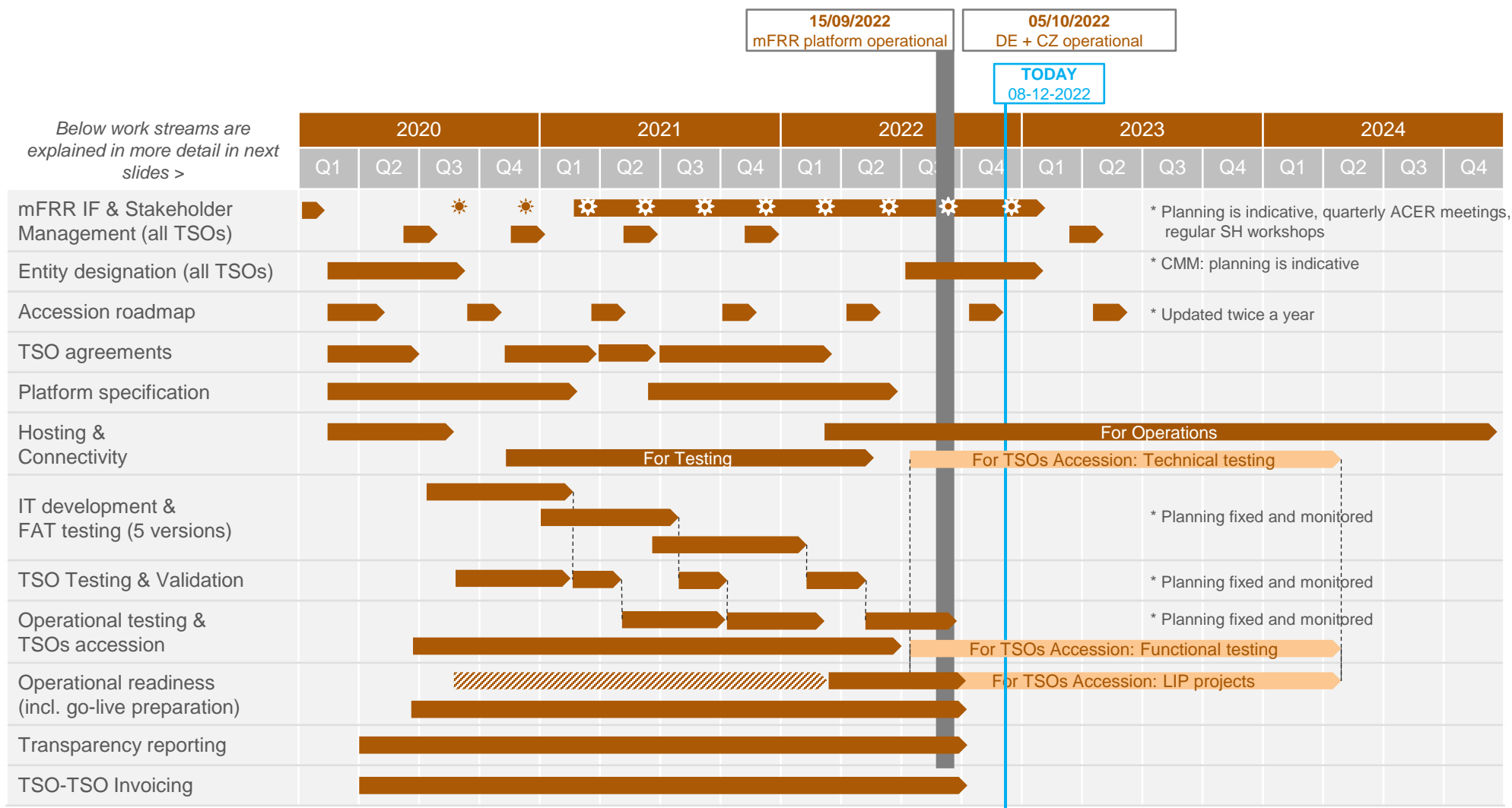
Amprion

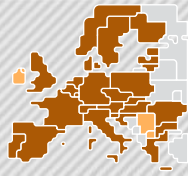
MARI Project Management Team Member



MARI Project Overview

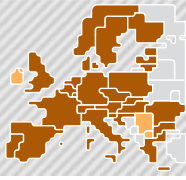
Project planning





Introduction

- Reminder: exclusive bids are mutually exclusive according to the principle “exactly one or none”
- Performance study had shown that the AOF passed the performance test successfully when a maximum of 10.000 exclusive groups is used. Limit apply for both SA- and DA-runs



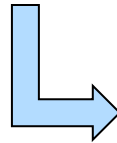
Process for evaluation of applying limitations:

1. Improvement of AOF

(continuously improve the performance of the AOF regarding acceptable volumetrics of exclusive bids)

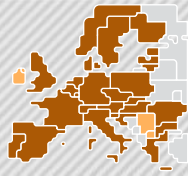
2. Monitoring & Guidance

(starting from MARI platform go-live, avoid having non optimal results from the AOF)



3. Applying of hard limitations

(when total limit exclusive bids is reached or if optimality gap is $>10\%$)



1. Improvement AOF

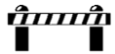
- Continuous improvement, based on monitoring and experience.



