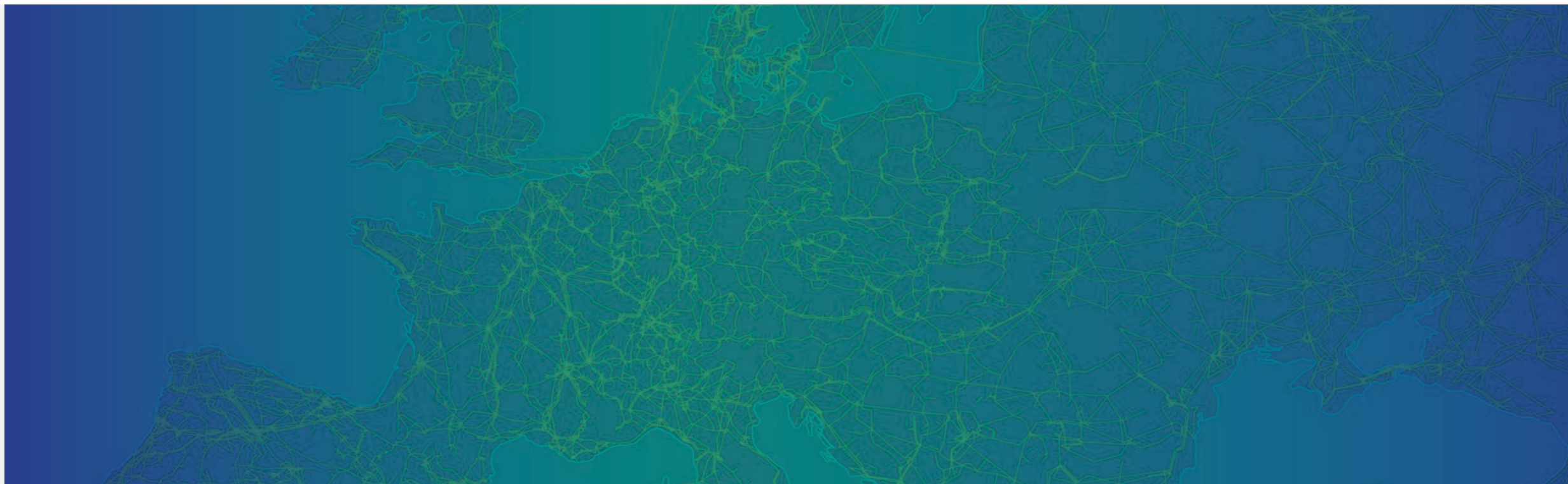


System Operation Stakeholders Committee

Materials for meeting 3th June 2020



1.1 Topics on the Agenda

Time	Agenda Topics	Documents	Lead
13:30-13:45	1. Opening		Uros Gabrijel
13:30-13:35	- Review of the agenda	Agenda	
13:35-13:40	- Review and approval of minutes from December meeting	Minutes	
13:40-13:45	- Review of actions	Slides	Jean-Philippe Paul
13:45-14:00	2. Update on the implementation actions	Slides	Jean-Philippe Paul
14:00-14:30	3. System Operation Guideline	Slides	
14:00-14:10	3.1 Cost Benefit Analysis for FCR providers by Limited		Luca Ortolano
14:10-14:30	Energy Reservoirs: Status update		Jonas Peter
	3.2 Information on Exchange\Sharing of reserves		Hasselbom
14:30-14:40	Coffee break		
14:40-14:55	4. CGM Program Implementation Update	Slides	Derek Lawler
14:55-15:00	5. AOB		



1.3 Review of actions

Jean-Philippe Paul

1.3 Review of actions

ACTION	ANSWER	STATUS
1. Note for future SO GL active library to include pre-qualification process aFRR, mFRR, RR.	Preparation for SO GL Active Library still ongoing.	Open
2. ENTSO-E to provide information concerning the exchange/sharing of the reserve.	Topic 3.2 in the agenda for this meeting	Close
3. Pending questions concerning CGM related topics to be sent to ENTSO-E.	Clarification requested on the question from Jean-Noel Marquet. Topic 4 in the agenda for this meeting	Close
4. GC ESC Expert Group on Pump Storage Hydro: Provide arguments why low frequency pump disconnection is triggered at different frequencies across Europe?	Topic for SO ESC in September	Open
5. National implementation of KORRR	Update to be provided Top 2	Open
6. ENTSO-E to provide an update about TCM status according to NCER Article	Topic for SO ESC in September	Open



2. Update on the Implementation Actions

Jean-Philippe Paul

Pan-European or regional deliverables 2020: SOGL

CSAm

Adopted by ACER on 21 June 2019, requests all TSOs to develop two amendments (Article 21 and 27) to this methodology within 18 months (ie by 21 December 2020) - Public Consultation to happen in August - September 2020

Regional Proposals for CSA (Art 76-77) TSOs of each CCR have provided their proposal in Dec. 2019. The approval/RfA by regulators is expected by end of June.

