



CWE FB MC project

PENTA SG1, April 8th 2013, Brussels



Agenda



1. Progress report on Flow Based Market Coupling (10h00 – 11h15)

- a. Presentation by TSOs and power exchanges
- b. Update of the planning
- c. Input from CEWE work
- d. CWE-CH impact assessment
- e. Discussion

2. Monitoring results ATC coupling (11h15 – 12h00)

- a. CWE prices, price convergence, price volatility, ATC utilization rate, adverse flows
- b. Clarification of some developments or trends
- c. Discussion

1 - Progress report on Flow Based Market Coupling



a) Presentation by TSOs and power exchanges

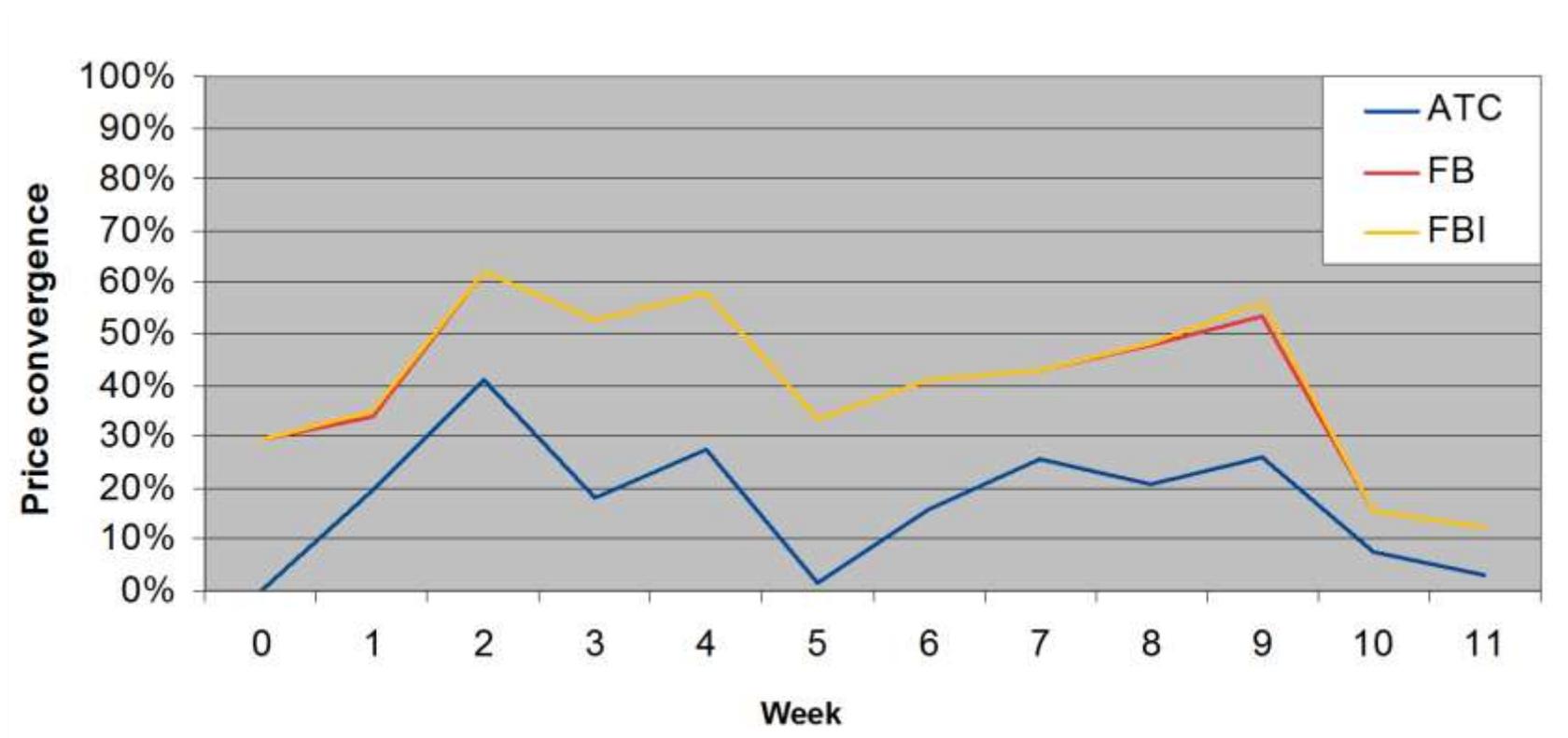
- ▶ CWE TSOs and PXs have recently achieved a major milestone with the launch of the external parallel run
 - All project partners have been putting their efforts in the realization of this important step which marks the beginning of concrete exchanges with the market about Flow Based simulation results
- ▶ A lot of progress has been made in 2012, especially linked to the
 - **Refinement of methodology:** Agreement on CB selection principles, Finalization of FRM values, New GSK implementations by some TSOs
 - **Optimization of process:** Organization of knowledge transfer, Coordination of common activities
 - **Improvement of tooling:** Supporting the methodology by IT tools
- ▶ A CWE FB MC Market Forum has been held the 7th of March where these achievements have been shown to market participants and further external parallel run explanation has been shared during dedicated workshops
- ▶ Please find an overview of the external parallel run data from the beginning of this year in the next slides

1 - Progress report on Flow Based Market Coupling



a) Presentation by TSOs and power exchanges: Price convergence

- ▶ The price convergence overview shows almost a continuous, **at least 10%, higher price convergence** under FB than under ATC



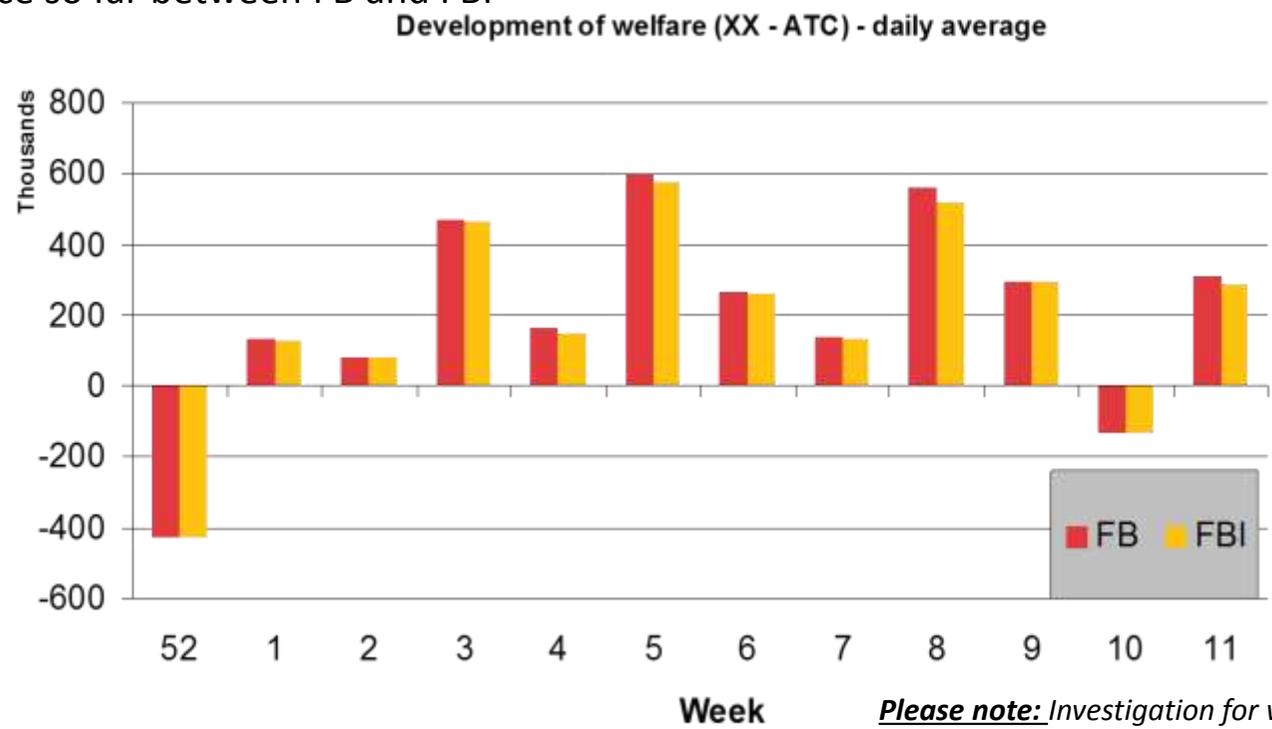
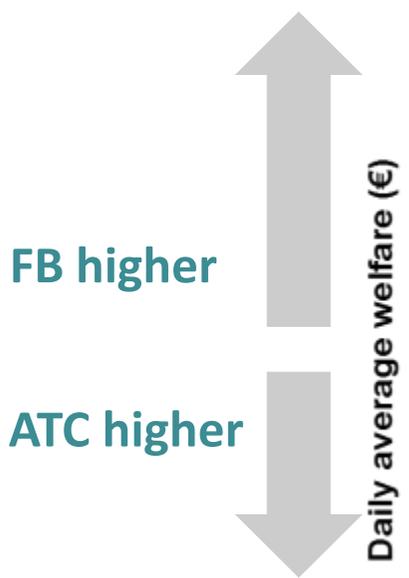
→ Full convergence better under FB than under ATC

