USERS' GROUP

WG EMD-SO

17/10/2023
09:00 – 12:00

Wifi Code

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First Name: Nathalie
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Agenda

_	Domain	Agenda topic	From - Till	Presenter	Time (min)
1	General	Welcome & intro	9:00 - 9:05	***Chairs***	5
2	General	Approval of MoM & status action points	9:05 9:10	***Secretary***	5
3	SO	Summer review & winter outlook	9:10 - 9:30	***Silvio Ferreira***	20
4	SO	Emergency & Restoration	9:30 - 9:45	***Peter Van Meirhaeghe***	15
5	SO	System defence & restoration plan: status & planning legal changes	9:45 10:05	***Mark De Winter (FOD Economie - SPF Economie)***	20
6	EMD	Core Intraday Capacity Calculation project: status	10:05 - 10:20	***Ruud Bouwhuis***	15
7	EMD	Core 3rd amendment DA CCM: challenges of circular flows with the Alegro HVDC BE - DE interconnector	10:20 10:40	***Koen Vandermot*** ***Cyriac de Villenfagne***	20
8	EMD	CEP 70: looking forward	10:40 - 11:10	***Steve Van Campenhout***	30
9	EMD	Market coupling BE-UK : Future capacity allocation with UK & CBAM • MRLVC impacts and drawbacks • CBAM impact & implications	11:10 - 11:35	***Elmo Van Thielen*** ***Thomas Van Den Broucke***	25
10	EMD	SDAC 15 min MTU: impact of additional computation time on BE nominations deadlines	11:35 - 11:55	***Thomas Van Den Broucke*** ***Bregt Vanderveken***	20
11	General	AOB & conclusions	11:55 - 12:00	***Chairs/Secretary***	5

Approval of Minutes & Action points

- Approval of the Minutes of WG EMD-SO 15/05/2023
- Status of Action points

Action	Responsible	Date Raised	Due date	Status
Present later in the year a status & planning on legal changes for the System defense & restoration plan	FOD Economie	31/01/2023	FOD Economie to present an update in Q3 WG EMD-SO session	**closed – presented in WG of 17/10**
Risk of incompressibility: WG EMD-SO members to share this internally within the companies to create much awareness on the issue and that prepares for the summer and future further.	members of the WG EMD-SO	12/05/2023	asap	**Closed – summer is over**
Bring topic of CBAM as a topic in WG EMD-SO.	Elia	12/05/2023	A follow up WG EMD-SO	**closed – presented in WG of 17/10**

System Operations

Summer review & Winter Outlook – Preliminary insights

October 2023 – Silvio Ferreira

Feedback: Summer 2023

Spring (ex. Sunday 9th of April 2023,…) and the « Summer Outlook » indicated unneglectable incompressibility risk.

A « Procedure High Risk of Incompressibility » was put in place for Summer 2023 and was triggered on: 08/07, 09/07, 21/07, 14/08, 15/08, 20/08, 03/09, 09/09.

For those days between 10am and 4pm,

- As published on IIP, Elia received little additional flexibility from limited coordonable/non-coordonnable units.
- Day-Ahead Price was in full price convergence or with a very little price difference with NL,DE,FR, AT.
- Elia grid was at the down limit (few MW margin)* except Reserve Sharing.
- Imbalance Price was mainly between -200€/MWh and -400€/MWh + ponctual price peaks at -500€/MWh.

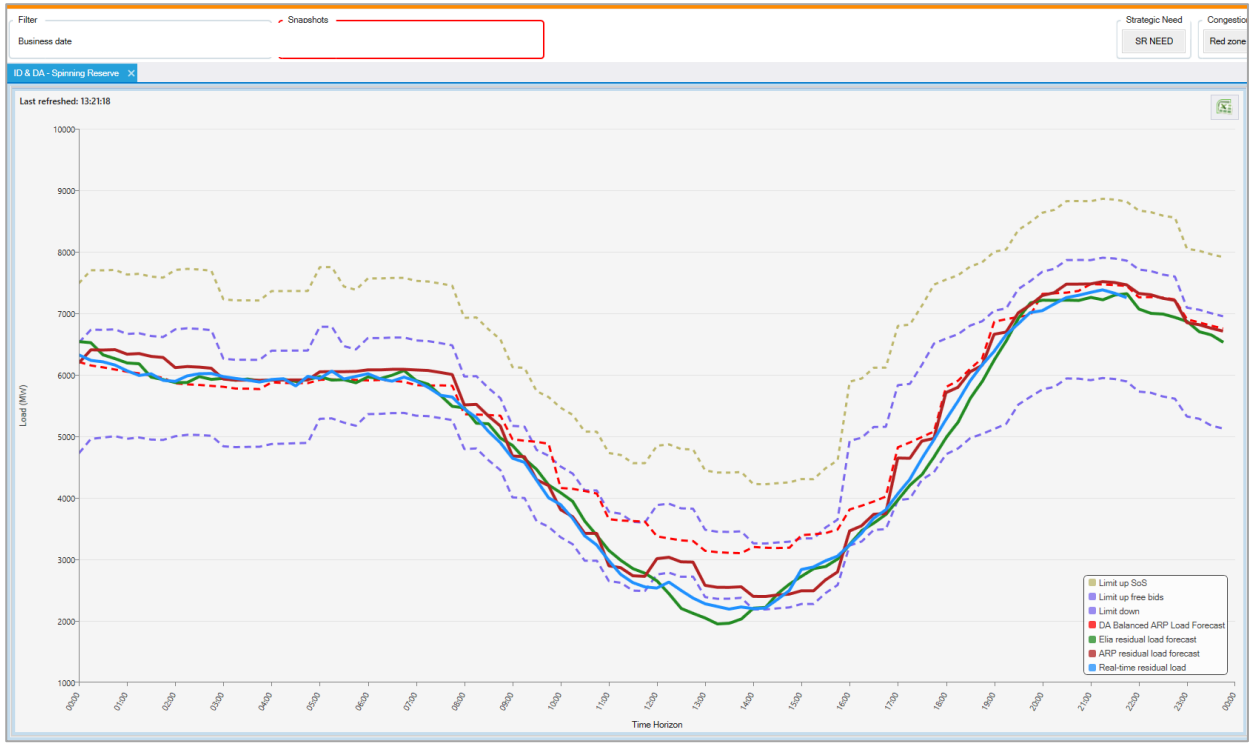
Typical day : See next Slide

Conclusion: There was no critical situation from an incompressibility perspective, but they were really few margin.

(*) Except for those days: 08/07, 09/07, 21/07

Feedback: Summer 2023

(Typical Day)



Next Step

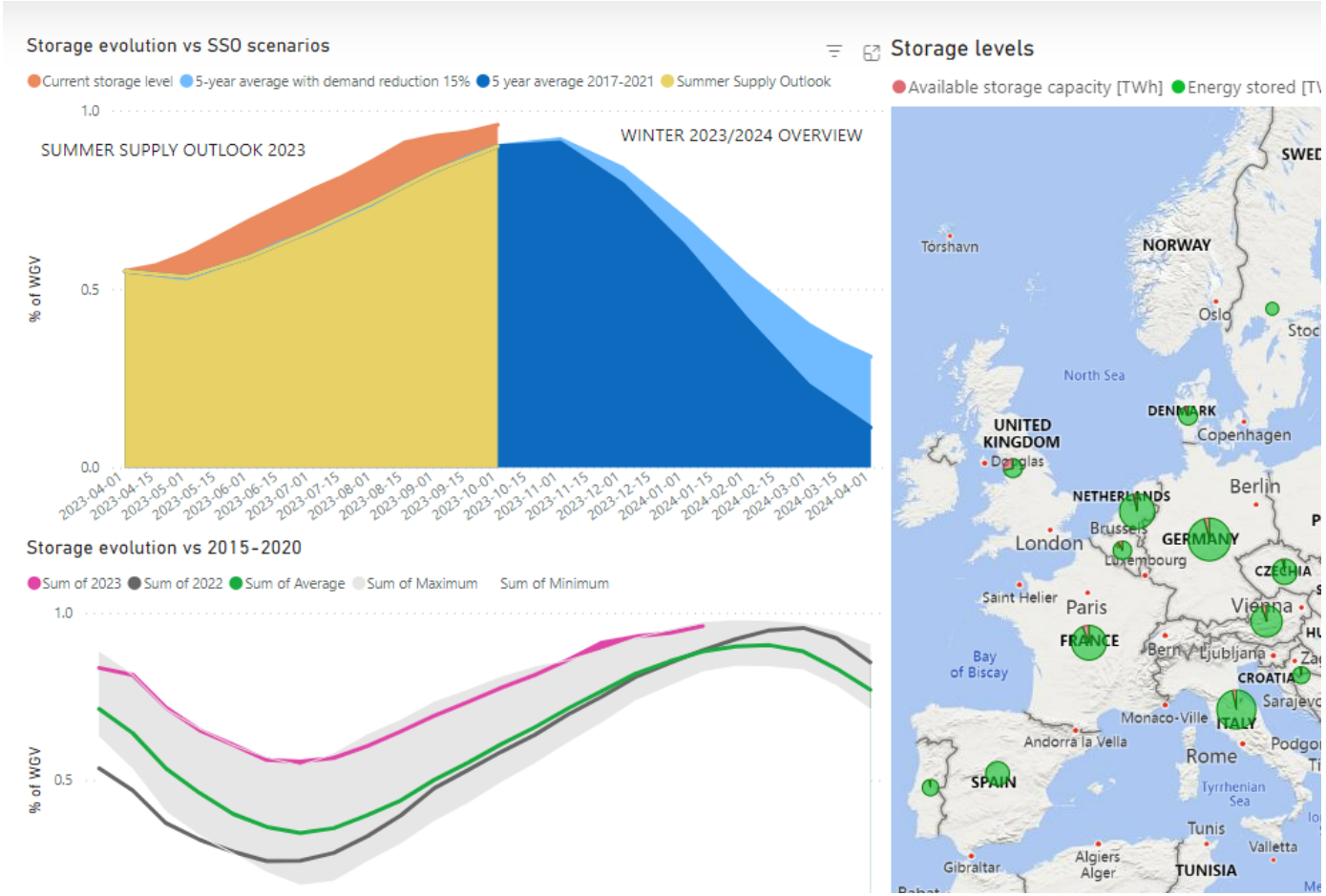
- Continious improvement of Forecasting (Solar, Wind, Load,…)
- Analysis for an updated version of the « Procedure: High Risk of Incompressibility» with the regulatroy framework available in 2024 (New Balancing Rules, New T&C SA, New LFCBOA,…)
- Summer Outlook 2024

Content

1. Overview of some key messages coming out of the EntsoE Winter outlook (status 09/10) about
   a) EntsoE Gas storage outlook
   b) EntsoE Winter outlook 2023/24 : scope, status & first trends

2. Feedback from Elia on the situation in our grid/production park for the upcoming winter

EntsoE gas storage outlook



Gas storage level in EU is very high (96%).
Situation for next winter much more secured than in 2022

EntsoE Winter Outlook 2023/24 : scope

Reference scenario

Best available information

Energy saving scenario

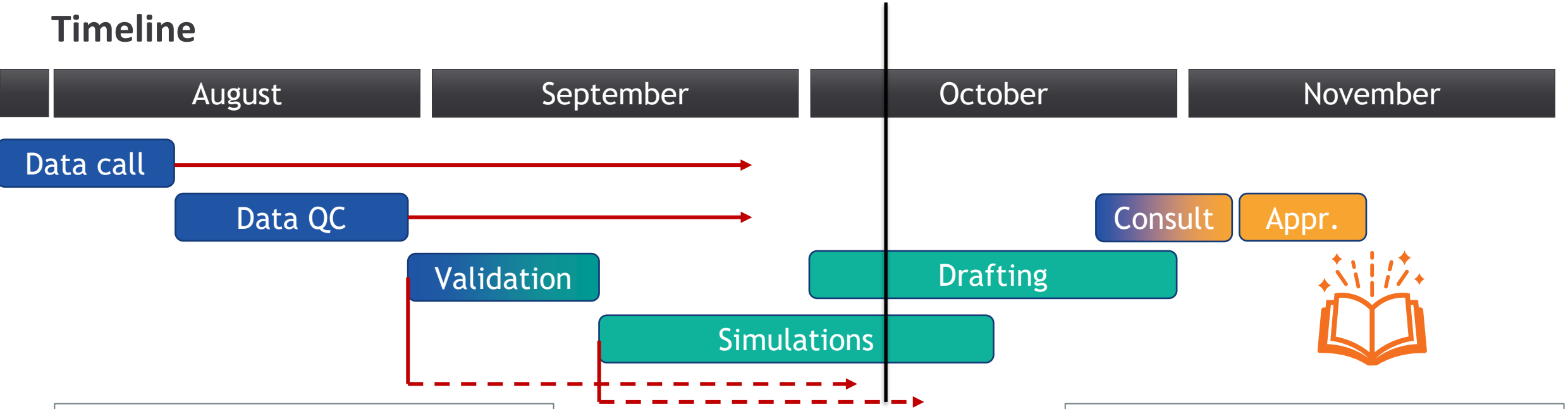
What if **European energy saving measures** would be reintroduced / effect maintains