Pan-European deliverables 2020: CEP

System Operation Regions Proposal (SORs)

ACER published his decision in 06/04/2020. RCCs proposals by TSOs of each SOR will be published on time by 5th July.
The approval by regulators of each SOR is expected by end October.

Risk Preparedness

Risk Preparedness Regional Electricity Scenario Methodology approved by ACER on 6th March triggering a 6 month period to implement the methodology. A final report ranking the regional electricity crisis scenarios to be established by 6th September 2020.

National Implementation

KORRR

The planning for KORRR National Implementation Workshop is postponed due to covid crisis. We will update as soon as possible when planning can be defined for a physical Workshop Q3-Q4 2020.

Operational Agreements

All the Synchronous Area Operational Agreements are available on [Transparency platform](#).

Additionally ENTSO-E has taken actions to facilitate the (optional) publication of LFC data in the [Transparency Platform](#) the LFC Block Operational Agreements from Austria, Belgium, Germany, France, Hungary, Great Britain, Slovenia/Croatia/Bosnia i Herzegovina, Slovak Republic, Ireland/Northern Ireland and Nordic are available on the Platform.



3.1 Cost Benefit Analysis for FCR providers by Limited Energy Reservoirs: Status update

Luca Ortolano

Next steps

Nordic

Considering the results of the CBA and the current presence of LER in the Nordic synchronous area, the Nordic TSOs will vote to set **15 minutes** minimum activation time period.

This solution does not prevent any possible proposal for the CE SA, from market perspective and technical perspective.

Nordic TSOs will officially submit to NRAs this proposal by **June 2020**.

Continental Europe

The CE TSOs accept the NRAs request to further discuss the proposals and then submitting the final time period proposal later than the Nordic TSOs since it has been evaluated that an asynchronous submission will have no impact in the choice of the time period.

NOTE: The CE deadline is 24th September 2020.

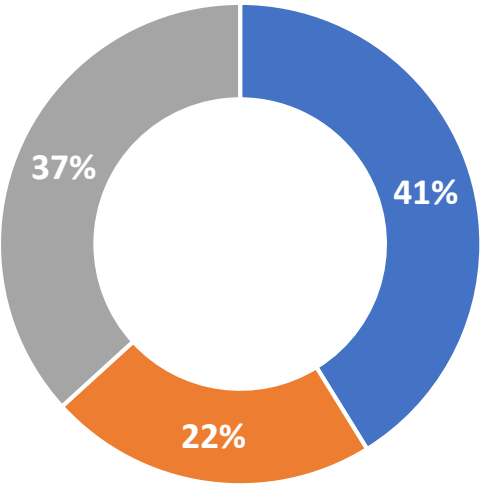
Stakeholders consultation feedback

35 answers



Comments per Macro-category

■ Methodology ■ Input ■ Results



Comments per Sub-category

Methodology				Results		Input
FRR behaviour 19	Energy reservoir size and SOC management 10		Not considered reactive response of batteries 10		Value destruction / extra cost if Tmin greater than 15 min 14	Harmonized requirements 9
	Not considered reduction of CO2 emissions 9	Historical data not representa... of the current system 8	Energy depletion and alert state 7	No LER share restrictions 6	Agree on exempt... 5	Market based mechanism 5
Not considered future regulatory changes 11					Small Tmin...	Disagree... on cost structure 14



3.2 Information on Sharing/Exchange of reserves

Jonas Peter Hasselbom Jacobsen

Introduction

- In the SO ESC meeting December 2019 it was asked that ENTSO-E should perform a reserve sharing/exchange survey to complement the one performed in 2019 on reserve sizing within each LFC Block.
- The survey includes FCR and FRR.
- The survey has now been conducted and will be presented in the following slides.

Reserve sharing/exchange - Survey Questions for LFC Blocks

- *Are there any agreements for exchange or sharing of reserves?*
- *If yes, is it exchange or is it sharing?*
- *Is it within a SA or between two SAs?*
- *What is the volume in MW and which direction?*
- *What is the timeframe of the contract, daily, weekly, monthly, yearly?*
- *If available, how are these reserves priced?*

→ On the following slides the overall result of the survey will be presented.