1 - Progress report on Flow Based Market Coupling



a) Presentation by TSOs and power exchanges: Welfare overview

- ▶ This overview shows the **gain in weekly DA market welfare** since the beginning of 2013
- ▶ Observation:
 - Total welfare under FB is higher than under ATC
 - No significant difference so far between FB and FBI



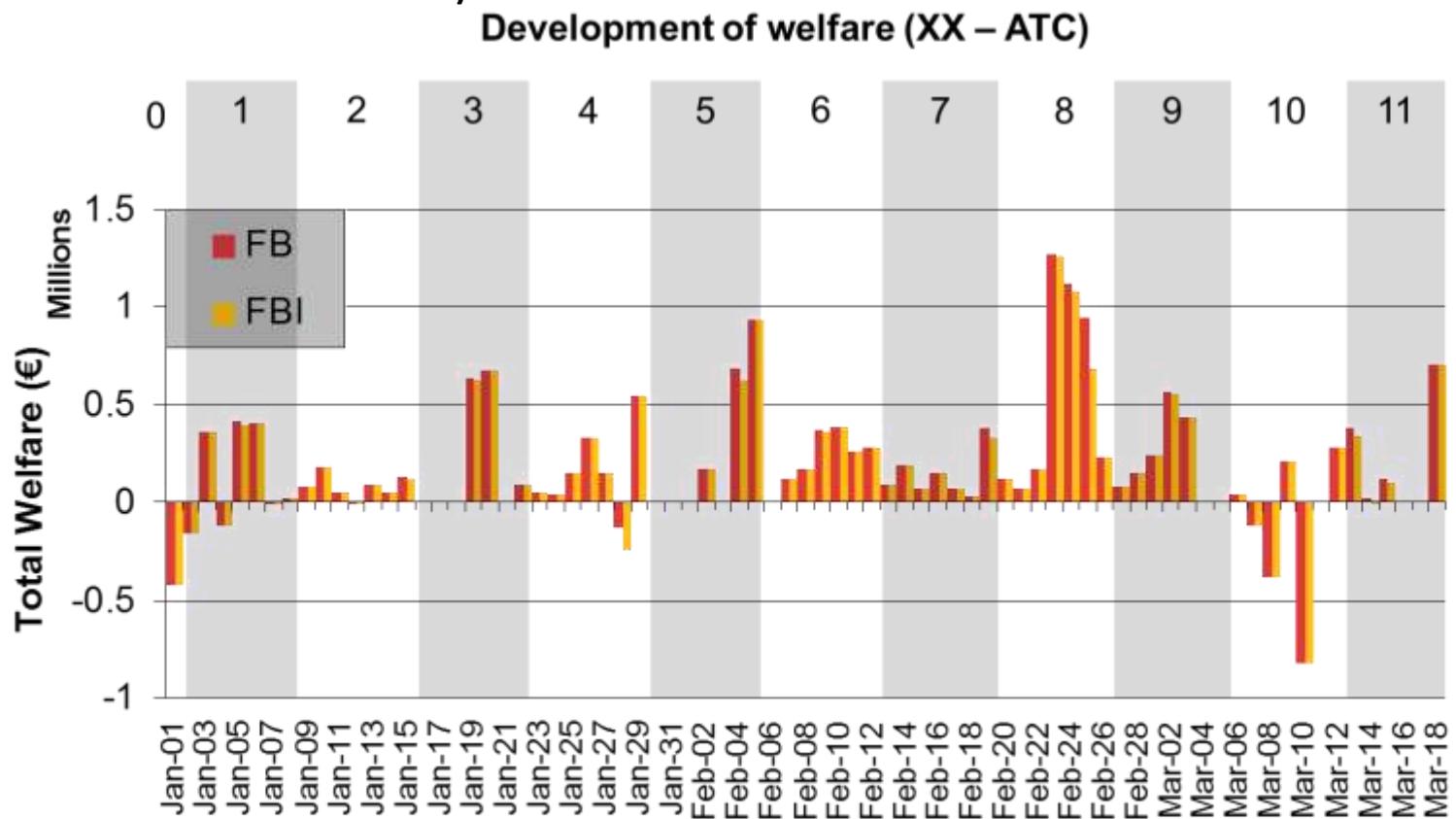
Please note: Investigation for week 10 still ongoing

1 - Progress report on Flow Based Market Coupling



a) Presentation by TSOs and power exchanges: Welfare overview

- ▶ The detailed **daily overview** shows a significant increase in DA market welfare under FB for almost all days



Please note: Investigation for Mar-08 and Mar-10 results ongoing, further information will be provided prior the meeting

1 - Progress report on Flow Based Market Coupling

a) Presentation by TSOs and power exchanges: Disclaimers



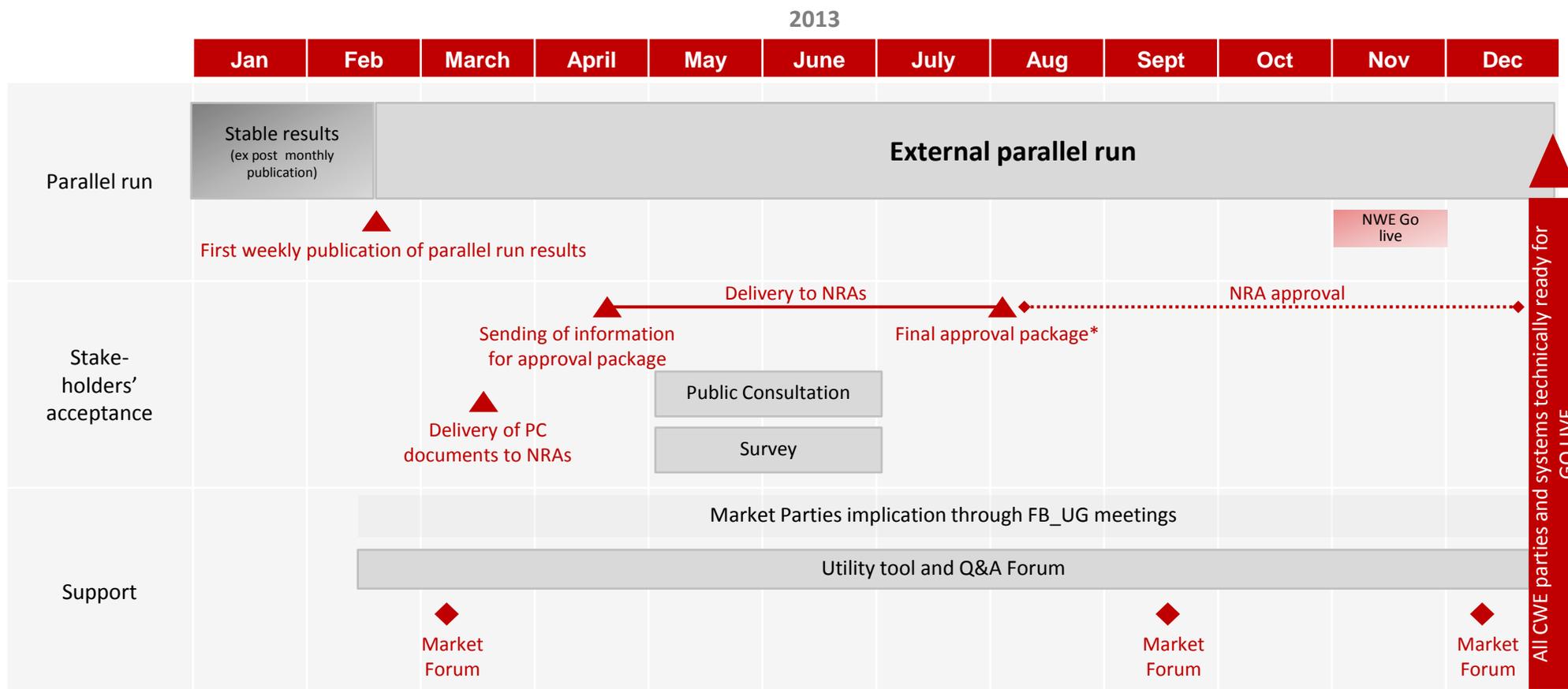
- ▶ The external run which will last one year is a **learning period for project partners and market participants**
- ▶ Therefore, the data has to be taken cautiously, keeping in mind important facts:
 - The external parallel run is performed with ATC Order books from production environment
 - As an industrialized tool is not available yet, an ex-post recalculation of the process can not be guaranteed. CWE Project Partners can therefore not ensure the 100% availability of results
 - The external parallel run remains a project phase in which some changes might for example be applied to the FB method or the process after having been submitted to a change procedure
- ▶ Of course, the **market will be informed** in due time about any impacting change that will occur during the external parallel run

