



# PCR Status Update

## European Stakeholder Committee

### 8<sup>th</sup> June 2017

EPEX SPOT



NORD  
POOL

cmie



OTE

TGE  
POLISH POWER EXCHANGE

Supported by:  
**europex**  
association of european energy exchanges

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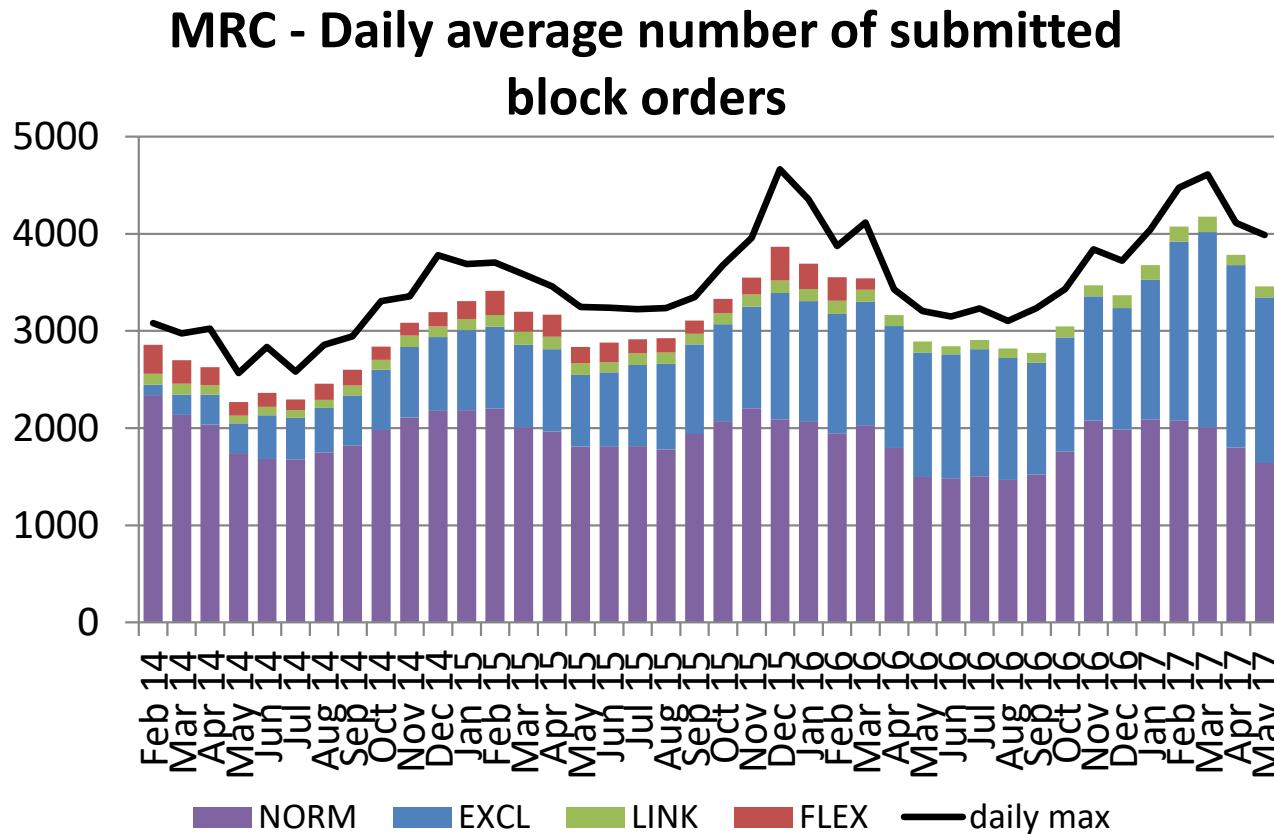
I. Euphemia Performance

II. System Upgrades

III. Extensions of Members / Geographic Use of PCR Assets

# I. Euphemia Performance

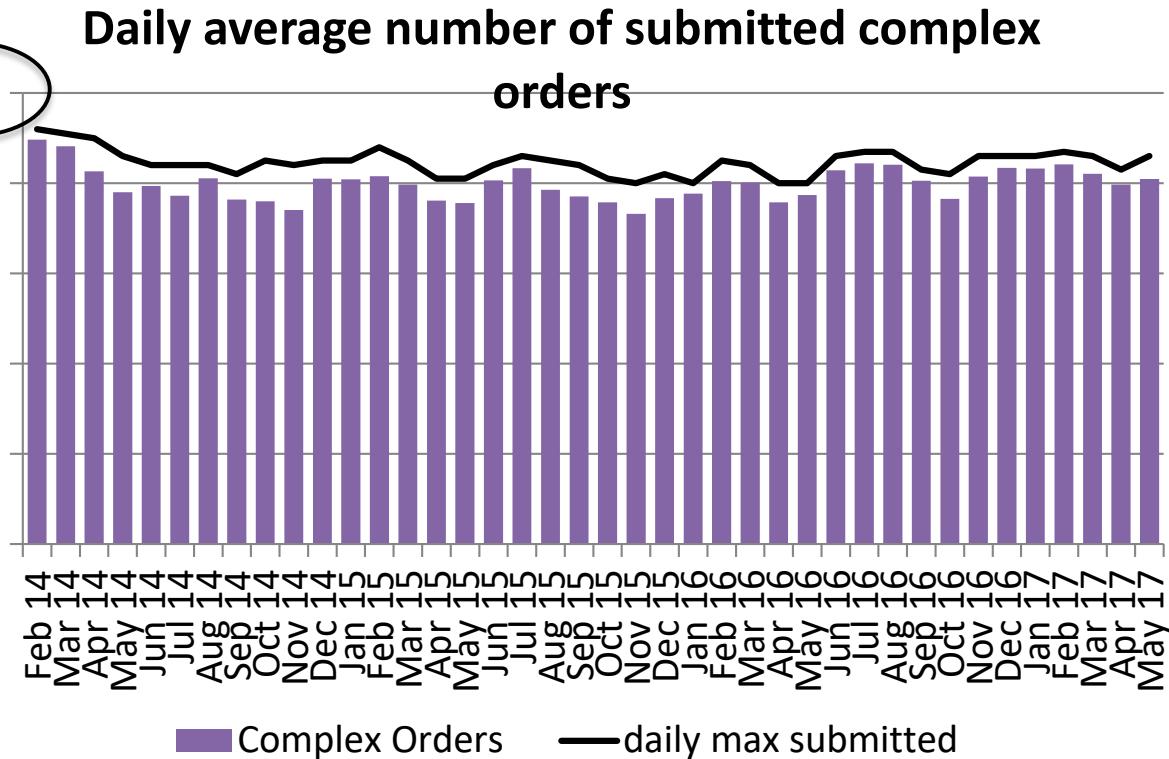
# MRC Orderbook Growth – Block Orders



#daily MRC Blocks continues to vary; Since 2015 the trend is an increase in the number of exclusive blocks

