Interconnection Belgium-Luxemburg

EMD WG

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Agenda

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2. Grid situations of the Creos' grid
3. Constraints in Creos' grid
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1. General context (1/2)

General context:

- Creos started a network development study to investigate an optimal long-term network strategy for the Luxembourgian grid.
- Resulted in a common Memorandum of Understanding (Creos, Elia) . MoU signed in 2013 between Elia and Creos a.o. to develop an interconnector.
- Project of common interest granted October 2013 (n°2.3.1)

Objectives:

- Security of supply of Luxembourg
- Improve market integration between BE and DE bidding zones

1. General context (2/2)

Market information:

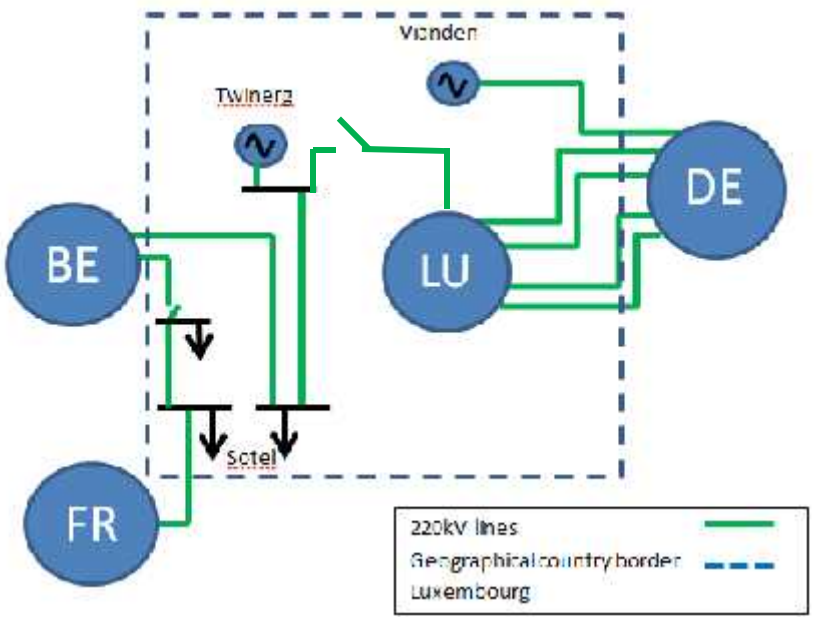
- First direct interconnector between bidding zones BE and DE.
- The 1st interconnector set up in CWE after FBMC Go Live (May 2015).
- At the market level, there will be an interconnection between:
  - the Belgian bidding zone and the German/Austrian/Luxembourgian (DE/AT/LU) bidding zone.
- At the operational level there will be an interconnection between:
  - the control area of Creos and the control area of Elia.

Planning:

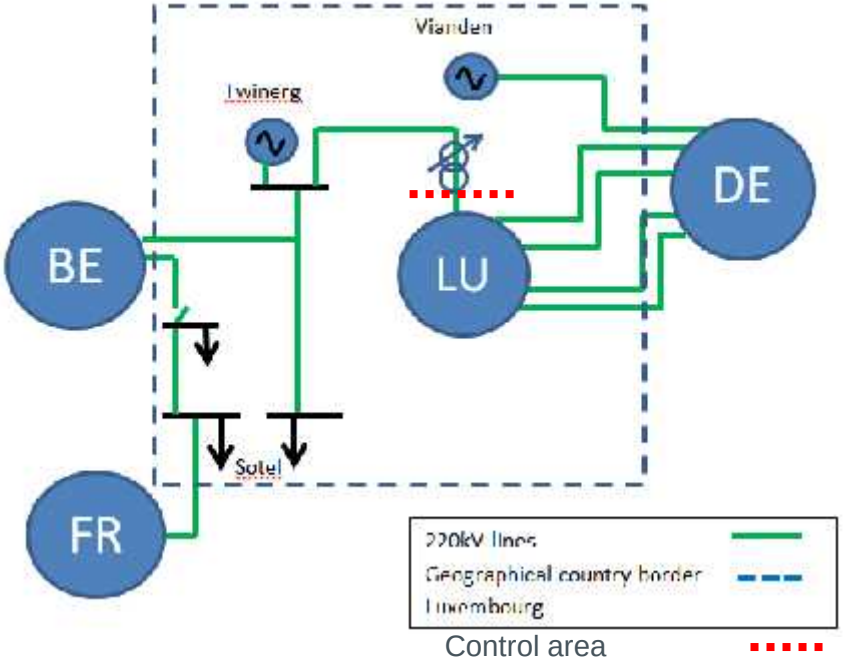
- The commissioning of the infrastructure regarding the interconnector between Belgium and Luxembourg is, according to the planning established by Creos, currently scheduled in December 2015.