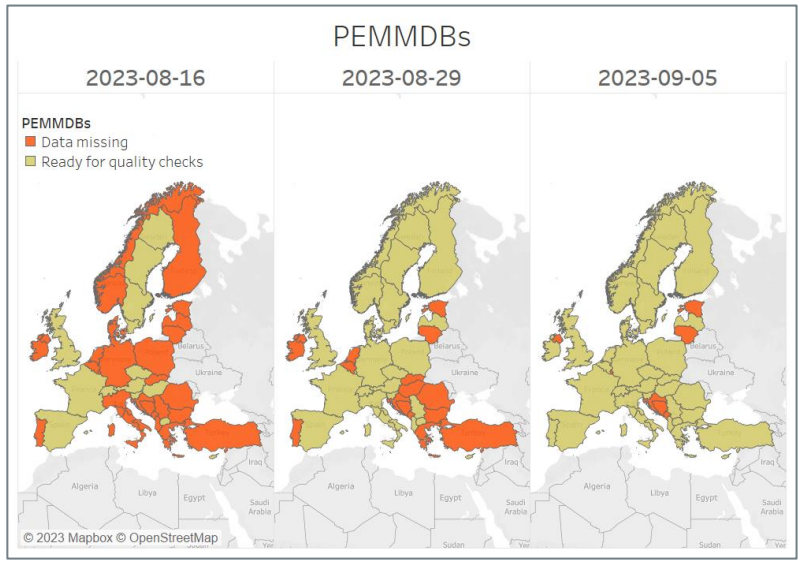
Adequacy assessment

Critical Gas Volume analysis (same as winter 2022-2023)

EntsoE Winter Outlook 2023/24 : progress status

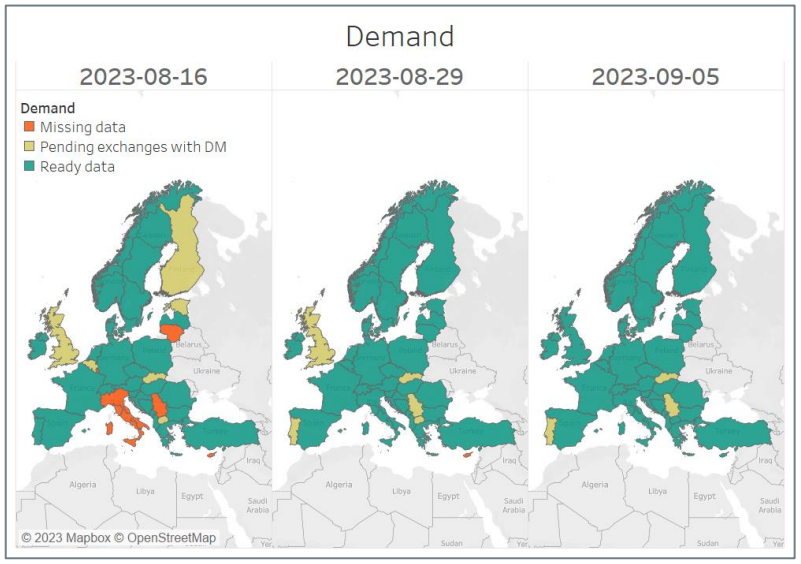
Timeline





Risks and uncertainties:
- Data delivery date
- Unexpected model issues

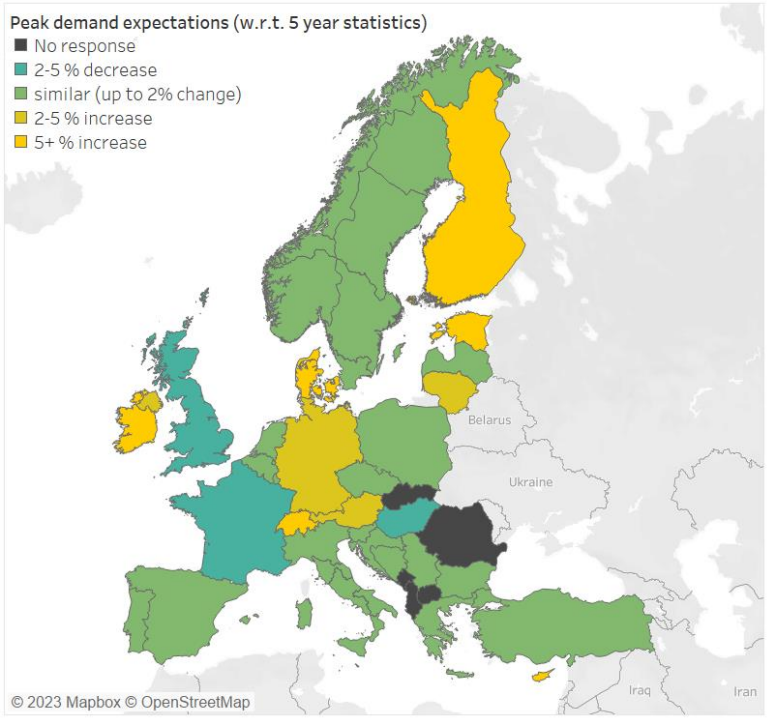
Mixed data sources:
- Complete datasets
- Re-use of 2022/2023 data
- List with data sources for report



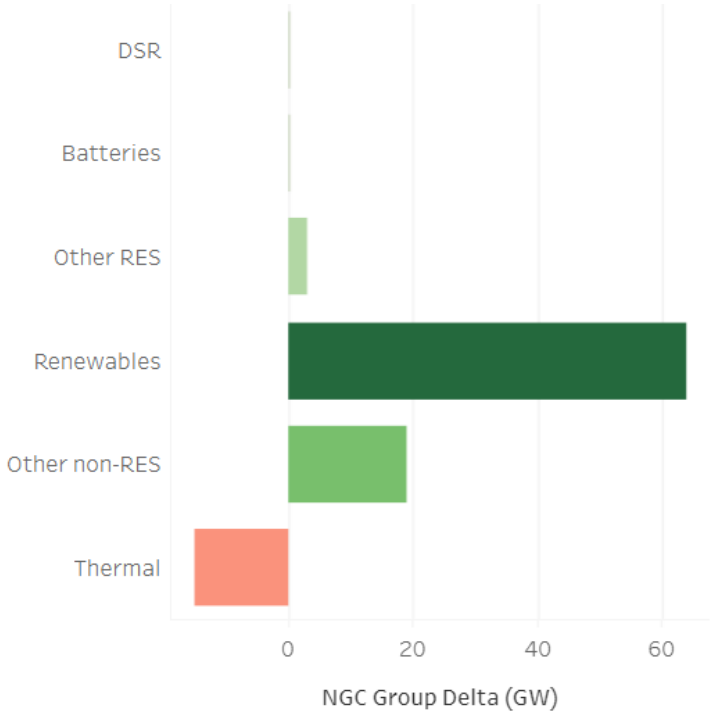
EntsoE Winter Outlook 2023/24 : identified trends

Demand varies around average levels across Europe

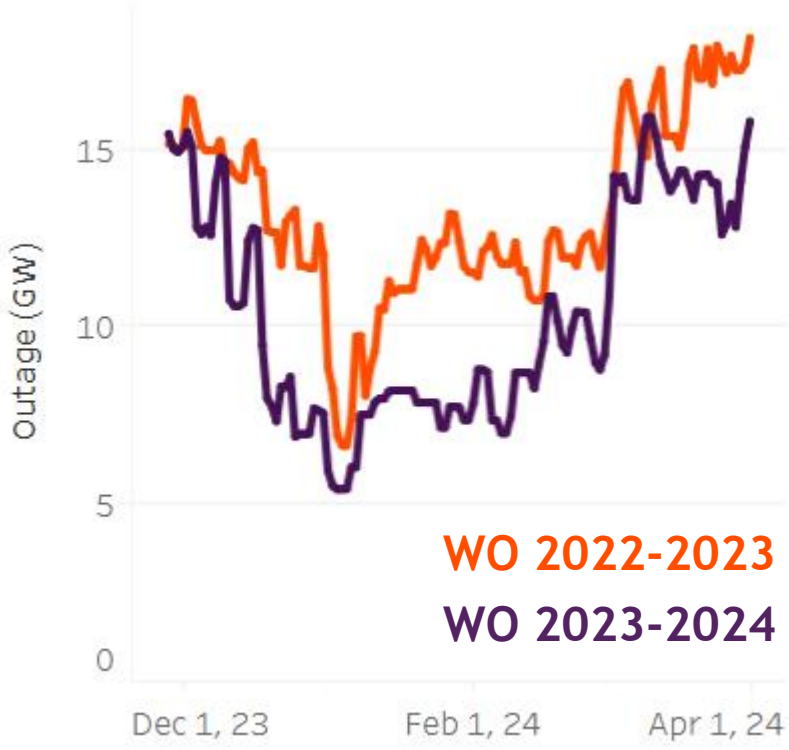
Peak demand



RES increase Conventional decrease



More favorable planned outage schedule



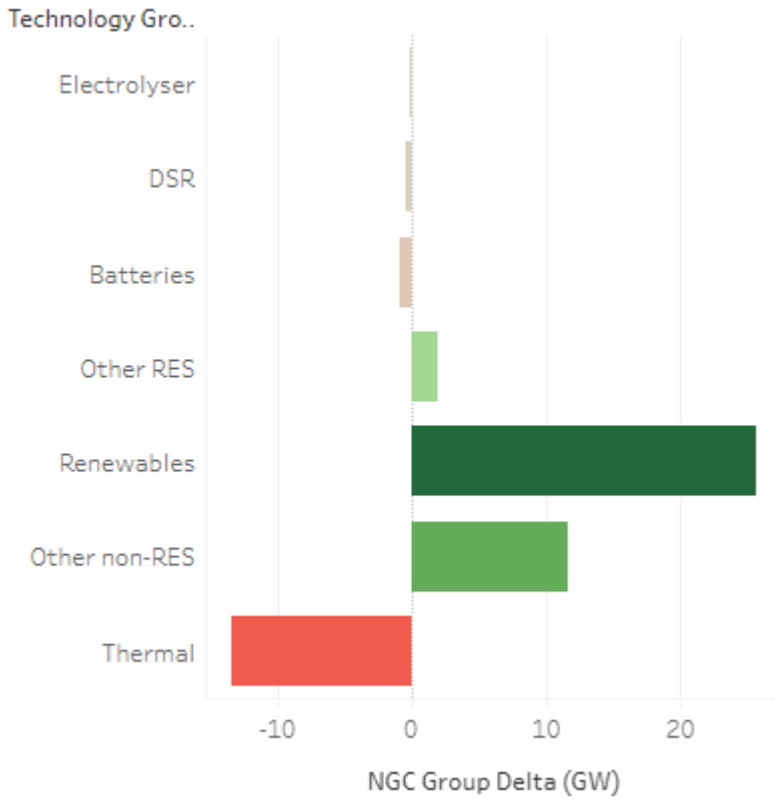
First identified trends at European level highlight a lower adequacy risk for next winter (23-24) compared to the previous winter (22-23)

EntsoE Winter Outlook 2023/24 : identified trends

Comparison of CWE installed capacity(BE/NL/FR/DE) winter 23/24 versus winter 22/23

Green = good news

Orange = bad news



-1 GW nuclear BE (Tiha 2)