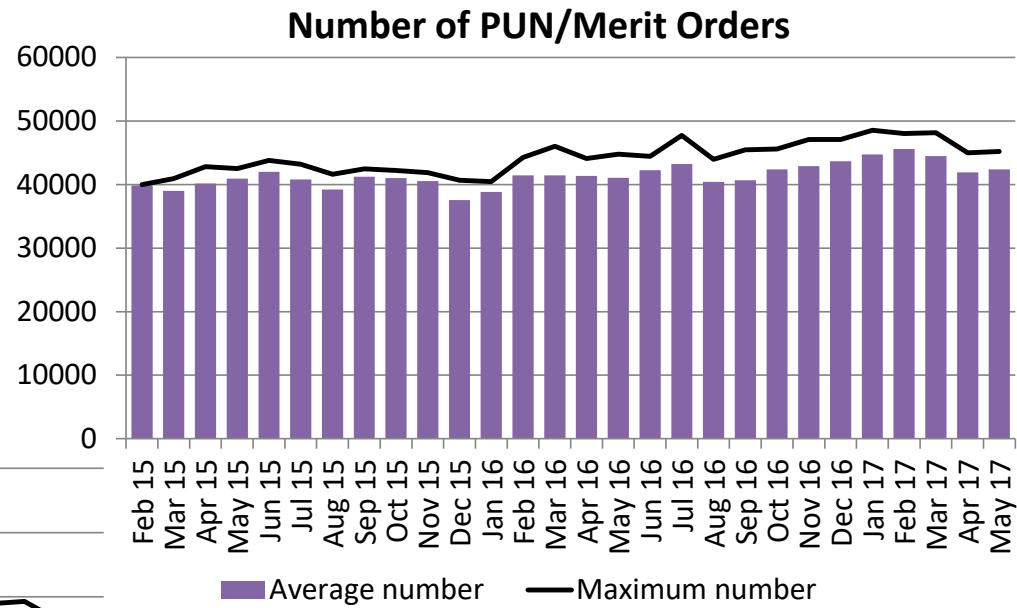
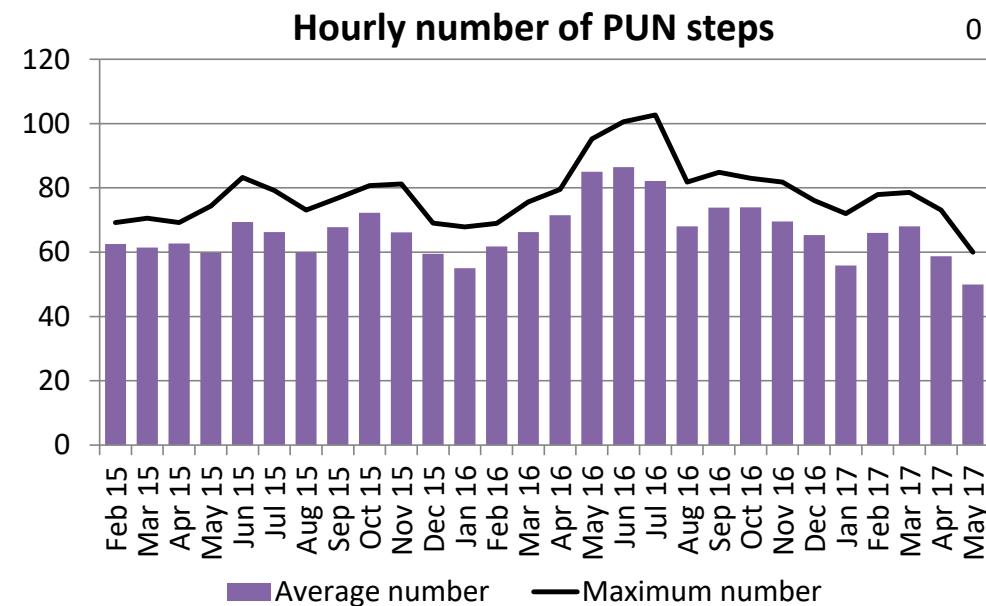
# MRC Orderbook Growth – Complex Orders

Note  
difference  
in scale



#Complex orders stable

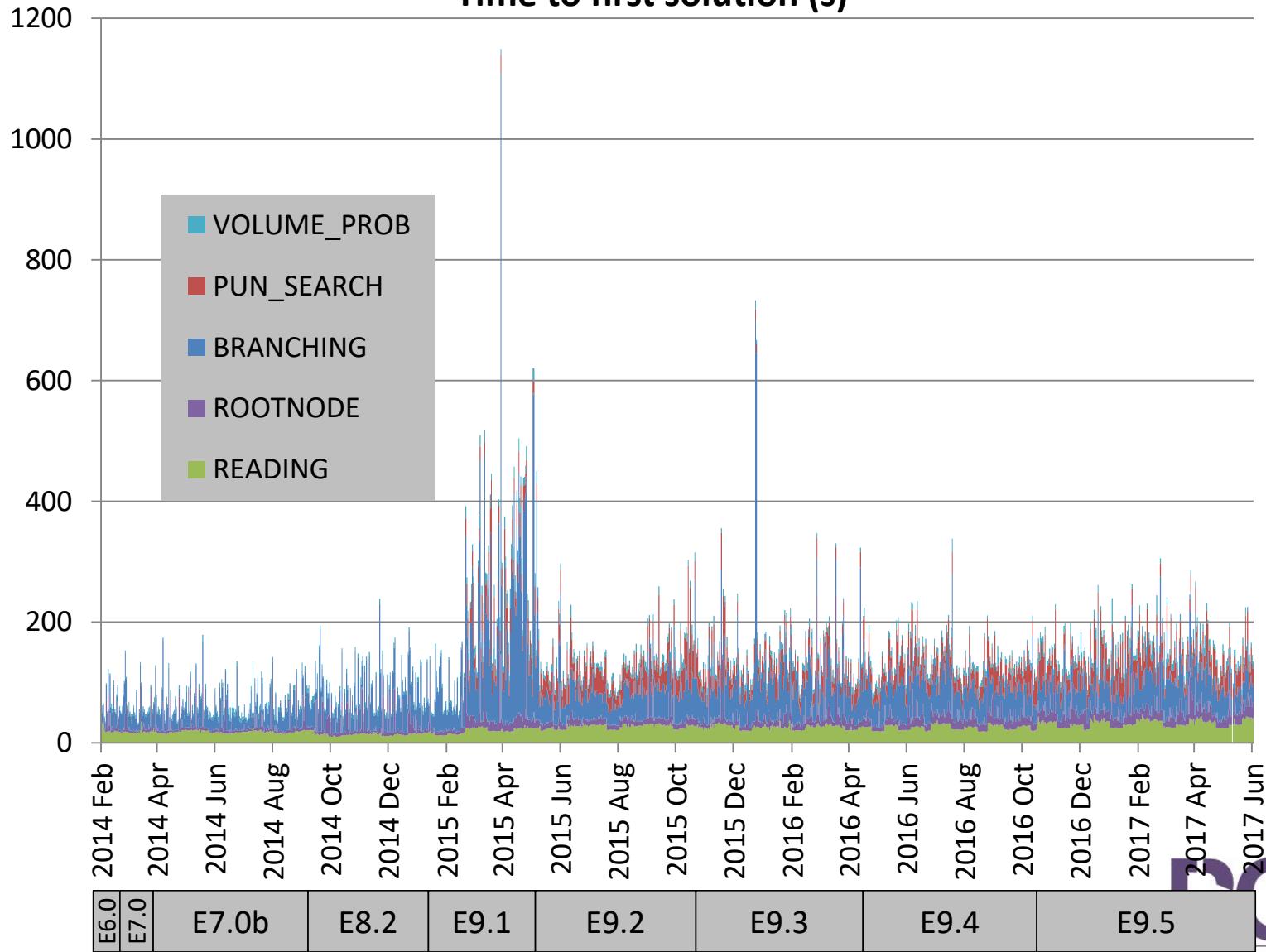
# MRC Orderbook Growth – Merit/PUN orders



