UPDATE ON ELECTRICITY BALANCING

Alexander Dusolt, Market Advisor, ENTSO-E

MESC meeting

8 June 2017



1 Implementation Organisation

2 Update on European Platforms



Timelines

Obligations	2017 2018		2019	2020	2021	2022	2023	
Obligations	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	
RR TERRE		Impl ramework EIF+6m	RR EU Platform EIF+2yrs		TSO Join Derogation +2yrs			
Imb. Netting IGCC		Impl ramework EIF+6m	IN EU Platform EIF+2yrs		TSO Join Derogation +2yrs			
mFRR mFRR project	Entry into Force	Impl Framework EIF+1yr			FRR EU Platform EIF+4yrs		TSO Join Derogation +2yrs	
aFRR aFRR project	Entry in	Impl Framework EIF+1yr			FRR EU Platform EIF+4yrs		TSO Join Derogation +2yrs	
Imbalance Settlement		Harmonised Proposal EIF+1yrs		ISP & Proposal Impl EIF+3yrs			erogation rs-4yrs	
TSO Proposals		Pricing EIF+1yr	CZC Alloc EIF+2yrs			CZC Harm EIF+5yrs		
General Compliance		EIF+1yr	Pub Info EIF+2yr					





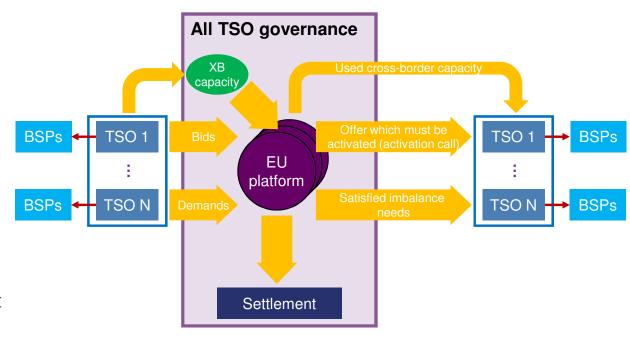




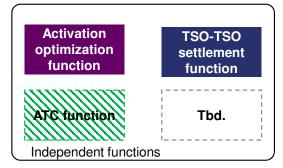


European Platforms

- European platform coordinates balancing energy activation requests of TSOs.
- As a TSO-TSO model is applied, activation requests and communication with national BSPs remains local.
- European platform comprises independent functions closely interacting with different (local) IT systems.
- » Platform describes business processes on European level supported by different functions potentially performed by different IT systems.



European processes







ENTSO-E Project Teams and TSOs implementation projects

All TSOs via ENTSO-E Project Teams

- Implementation Frameworks for
 - Imbalance Netting
 - o aFRR
 - o mFRR
 - o RR
- Settlement TSO TSO, TSO BSP, TSO BRP
- Cross Border Capacity Allocation
- Reporting
- Activation purposes
- CBA

TSOs implementation projects

Implementation Projects for

- Imbalance Netting IGCC
- aFRR ?
- mFRR ?
- RR TERRE



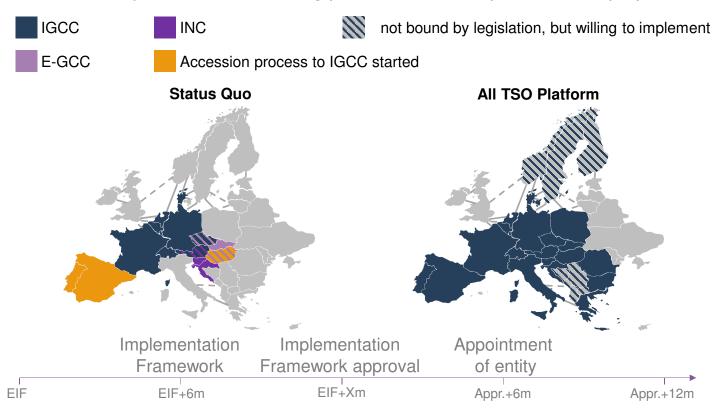
1 Implementation Organisation

2 Update on European Platforms



Imbalance Netting

IGCC formally identified as starting point and is the implementation project





Imbalance Netting

- 1. Implementation Framework is agreed by all TSOs
- 2. Implementation Framework is approved by all NRAs
- 3. IGCC is adapted accordingly if necessary to fulfil the Implementation Framework
 - IGCC MLA, algorithm and settlement is adapted by the current and expected member TSOs of IGCC
- 4. IGCC fulfils all requirements of the GL EB to the European platform for imbalance netting
- 5. IGCC is the European platform for imbalance netting
- 6. All TSOs performing aFRR, at least from Continental Europe, become Member of the European platform for imbalance netting having signed the IGCC MLA
- 7. TSOs are encouraged to join IGCC at an earlier stage, even before any amendments due to Implementation Framework have been implemented



aFRR: Project Plan

- ENTSOE has started the project on the aFRR implementation framework
- It is expected that a first draft can be presented to BSG in December 2017
- The ENTSOE project will be accompanied by a reference project as it is the case for mFRR (MARIE), RR (TERRE) and Imbalance Netting (IGCC)

