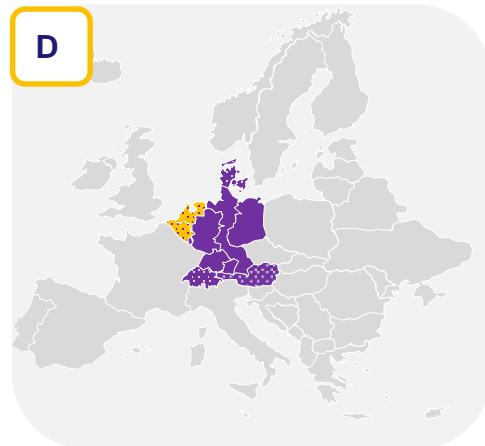
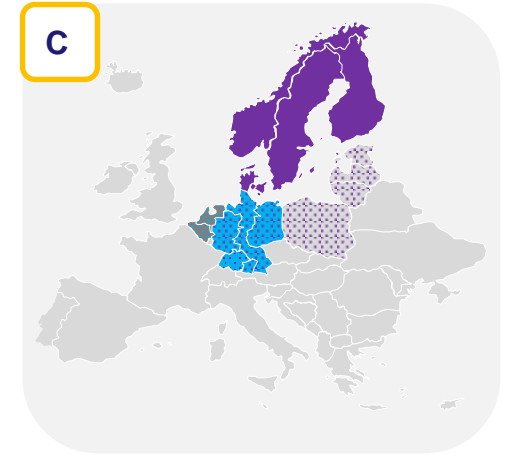
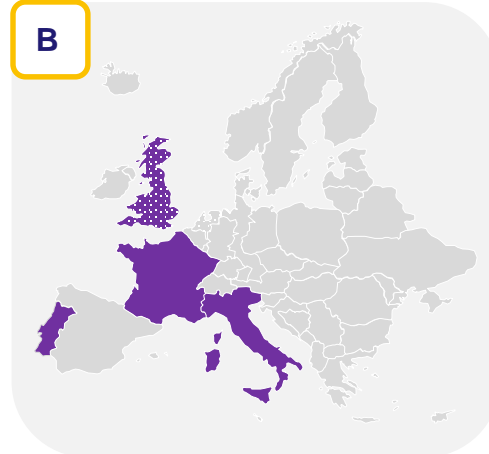
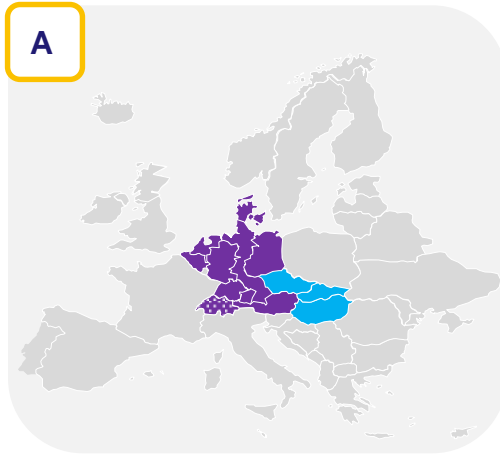


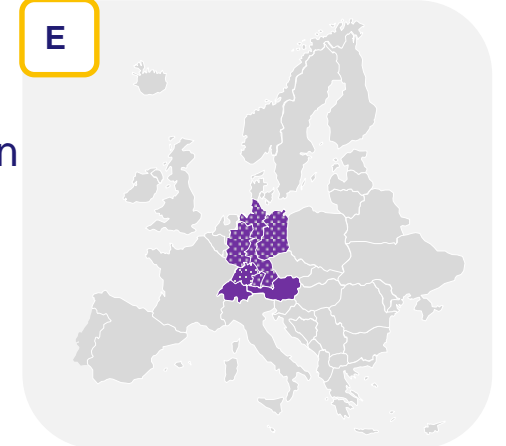
# Pilot Projects overview

**2<sup>nd</sup> Stakeholders meeting**  
September.11th .2014, Brussels

# Balancing Pilot Projects (processes)



- A. Imbalance Netting (IN)
- B. Replacement Reserve (RR)
- C. Manual Frequency Restoration (mFRR)
- D. Automatic Frequency Restoration (aFRR)
- E. Frequency Containment Reserve (FCR)



# Pilot 1: Latest Developments



## Flow-Based CM for aFRR Activation in Germany

- The new operational concept with flow-based constraints on the CMO for aFRR activation in Germany is effective since July 2014.
- First discussion on possibilities to use the flow-based approach to **monitor** the flows resulting from Imbalance Netting (Pilot 9)

## Cooperation with other Pilot Projects

- Pilot 1 & Pilot 5 – Technical feasibility of possible cooperation in Imbalance Netting and mFRR was shown, results expected in September 2014
- Pilot 1 & Pilot 7 – first evaluations completed, results expected in September 2014
- Pilot 1 & Pilot 2 – begin of the implementation project

## Pilot 2: Summary update on the Pilot Project FCR (APG, SG)

### Recent achievements

1. Project successfully designed and implemented within one year - Go Live date: 3<sup>rd</sup> July 2013
2. Agreement with TSOs of Germany and the Netherlands for extension of the collaboration – Feasibility studies complete
3. Plan agreed 2 weeks ago.