List of TSOs that answered the Survey

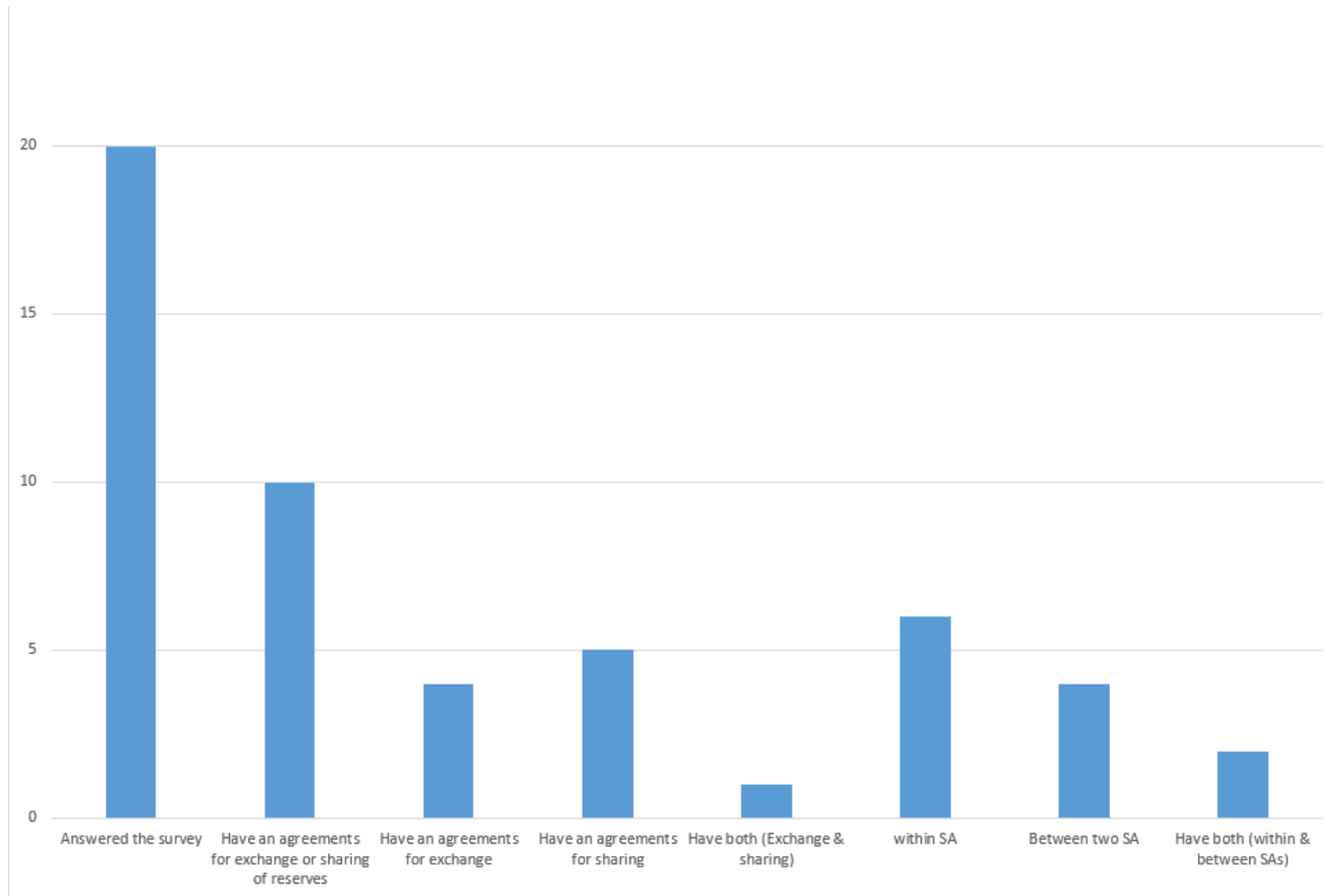
ENERGINET



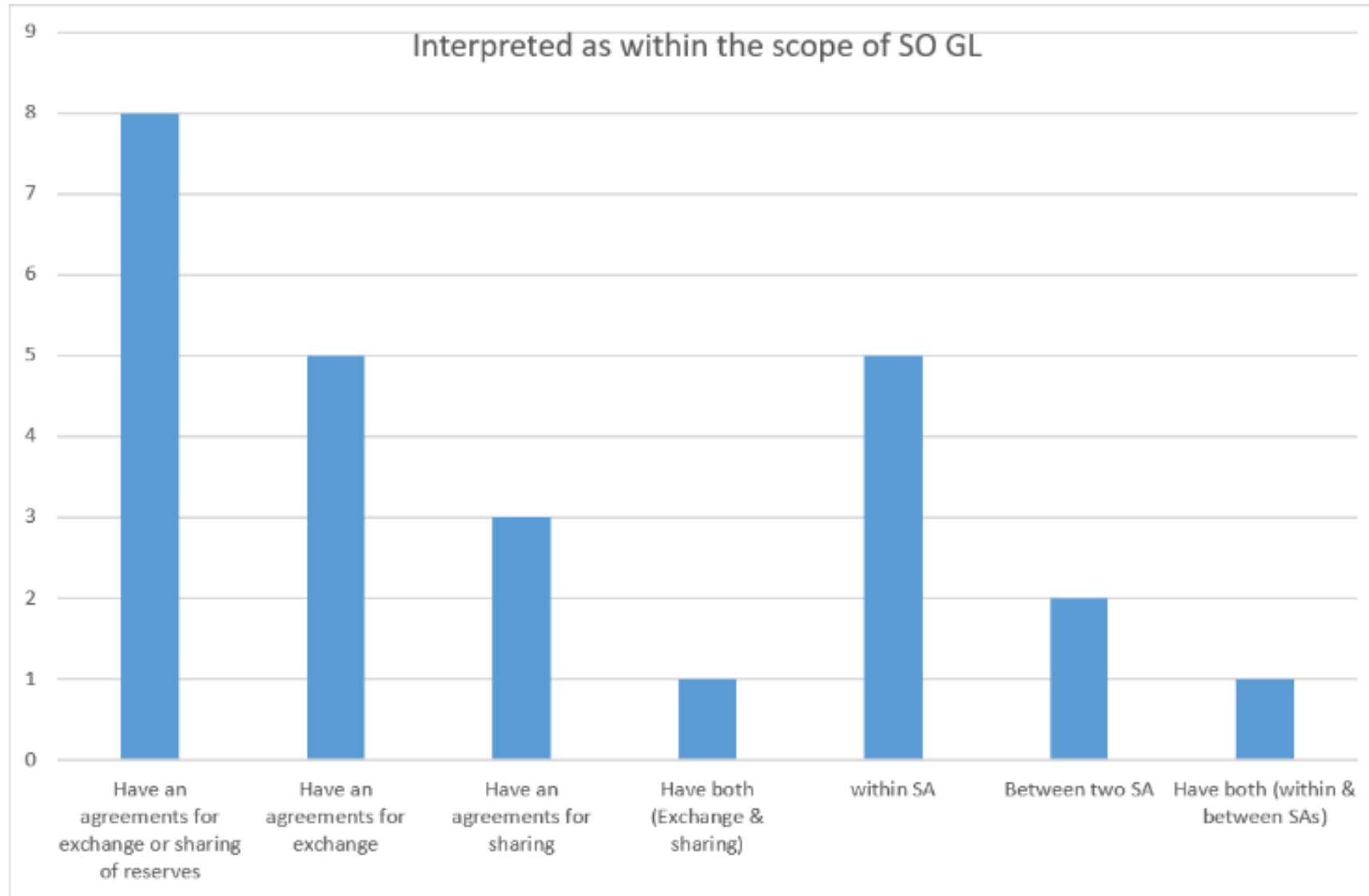
nationalgrid



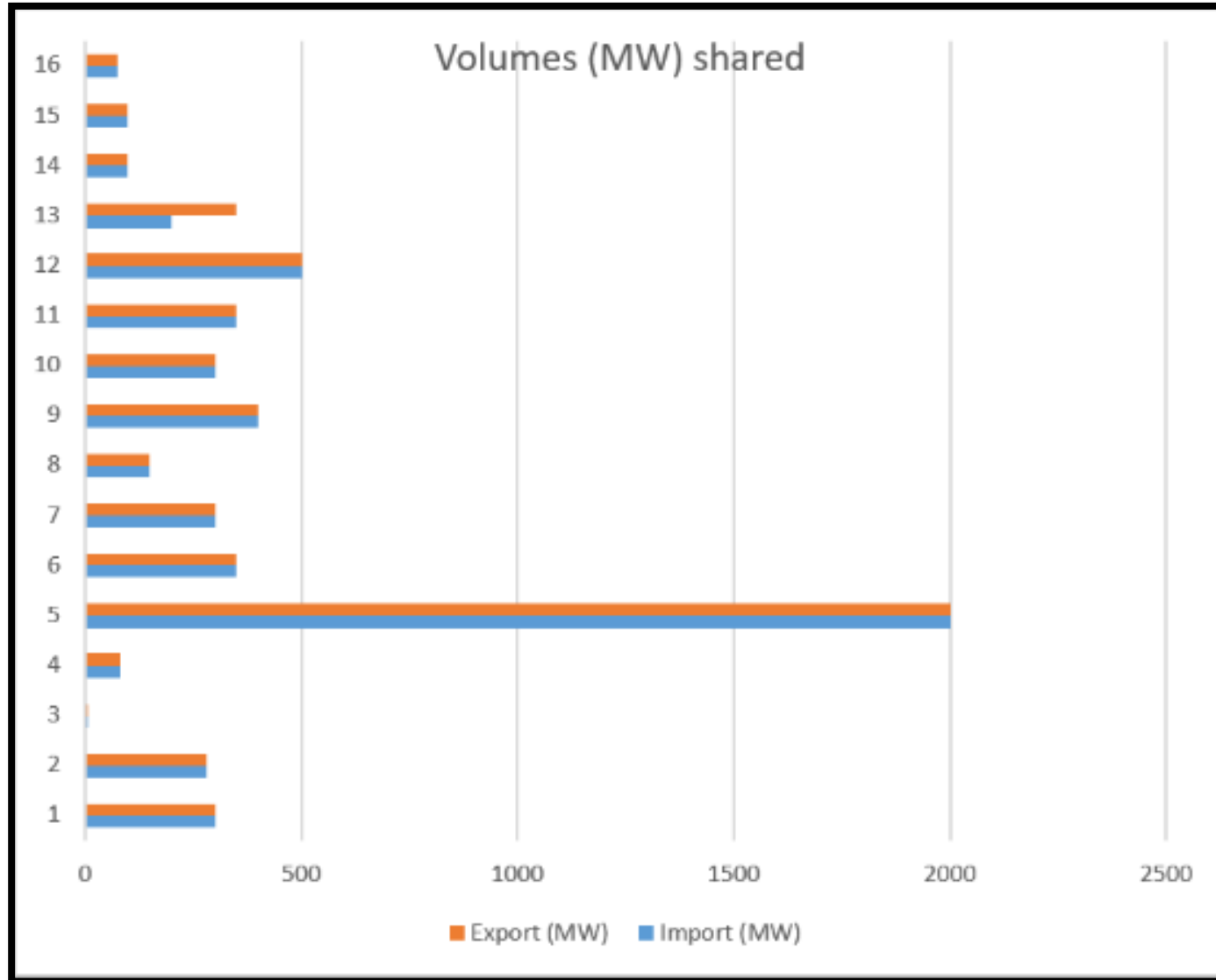
Analysis – Sharing/Exchanges of reserves



Analysis – Sharing/Exchanges of reserves



Examples of reserve volumes (MW) shared/exchanged





Survey Conclusions

Jonas Peter Hasselbom Jacobsen

Survey conclusions

- *The LFC-Blocks can have difference in their implementation which is normal due to local and historical characteristic of each control block*
- ***20 out of 24 LFC Blocks answered the survey***
- ***Around 1/3 of the LFC blocks have arrangements of sharing or exchanges of reserves***
- ***The maximum level of shared/exchanged reserves are 2000 MW***
- ***The minimum level of shared/exchanged reserves are 8 MW***
- *Some LFC blocks interpreted their arrangements for sharing/exchange of reserves as **out of scope of the SO GL**. The interpretation was mainly that their sharing of reserves are for emergency situations.*
- ***We cannot confirm whether the ones who only answered no also have agreements of sharing/exchange of reserves for emergency situations (inter TSO assistance/support).***