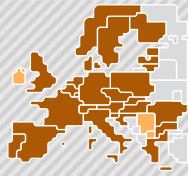
2. Monitoring & Guidance

- Monitoring: starting from go-live based on KPIs (usage and optimality indicators) on platform level

3. Applying of hard limitations



- In case the monitoring shows that the BSPs will submit a larger number of exclusive bids than the technical limit, a **hard cap** will be applied.
- The hard cap shall be implemented locally by TSOs.
- On platform level, a check will be done that the TSOs respect their limit.
- TSOs foresee a 1-week transition period between reaching the threshold and the application of the local threshold. This period is needed, allowing for communications with NRAs and BSPs and to ensure ample time to implement the limit in the TSO-systems.



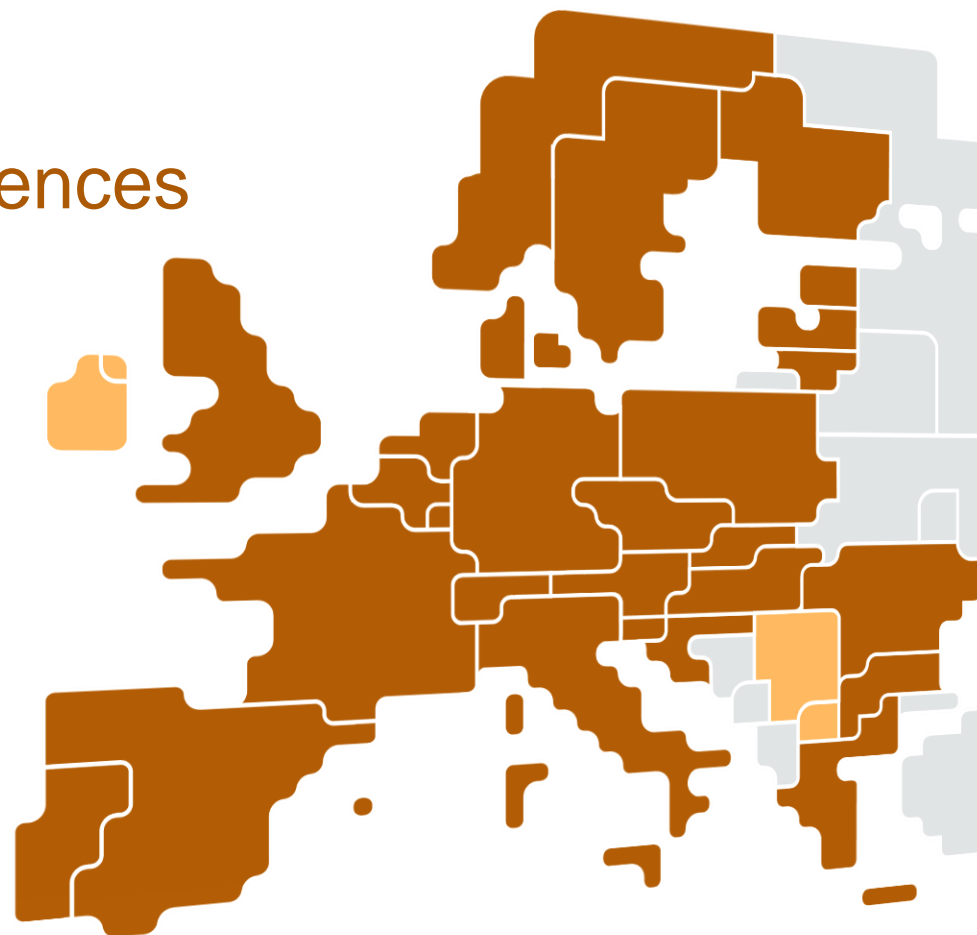
Summary

- At the Go-Live, no hard restriction regarding exclusive bids will be imposed to any TSOs and BSPs (only guidance), given the limited number of TSOs participating and the fact that BSP-bidding strategies are not known
- For the purposes of triggering the application of limits (hard cap), three of the following conditions must be fulfilled:
 - No further AOF improvement is possible in due time
 - Gap from optimal solution due to the high number of exclusive bids is above 10 %
 - Occurrence of above-mentioned gap is more than 4 times per day during period of 7 consecutive days
- Distribution of the limit among TSOs via using the cost sharing key
- Distribution of the limit among BSPs by each TSO. This ensures local specificities (e. g., unit-based bidding or portfolio-based bidding)