1 - Progress report on Flow Based Market Coupling



b) Update of the planning

- Please find hereunder the updated project planning taking into account the postponement of the NWE Day-Ahead Project Go Live



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c) Input from CEWE work

► Status report – conveners view:

- CEWE FB Group was introduced to harmonize capacity calculation schemes known as flow-based approaches between CEE and CWE
- Since some general questions in CEE could not be answered in due time work of the group was postponed last year
- Recent developments indicate a restart of CEE FB group, but further development for CEWE FB group is still on hold
- Nevertheless any harmonization becomes challenging when the involved regions develop at different speed. Once there is a new common basis for collaboration, this will be reported immediately

1 - Progress report on Flow Based Market Coupling



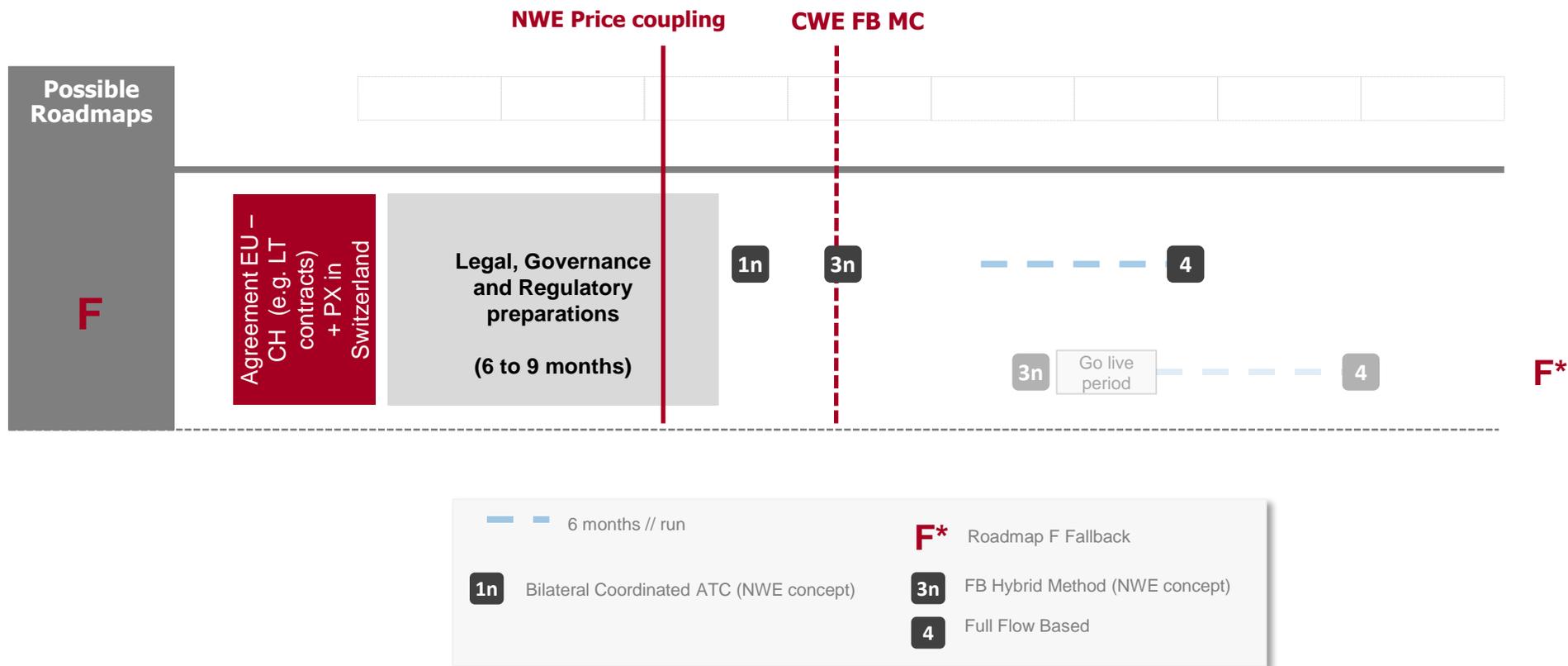
d) CWE-CH impact assessment: Context

- ▶ Following the PLEF in October 28th, 2011 and the CWE JSC decision, an impact assessment regarding the integration of CH-(FR/DE/AT) borders in CWE MC performed by CWE parties (CWE TSOs, CASC and CWE PXs), APG and Swissgrid has been delivered in October 2012
- ▶ Results of this CWE Impact Assessment are six roadmaps (A-F), of which roadmap F would enable a fast integration of the CH-(FR/DE/AT) Borders into the CWE MC without significantly endangering the NWE or Flow Based Go Live
- ▶ In the chosen Roadmap CH-(FR/DE/AT) borders will first be coupled ATC based and in the long run flow based
- ▶ The CWE JSC is considering roadmap F and F* in light of the new NWE and CWE timelines while underlining that the project can be put on hold at any stage if risks for the CWE FB MC Go Live would occur
- ▶ The impact assessment presented in the following slides is based on a study finalized in October 2012, including information regarding the planning available at this time. Based on currently available information the NWE Go live is now planned for November 2013

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d) CWE-CH impact assessment: Roadmaps F and F*



- ▶ Roadmap F and F* consist of the same technical and procedural concepts and roadmap F* can be seen as a fallback of roadmap F in case that Swissgrid's integration activities will impact the CWE FB MC progress

1 - Progress report on Flow Based Market Coupling



d) CWE-CH impact assessment: Next steps

- ▶ The Impact assessment demonstrated that an integration of CH-(FR/DE/AT) is feasible, however, and respecting the above mentioned conditions, the launch of a Full integration project is subject to two prerequisites:
 - Agreement concerning LT contracts between European Union and Switzerland
 - Formal designation of a PCR compatible “Nominated Electricity Market Operator(s)” for Switzerland and for Austria
- ▶ CWE JSC asks the PLEF for guidance regarding further steps to be taken towards CH-(FR/DE/AT) integration
 - How to progress on the two open points?
- ▶ Does the PLEF approve the beginning of preparation activities?
 - These activities include the work on legal, governance, costs and regulatory preparations
 - Delivery of a detailed roadmap/planning

APPENDIX



1 - Progress report on Flow Based Market Coupling

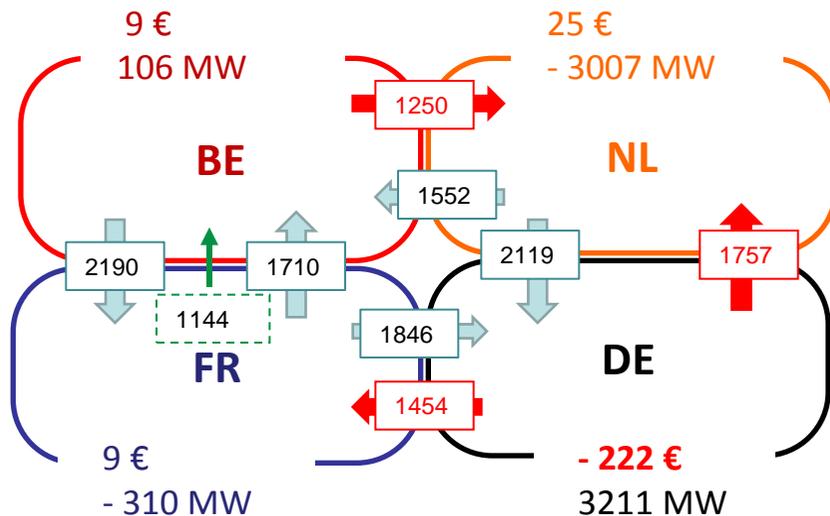


a) Presentation by TSOs and power exchanges: Christmas Day

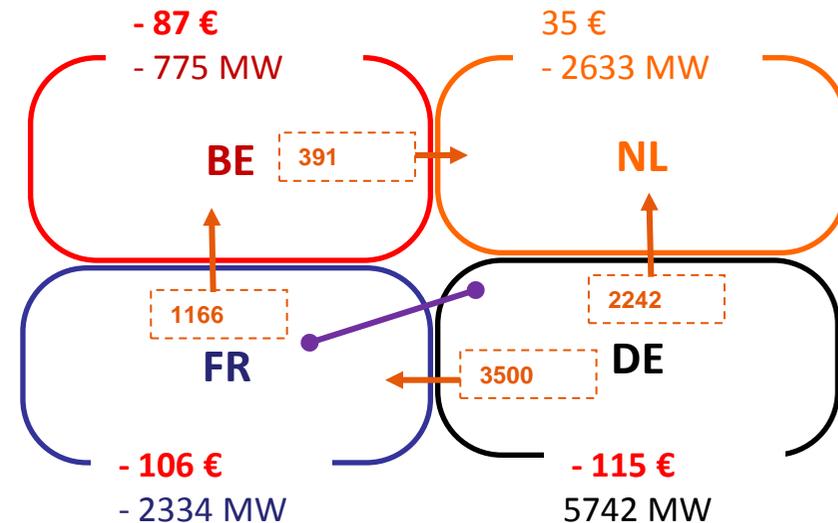
Situation: Christmas day, at 2 – 3 am

- ▶ The situation was remarkable with strongly negative prices in Germany, linked to high wind infeed