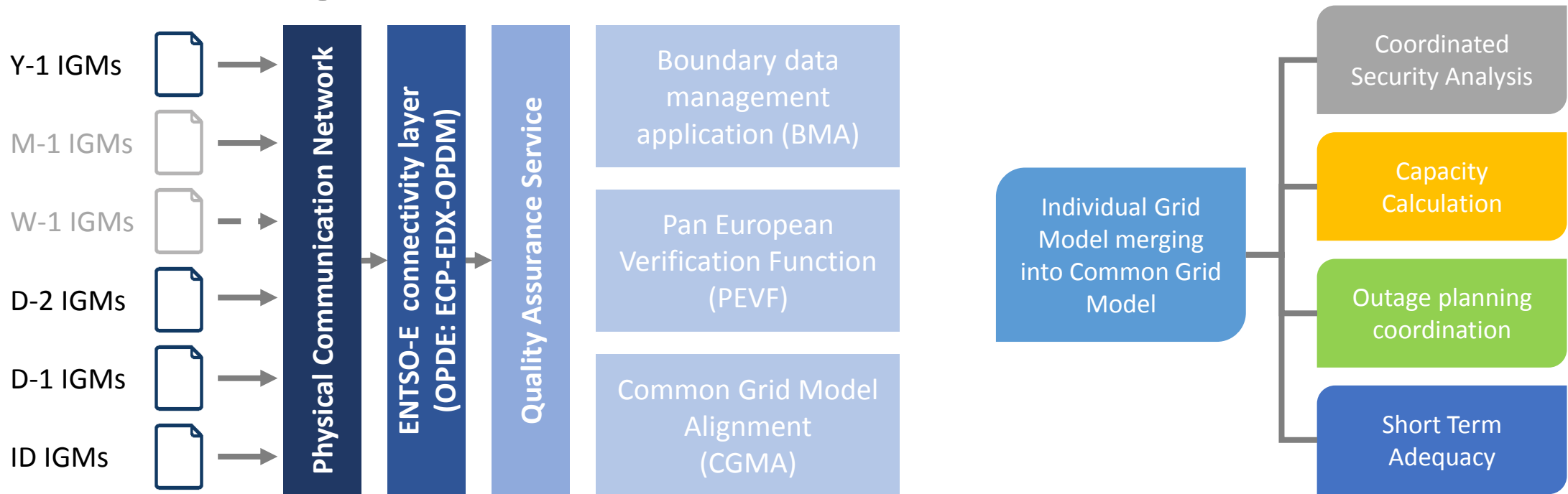


System Operation Stakeholders Committee

Top 4. CGM Program Implementation Update – Derek Lawler

Materials for meeting 3th June 2020

CGM Programme scope summary



TSOs



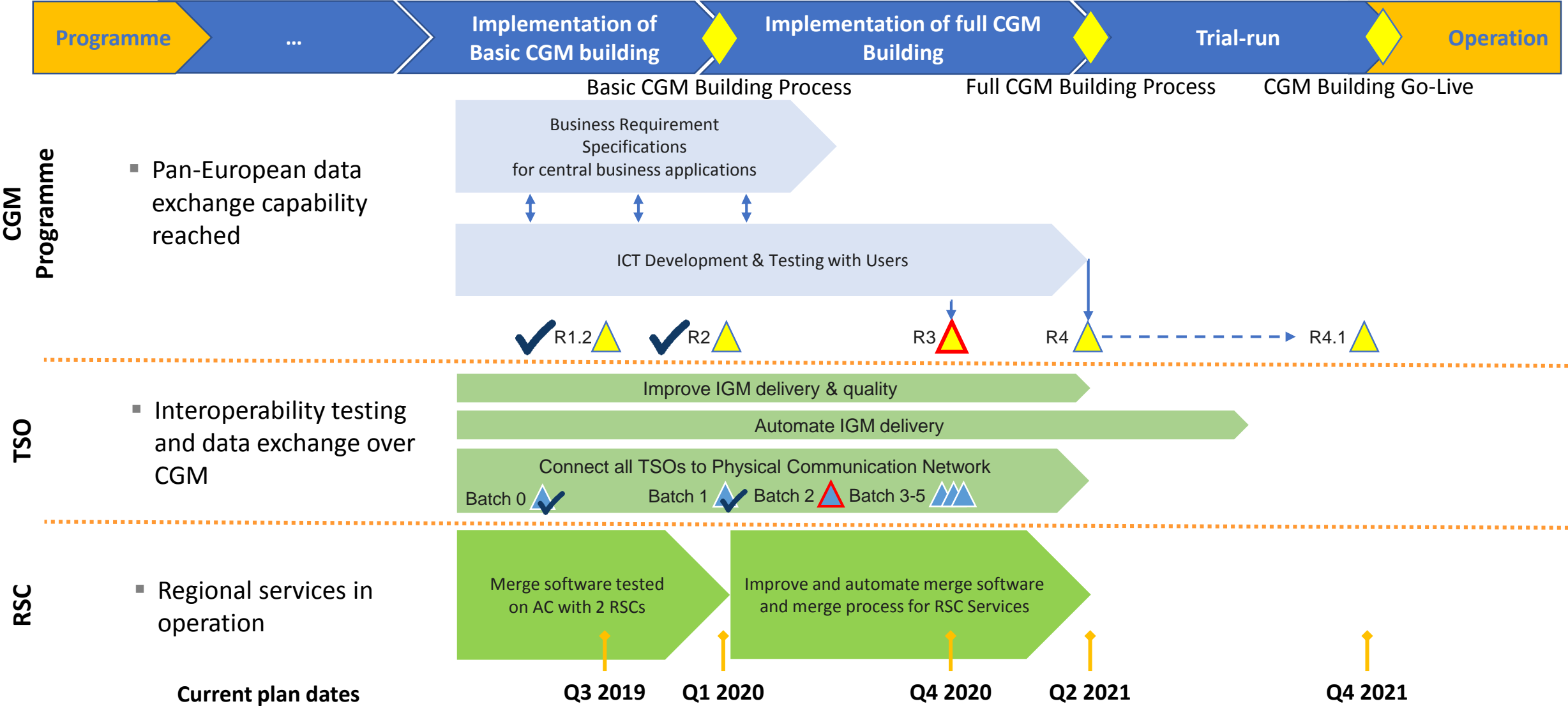
CGM Programme



RSCs

Integration of CGM Programme, TSOs and RSCs is key for an integrated system for a more secure, cleaner and cost efficient European energy market

High-level CGM Programme plan



CGM Business Tests












CGM Solution Delivery has defined different tests, to ensure that the CGM process and functionalities will be delivered and working as expected.

Test	Description
1 Basic CGM Build Process Test	The Basic CGM Build Process tests the basic business process and its related software applications. The test shows if the overall process is working within its expected process times and if the data is delivered, merged and processed as required. The Basic CGM Build Process shows the status of the maturity of all software applications and stakeholders.
2 Non-functional requirements test	The non-functional requirements tests will ensure that the OPDE platform is capable to fulfil the quality and performance requirements, which have been defined in the Business Requirements specifications