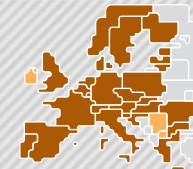
MARI

Operational Experiences



First Market Results

Positive mFRR



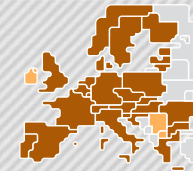
Key Facts

- Evaluated dates: 05/10/2022 – 16/11/2022
- So far 9 cross-border activations

	50 Hertz	Amprion	CEPS	TenneT DE	Transnet BW
Avg. available pos. mFRR	155 MW	38 MW	299 MW	296 MW	222 MW
Avg. available neg. mFRR	104 MW	53 MW	188 MW	112 MW	104 MW
Max. CBMP	6,920 €/MWh	6,920 €/MWh	1,235 €/MWh	6,920 €/MWh	6,920 €/MWh
Min. CBMP	-512 €/MWh	-512 €/MWh	-250 €/MWh	-512 €/MWh	-512 €/MWh
Max. pos. demand	50 MW	200 MW	120 MW	300 MW	50 MW
Max. neg. demand	0 MW	200 MW	134 MW	0 MW	0 MW

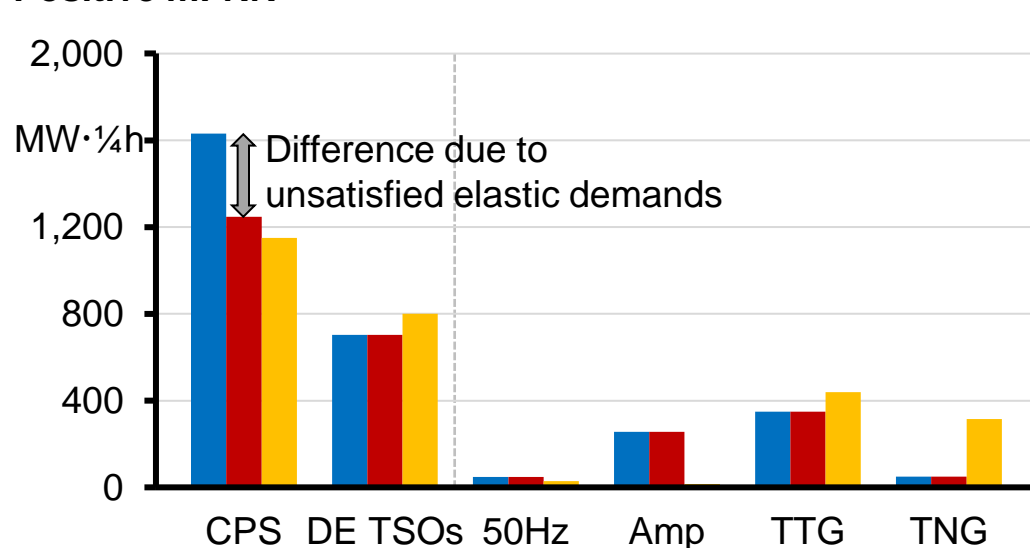
First Market Results

Requested, satisfied and activated mFRR

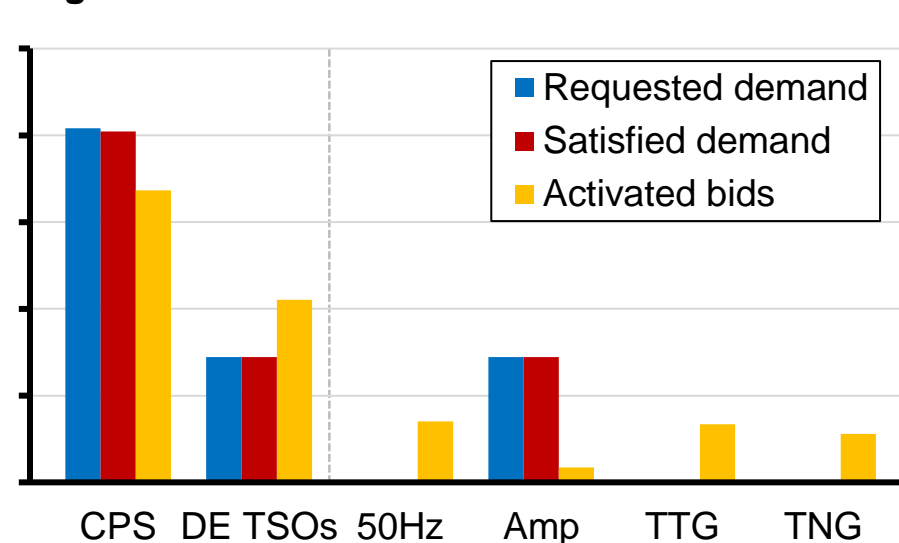


- Overview on requested, satisfied and activated mFRR from 2022/10/05 to 2022/11/16 on the mFRR platform
- Additional differentiation between TSOs (LFC areas) in Germany