-4 GW nuclear DE

-5 GW Gas DE

-3.4 GW Gas NL

+24 GW RES

+10 GW Other non-RES *

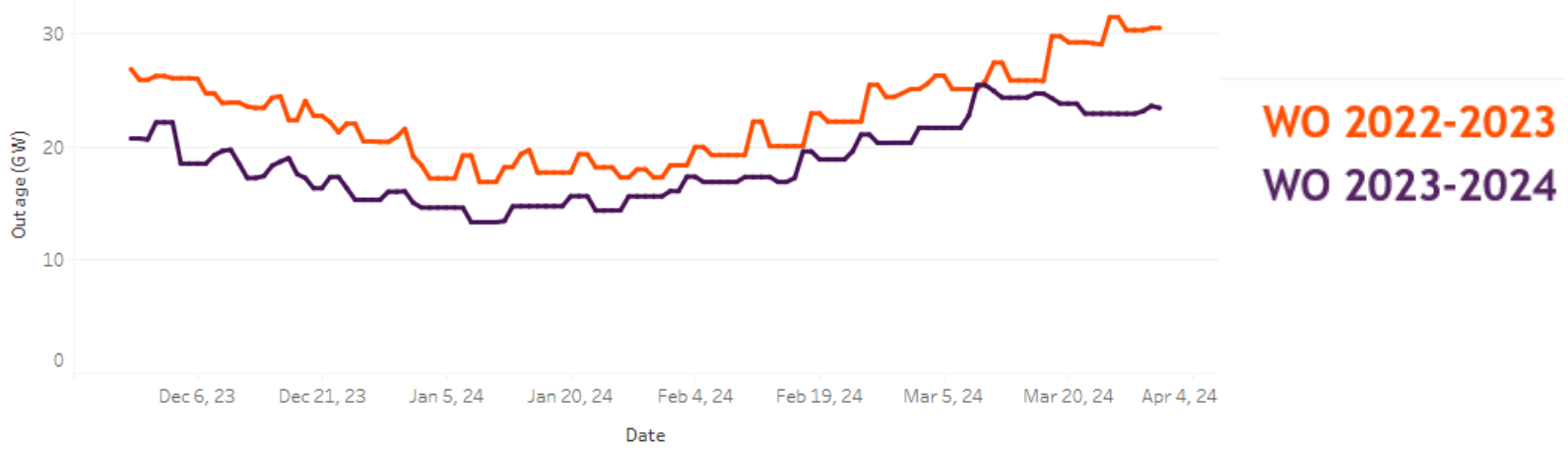
* Still under data validation

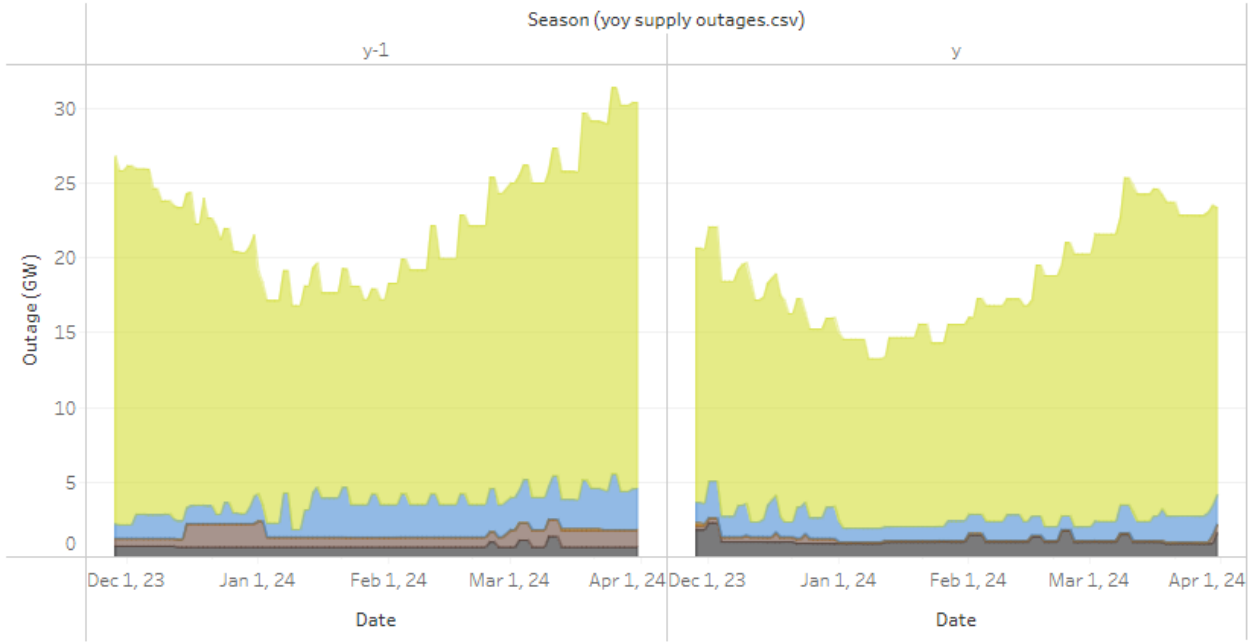
EntsoE Winter Outlook 2023/24 : identified trends

Comparison of outage planning (BE/NL/FR/DE) winter 23/24 versus winter 22/23

Green = good news

Orange = bad news

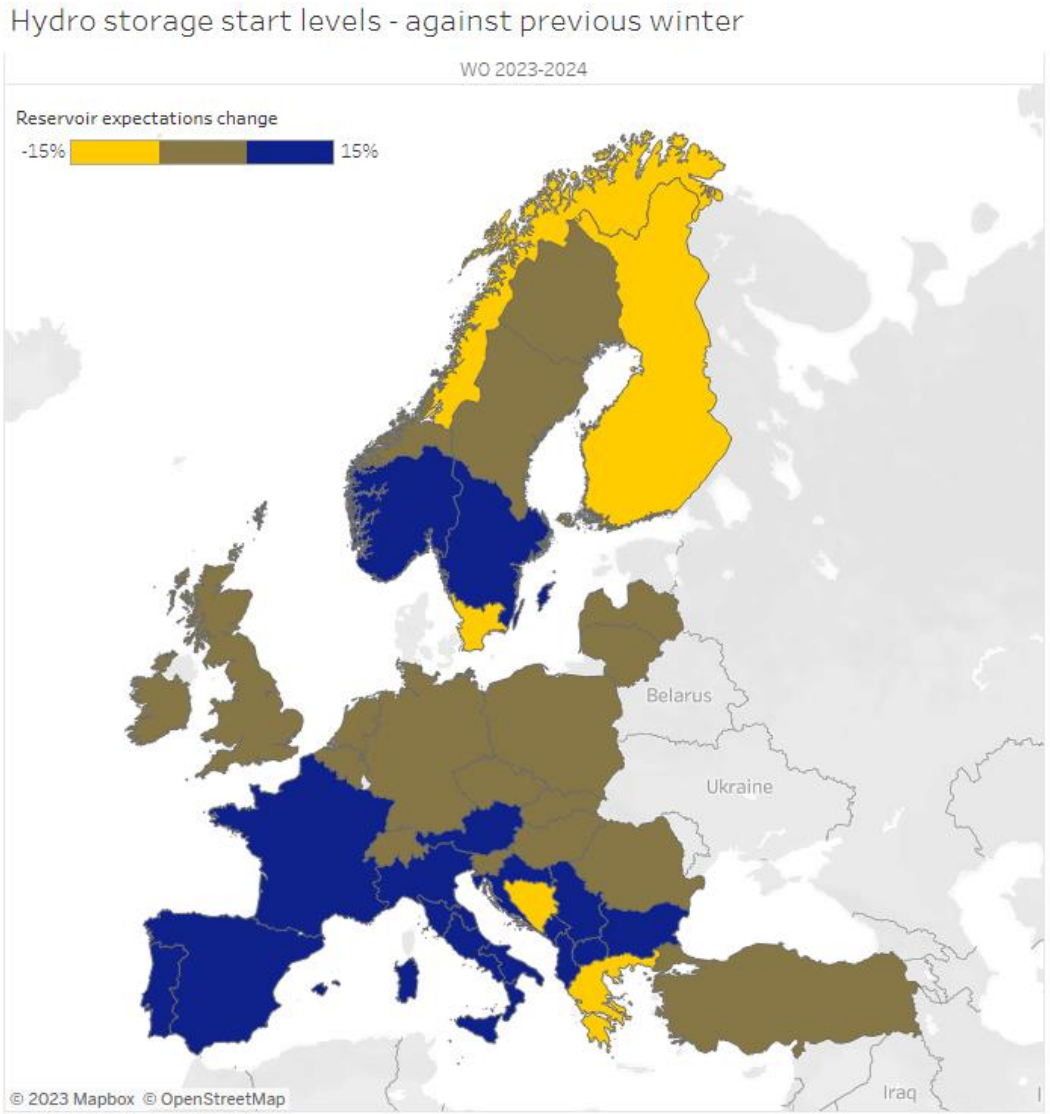




- Less revisions in general
- Mostly still NU park in FR

EntsoE Winter Outlook 2023/24 : identified trends

Comparison of hydro storage levels winter 23/24 versus winter 22/23



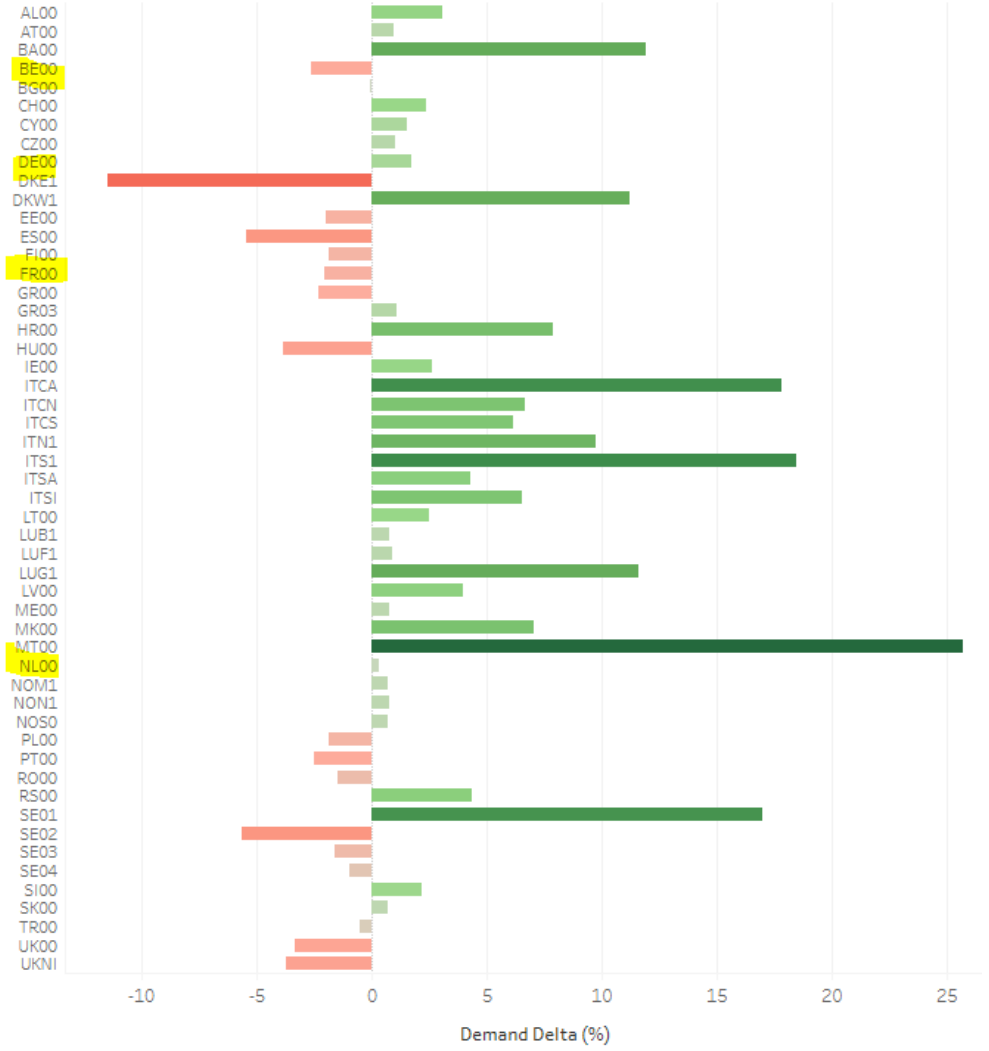
Green = good news

Orange = bad news

- **Improved hydro storage forecast in FR (and in general in EU)**

EntsoE Winter Outlook 2023/24 : identified trends

Comparison of demand level winter 23/24 versus winter 22/23



Green = good news

Orange = bad news

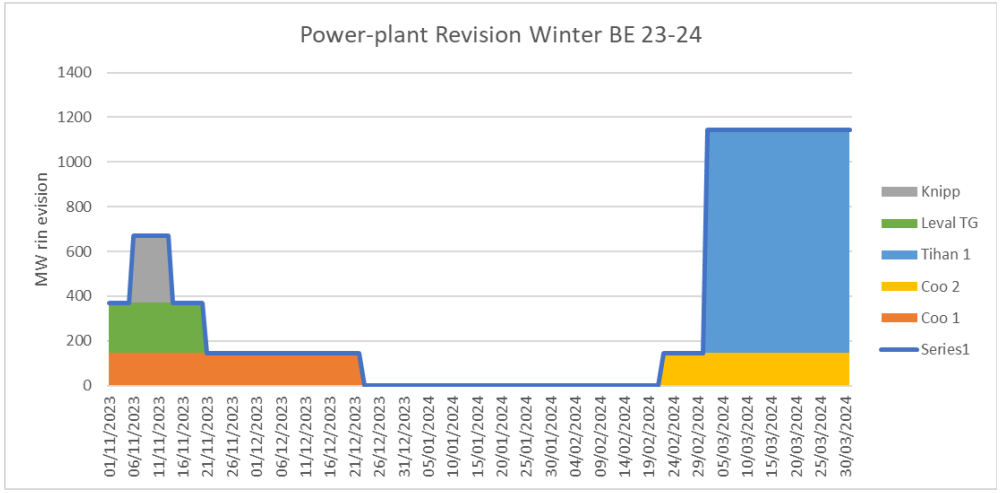
- Lower expected demand in FR and BE
- Small increase in DE and NL