2.Grid situations: pre-interim (phase 1)

Existing situation



pre-interim situation

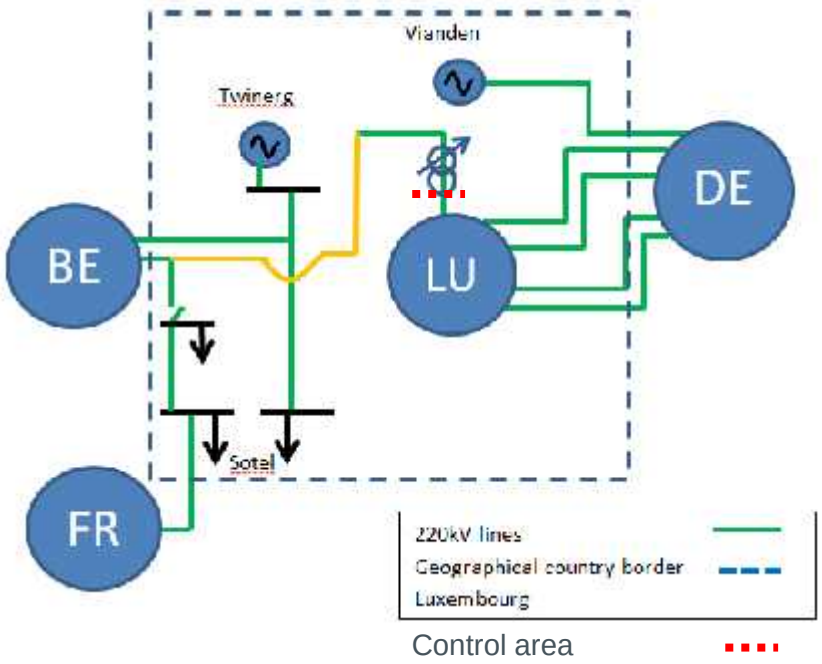


pre-interim phase starts with the commissioning of the phase shifter transformer (PST)

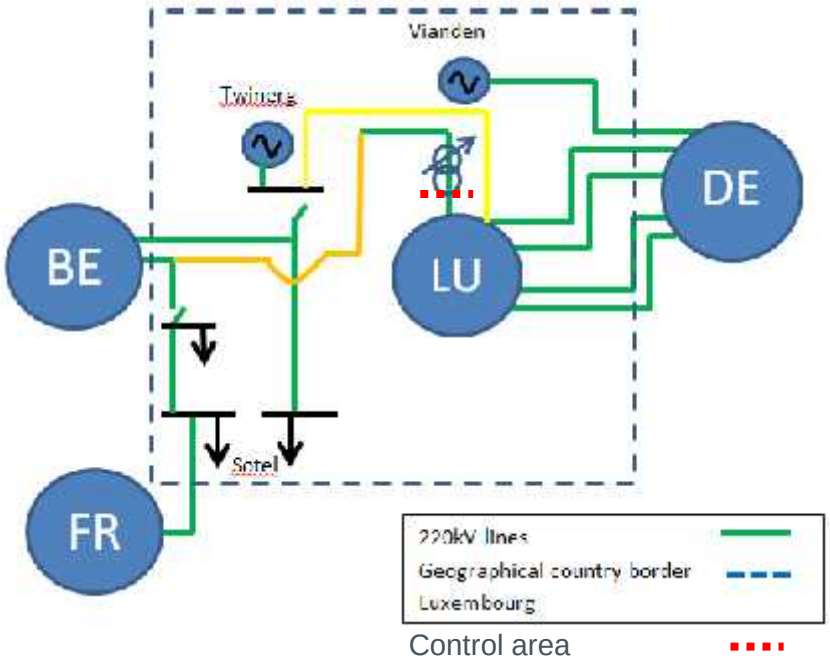
Existing infrastructure of Elia, Luxembourgish Industrial grid & Creos grid will be reused to build the interconnection