Positive mFRR



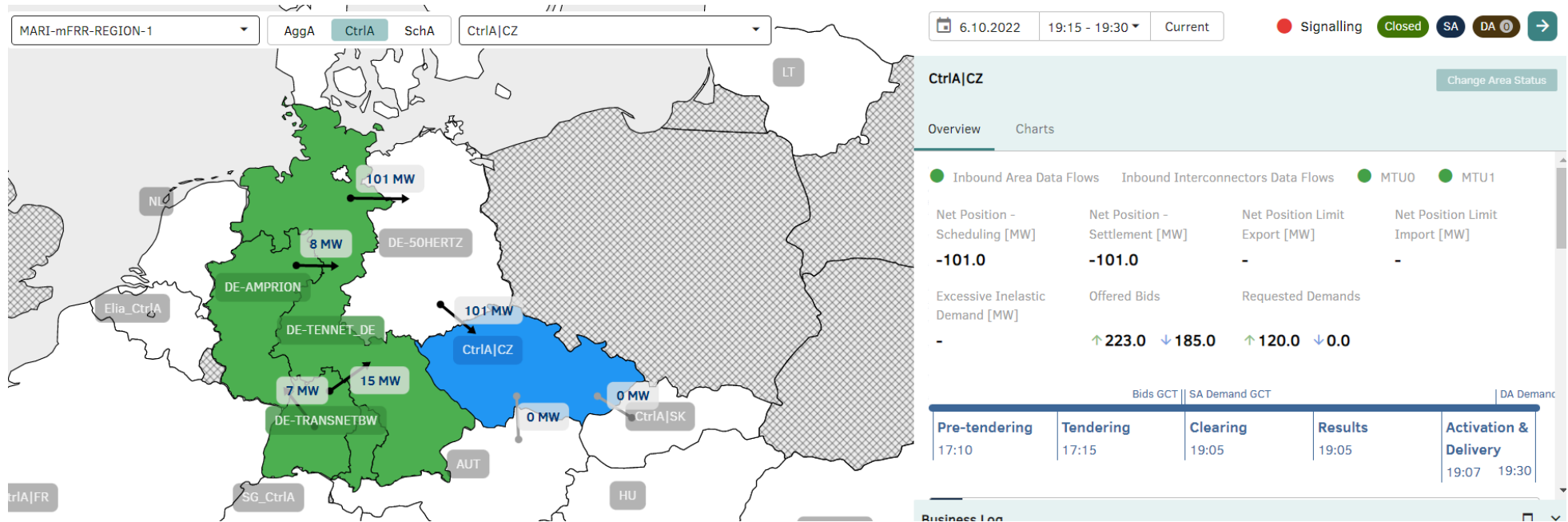
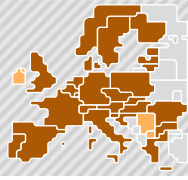
Negative mFRR



- » Price elastic demand is applied by CEPS
- » In sum, net export of 97 MW·¼h of positive mFRR and 271 MW·¼h of negative balancing energy from mFRR from Germany to Czech Republic.

First Market Results

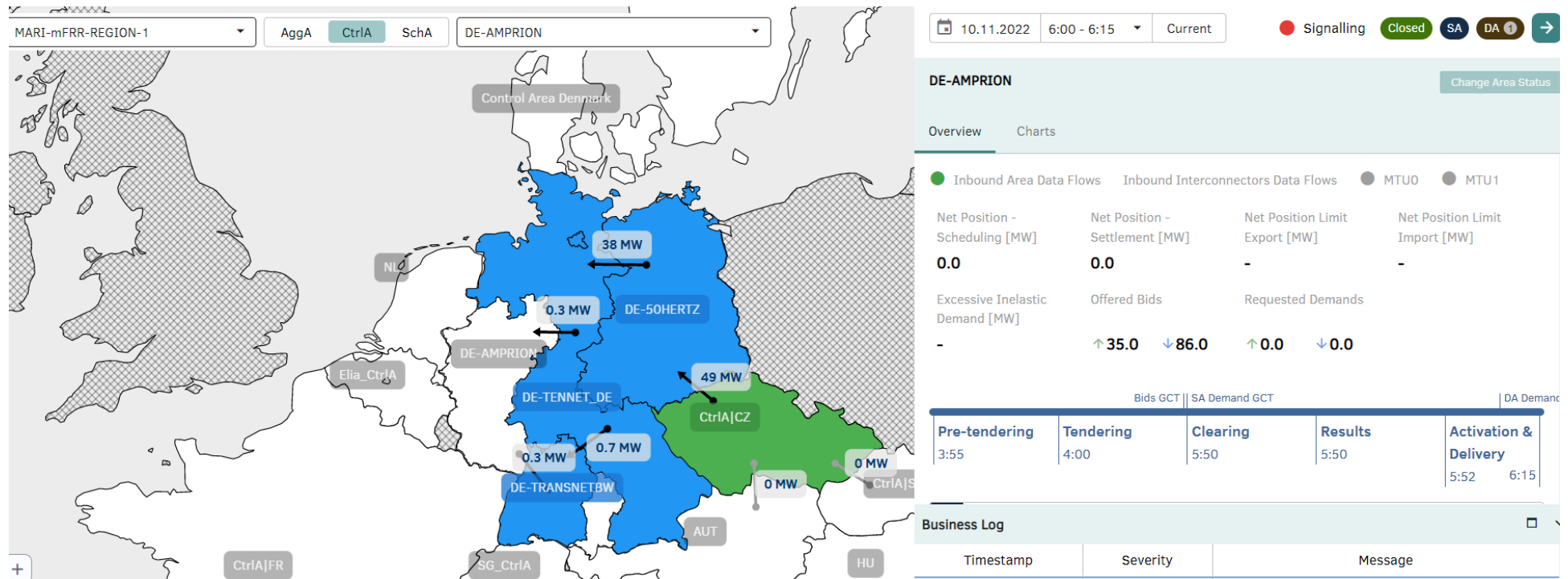
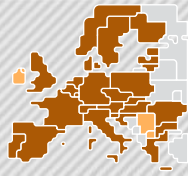
Exemplary activation of positive mFRR