3 User Acceptance Testing (UAT)	The UAT is a verification of the functionalities and requirements from a user point of view. In the context of the CGM Programme the intent of the UAT is to verify the delivered functionalities of new OPDE releases.
4 Interoperability Test (IOP)	The IOP is executed on a monthly basis by the Building Process Working Group on behalf of the Business Lead Manager. This monthly test aims at increasing the compliancy of TSOs' and RSCs' provisions with quality standards by providing detailed feedback.

Note: Integration testing (e.g. Factory Acceptance Test, Site Acceptance Test) is not displayed.

• Draft CGM Business Test Schedule 2020/2021

	2020											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
UAT			 UAT 2.0				 PEVF				 UAT 3.0	
Basic CGM Build Process												
Non-Funct. Test												

	2021											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
UAT					 UAT 4.0							
Basic CGM Build Process			 	 	 	 						
Non-Func Test												

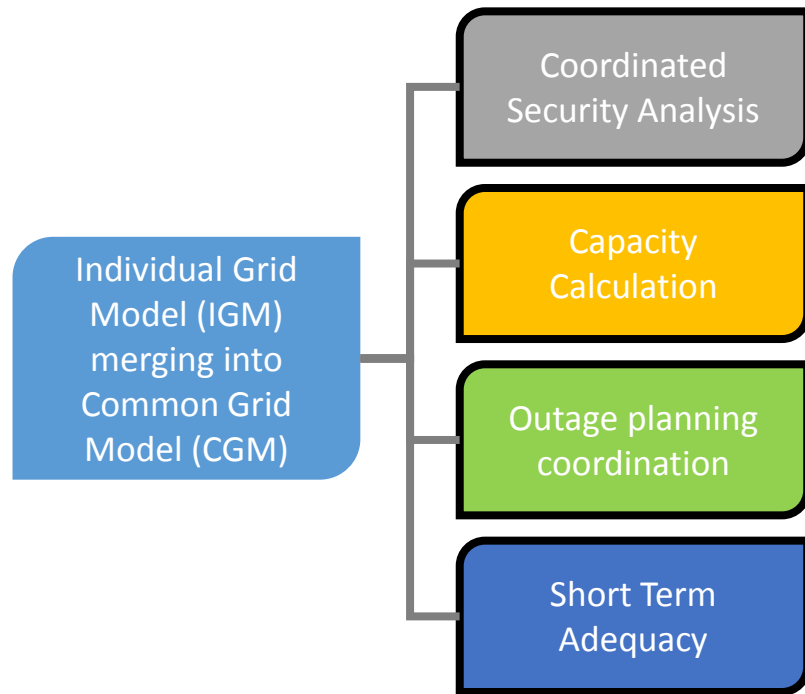
Note: Integration testing (e.g. Factory Acceptance Test, Site Acceptance Test) is not displayed.