### Risks or legal/regulatory issue

1. Request of Austrian Regulator for detailed publishing of the auction results – No critical issue for the project
2. Common publishing policy for both countries

### Project co-operation and merging

1. Pilot project 2 is the only one focusing on FCR
2. Project packages for the extended collaboration defined – Deadlines in Q4 2014 (between October and December)

# Pilot 3: Summary update on the Pilot Projects (Imbalance Netting): Pilot 3 (CEPS, SEPS, MAVIR)

## Recent achievements

1. No additional developments since the last reporting

## Project co-operation and merging

1. ČEPS is already participating in IGCC (pilot 9), the other TSOs do not intend to join IGCC at the moment.

# Pilot 4: Summary update (RR): (NG, RTE, TERNA, REN,NGIL)

## Recent achievements

- Successful web-conference held on the 17<sup>th</sup> July , intention to finalise TERRE Product(s) during TSO Workshop on the 17<sup>th</sup>/18<sup>th</sup> Sept.
- Agreement has been reached on the Qualitative Study for the Matching Process.
- Data Capture is progressing well
- TSO workshop to be held in London in the next few weeks.

## Risks or legal/regulatory issue

- Timescales for completion of Design Phase will be reviewed and harmonised alongside the development of the Balancing Code.

## Project Co-ordination and Merging with Pilot Projects

- REE and Swissgrid have joined the Project (subject to accession agreement) and have provided first thoughts on TERRE Product

RTE, REE (11 June) & REN (17 June) successfully begin RR exchange allowing Cross-Border Balancing Services in SWE Region

# Manual Frequency Restoration Reserve (mFRR): Pilot 5 (Nordic)

## Recent achievements

Still on-going studies on how to:

- Exchange mFRR energy between possible future CoBAs (German pilot and Baltic feasibility studies)
- Perform imbalance netting between synchronous areas and CoBAs (HVDC) (within German pilot feasibility study)
- Exchange mFRR energy between a self-dispatch system and a central dispatch system (Polish feasibility study)

## Risks or legal/regulatory issue

Export of balancing energy from Standard Products for FRR from the Netherlands will adversely affect market functioning, cost recovery of balancing costs via imbalance settlement, and local incentives to BRPs. The TSO in the Netherlands can and does export Balancing Energy from Special Products for FRR to other TSO's.

## Project co-operation and merging

- Feasibility study with Pilot 1 on-going
- Feasibility studies with Poland and the Baltics on-going
- Initiated dialogue on the possibility for feasibility study with the Netherlands

# Automatic/manual Frequency Restoration Reserve (a/mFRR): Pilot 7 (ELIA, TENNET NL)

## Recent achievements

Agreement on working assumptions:

- For aFRR and for mFRR regarding product definition, bidding process, activation process, exchange process and settlement process
- On how to use cross zonal capacity for different balancing processes
- Regarding settlement of balancing energy and imbalance settlement
- **A common Public workshop was organised on 13th of June**
  - Slides were published on websites of both TSOs
  - Proceed with CBA as a next step

## Risks or legal/regulatory issue

- Implications for harmonisation of aFRR products (impact on liquidity of local markets and local TSO responsibility-ACE quality) between 2 different control blocks with consequences for local access tariffs
- Complexity of pricing methods as this is not only affecting market functioning but also cost recovery of balancing costs via imbalance settlement, local incentives to BRPs and possibilities to extend the BE-NL collaboration to other countries

## Project co-operation and merging

- Common study on-going between pilot 7 and pilot 1 to assess possibilities for collaboration for balancing energy (aFRR & mFRR) and balancing capacity
- Assessment of interactions by pilot 7 between FRR processes (pilot 7) and imbalance netting and aFRR assistance (pilot 9)



# Summary update on the Pilot Projects (RR): Pilot 8 (TENNET NL, NG)

## Recent achievements

1. Feasibility study is on-going between GB and NL
2. Other balancing services have been considered which are not part of Pilot 8 e.g. Emergency Reserves, Frequency Response

## Risks or legal/regulatory issue

1. The two different market models do not facilitate the exchange of cross border energy for Replacement Reserves

## Project co-operation and merging

1. Consideration has been given to cooperating and possibly merging Pilot 8 with Pilot 4 at a later date
2. Conclusion is that the Pilots should remain separate to test the feasibility of the two different market models