# Statistics - PCR Algoritmic Performance

PCR algorithm performance update – Time to first solution (s) on MRC scope

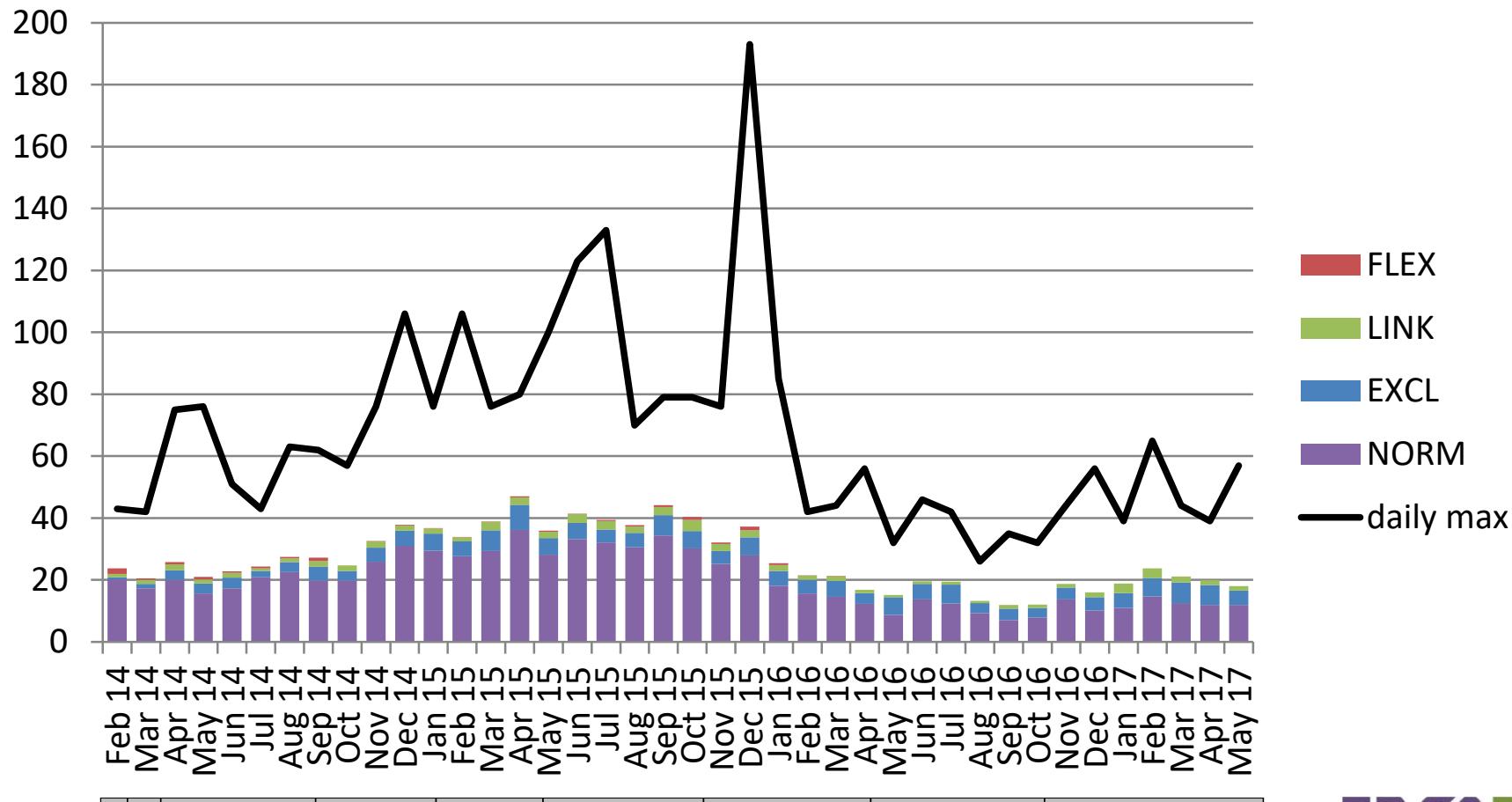
Time to first solution (s)