Objective of the Basic CGM Build Process Test

- The objective is to test the Basic CGM Build Process which aims at achieving a first **[D-1 and D-2] model merge** considering AC flows on a scope expanding to the **largest possible interconnected model** inside Europe.
- This model is based on **Individual Grid Models (CGMES)** delivered **via OPDE on a daily basis** by TSOs and will test the usage of the merged model.
- The CGM Build Process test is scheduled for **three consecutive working days** (one model merge per day) before **end of May 2020**.



CGM dependencies for RSC Services



- Ongoing engagement with TSOs and RSCs regarding readiness for the CGM Build process (e.g. IGMs / CGMs).
- The synchronization of business requirements among RSCs, Capacity Calculation Regions (CCRs) and the CGM Programme continues.



Thank you

Why the Common Grid Model?

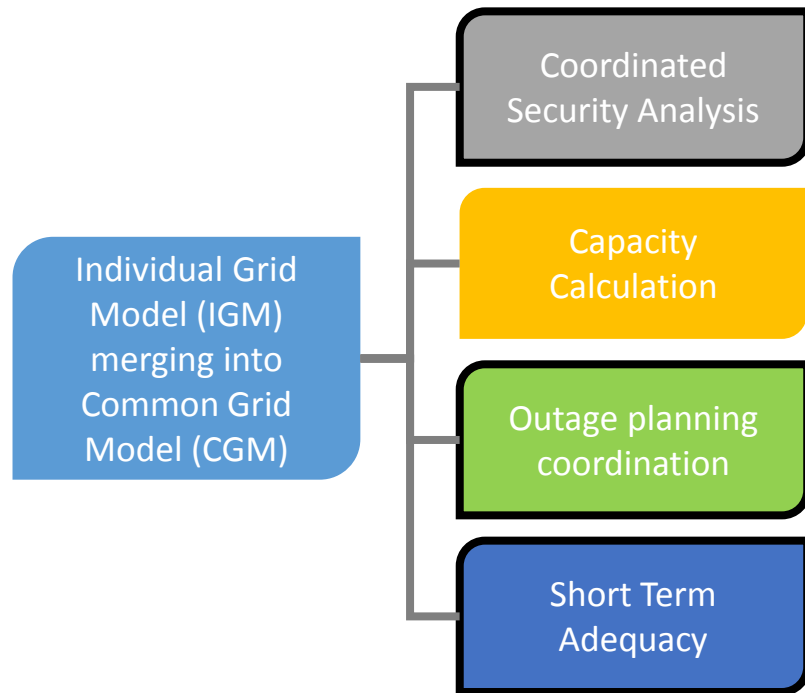
- The Common Grid model will **increase efficiency in system operations**, allows us to **reduce network costs** by minimizing the risk of wide ranging events, **strengthens security of supply** and **maximizes the availability of transmission capacity** to support market efficiency
- **ENTSO-E together with TSOs and RSCs** are developing a pan-European model called the Common Grid Model, being the enabler for **more accurate, more reflective and more effective data sharing system**
- Accumulating a **pool of operational data** with timeframes **from one year out to Intraday**
- Establishing a **state of the art data exchange environment**, running on a **brand new Physical Communication Network**
- Exchanging data seamlessly **Regional Security Coordinators** support **Transmission System Operators** to **maintain system security** providing well balance coordination from a variety of needs

Why the Common Grid Model Programme?

- The CGM Programme delivers under **EU regulations (i.e. CACM, FCA, SOGL)**
- Its deliverables **enable TSOs and RSCs** to produce **consistent and synchronised calculations** out of an harmonised pan-European Common Grid Model data source
- **The Pan-European Common Grid Model** will be used as a key input to **perform the RSC Services**
- The **scope** of the CGM Programme includes:
 - a **Physical Communication Network** transporting the data,
 - a connectivity layer - **Operational Planning Data Environment** - to allow secure communication
 - and a set of **CGM business applications** to allow the creation of an high quality Common Grid Model

CGM dependencies for RSC Services

CGM Programme delivers input to the following RSC Services:



- ❑ **Operational Planning Data Environment** exchanging data between TSOs, central business applications and RSCs
- ❑ **CGM Alignment application** supporting the Pan-European balance of the common grid model
- ❑ **CGMs after merging IGMs** (i.e. ID, D-1, Y-1)

Additional requirements (e.g. M-1 and W-1 CGMs) are currently under discussion.