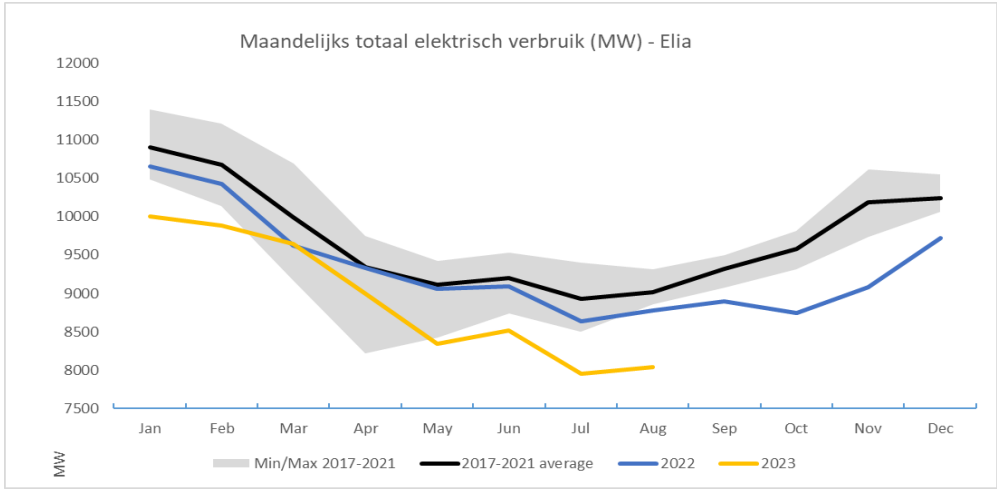
Winter Outlook : preliminary insights Elia

Elia

- Preliminary indicators
  - ✓ Low revision volume on conventional power-units during critical months
  - ✓ Load expected to stay under / similar-to historical values for next winter

- Action being taken
  - ✓ RTE and Elia maintain as previous winter some measures to manage difficult winter adequacy situations
  - ✓ Regular winter trainings
  - ✓ No other preventive winter actions yet foreseen in Belgium





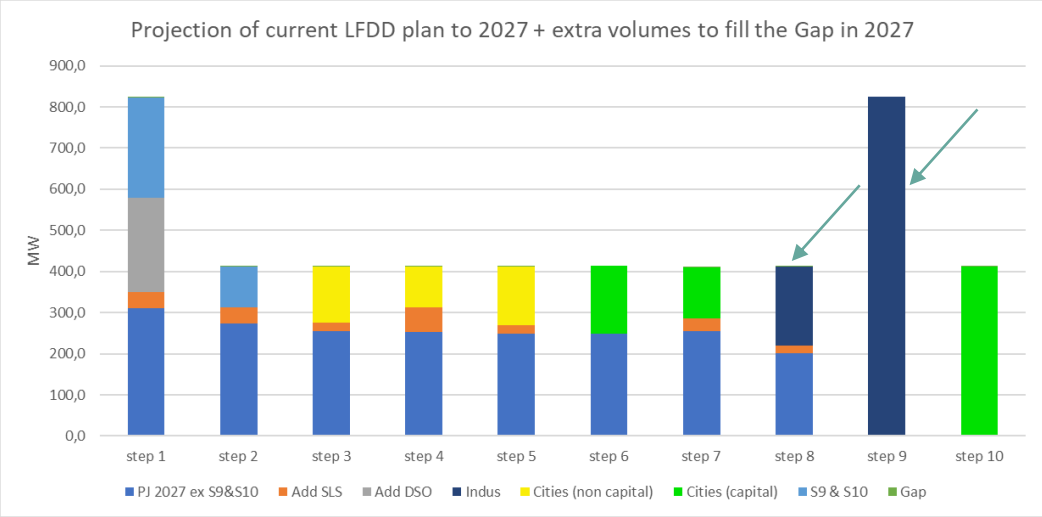
Elia sees next winter as less risky compared to previous winter, mainly due to low revision volume in Belgium and better situation in neighboring countries. The identified trends of EntsoE outlook are confirming our preliminary assessments

Emergency & restoration

Review of defense and restoration plans

- Elia has submitted reviewed versions of SDP and RP for approval to Minister on 6/10/2023
- Creg advise is expected within 40 working days
- NCCN advise is expected within 40 working days for RP
- Ministerial decision is expected by 18/12/2023
- Implementation of measures as from 1/1/2024
- Consultation report (only non-confidential remarks from stakeholders) will be made available by Elia in October
- The approved Non-confidential versions of SDP and RP will be made available by Elia on its website after approval by the Minister.

LFDD recap



Transmission connected demand facilities and CDS should implement selective disconnection of (netted) demand for the following share of their gross consumption:

- 6% at 48,3 Hz
- 24% at 48,1 Hz

Still to be determined for each SGU:

- Voluntary disconnection at 49,0 Hz ?

  → Mail 15/11/24 → Reaction by 15/12/24

- Individual fulfillment of LFDD obligation or via an LFDD group ?
- If SGU individual disconnection
  - in two steps: 6% at 48.3 Hz and 24% at 48.1 Hz ?
  - 30% in one single step ? Elia sets the frequency threshold.
- If SGU is part of an LFDD group
  - Who are the members of the LFDD group?
  - Who will disconnect how much at 48,3 Hz and at 48,1 Hz ?

  → EPIC open 1/4/24 → Reaction by 30/6/24

*** Elia will organize an LFDD info meeting for SGUs on practical implementation aspects on 25/1/2024 ***

System defense & restoration plan: status & planning legal changes

Mark De Winter

System defence & restoration plan: status & planning legal changes

Follow up of action point for FOD Economie – see separate slideset

Present later in the year a status & planning on legal changes for the System defense & restoration plan	FOD Economie (J. Robbelein)	31/01/2023	FOD Economie to present an update in Q3 WG EMD-SO session	Open, to table for next WG EMD-SO

economie

FOD Economie, K.M.O., Middenstand en Energie

High level overzicht wetgevend kader voor crisisbeleid elektriciteit

AD Energie

Oud versus nieuw

Huidig wetgevend kader

- MB afschakelplan 2005 (herzien in 2015)
- KB FTR artikels 259 tot 263

Nieuw en toekomstig wetgevend kader

- Netcode Emergency & Restoration (E&R) (EU) 2017/2196 en EU verordening Risicoparaatheid (RPP) (EU) 2019/941
- MB Risicoparaatheidsplan 2023 (met het volledige RPP in bijlage)
- KB FTR artikels 29 tot en met 33
- Slapende besluiten voor verdere uitvoering

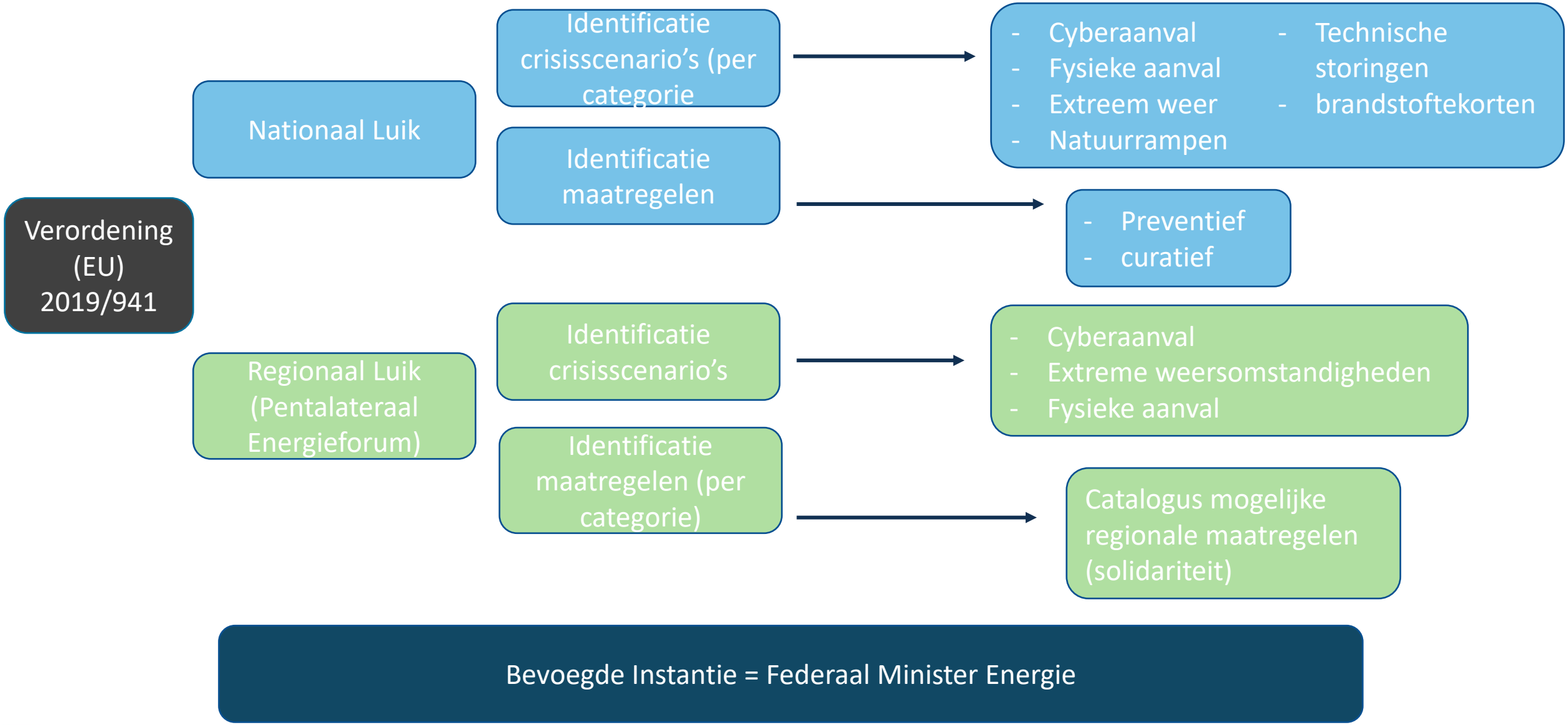
Wat is er nieuw:

- Volledige RPP in bijlage van het MB. Hierdoor met dezelfde juridische afdwingbaarheid
- Definitie elektriciteitscrisis: een significant tekort aan elektriciteit voor meer dan 100MW aan vermogen of voor meer dan 100K aansluitingen
- Aanduiding minister van Energie als bevoegde instantie inzake crisisbeleid elektriciteit
- Vraagbeperkende maatregelen zijn beter juridisch verankerd (verwijzen naar RPP verordening i.p.v. wetboek economisch recht)
- De jaarlijkse update van de HPSNG's moet klaar zijn voor de winter (1 Nov)
- Onderscheid gemaakt tussen handmatig en automatisch afschakelplan (LFDD)

Blijven ongewijzigd:

- Notificatieprocedure van een incident door Elia
- Handmatig afschakelplan
- Minister kan een mandaat geven aan Elia om handmatig af te schakelen
- Geen handmatige afschakelingen voor TSO geconnecteerde bedrijven, steden >50k inwoners, provincie hoofdsteden
- De procedure van schaarste

BE Risicoparaatheidsplan voor de elektriciteitssector



European Market Design

Core Intraday Capacity Calculation

Ruud Bouwhuis

Core Intraday Capacity Calculation – Status update – 1/2

- **Ongoing ACER escalation for 2nd & 3rd Core ID CCM amendments**
  - The ACER escalation process of the ID CCM is nearing its end, a final outcome due to additional iterations between Core TSOs, NRAs & ACER is now expected end of October.
  - Expected controversial topics are virtual capacity in ID & XNEC to CNEC conversion. In the view of ACER, indeed the minimum capacity requirement (i.e. CEP70) should also applicable for the entire ID timeframe. It is not expected that Elia's proposal for a MinRAM 20% (minus AACs) will be adopted in the final version.
  - Between Core TSOs, NRAs & ACER there was consensus on having a quickly implemented ID recomputation, using the final DA Security analysis. It is likely that the implementation of an "IDCC_C*" during the night will be prioritized over the planned IDCC2 (a.k.a. IDCC_D).
  - If the minimum capacity requirement is included in ACER's decision, this will most likely trigger the creation & request of a derogation by the different Core TSOs.
  - After ACER issued its decision, Core TSOs will reassess the implementation timeline for the different ID computations. In case of inclusion of the minimum capacity requirement it is likely that there will be a staged implementation, starting with an IDCC process without virtual capacities.