# Statistics - PCR Algorithmic Performance

PCR algorithm performance update – Number of PRBs on MRC scope

## Daily average number of PRBs

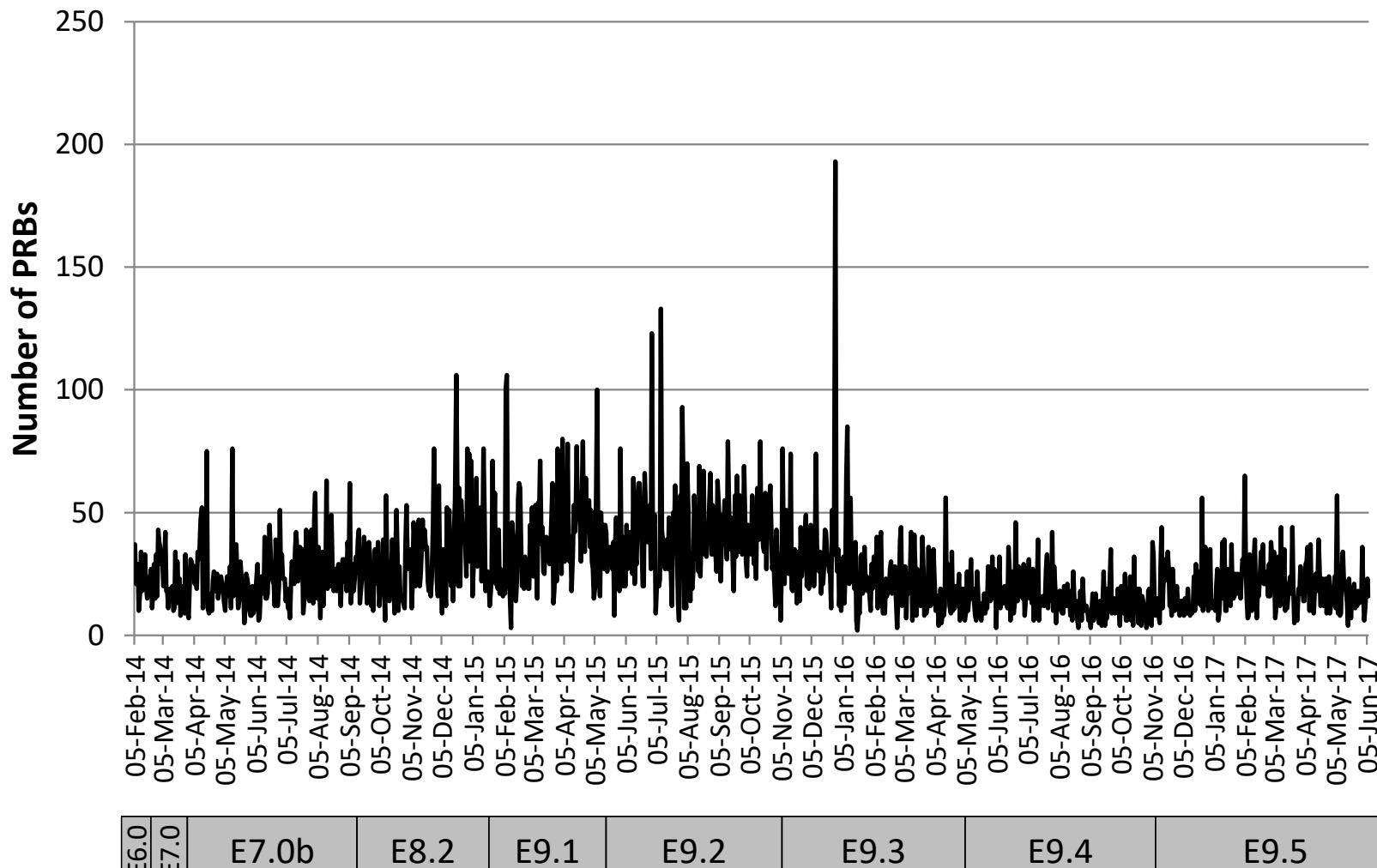


E6.0	E7.0	E7.0b	E8.2	E9.1	E9.2	E9.3	E9.4	E9.5
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# Statistics - PCR Algorithmic Performance

PCR algorithm performance update – Number of PRBs (on MRC scope)

## Number of PRBs

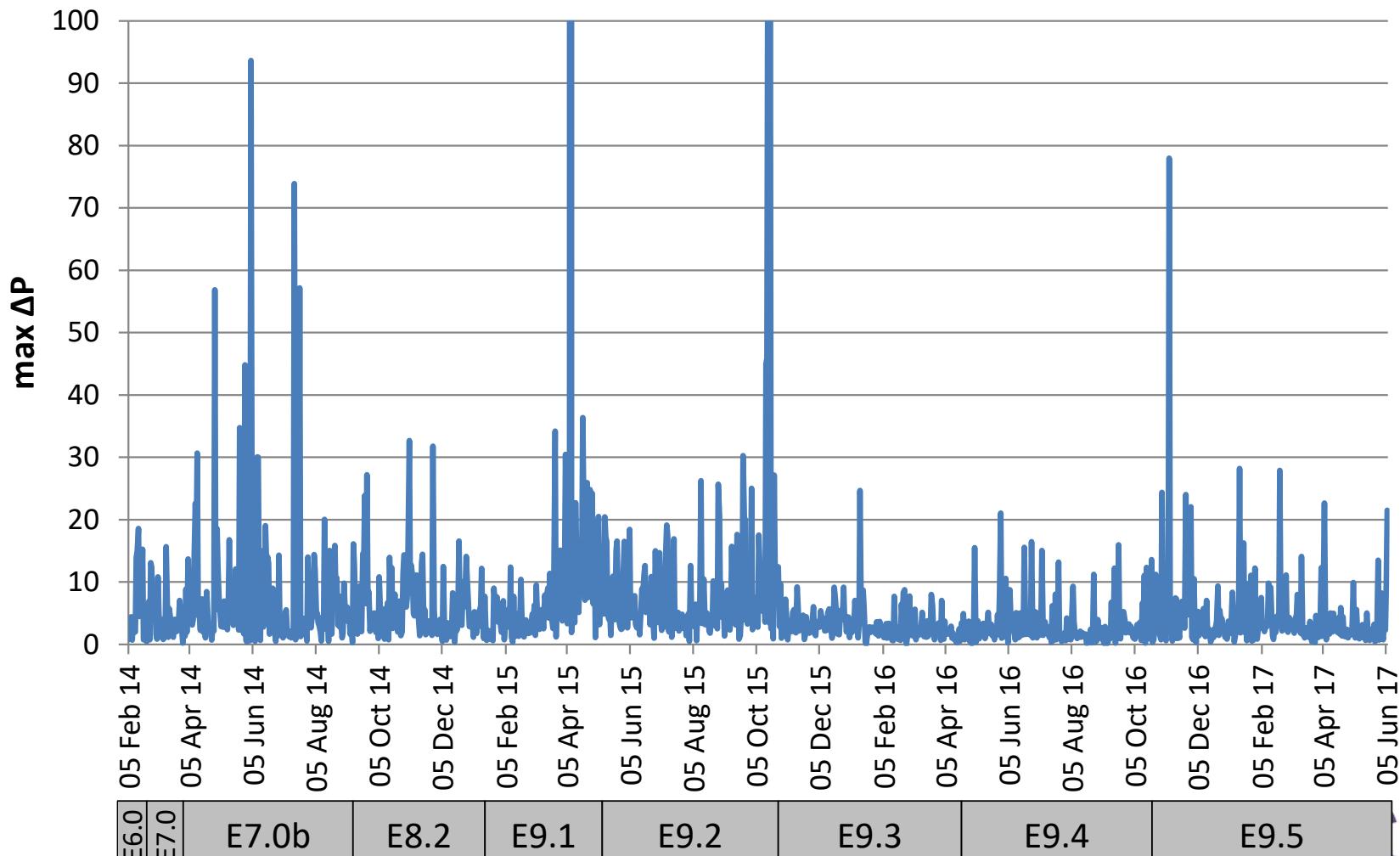


E6.0									
E7.0	E7.0b	E8.2	E9.1	E9.2	E9.3	E9.4	E9.5		

# Statistics - PCR Algorithmic Performance

PCR algorithm performance update – Max  $\Delta P$  (on MRC scope)