ATC market coupling



FB market coupling



- ▶ Congested situation in ATC
- ▶ Limiting ATC from Germany to Netherlands and France, and from Belgium to Netherlands
- ▶ Negative prices in Germany only as export capability is limited

- ▶ Constrained situation in FB
- ▶ Somewhere in CWE, at least an “active CB” is limiting the market (in purple, arbitrarily located)
- ▶ However there are more exchanges (especially from DE), and more convergence, the FB outcome generates more welfare for market parties, less congestion rent. Prices are less divergent, and become negative in FR and BE as well

- ▶ **Note:** the external // run had not started at this stage, however CWE partners were finalizing the preparation to be ready for the 1st of January. Consequently, the PTDFs computed this day are representative

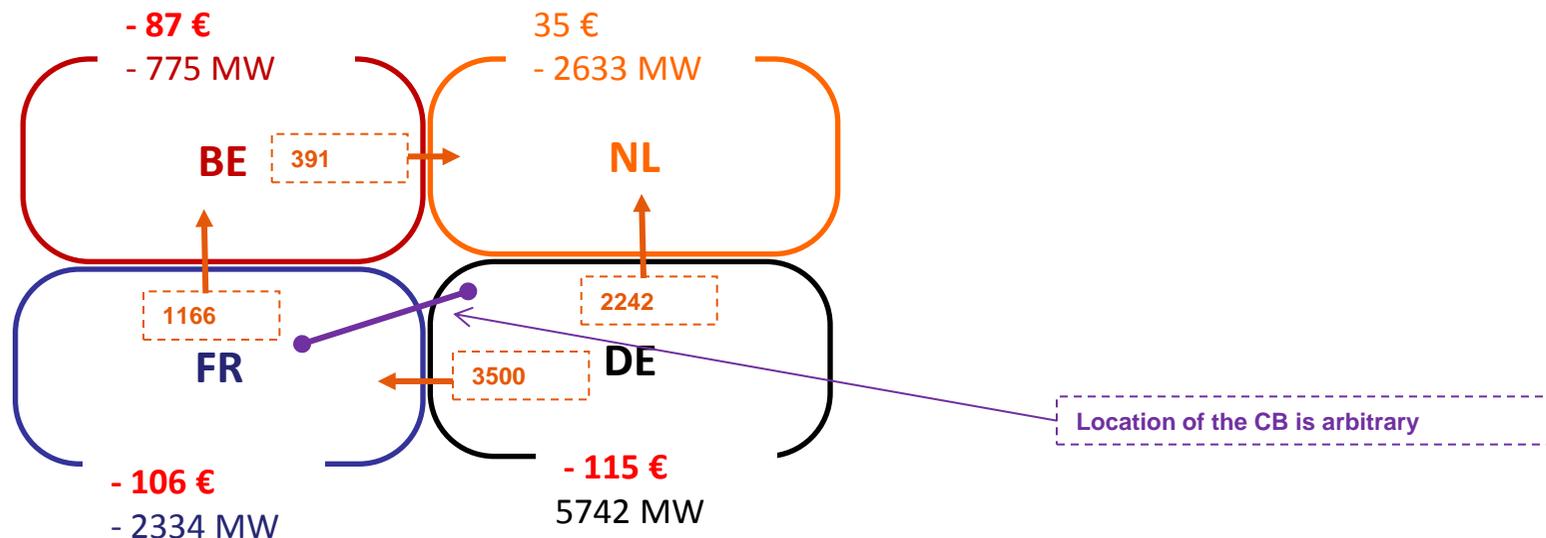
1 - Progress report on Flow Based Market Coupling



a) Presentation by TSOs and power exchanges: Christmas Day

Situation: Christmas day, at 2 – 3 am

- Utility tool is not available on Xmas day, however an active CB in FB has been identified by TSOs



 Decomposition of Nex in bilat exchanges is arbitrary on this sketch

day	TS	BE-hub	DE-hub	FR-hub	NL-hub	RAM
25/12/2012	3	0,0059	0,0762	0,0346	-0,1172	660,5587

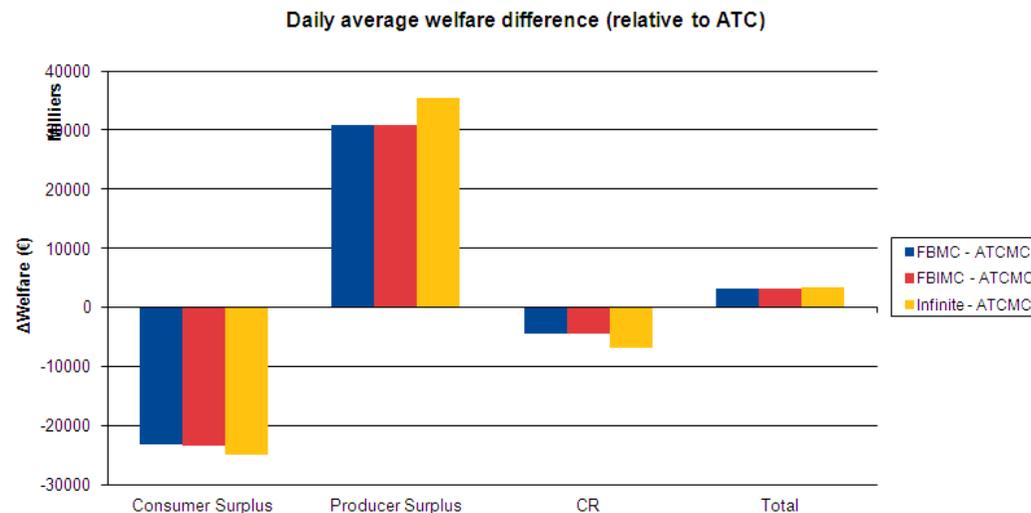
1 - Progress report on Flow Based Market Coupling



a) Presentation by TSOs and power exchanges: Christmas Day

Situation: Christmas day

- ▶ **The gain of welfare is remarkable : about 3 M€** over the day, essentially benefiting to German producers in this case, an increase due to the enhanced export capability of Germany.
- ▶ A comparable situation was observed on the morrow (boxing day)