2.Grid situations: Interim (phases 2 & 3)

Phase 2



Phase 3



- New cable Bascharage-Biff will be installed in CREOS grid
- Change between phases 2 & 3 : switching of Twinerg power plant from Elia's control area to Creos' control area.

3.Constraints in Creos grid

- Elia and CREOS will reuse existing infrastructures to create the new interconnection.
- Currently, there are some internal constraints in the Creos' grid and the Luxembourgish grid is not "completely designed" for international exchanges.
- Several infrastructure projects in Creos' grid are ongoing to enhance the Luxembourgish 220kV grid and especially the "LuxRing" project (2017) will improve substantially the transit through Luxembourg, in particular for exchanges between BE and DE bidding zones.

4. Split Rules

- As the engineering project is composed of various phases to develop the BE-LU interconnection ➔ stepwise approach in capacity calculation/allocation
- proposal to start with the day-ahead capacity allocation only, given:
  - energy exchange from the German bidding zone to the Belgian bidding zone will be limited due to internal constraints in Creos' transmission grid ,
  - first new interconnection in CWE region after Flow-Based go-live ➔ already challenging to integrate in the CWE FB,
  - the modest available capacity and the market behaviour will influence commercial exchanges, which need to be carefully monitored by TSOs to insure a well-functioning market.
- After gaining experiences with the BE-LU interconnection, long term capacity products for this interconnection will be added in a later phase.
- Creos and Elia decided to wait until the NWE intraday allocation solution (XBID solution) is implemented in NWE region before introducing intraday capacity products on the BELUX interconnection.

5. DA calculation and allocation (1/2)

The new BE-LU interconnection will be integrated in the CWE FB allocation methodology (capacity calculation and capacity allocation)

- The BE-LU interconnection and the relevant Creos grid assets will be included in the common grid model.
- The PST transformer will be used as remedial action to solve congestion on the BE-LU interconnection and the surrounding elements with the advantage to not reduce market exchanges (the Flow-Based domain).
- Shadow auctions will be implemented as fallback.

5. DA calculation and allocation (2/2)

TSOs have already done some first analysis on the FB market results

Context of simulations:

- FB Simulations done on the pre-interim phase only.
- PST modelised and interconnection BE-LU as Critical branch (monitoring purpose).
- Market results were compared between current CWE FB vs CWE FB with new interconnection.

First “preliminary” conclusions:

The introduction of the new BE-LU interconnection has a neutral impact in the pre-interim phase, i.e. it does not increase or reduce the flow-based domain and as such does not impact the relative gain of social welfare of the CWE region. This is due on one hand to the modest capacity available and on the other hand thanks to the use of the new PST.

6. Update of the CWE FB Capacity Calculation methodology

- §12 of the CWE FB approval document with regard to the “Bilateral Exchange Computation and Net Position Validation” normally needs a modification : taking into account the additional border BE-LU, the formulas in the document need to be amended.
- This change could be integrated in the update of the common system of November 2015. Full analysis of IT changes still ongoing. Still subject to agreement with PXs.
- Such a modification does not change the “capacity calculation methodology” with impact for all CWE TSO’s.

7. Next steps

- NRA approval package will be delivered by TSOs in Q3 2015. Consultation will be launched by CREG and ILR (LU regulator) in autumn 2015.
- Integration of BE-LU interconnection in the CWE FB allocation (systems, procedures, agreements, ..) with CWE partners.
- Go live date still to be determined but probably in Q1 2016 according to current planning. Communication will done in autumn.