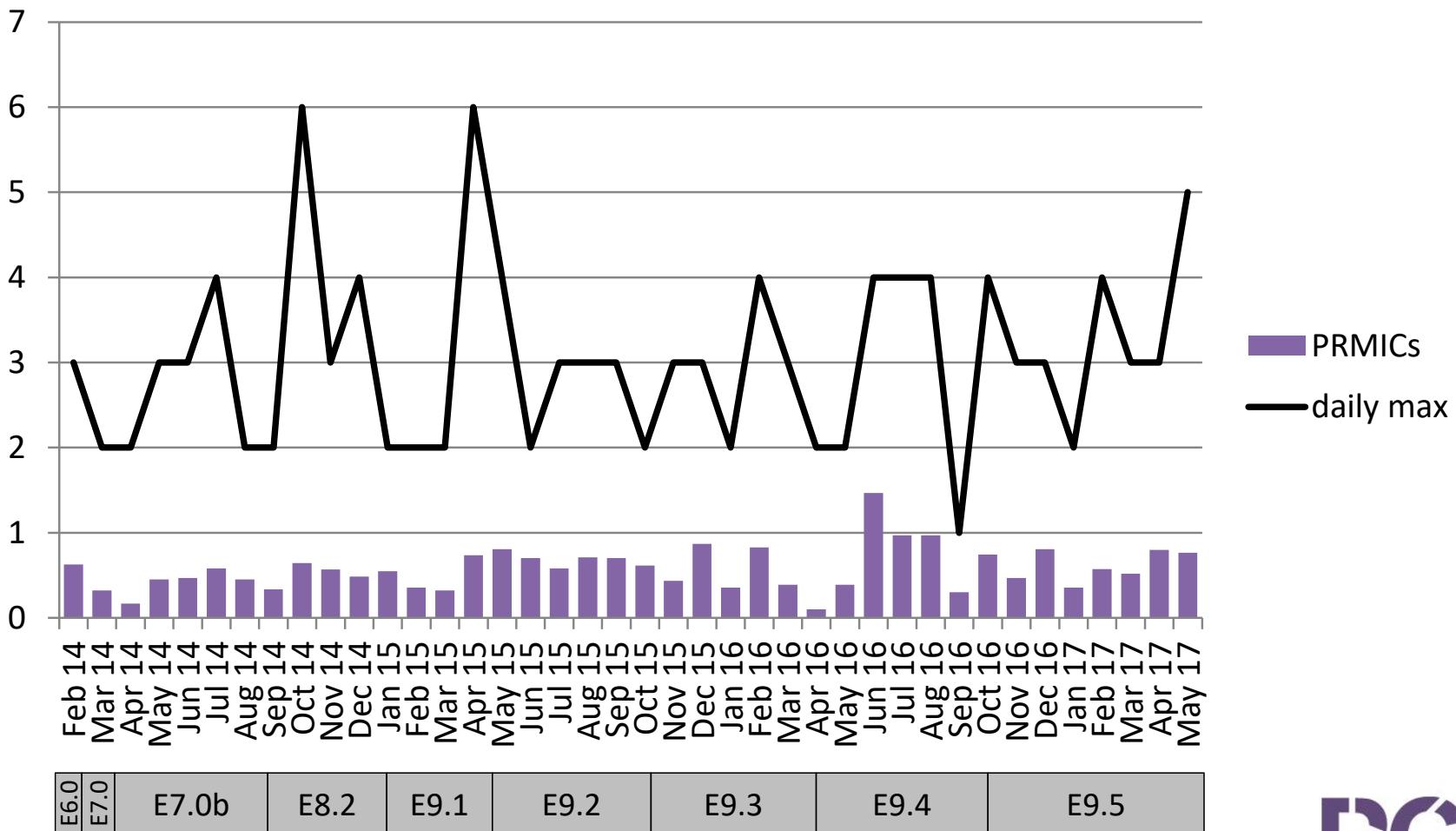
max  $\Delta P$



# Statistics - PCR Algorithmic Performance

PCR algorithm performance update – PRMICs (on MRC scope)

## Daily average number of PRMICs

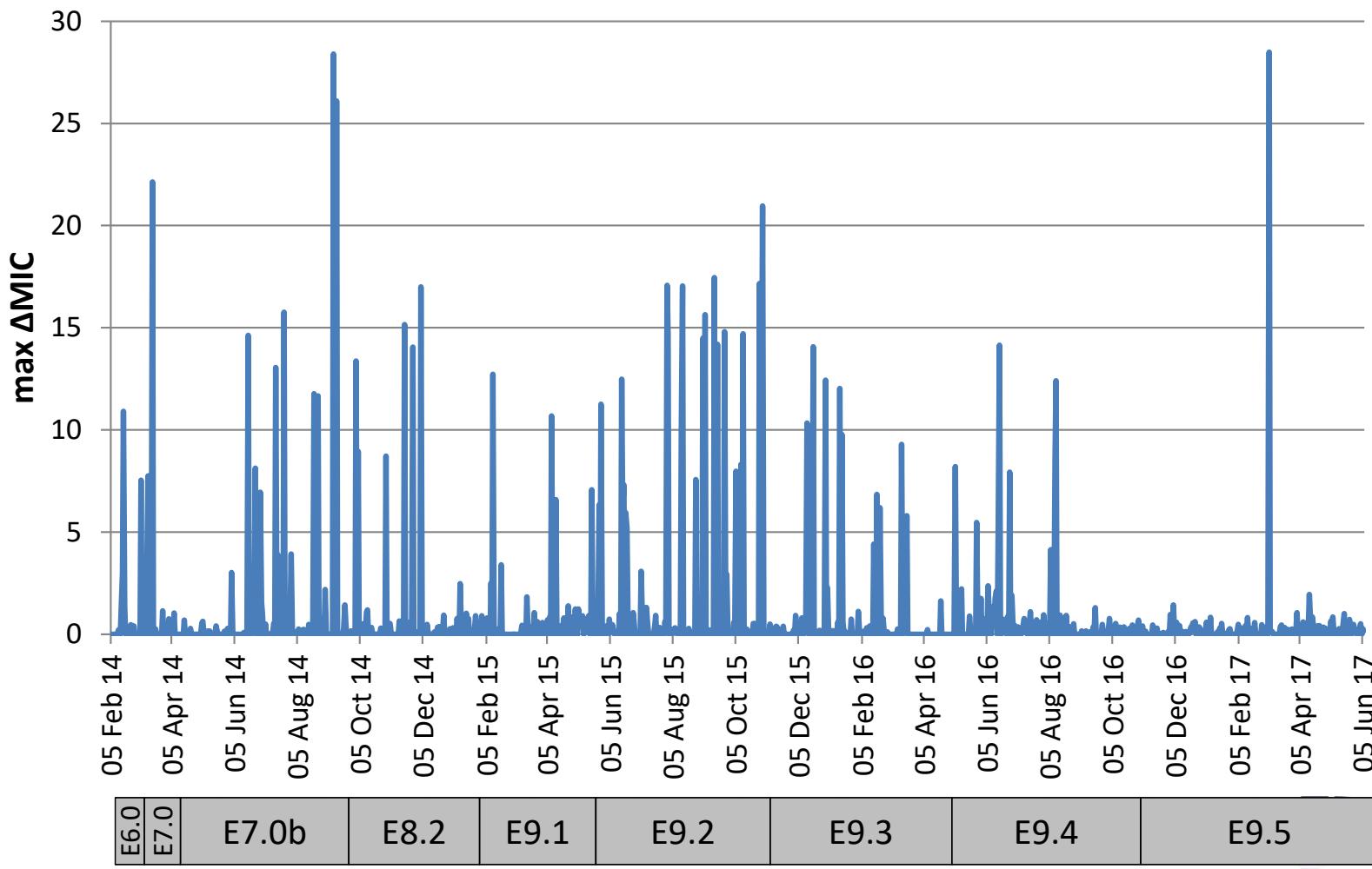


E6.0	E7.0	E7.0b	E8.2	E9.1	E9.2	E9.3	E9.4	E9.5
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# Statistics - PCR Algorithmic Performance