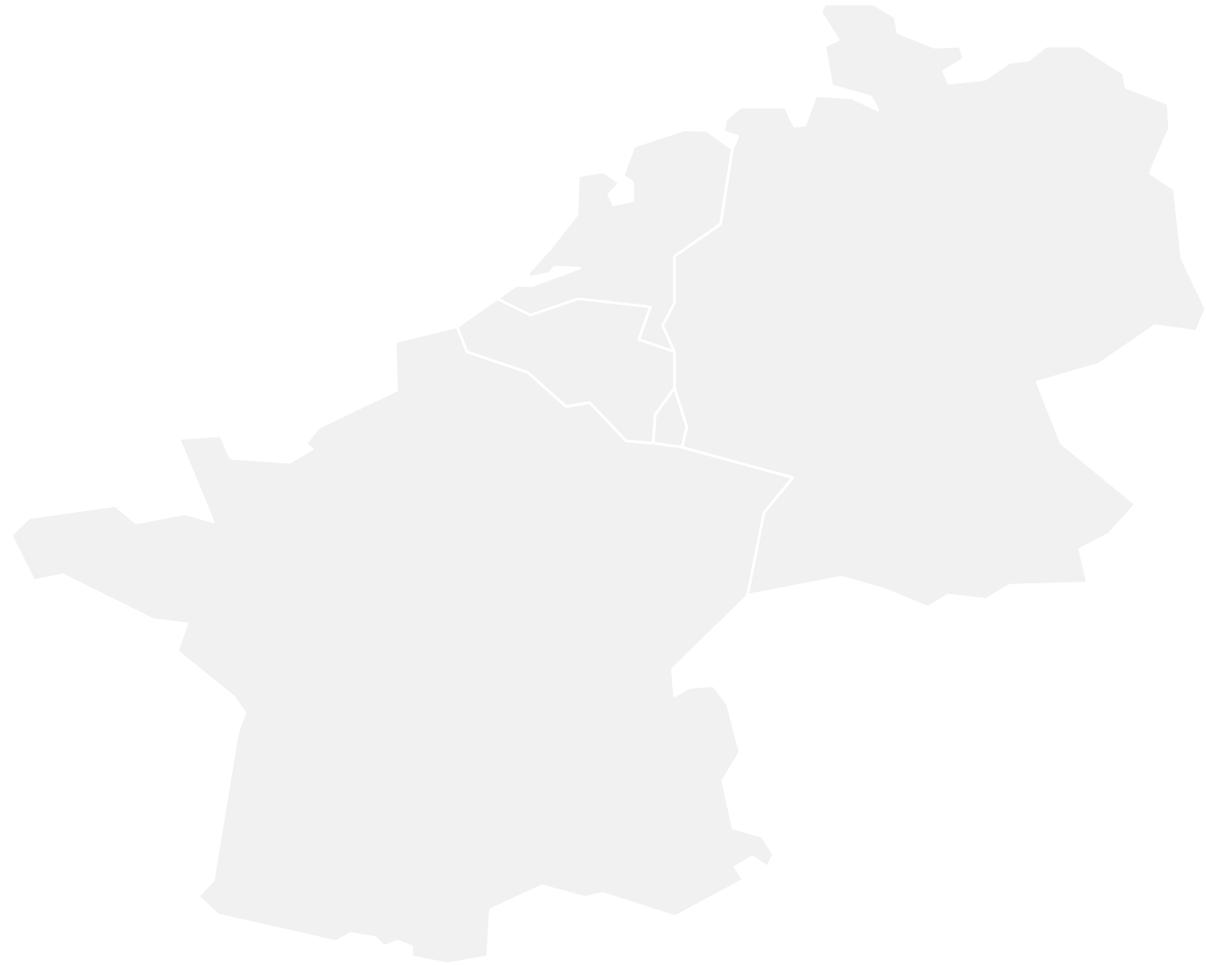


- ▶ This is a direct illustration of the notion introduced in the previous case, but working the other way around. Thanks to a better description of the grid, TSOs have been able to maximize the offered capacity closer to the physical limit, increasing significantly trading opportunities and generating much welfare along the way. This phenomenon is all the more apparent that the operational situation is constrained for TSOs

1 - Progress report on Flow Based Market Coupling

e) Discussion

Questions?



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2. Monitoring results ATC coupling (11h15 – 12h00)

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2 - Monitoring results ATC coupling



a) CWE prices, price convergence, price volatility, ATC utilization rate, adverse flows

▶ CWE Price

- Feb 2012 to Feb 2013
- Oct 2012 to Feb 2013

▶ Price Convergence

- Average: Feb 2012 to Feb 2013
- Average: Comparison Feb 2012 to Oct 2012 vs. Oct 2012 to Feb 2013