- » Demand of 150 MW positive mFRR submitted to MARI by CEPS.
- » Activation of 101 MW positive mFRR if Germany for Czech Republic.
 - 0 MW have been provided by LFC area 50Hertz.
 - 1 MW has been provided by LFC area Amprion/Creos.
 - 78 MW have been provided by LFC area TenneT DE.
 - 22 MW have been provided by LFC area TransnetBW.

First Market Results

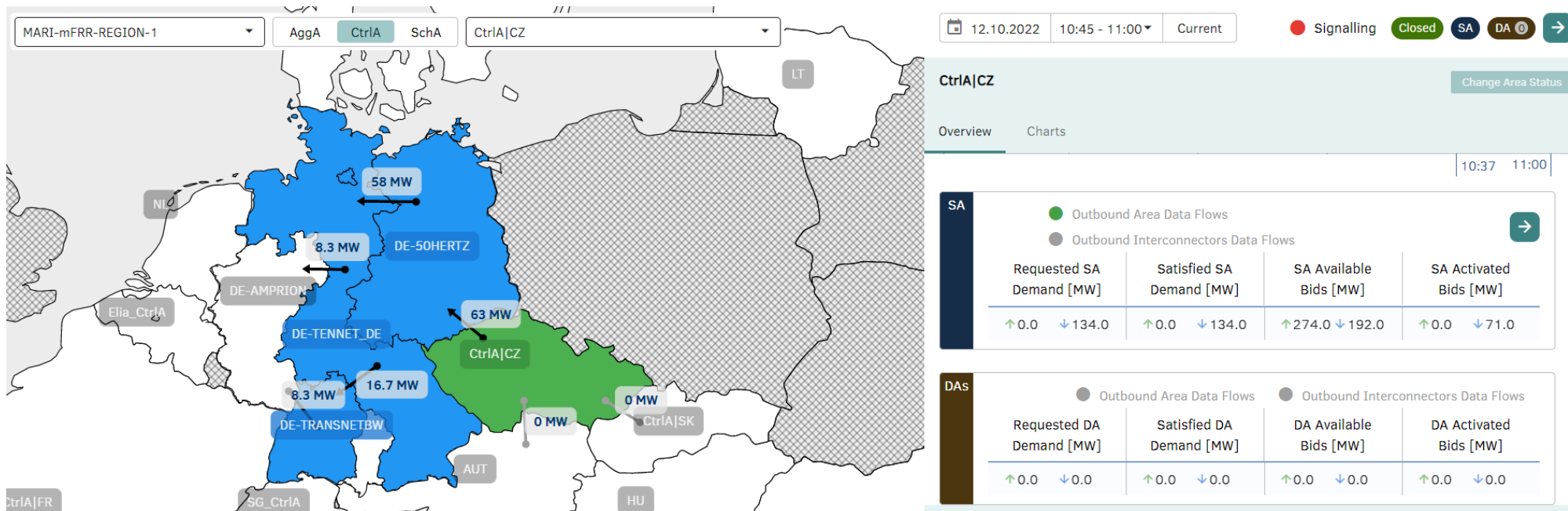
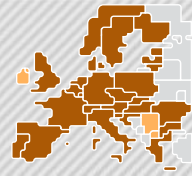
Exemplary activation of negative mFRR (i)



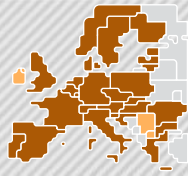
- » Demand of 100 MW negative mFRR submitted to MARI by CEPS.
- » Activation of 49 MW negative mFRR if Germany for Czech Republic.
 - 11 MW have been provided by LFC area 50Hertz.
 - 0 MW have been provided by LFC area Amprion/Creos.
 - 37 MW have been provided by LFC area TenneT DE.
 - 1 MW has been provided by LFC area TransnetBW.