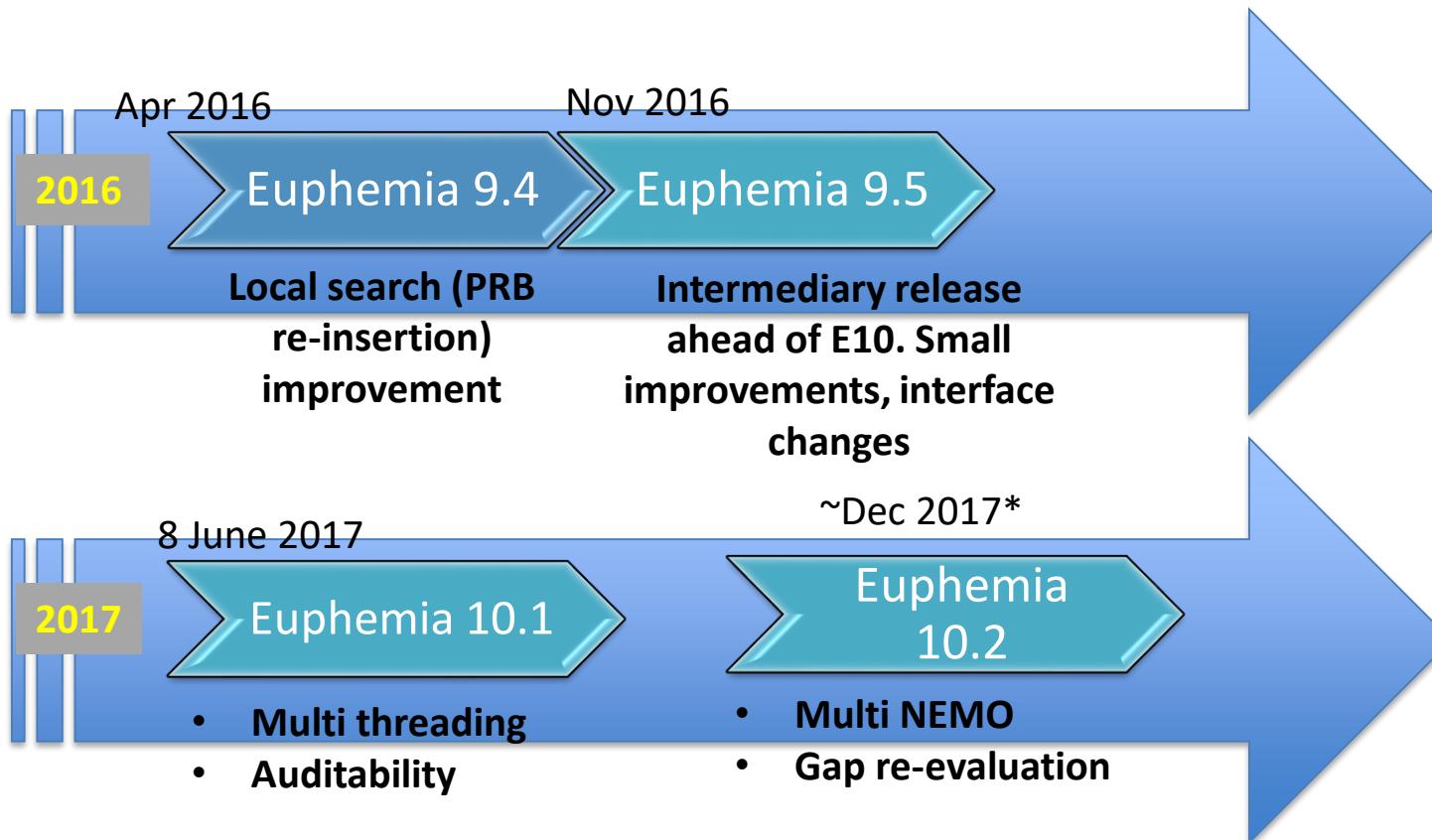
PCR algorithm performance update – Max  $\Delta$ MIC (on MRC scope)

max  $\Delta$ MIC



# Euphemia – Release Plan

- In order to cope with the expanding perimeter and the increasing number and complexities of the products that are used, significant performance improvements have been and are continued to be implemented within Euphemia.



\*Tentative: MNA requirements still being finalized between TSOs, NEMOs and individual MNA implementation projects

# PCR status – Algorithm working group

## E10.1 go-live, first delivery day 7 June

- Supports multi threading architecture
- Implements auditability requirement

**MNA requirements being finalized in dedicated group between NEMOs, TSOs and MNA implementation projects**

- Support for multiple NEMOs
- multi NEMO flow calculation

## II. System Upgrades

# General PCR status linked to system upgrades

## New PMB release version 10 – design phase on-going

- Fixing a few minor bugs
- Improving the system through a few minor CR:s (ideas from operators)
- Main changes needed because of the MNA are still being defined, and the SDWG has suggested to split the release into two phases, in order for the system provider to be able to start the implementation work while the design work is still being finalized.
- Expected go-live in Q1-Q2 2018. The prolonged design phase puts a strain on the schedule. The deadline for the providers to start the development is July 1<sup>st</sup>, 2017.

## Elements still under discussion for the MNA change :

- Inter- Nemo flow calculation (when and how)
- Decoupling scenarios
- Multiple scheduling areas within one bidding zone

**Inputs from MNA projects and TSOs are needed ASAP**

# **III. Extensions of Members / Geographic Use of PCR Assets**

## New PCR Full Members

(i.e. Adherences to PCR Agreements)

- 26.10.2015 Polish PX TGE
- 30.10.2015 Romanian PX OPCOM
- Total PCR Full Members: 7 contributing (paying and voting) Parties from 1<sup>st</sup> of February 2016

## New PCR Associate Members

(i.e. «Viewers» -> required signature individual NDA-Confidentiality Declaration)

- 26.07.2015 Croatian PX CROPEX, with market launch on the 10.02.2016\*
- 12.10.2015 Bulgarian PX IBEX, go live – inclusion in PCR on the 19.01.2016\*
- The Serbian PX SEEPX is presently completing its associate membership