In the current working documents, foreseen ID processes (DA Leftovers, IDCC1, IDCC2 etc.) will be renamed to IDCC_A, IDCC_B, used in the order of when capacities are published.

Core Intraday Capacity Calculation – Status update – 2/2

- **Status Core IDCC 1 (a.k.a IDCC_B)**
  - The External // Parallel run continues, with no significant changes in levels of capacity observed.
  - In preparation for an eventual Go-Live in 2024, the following process changes are foreseen.
    - Change to 5% FRM (compared to Fmax for all CNECs) - **Implemented on 2023/09/04**
    - Switch to foreseen Go-Live timings
    - Usage of an earlier DACF will be required due to timing constraints (i.e. current IDCC results were overestimated)

- **Status Core DA leftover provision @ D-1 14:45 (a.k.a IDCC_A)**
  - Core TSOs are preparing an approach for an External // run for the new approach for DA leftover computations.
  - This plan will be communicated in due time.

Core 3rd amendment DA CCM: challenges of circular flows with the Alegro HVDC BE - DE interconnector

Core Day-Ahead Capacity Calculation - Circular flow challenge caused by day-ahead schedules on ALEGrO: Problem description

Reminder

- HVDC link will be optimized in EUPHEMIA to maximize social welfare
- ALEGrO is meant to relieve the burdened grid nearby
- Calculated DA-schedule is used as basis for real-time operation

Elia & Amprion observed undesired behaviour in DA Market Coupling

- Circular Flows via ALEGrO
  - Leading to **highest loading of close by AC tie-lines** whilst social welfare gain is very limited.

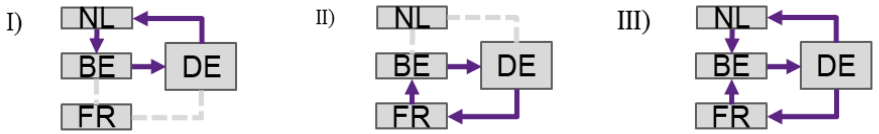


***Fig. 1**: Analysed types of circular flows with ALEGrO*

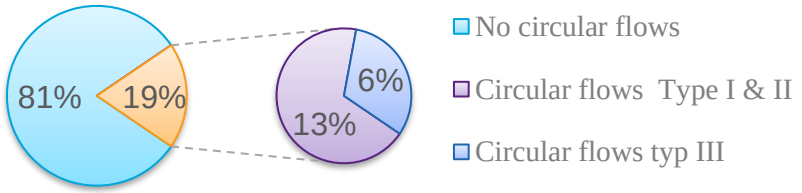
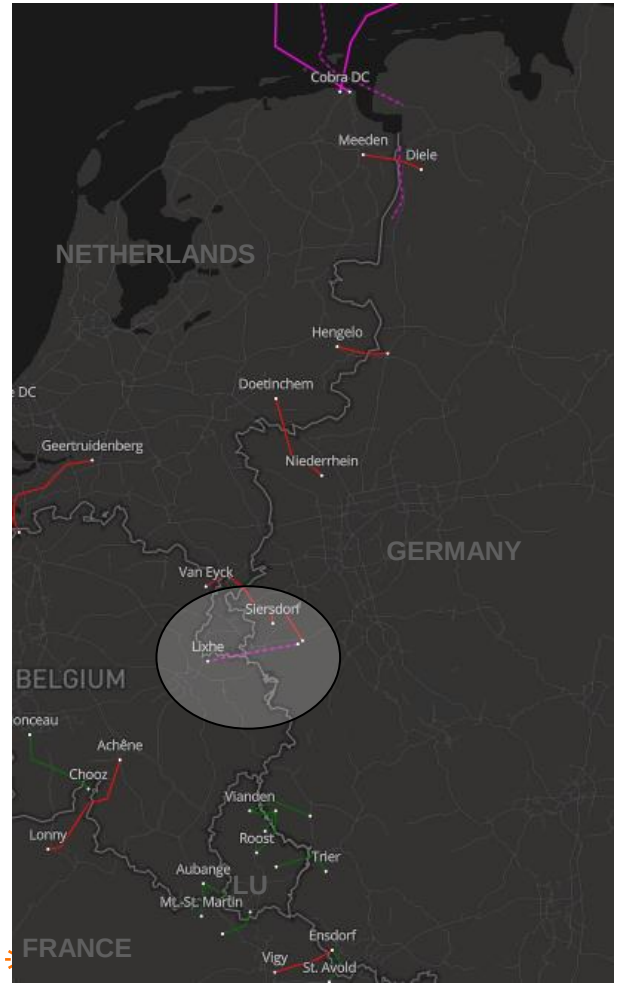


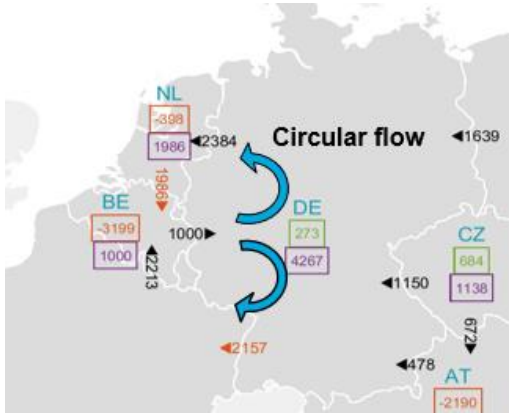
***Fig. 2**: Occurrence of circular flows in March 2023*



Core Day-Ahead Capacity Calculation - Circular flow challenge caused by day-ahead schedules on ALEGrO: Possible solution

CAUSE of undesired Behaviour

- The **undesired behaviour is attributed to very distant network elements** with a low sensitivity to ALEGrO exchanges in the context of the social welfare maximization in Market Coupling.
- A slight relief of a very distant limiting CNEC is achieved by scheduling ALEGrO against the market direction at the cost of circular flows and **full loading of nearby CNECs leading to n-1 violations** and application of costly remedial actions in real-time system operation. This comes along with a small social welfare gain.
- The **circular flows** have been observed mainly between the hubs BE, DE, NL and FR, counteracting operational security and **reducing Intraday Capacities** whilst only leading to a small social welfare increase in Day Ahead Market Coupling.



Transit & Loop Flow
Non-Intuitive Flow
Saldo > 0: Export
Saldo < 0: Import

Fig: *Core NP on Business Day: 19/03/2023 H11*

Possible solution

- Introduce an ALEGrO z2z PTDF threshold (e.g., 0.5%)
  - Solution was tested and proved to be of help 1
  - Impact on social welfare proved to be small
- Other solutions are still being investigated that might make the ALEGrO z2z PTDF threshold obsolete.
- Introduction of ROSC will allow for modifying ALEGrO set point and thus make either of the options above obsolete.

TS	CNE	CO	Loading @MCP RefCase	z2z PTDF AL DE-BE in % RefCase	Active Constraint	Presolved CNEC
11	[D8-D8] Pasewalk - Vierraden 306 [OPP]	N-1 TR Vierraden 220/400 402	90%	0.04%	True	True

Tab: *Limiting CNECs with ALEGrO z2z-PTDF<0,5% for BD 19/03/2023, H11*

Core Day-Ahead Capacity Calculation - Assessment solution PTDF filtering vs. Flow tariff

	PTDF filtering	Flow tariff
Solving the circular flow	Yes	Yes
Impact on operational security	Neglected flows up to 10MW	ALEGrO setpoint not optimal during price convergence *
Impact on social welfare	Lower, the essential function of ALEGrO to optimize allocation across the parallel AC + ALEGRO borders is preserved	Higher than PTDF filtering as using ALEGrO is penalized for all trades, resulting into less price convergence
Impact on price difference BE-DE	None	Even if there is a price difference remaining between DE and BE, ALEGrO is not used

* Alegro setpoint is determined via the least costly exchange path principle, which is the “best determinable” setpoint until ROSC is available.

Core Day-Ahead Capacity Calculation - Example of 1 BD (19th of March) with the capacity on ALEGrO

Hour	Capacity on ALEGrO [MW]			Case
	As is	PTDF threshold 0.5%	Flow Tariff 0.1 EUR/MWh	
1	456,4	456,4	0	Price convergency
2	433,9	433,9	0	
3	448,9	448,9	0	
4	205,4	205,4	0	
5	96,9	96,9	0	
6	189,9	189,9	0	
7	491,8	491,8	0	
8	647,4	647,4	0	
9	666,1	666,1	0	
10	940,3	940,3	0	
11	-1000	842,4	0	Circular flows
12	-1000	703	0	
13	-1000	890,2	0	
14	535,6	535,6	0	Price convergency
15	410,6	410,6	0	
16	184,1	184,1	0	
17	-244,5	-244,5	0	
18	338,1	338,1	338,1	No price convergence
19	1000	1000	993,8	
20	27,1	27,1	0	Price convergency
21	257	257	0	
22	177,6	177,6	0	
23	223,2	223,2	0	
24	290,5	290,5	0	

3 possible cases

- Price convergence
  - PTDF filtering : capacity on ALEGrO similar to now
  - Flow Tariff : **no flow allocated to ALEGrO**
- No price convergence with circular flows
  - PTDF filtering : capacity on ALEGrO lowered by the value of the circular flows
  - Flow Tariff : **no flow allocated to ALEGrO**
- No price convergence no circular flows
  - PTDF filtering : capacity on ALEGrO similar to now
  - Flow Tariff : : capacity on ALEGrO similar to now

CEP 70

Steve Van Campenhout

2024: Elia will re-submit a request for derogation on excessive loopflows

Absolutely necessary in the interest of Belgian consumers and fully compliant with Art 16(9) of Electricity Regulation:

- In the interest of Belgian consumers / tariff payers:
  - Avoid that Belgian tariff payers pay for excessive loopflows
- Based on foreseeable grounds:
  - The local remedial action potential is insufficient to alleviate the impact of loop flows
  - Must have implementations will come earliest in 2025: ROSC + cost-sharing + coordinated validation in DACC
- Extent is limited to what is strictly needed - Elia applies as best practice:
  - Use of the right to lower the excessive loopflows at the start of capacity calculation, thanks to our PSTs
  - The target is dynamically set, thus based on the amount of excessive loopflows remaining

Elia is convinced that 70% as a target will remain a pipe dream

Electricity Regulation foresees several reasons to derogate or deviate from the 70% rule, justified in the legal text by the need to ensure the operational security of the grid. This is indeed required since the rule is artificial and arbitrary. TSOs have the legal duty in the very same regulation to reconcile it with physical reality.

This duty does not stop in 2026. Derogations can continue to apply in certain circumstances, also from 2026 onwards. This is especially relevant when dealing with externalities i.e. excessive loop flows:

- They are not alleviated through the implementation of action plans;
- It has not been proven that solely through bidding zone reconfiguration they can be alleviated to the extent required to fulfil the 70% rule.

70% is not an absolute target

The complexity around 70% poses challenges in terms of transparency

Learnings from the concrete implementation show that the so-called validation adjustments will also be part of the game to fulfil this duty.

Albeit these validation adjustment being justified by TSOs, it poses a challenge in terms of transparency as it is very difficult to foresight and most likely too complex to be reproduced by market parties.

This challenge will further increase the coming years as more virtual capacity is to be added and an additional layer of validation (coordinated validation adjustments) is to be implemented to manage it in the day-ahead capacity calculation.

Validation becomes the shadow capacity calculation

70% relies on massive redispatch after the market

Electricity Regulation allows individual Member States to adopt the pay approach, yet it creates massive "collateral damage":

- Everyone is faced with a requirement that is not incentivizing to build and operate the system to achieve a techno-economic optimum.
- Market and physics are drifting away from each other. Virtual capacity is becoming a dominant factor and this is not an efficient way to manage congestion.
- The DA market price signal gets distorted
- It distorts grid investments. Should TSOs delay their investments in more interconnectivity despite a positive societal CBA and instead (over)invest in the internal grid to keep the internal flow at all times below 30%?