First Market Results

Exemplary activation of negative mFRR (ii)



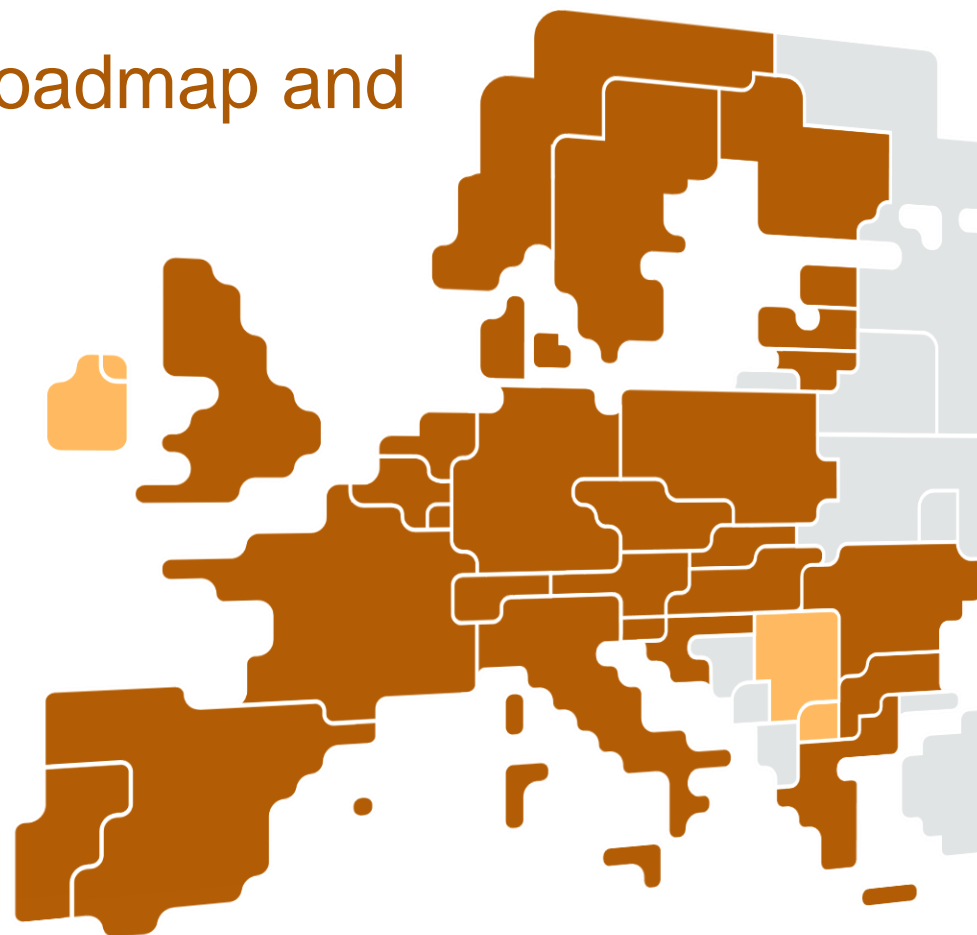
- » Demand of 134 MW negative mFRR submitted to MARI by CEPS.
- » Activation of 63 MW negative mFRR if Germany for Czech Republic.
 - 5 MW have been provided by LFC area 50Hertz.
 - 0 MW have been provided by LFC area Amprion/Creos.
 - 33 MW have been provided by LFC area TenneT DE.
 - 25 MW have been provided by LFC area TransnetBW.

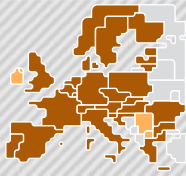








- European TSOs have started implementing MARI already in 2017 (i. e. before entry into force of Guideline Electricity Balancing).
 - More than 421 experts from TSOs have contributed to MARI in the past years.
 - Also cross-platform issues are addressed under the framework of MARI.
 - Road to individual TSOs go-live will also continue in 2023 and 2024.