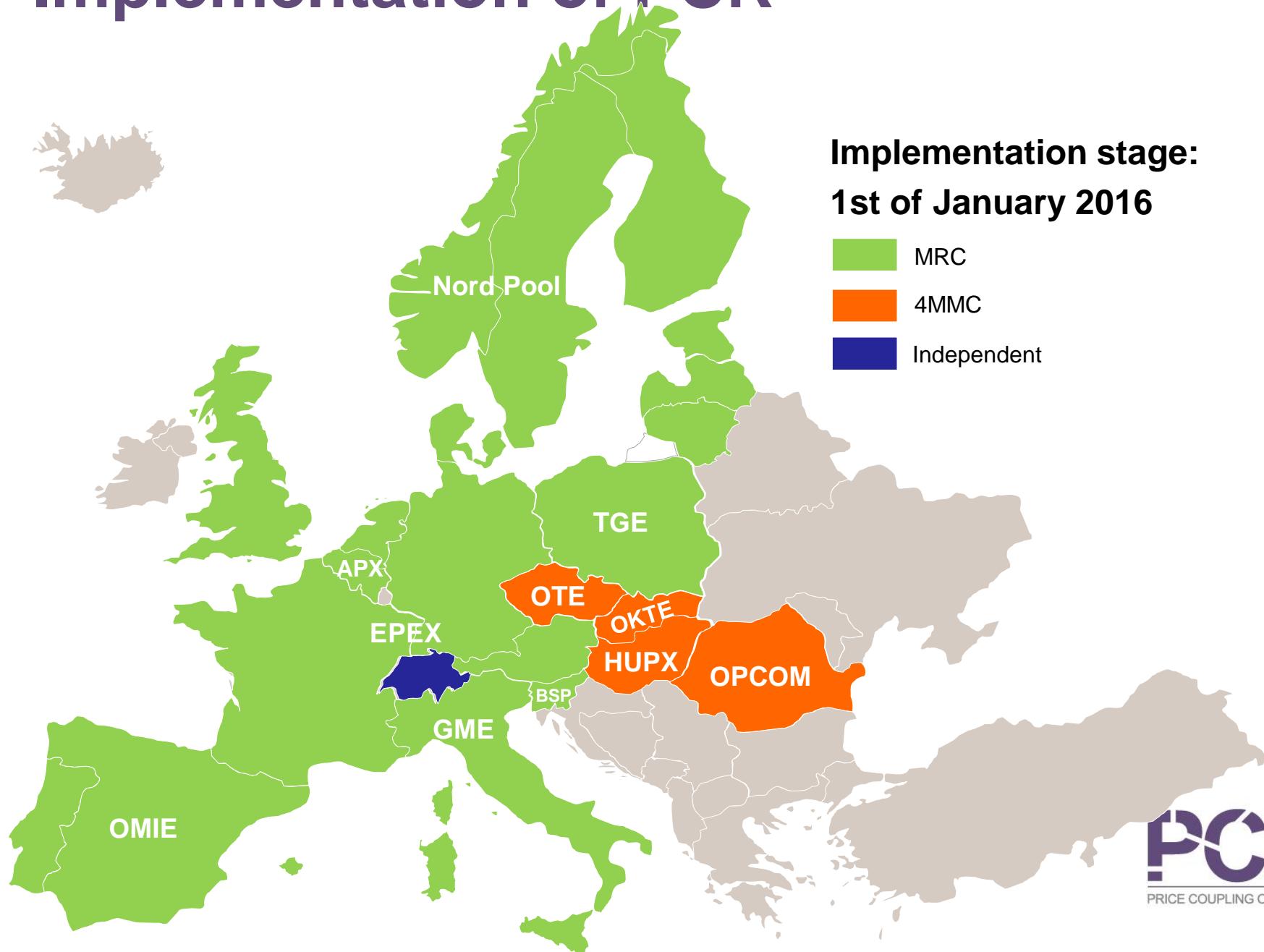
\*Both IBEX and CROPEX join the MRC process as PCR Serviced PXs by Nord Pool

## Recent extensions of the geographic use of PCR assets

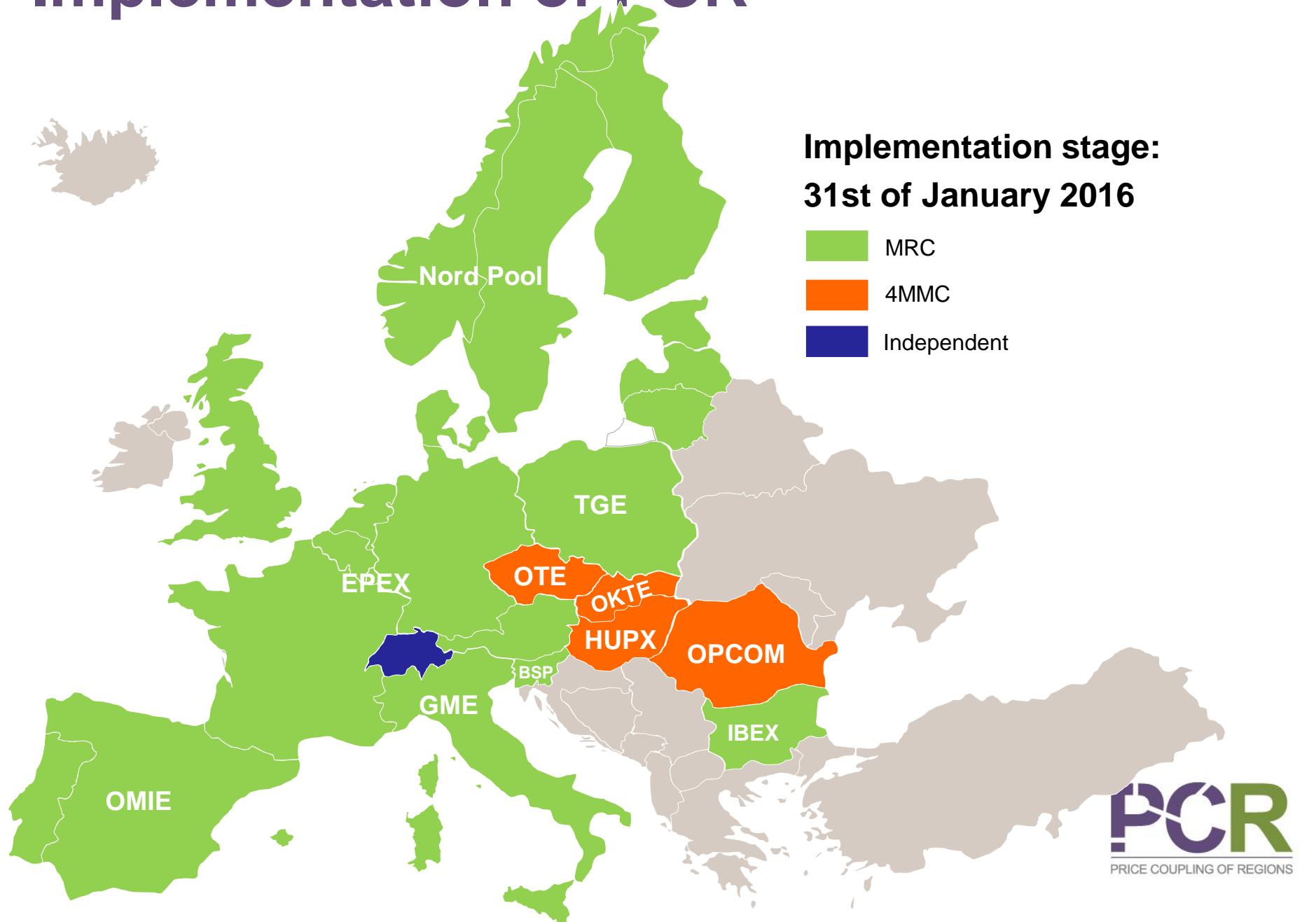
(i.e. New «serviced PX» -> required signature of the Multilateral Liability Agreement-MLA)

- 02.12.2015 Croatian PX CROPEX
- 03.12.2015 Bulgarian PX IBEX
- The Serbian PX SEEPX (only EUPHEMIA to be used) is presently completing the adherence to the MLA