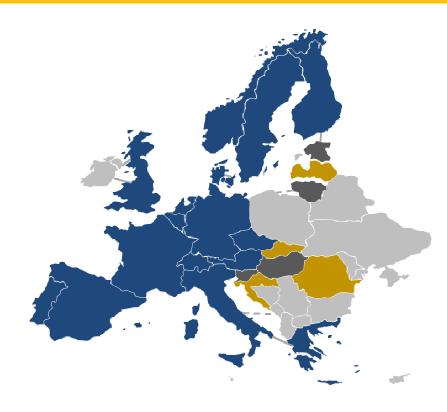
Workpackage	Jun 17	Jul 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	Nov 18	Dec 18
Submission of the proposal																			
TSO Approval of final version																			
Legal review of final version																			
Review of the public consultation																			
Public consultation																			
Informal sharing with ACER					F	Presentation of a first draft													
Legal review of pre-consultation draft							1												
TSO Approval of pre-consultation draft																			
Presentation to BSG / NRAS																			
Drafting the legal document																			
Drafting the explantory document																			



mFRR: MARI - Involved Parties

O Member	s – 19 TSOs from 16					
FINLAND	FINGRID					
SWEDEN	SVENSKA KRAFTNAT MISSION MISS AND MISSION MISS					
Norway	Statnett					
DENMARK	ENERGINET					
GERMANY	→ Sohertz Amprion					
GREAT BRITAIN	national grid					
NETHERLANDS	TENNET HOLD STATE HOLD					
BELGIUM	Celia					
FRANCE	Rte					
CZECH REPUBLIC	Č P OI, _{o.s.}					
SWITZERLAND	swissgrid					
AUSTRIA	APC					
PORTUGAL	RENM					
SPAIN	RED ELECTRICA DE ESPANA					
ITALY	Terna Rete Italia					
GREECE	AAMHE					

 4 countries (4 TSOs) in the process of becoming 							





RR: TERRE - project Mission and Participants

Develop a XB platform for RR products

- TERRE project will involve the design, development, implementation and operation on a cross-border platform for the balancing products (RR)
- The first phase of the design finalized with a consultation proposal, and has been validated by the NRAs and the market participants (stakeholder)

Toward efficient cooperation in balancing in Europe

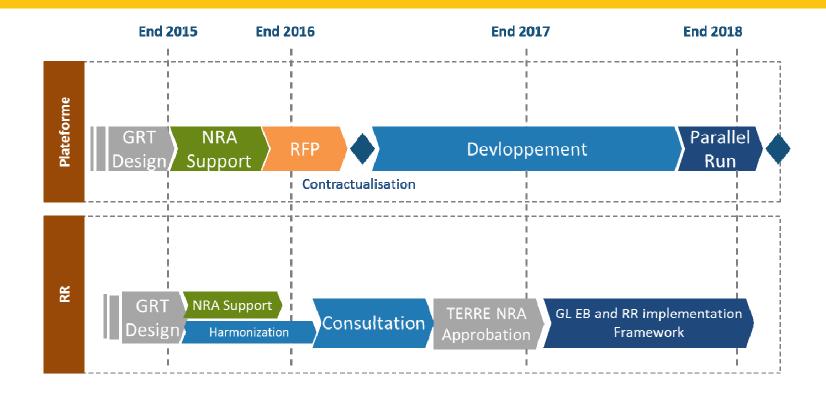
- The proposed RR product together with the project governance should be aligned with Guidelines on Electricity Balancing.
- The established platform should support the future European balancing vision to assure the security of the energy supply
- The RR is not the only balancing product which is in development and should therefore be aligned with the ongoing projects (mFRR balancing regions), mainly to assure liquidity of balancing
- The TERRE platform is a suitable candidate for other balancing products such as mFRR.

Potential participants to TERRE project

Following TSOs were included in the cooperation **Full Participants:** France (Rte) Ree Portugal (REN) RENM • Espagne (RED) • Suisse (Swissgrid swissgrid · GB (National Grid) nationalgrid Observers: Greece ∑ Candidates: Norway Statnett Finland FINGRID Denmark energinet DK · Czech Republiceps Romania 🚣 Poland PSE Full participants Observers Croatia M HOPS RR countries Candidate



RR: TERRE macro planning





FCR: Overview of the FCR Cooperation

- 10 TSOs from 7 countries current member of the cooperation
- Common demand of 1.4
 GW for 2017 in common
 auction (almost half of the
 ENTSOE wide demand)
- Further coupling of Denmark planned





FCR: Potential for future market development

FCR cooperation indicates following benefits:

- socio economic benefit for the participating countries
- increased robustness of supply
- positive influence on security of supply

TSOs and NRAs of the countries involved have identified a set of priorities regarding cooperation evolutions

An improved market design could

- Ease the access for smaller market players
- Improve the investment signals
- · Strengthen the international market integration
- Increase socioeconomic benefits



entsoe

Reliable Sustainable Connected