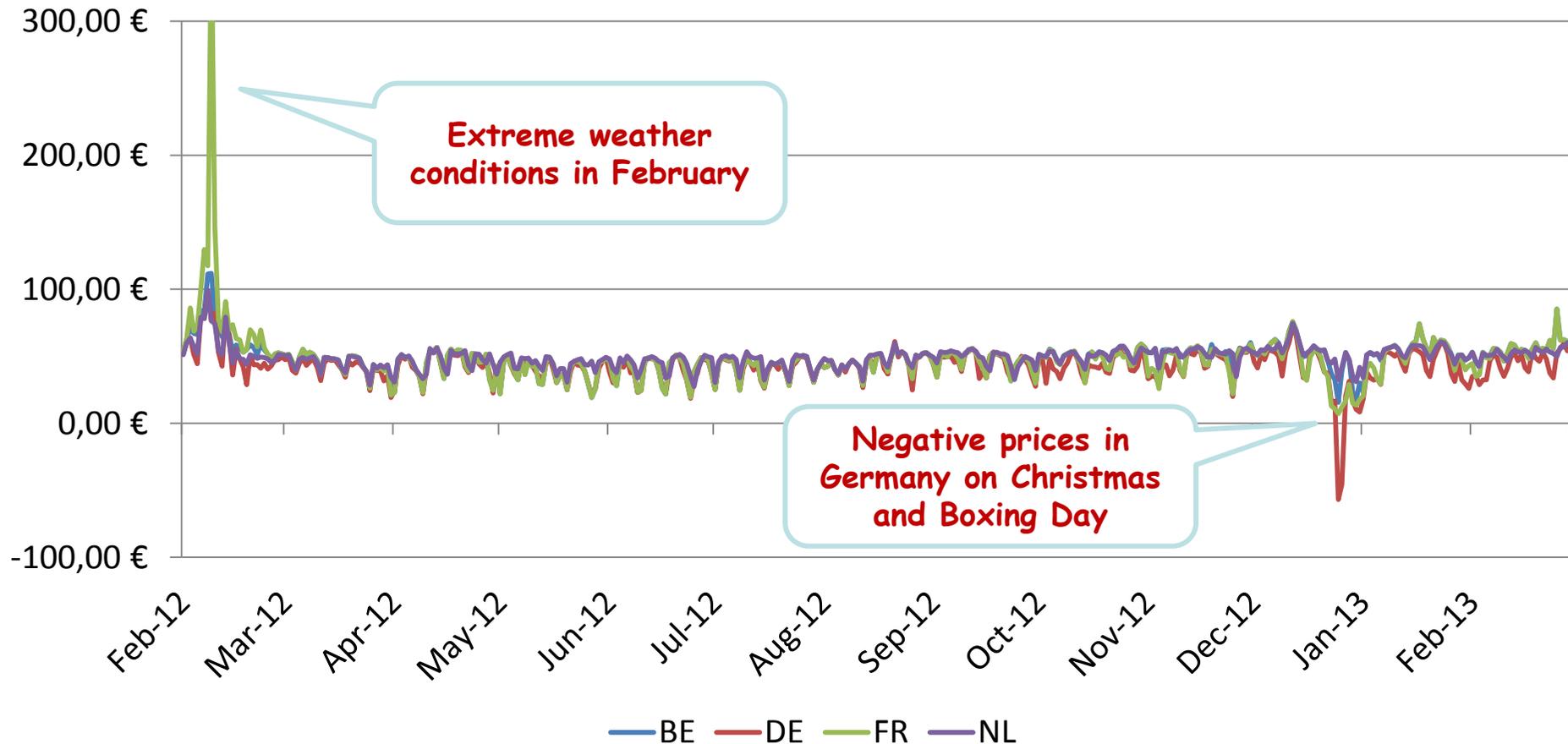
▶ Price Volatility

- Average: Feb 2012 to Feb 2013
- Average: Oct 2012 to Feb 2013

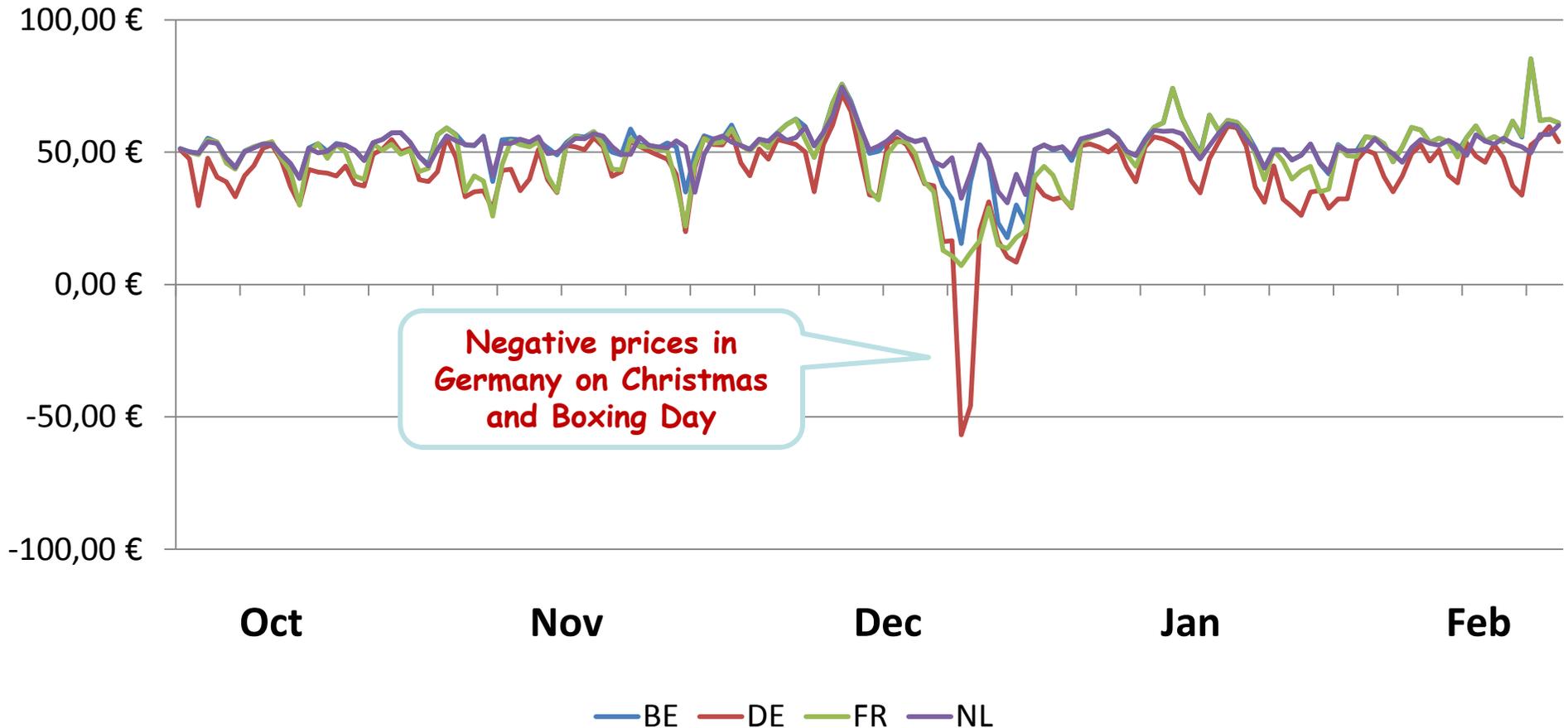
▶ ATC Utilization Rate

- Average: Feb 2012 to Feb 2013
- Average: Oct 2012 to Feb 2013

CWE prices (daily baseload) February 2012 to February 2013

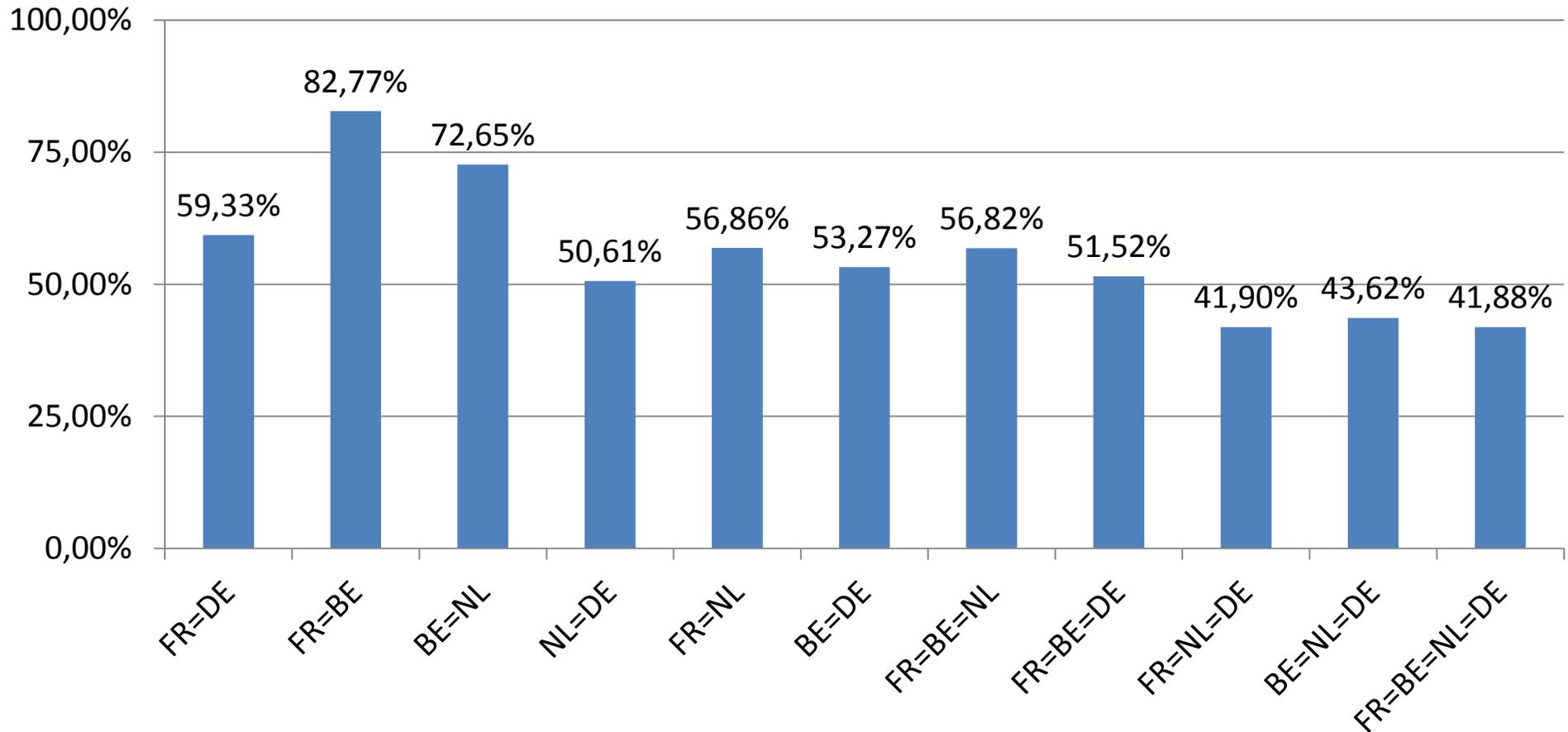


CWE prices (daily baseload) October 2012 to February 2013



CWE Price Convergence

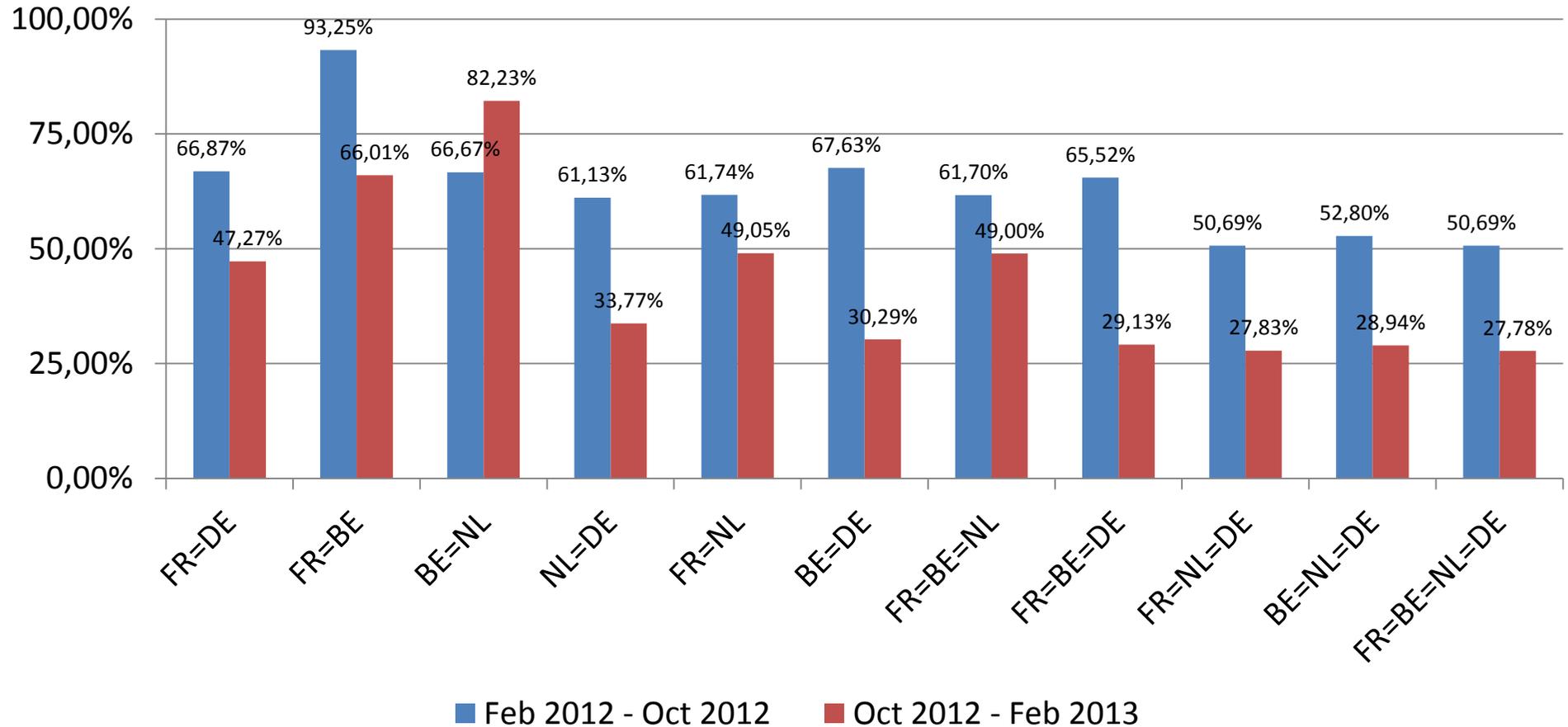
Average: February 2012 to February 2013



% of hours with convergence of prices (threshold is 0,005€)