Not scalable to a system characterized by larger and more volatile power flows, which inevitably goes hand in hand with EU's decarbonisation and offshore ambitions.

Elia calls upon policy makers to re-open Electricity Regulation and find something better than the 70% rule

Elia believes it should consider following ingredients:

- A zonal model where the market is better reflecting physical constraints. Hereby anticipating that congestion patterns will become more dynamic and shifting a lot over time.
- A better governance to discuss and decide on bidding zone delineation;
- Right balance between priority for intra-zonal trades (natural feature of a zonal market!) and not unduly discriminating cross-zonal trades.

Need #1: revise the definition of structural congestion

- Acknowledge that bidding zone delineation has its role to play
- Acknowledge also it is not possible to create a bidding zone border at any place where at some point in time a (structural) congestion occurs.

➔ trade-off which structural congestion to solve through bidding zone delineation and which ones not

Elia calls upon policy makers to re-open Electricity Regulation and find something better than the 70% rule

Need # 2: expand the congestion management toolkit

- **Long-term tool: BZ reconfiguration through a BZ target model**
  - Scope: frequent congestions combined with a long-term perspective thus looking ~5 up to ~20 years
  - Synergies with grid infrastructure planning as well as securing the necessary stability for a well-functioning forward market.
  - Level of anticipated loop flows is a relevant metric to shape the number and size of bidding zones.
- **Medium-term tool: dispatch hubs**
  - Scope: frequent congestions being ‘structural’ but of temporary nature, looking 1 to 5 years ahead.
  - Consolidate assumptions in a single optimization, instead of stacking sequentially throughout CC, allocation and ROSC processes
- **Short-term tool: capacity calculation and allocation**
  - Scope: manage daily the less frequent congestions resulting from the combined effect of allocated flows (market flows) and non-allocated flows (internal flows and loop flows) in the most efficient manner. Allocate capacity in the most efficient manner to the market.
  - Ingredients: visibility on the congestion; integrate PSTs, HVDCs & Dispatch Hubs in market coupling; maximize scope of economic arbitrage by including borders with UK, CH in one single price optimization and applying advanced hybrid coupling

BE-GB Market Coupling - MRLVC under TCA

WG EMDSO

17/10/2023

MRLVC Report: status

- In February 2023 EU and UK TSOs received a list of technical questions from European commission and UK government (DESNZ) concerning MRLVC which were to be answered within 5 months after receipt. Elia actively contributed to the final report, which was delivered to EC and UK government is 10th of July but given its confidentiality cannot be shared externally.
- The list of questions are focused on technical aspects providing aiming to provide more clarification for a possible implementation of MRLVC as foreseen in the TCA. It only makes a comparison to current explicit trading arrangements in place today on several GB-EU borders. Other alternatives are not in scope of the current exercise
- Scope of the questions targeted following domains, which are a follow up of the CBA performed in 2021 :
  - Preliminary Order Book option
  - Common Order Book option
  - Market Coupling Operation (MCO) of MRLVC
  - Bidding Zone Border Flow Forecast methodology
  - Implementation timeline & costs for establishment of MRLVC
- See annex for details on the MRLVC process

MRLVC Report: status

Elia actively contributed to the MRLVC report, but together with other MCSC TSOs and NEMOs also shared its concerns on the MRLVC market model and its implications in case of an implementation.

Elia sees some fundamental concerns on MRLVC

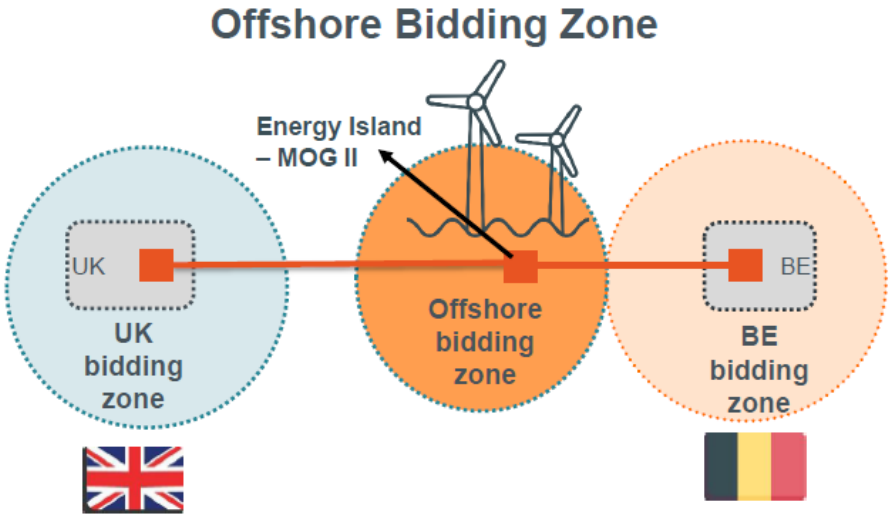
- Impact of MRLVC on current SDAC processes can be high creating an (unwanted interdependency)
- Market manipulation under preliminary order books design
- Accuracy of BBZ forecasting methodology
- Long implementation time of the market design impacting several stakeholders as well as the project pipeline of existing or near future market projects.
- Scalability for the offshore grid with Offshore bidding zones

To reach an efficient market and safeguard offshore ambitions, market coupling with the UK should revert to a full integration in the SDAC

- Current explicit model suffers from significant trade efficiency losses
- It is uncertain to which extent MRLVC would reduce losses, but they will surely remain compared to full implicit price coupling
- MRLVC introduces an additional, completely new interdependency for the SDAC process (additional risk on process, fallbacks needed, extensive parallel-runs required,…)
- Future offshore grid and generation development is compromised due to MRLVC's limited efficiency and expected long implementation time
- There are fundamental unresolved issues with MRLVC's application to offshore bidding zones which have no clear solution today
- Elia believes the main challenge for integrating UK in the SDAC price coupling is political, not technical

MRLVC raises fundamental concerns on how it would work for offshore bidding zones

- Current explicit trading model would not couple the UK price directly, but depend on separate trades over the cable
- Under MRLVC, there is no clear solution yet how any UK price effect would carry over in the OBZ
- Both models rely on forecasts, resulting in suboptimal allocation of capacity (underutilization of infrastructure, suboptimal allocation of offshore wind,…)



- Because of limited and single-source local offers, the OBZ is more sensitive to explicit/MRLVC inefficiencies than other (larger) bidding zones
- Elia believes that a full return to implicit price coupling with offshore bidding zones is expected to be the only scalable solution for offshore wind ambitions

CBAM (Carbon Border Adjustment Mechanism)

WG EMDSO

17/10/2023

What is CBAM?

*The EU CBAM will apply from **1st January 2026**, following a transitional period from **1 October 2023** until **31 December 2025**, initially covering products from six sectors, including Electricity.*

The EU CBAM would apply a carbon price for imports at the "border" to avoid "carbon leakage"

Importers will need to report on the emission content of goods and purchase CBAM certificates for non-EU products

During the transitional period, the reporting process will apply without the requirement to purchase certificates.

CBAM so far and what to come

16 May 2023

The CBAM regulation officially entered into force.

17 Aug 2023

The European Commission adopt the rules governing the implementation of the (CBAM) during its transitional phase.

1 Oct 2023

Transitional period began **1 Oct** and will run until **31 Dec 2025**. Importers to report on direct emissions and carbon price due for these emissions

2023

31 Jan 2024

The **first report** is to be submitted by **31 January 2024** for imports during the fourth quarter of 2023

1 Jan 2026

Definitive CBAM Period Begins

31 Jan 2026

Last report to be submitted by **31 January 2026** for imports during the **fourth quarter of 2025**

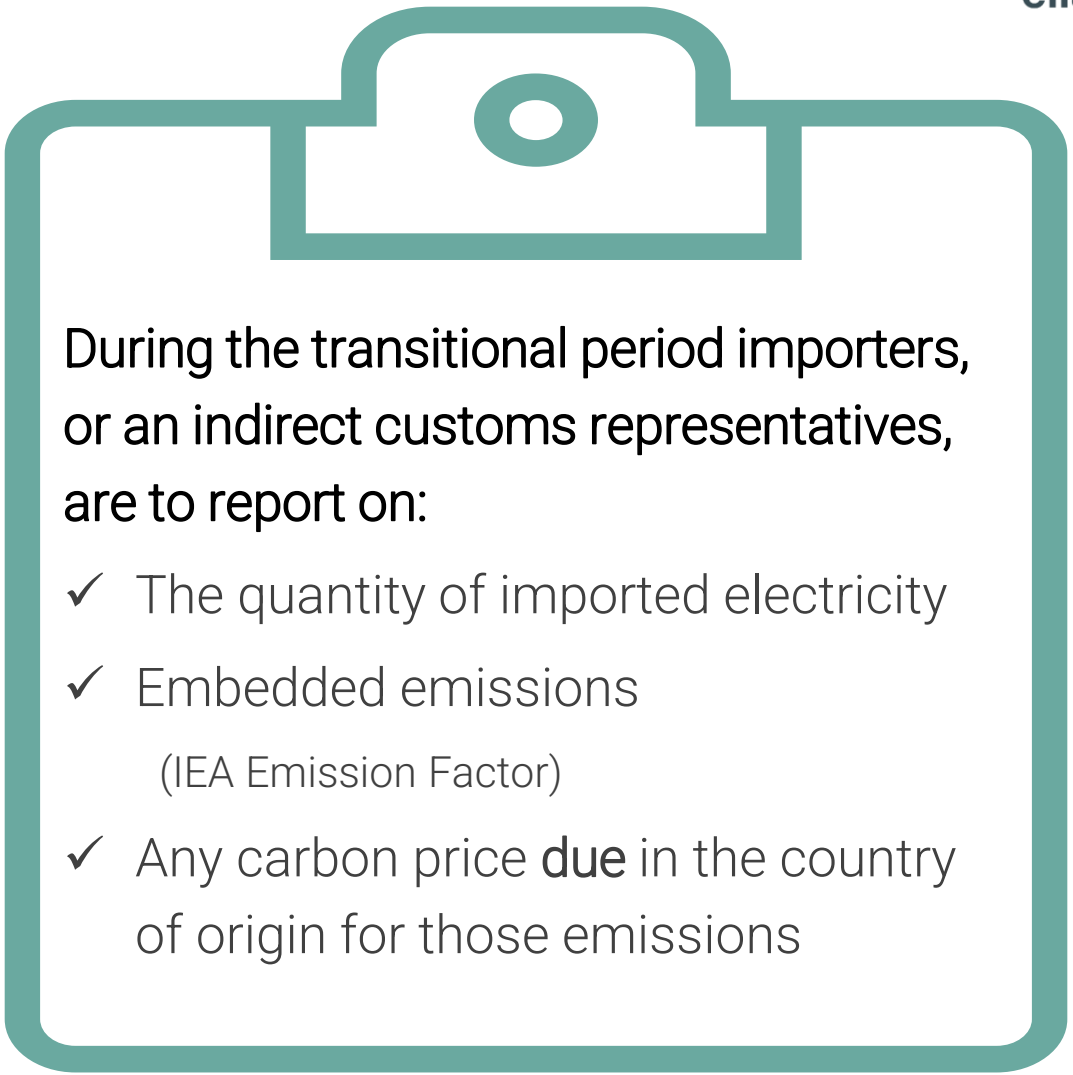
2024

2026

Source: Nemo Link Annual Forum - 03 October 2023

The Transitional Period Reporting

- The reporting declarant must provide a ‘CBAM report’ on a **quarterly basis**, to the European Commission via the CBAM Transitional Registry.
- Reporting will occur on a quarterly basis from **1 October 2023 until 31 December 2025**
- Should be submitted no later than **one month** after the **end of the quarter**. (The first quarterly report for the period October to December 2023, is due to be submitted on the CBAM Transitional Registry by 31 January 2024.)