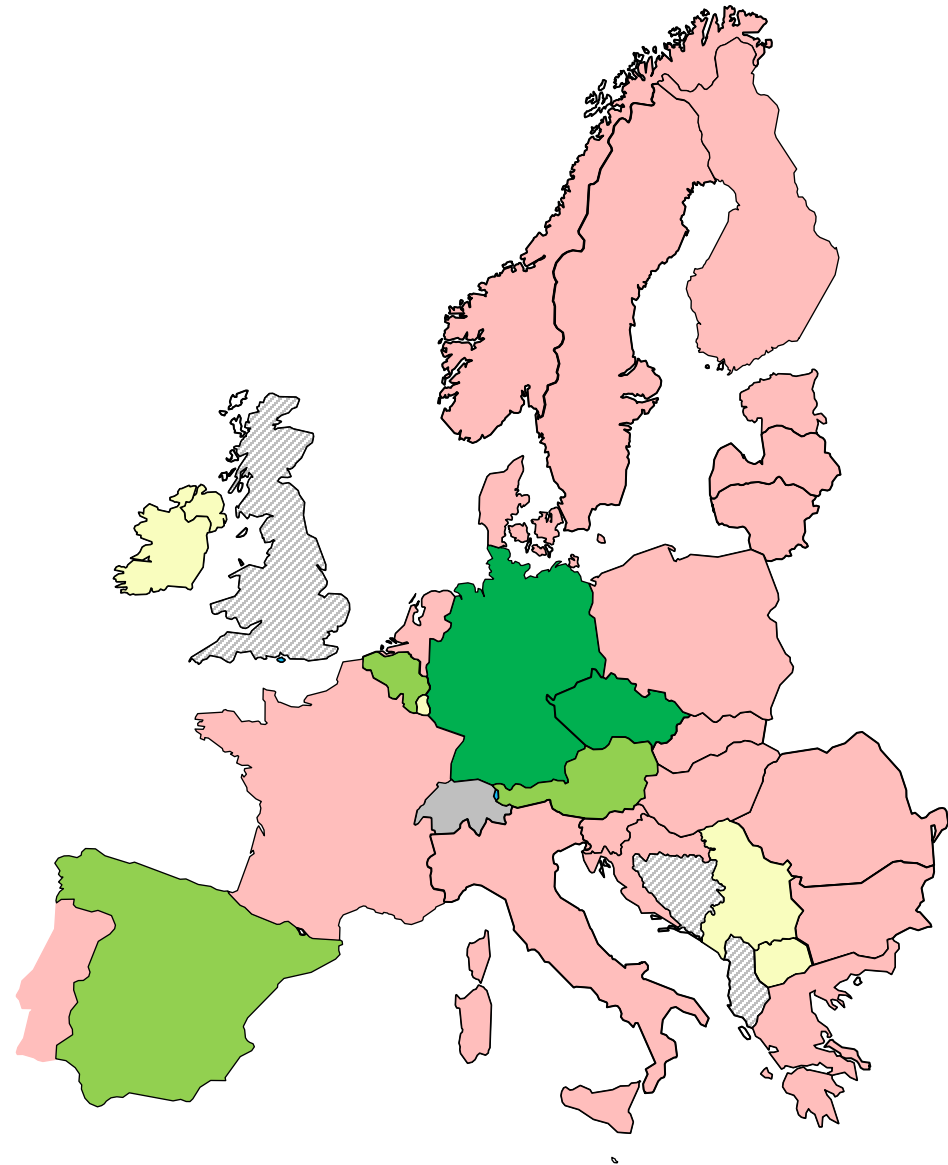
MARI Accession Roadmap and Next Steps





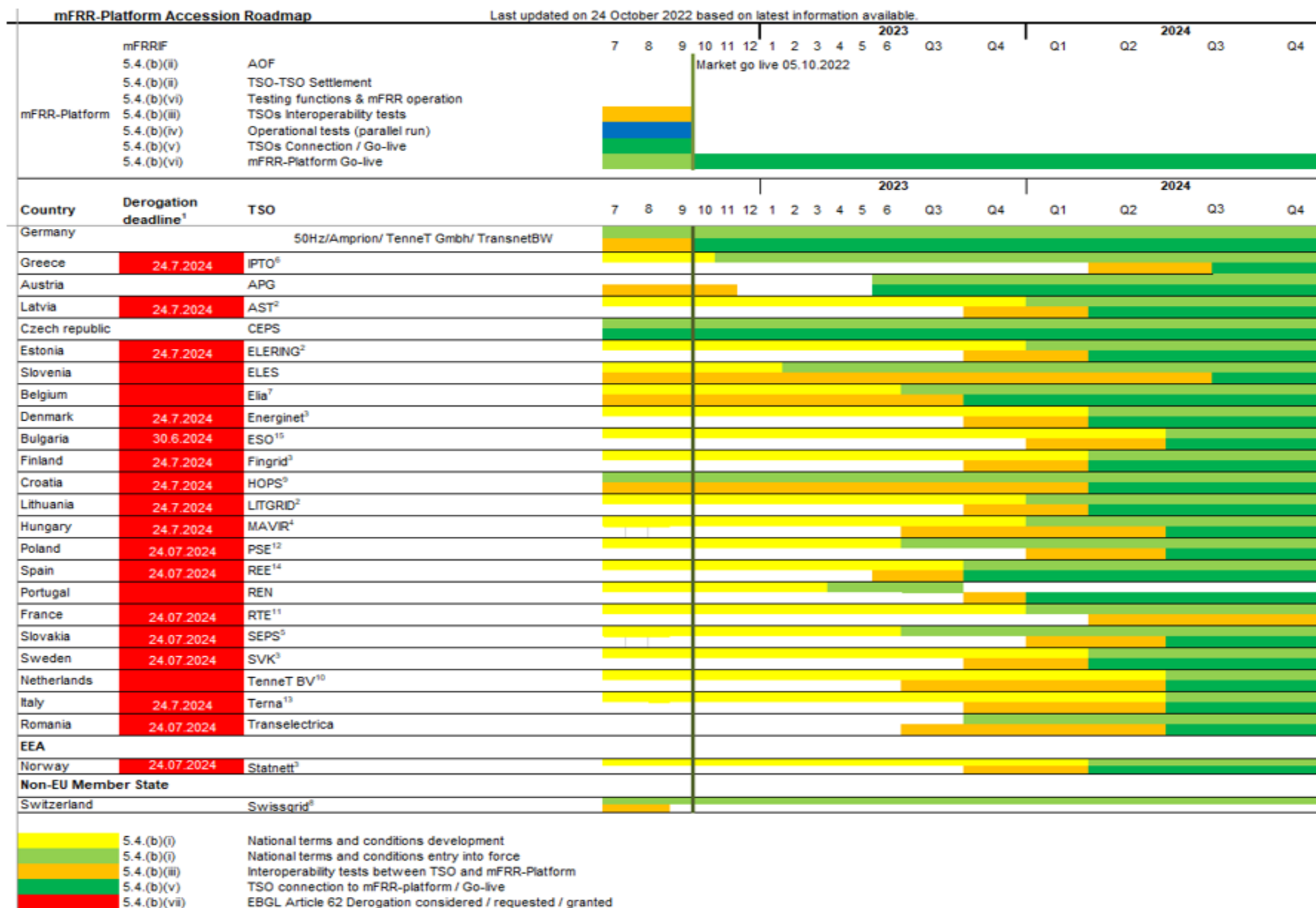
-  Operational per since October 5, 2022
-  Go-live foreseen in 2023
-  Go-live foreseen in 2024
-  Observers
-  Technically ready
-  Non-MARI members