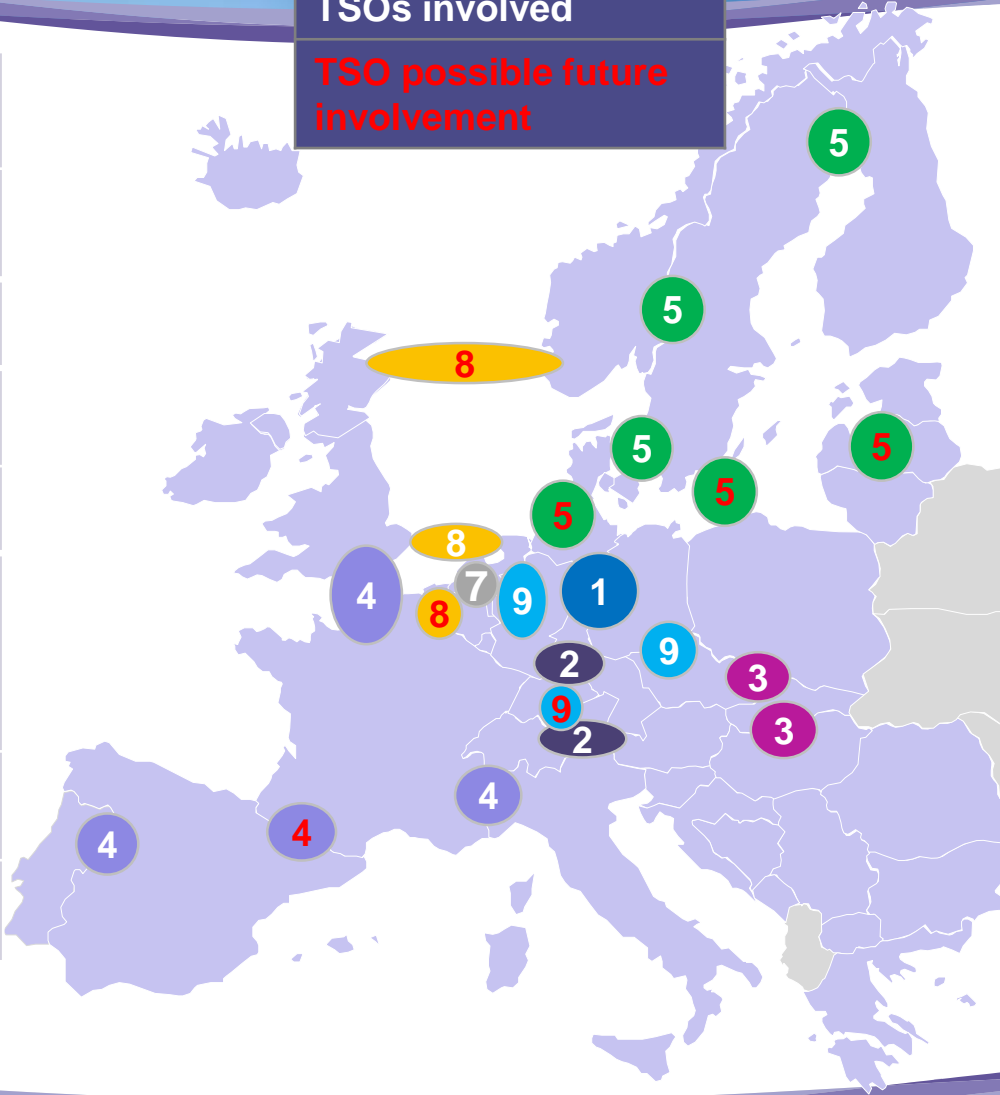
### Recent achievements

1. The IGCC Members have created a first draft of a new multilateral Imbalance Netting agreement – the second draft was delivered to the IGCC Steering Committee for further discussion.
2. The IGCC Steering Committee has decided to organise a stakeholder workshops dedicated to IGCC

# The Cross Border Pilot Projects on Electricity Balancing

1	CMOs for mFRR and aFRR with real time flow based congestion management
2	Cross-border market for FCR based on TSO-TSO model
3	E-GCC
4	TERRE: Trans-European Replacement Reserves Exchange
5	Development of the Nordic RPM
7	Design and evaluation of a harmonised reactive balancing market with XB optimisation of Frequency Restoration while keeping control areas, bid zones, and Regulatory oversight
8	BritNed / TenneT / National Grid Balancing Services
9	IGCC Imbalance Netting, aFRR-Assistance and Flow-Based Congestion Management.

TSOs involved  
**TSO possible future involvement**



\*Pilot 6 has been put on hold for the time being

## Some feedback & questions on July 9<sup>th</sup> AESAG presentation

- **Are all projects compliant with the final target model:**

Is IGCC using a BSP-TSO model?

*No, IGCC uses a TSO-TSO model*

Is TERRE using a CMO?

*yes TERRE intends to use a CMO as per final target model and to form a CoBA*

- **Slide 13 (FCR, pilot 2)– last point – is there anything new here? There has been an agreement with German & NL TSOs for some time.**

*During the past months the concept phase of the project was completed and detailed specifications are currently being finalised. It has been decided to have a small project team that will work on the different work packages and the project leaders will report to the Steering Committee on the progress. According to the current project plan, the extended collaboration will start until the end of 2014/ beginning of 2015.*

- **Slide 9 (mFRR pilot 5) - Is this statement true “It is not possible for the TSO in the Netherlands to export balancing energy due to the Dutch balancing market design” ....can NL not export?**

*The TSO in the Netherlands can and does export Balancing Energy from Special Products to other TSO's*