Source: Nemo Link Annual Forum - 03 October 2023

SDAC 15 min MTU go-live: impact on local nomination deadlines

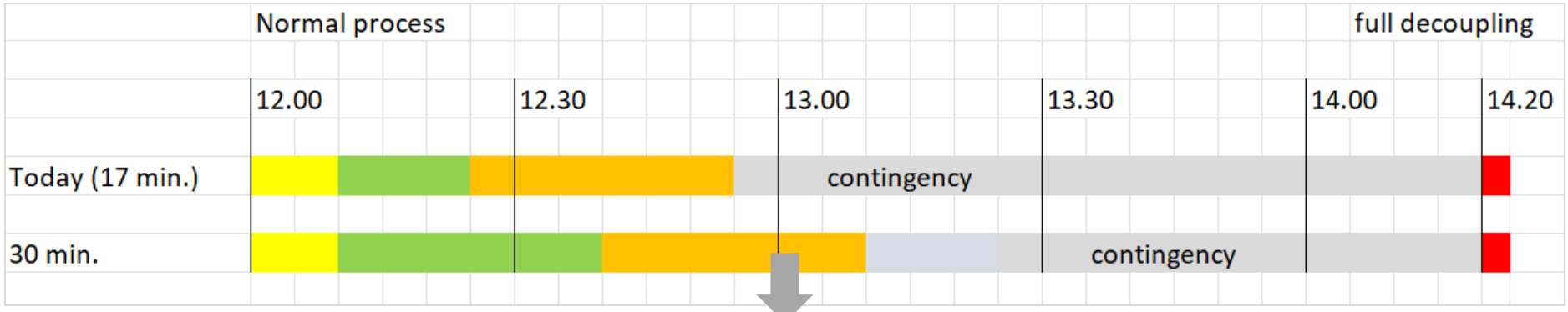
SDAC 15 min MTU go live

- SDAC will change to 15 min MTU (market time unit). Planned go live is for Q1 2025
- The market coupling algorithm has challenges with the complexity of the welfare optimization problem when the switch to 15 min MTU will be made. The computation time in a normal process is expected to be extended in order to enable 15 min MTU implementation in SDAC
- The discussion on proposal for computation time change and updated operation timings was anticipated in September MCSC and is also communicated to Market Parties via the MCSC Market Coupling Consultative Group (MCCG).
- Next slides are also part of the MCCG session for 20/10 and have already been shared publicly.
- The impact for Elia is under assessment and its status is shortly reported on the final slide.

SDAC 15 min MTU: Daily operational process given 30 min computation time

Market Coupling Steering Committee

Topic description & background	Currently, the time dedicated to the SDAC process is 12.00 -14.20. 12.00 is the order book gate closure and is written in CACM. 14.20 is the full decoupling deadline and is derived from the deadline for nomination which is set at 15.30 in several countries. Time from 14.20 to 15.30 is the time dedicated to the actions after full decoupling to respect the 15.30 deadline. With an extension in the calculation, contingency time is reduced.



	17' calculation time	30' calculation time
Preliminary results publication	**12h45**	**12h58**
Publication of Final Results	**12h58**	**13h11**

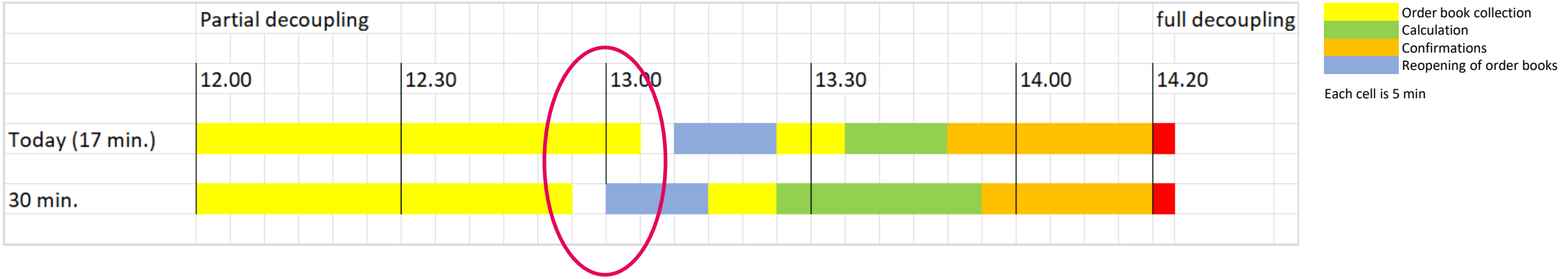
Summary:

- **Extension of calculation time to 30 min requires finding additional 13 min in the daily operational process.**
- Hence, assessment of possible parallelization **or time shortening** of the SDAC results confirmation process is ongoing. The assessment is ongoing in SDAC OPSCOM.
- The results publication deadline is **foreseen to be 13:11**. This is without any positive outcome on possible parallelization **or time shortening** of processes for the confirmation. Market Participants shall be clearly informed about the proposed timings and impacts on the result publication.

SDAC 15 min MTU: Daily operational process given 30 min computation time: Partial decoupling (1/2)

Market Coupling Steering Committee

Topic description	**30 min are required between the declaration of the partial decoupling and the start of the calculation.** • 5 - 10 minutes organization and information to MPs • 15 minutes reopening of order books • 10 minutes resending of order books **Note:** It is not possible to shorten it, i.e., cancelling the reopening of order books.



Summary:

- Since the partial decoupling has been moved to 13:05 (current deadline), the time of 12:55 was never reached in partial decoupling situations. Therefore, based on historical facts, an anticipation is that a **computation time increase to 30 min is not so impactful.**
- If confirmation processes are shortened in the future, the partial decoupling deadline could be re-evaluated. **Partial decoupling deadline will be 12:52 – 12:55.**

SDAC 15 min MTU: Daily operational process given 30 min computation time: Partial decoupling (2/2)

Market Coupling Steering Committee

- Operational experience has shown that the **partial decoupling deadline 12.55 was never reached since the partial decoupling deadline was set to 13.05.**
- This allows for an assumption for the **new partial decoupling deadline to be set around 12:52 – 12:55.**

Indicative timings proposal for 30 min computation time:

	Current timings	2025. timings	
Coupling	12:00	12:00	NEMO Order book Gate Closure Time
	12:10	12:10	PMB GCT // Reception of all Order Data files in PMBs à Start of Calculation
	12:40	12:27	Deadline to send the message for Risk of Partial Decoupling
	12:27	12:40	End of Calculation
	13:05	12:52	Deadline to declare Partial Decoupling
	12:45	12:58	Publication of Preliminary Results and sending to the TSOs
	12:58	13:11	Publication of Final Results à Start of Notification Process
	13:50	13:50	Deadline to send the message for Risk of Full Decoupling
	14:20	14:20	Deadline to declare the SDAC Full Decoupling or Publication of coupled Results

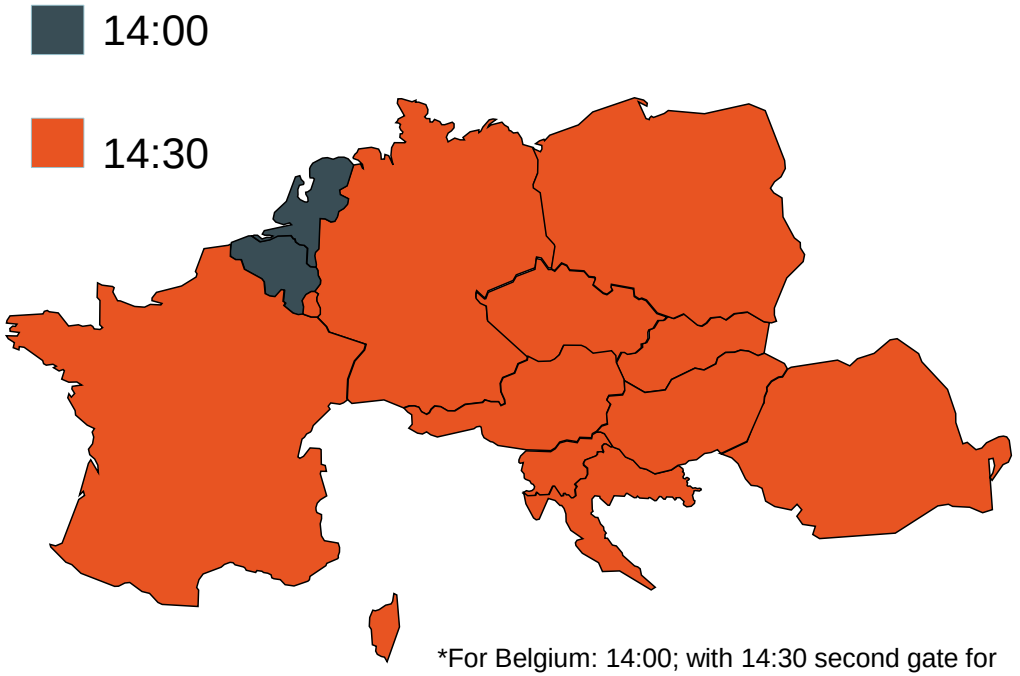
Summary:

- MCSC expect Market Parties to confirm that market participants are fine with the envisaged 2025 extended operational timings, granting 30' calculation time to the algorithm

Overview Local hub BRP Day Ahead nomination deadlines under the normal day scenario for Core TSOs

Assessment of the above mentioned deadlines in the context of 15 min MTU in SDAC:

- With a shift of the final publication results to approximately 13h10 it is clear that MPs will face most challenges in those countries who have deadlines for the local and / or cross border nominations at 14h00, as here the impact is the highest compared to the situation today.
- Relevant TSOs are aware of this constraint towards MPs when the switch is made towards 15 min MTU and some have already started internal assessments on this.
- Any possible adjustment of these deadlines is a local matter and will require changes in the national rules & procedures. Therefore, respective TSOs will engage on national level towards Market Parties/regulators on this. Information on the status & progress can be provided towards MCSC/MCCG.



*For Belgium: 14:00; with 14:30 second gate for correction

Impact for Elia and BE Market Parties

- With a shift of the final publication results to ~13h11, it is clear that MPs in BE will have limited time for submitting their Day-Ahead internal hub nominations to Elia, as current nomination deadline in the BRP contract for local HUB nomination is 14h00.

- Elia is aware of this constraint towards MPs when the switch is made towards 15 min MTU in SDAC and has already started internal assessments on this.

- Any possible adjustment of these deadlines will require further assessment on Elia internal processes and will also require an update of the T&C BRP by the go live of 15 min MTU in SDAC (expected go live Q1 2025)

- Elia will come back to MPs on this in next WG EMD-SO sessions on the next steps & way forward.

AOB & Conclusions

AOB

- Change of co-chair: due to internal job rotation Filip Carton will be replaced by Walter Geelen as from 01/12/2023
- Next MCCG meeting 20/10: public open to all
  - Agenda: MCCG-20October2023-FINALagenda.pdf (windows.net)
  - Initial support material: Organigram joint SDAC & SIDC (windows.net)
  - Registration link: GoTo Webinar

Conclusions & next steps

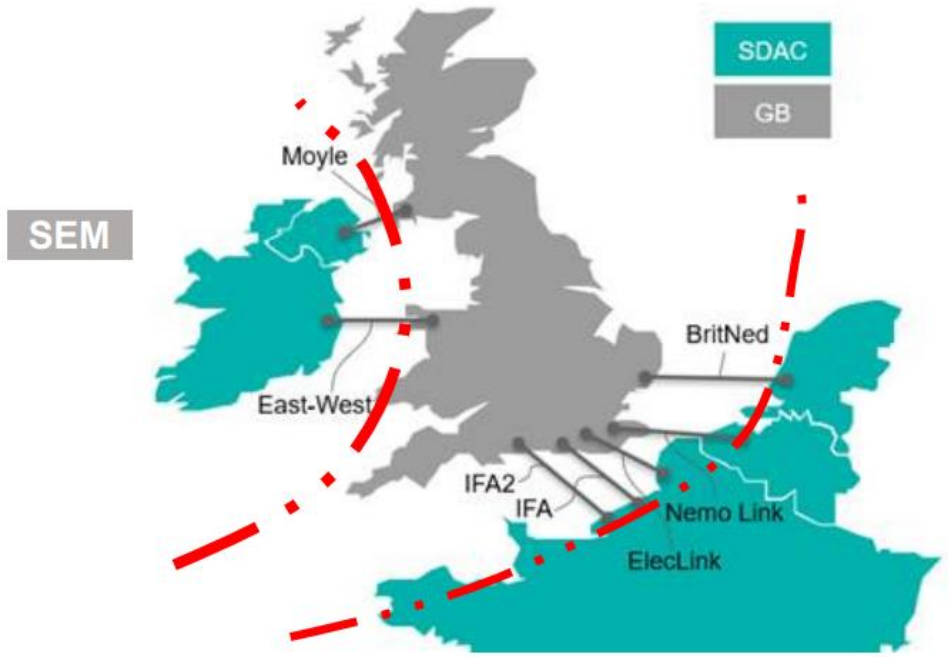
Recap of main conclusions, actions & defined next steps after todays WG EMD-SO

- (based on discusson of meeting)