- TSOs can request a derogation until two years after July 2022
- An increasing number of TSOs have applied or are applying for a derogation
- Germany and Czech Republic connected to the MARI platform on October 5, 2022
- In 2023 foreseen connection of 3 Member States to the MARI platform



MARI Accession Roadmap

Full overview



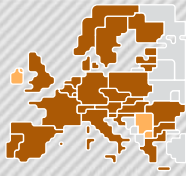


Footnotes

- 1) The technical Go Live of the MARI platform was 15 September 2022, while the first TSOs connected 5 October.
- 2) Derogation request submitted by Baltic TSOs is approved by the Baltic NRAs. According to the NRAs decision, the planned connection time will be aligned with the Nordic TSOs, expected in Q2 - Q3 2024, but not later than 24.07.2024.
- 3) The plan presented in this roadmap shall be regarded as a preliminary, non-binding estimate. The planned connection time is expected in Q2 2024.
- 4) MAVIR - derogation was granted by local NRA until 24.07.2024.
- 5) SEPS - derogation was granted by local NRA until 24.07.2024.
- 6) IPTO was granted a derogation by the NRA until 24.07.2024. The plan presented in this roadmap shall be regarded as a preliminary, non-binding estimate.
- 7) Elia was granted a derogation by the NRA until 24.07.2024. The plan presented in this roadmap shall be regarded as a preliminary, non-binding estimate.
- 8) The technical readiness of Swissgrid has been acknowledged. The participation of Switzerland in the mFRR-Platform is regulated based on article 1.6 and 1.7 of the EB Regulation and currently the subject of litigation by Swissgrid at the General Court of the European Union.
- 9) HOPS - derogation was granted by local NRA until 24.07.2024., but HOPS's ambition is to join MARI Platform earlier (depends on progress of processes related to local implementation).
- 10) TenneT NL aims for implementation and go-live by July 2024 and has requested a derogation until then. However, there is a real risk that the final derogation will take place even later than the requested derogation period. If TenneT takes these risks into account, TenneT expects to participate in the summer of 2025 to participate in the mFRR platform and TenneT will enter into discussions with relevant stakeholders if it becomes clear that the risks already in the planning manifest themselves.
- 11) RTE was granted a derogation by the French NRA until 24.07.2024. However, at least one additional year will be required for RTE to connect to the MARI platform in order to ensure the operational security of the French electrical system
- 12) PSE - derogation was granted by local NRA until 24.07.2024.
- 13) TERNA - derogation was granted by local NRA until 24.07.2024
- 14) REE - derogation has been granted by the NRA until 24.07.2024. However, REE is urged to make its best effort to connect before 24.12.2023 (i. e. 17 months after the legal date of implementation)
- 15) ESO - derogation was granted by local NRA until 30.06.2024.

Closure (for all projects)

Request for feedback (*1 minute survey with 3 star-questions and 1 comment box*)



Participants are kindly requested to provide a short feedback to the workshop. The survey will be open to participants for the next one day following the closure of the workshop:

- Was it complete
- Was it clear
- Was it satisfactory
- If not, or not 100%, to provide comments

Link to survey: [Balancing Platforms Stakeholder Workshop 8 December 2022](#)

“This survey is administered by the balancing platforms who act as data controllers for the data submitted to the survey”.