CWE Price Convergence

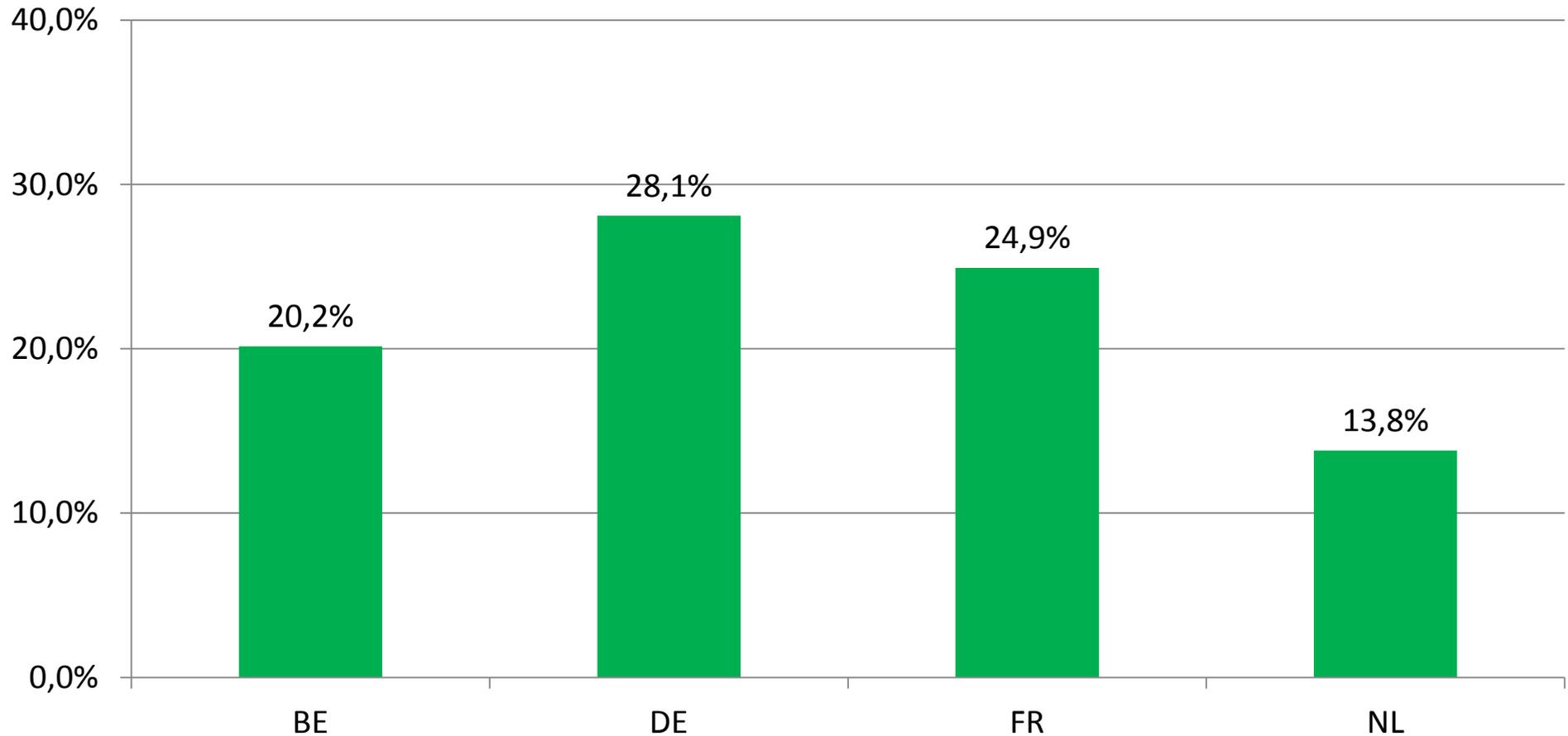
Average: Comparison Feb 2012 to Oct 2012 vs. Oct 2012 to Feb 2013



% of hours with convergence of prices (threshold is 0,005€)