ANNEX

Background on MRLVC

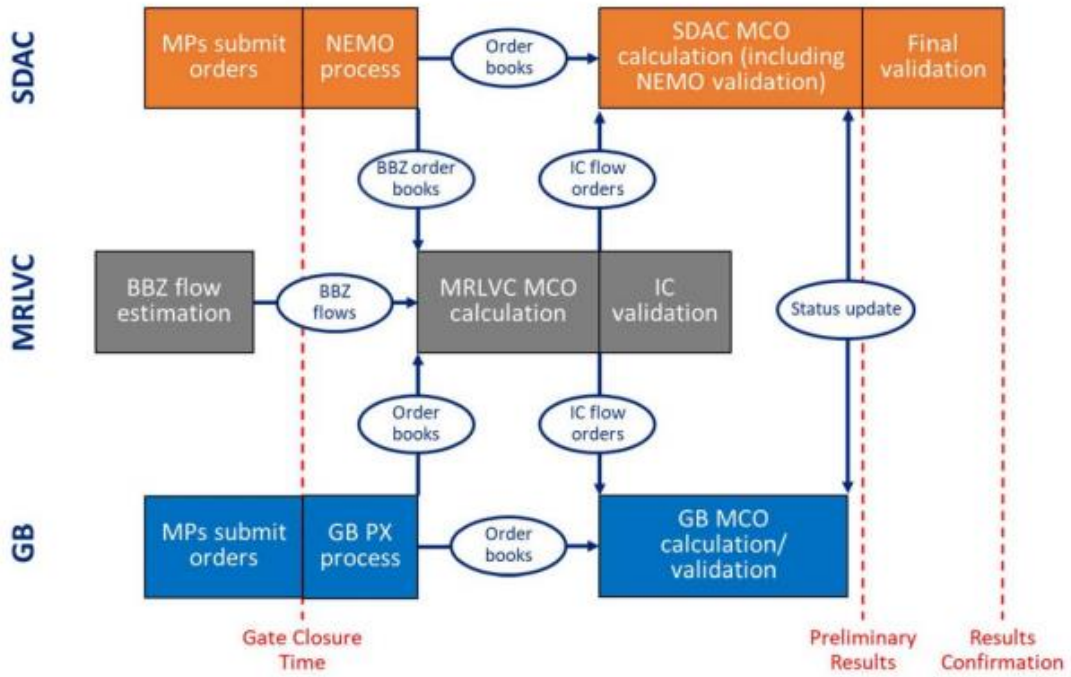
Multi-Regional Loose Volume Coupling



- MRLVC is the market coupling model covered by the Trade and Cooperation Agreement between UK and EU
- UK and SDAC market coupling retain separate SEW optimization processes and price setting
- MRLVC is an isolated step coupling order books from UK and Bordering Bidding Zones (BBZ)
- It occurs before SDAC/UK market coupling
- It needs a forecast of flows to/from non-bordering bidding zones
- It provides price-taking orders to SDAC/UK market coupling representing interconnector flows
- It does not provide a price

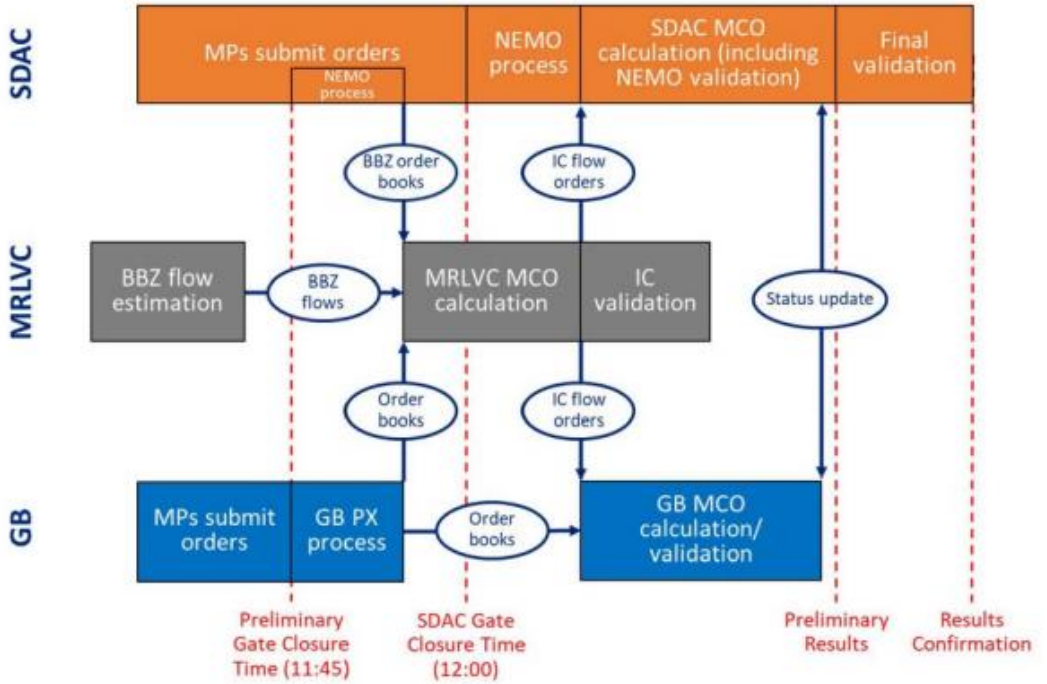
Two fundamental design options for MRLVC

Option 1: use the full order books



Issue: Significant impact expected on SDAC process, leading to delays in current timings, risk of MRLVC-SDAC interdependencies, introduction of new, complicated fallbacks…

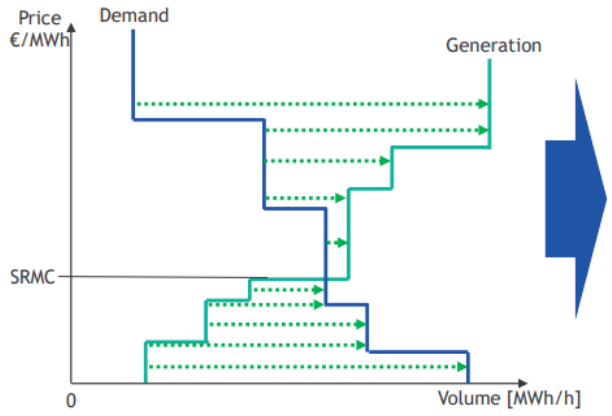
Option 2: use the preliminary order books



Issue: MRLVC is not based on final order books (non-optimal outcome, market manipulation,… => likely unacceptable option) and also impacts SDAC processes (although likely to a lesser extent)

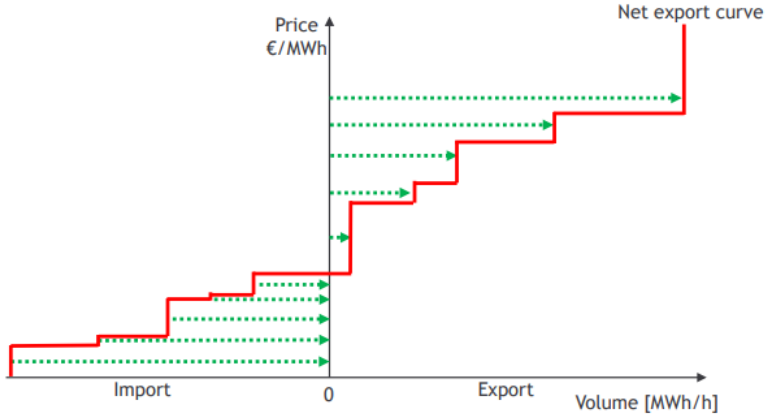
Because MRLVC lacks order books for surrounding bidding zones, forecasts are needed

1. Collection of order books



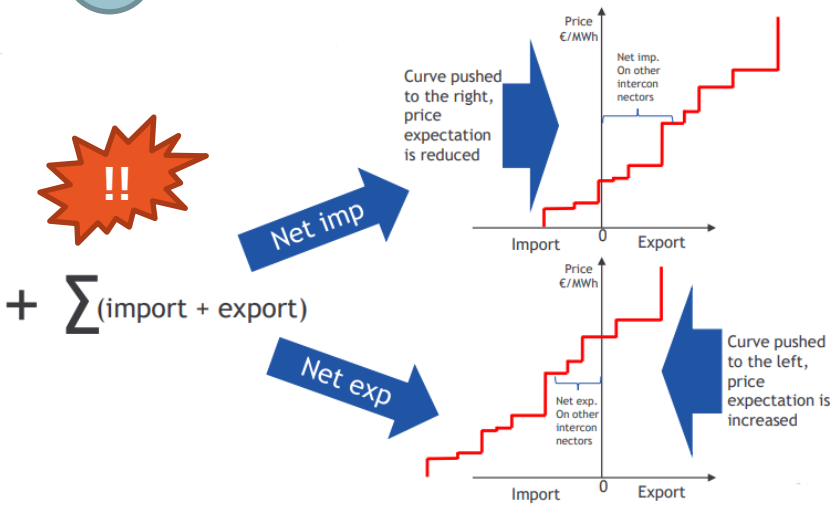
- Local orders for each bidding zone subject to MRLVC
- Leads to local-supply demand curve
- Green arrows represent required import/export at price to match supply/demand

2. Create Net Export Curve



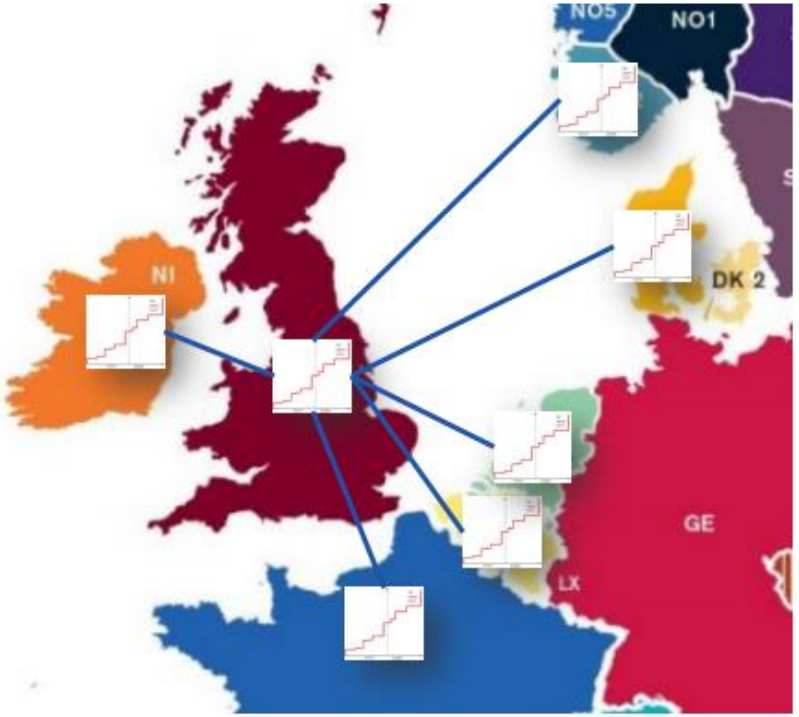
- For each potential clearing price, this curve shows the required import/export position
- Determined by difference btwn local demand/supply (green arrows) at price

3. Create Net Export Curve



- Net export curves are adjusted for import/export to bidding zones not in MRLVC
- This is based on <u>forecasted</u> imports/exports
- Errors lead to increased/ decreased price for import/export and impacts result

The adjusted net export curves are then used to perform the MRLVC



A market operator is tasked with:

1. Generating net export curves for all 7 areas
2. Adjust net export curves for the 6 EU bidding zones subject to forecasted flow on bidding zone borders to other areas
3. Optimising the socio-economic welfare in the 7 bidding zones, subject to adjusted net export curves, ramping constraints and interconnector capacities
4. Extracting the flow on each interconnector after optimisation
5. Enter price in-flexible bids (consumption or production) in each of the 7 bidding zones, reflecting the flow of the interconnectors

BBZ forecasting errors lead to estimated adjusted net export curves, which leads to suboptimal interconnector flows delivered as input to the market coupling

Accuracy of this estimate is unknown in absence of a working prototype

Expected long implementation time compromises offshore political ambitions

NSEC-UK MoU:

- Aims to enable joint offshore ambitions
- 60 GW in 2030 and 300 GW in 2050 for EU
- 50 GW in 2030 for UK

MRLVC could only arrive late in the process of reaching the 2030 ambitions:

- It is a completely new process in addition to the SDAC
- It is still at the conceptual level; the detailed design is yet to be established
- No governance structure for MRLVC exists (i.e. joint UK/EU)
- Resources dedicated to MRLVC would take away from other (valuable) evolutions in the market coupling
- Even with high resource allocation, such an implementation is likely to take several years