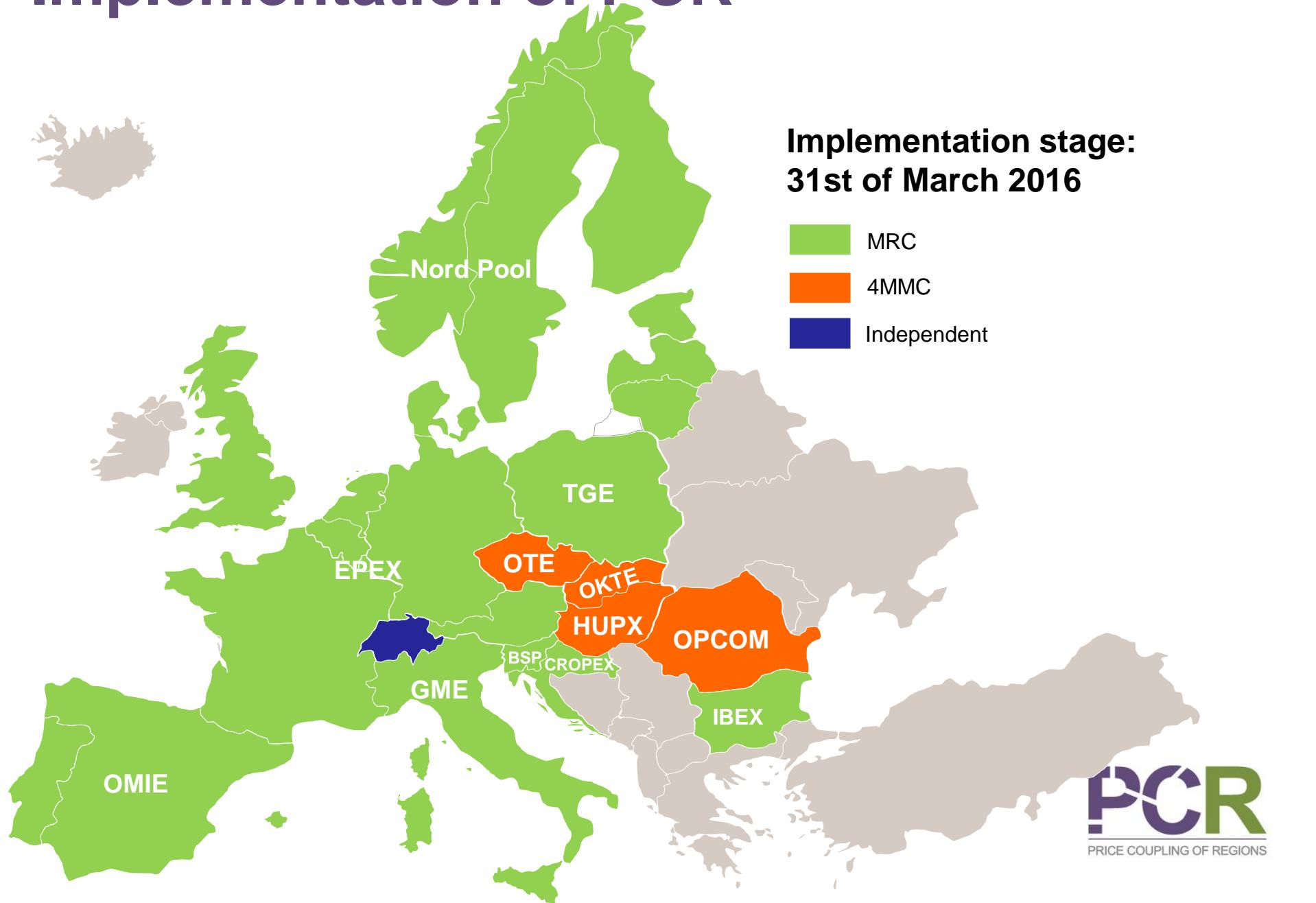
# Implementation of PCR



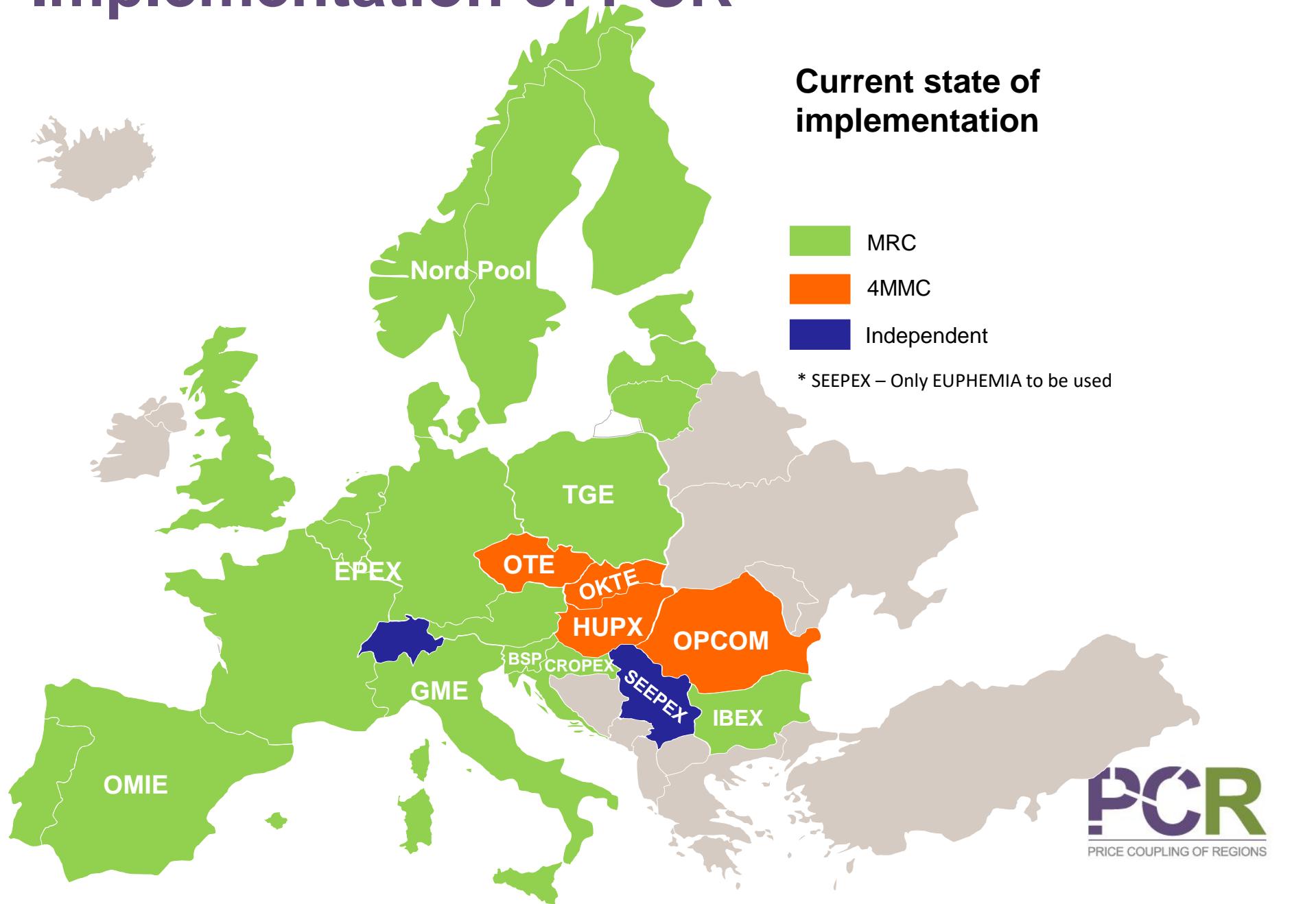
# Implementation of PCR



# Implementation of PCR



# Implementation of PCR



# Thank you!