CWE: Base Load Price Volatility

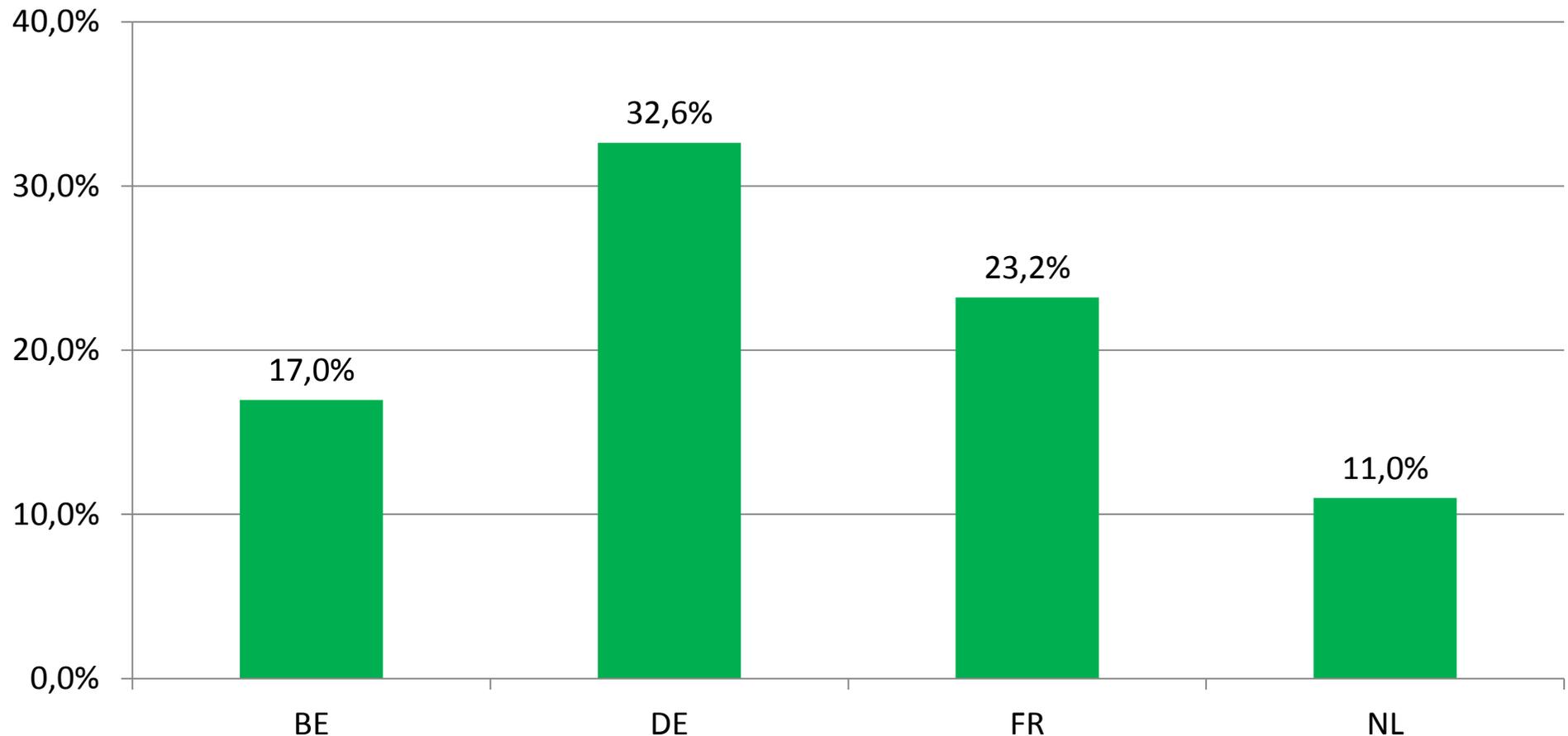
Average: February 2012 to February 2013



Average of the standard deviation of the relative variation of daily prices

CWE: Base Load Price Volatility

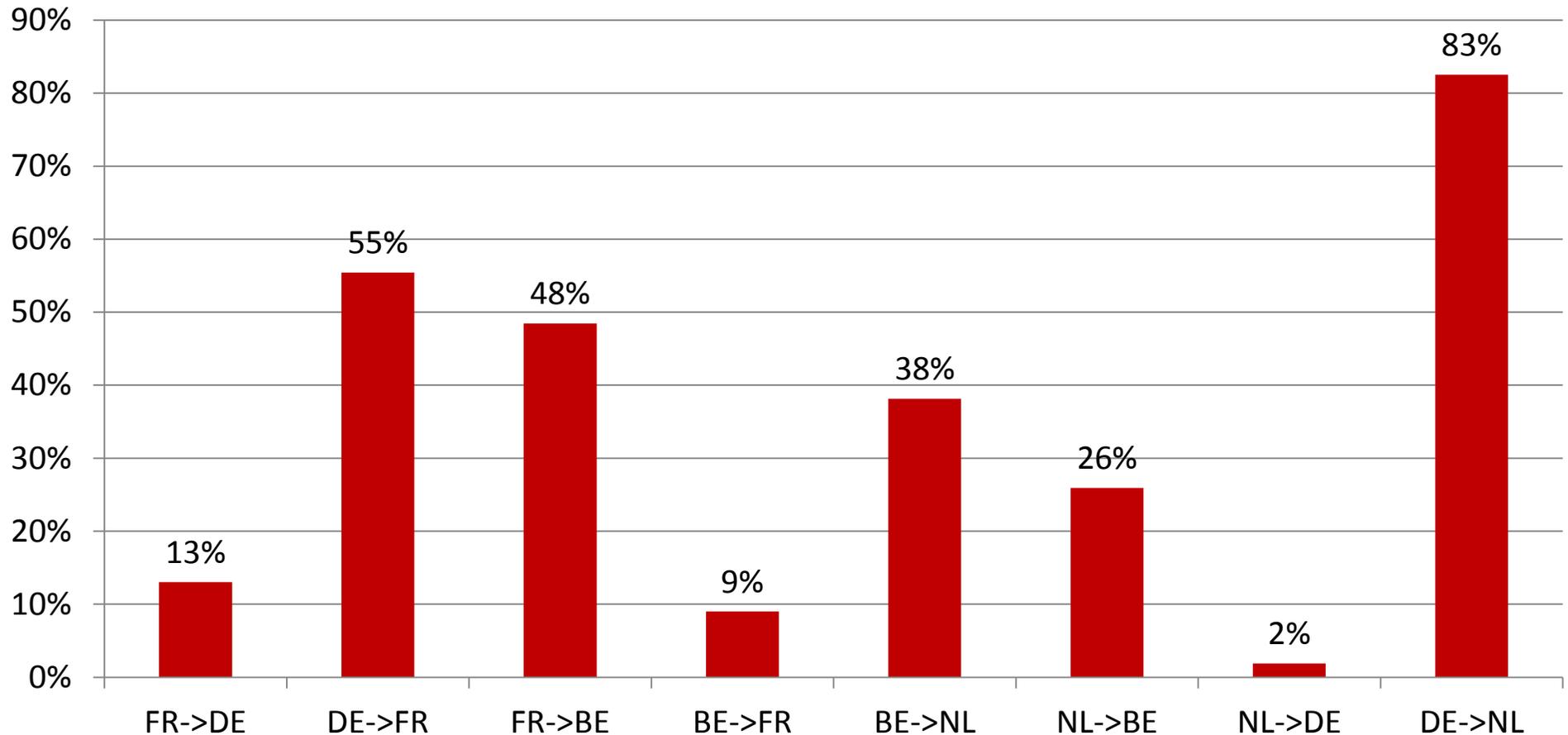
Average: October 2012 to February 2013



Average of the standard deviation of the relative variation of daily prices

CWE: ATC Utilization Rate

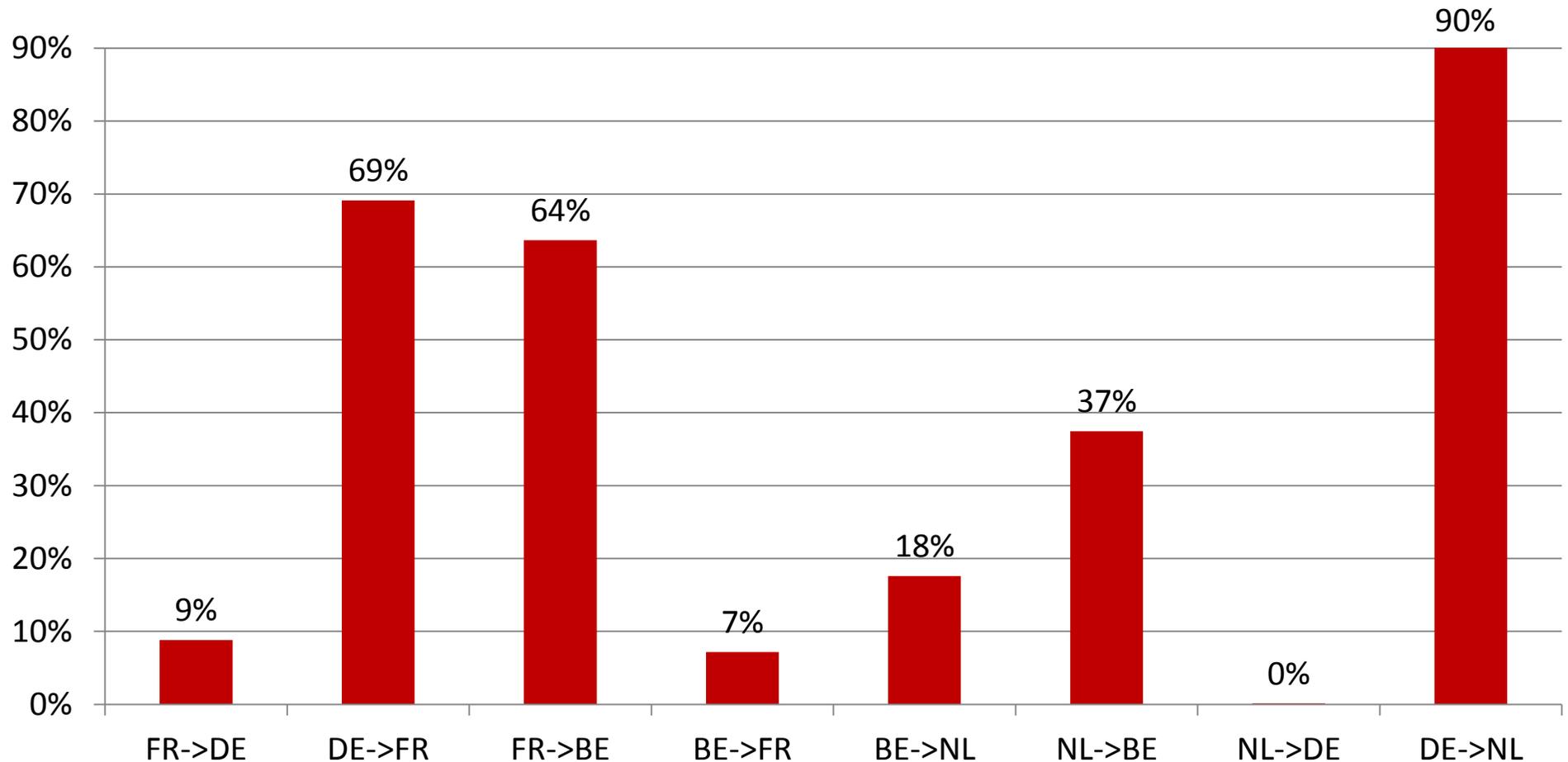
Average: February 2012 to February 2013



Average utilization of CWE interconnectors = Cross Border Flow / Daily ATC on interconnector
If ATC on interconnector = 0 → Utilization rate = 0%

CWE: ATC Utilization Rate

Average: October 2012 to February 2013



Average utilization of CWE interconnectors = Cross Border Flow / Daily ATC on interconnector
If ATC on interconnector = 0 → Utilization rate = 0%

2 - Monitoring results ATC coupling

b) Discussion

Questions?

