PCR Status Update

Presentation to

MRC JSC — Dec 2nd 2015

ESC — Dec 3rd 2015

Agenda

- Approach for further Euphemia developments
- Cost recovery of further PCR developments
- PCR Memberships update

Approach for further Euphemia Developments

Context:

- **Stakeholders of the PCR Day Ahead Market Coupling expressed some questions and concerns about the functioning of the Euphemia algorithm**

- **PCR permanently invests in performance increase by developing new releases. Further performance increase of the Euphemia algorithm must be anticipated:**
  - The diversity of the combined product portfolio's combined with the growing size of the order books in the coupled MRC area is increasing the complexity
  - Growth of number of bidding zones must be anticipated
  - Market coupling process constrains the available time for the algorithm calculation

- **PCR wishes to be a responsible, transparent and trusted solution provider for the European Day Ahead Market Coupling and wishes to assure:**
  - Clarification of the design choices followed for Euphemia and their consequences
  - Insight in the performance evolution of the current Euphemia algorithm
  - Continuous improvement

- **Therefore PCR initiated a process to define next steps of the Euphemia developments and to keep the stakeholders informed**

Approach for further Euphemia Developments

Proposed way forward

- **PCR is continuously monitoring the current performance issues of Euphemia and investigated the concerns. Some of these concerns were taken on board in EUPHEMIA 9.3 released on 26th October 2015.**

- **PCR asked its algorithm provider nSide to propose new design options to address the remaining concerns and to further improve performance of the Euphemia**

- **Nov 20th 2015 a specific workshop was held with the experts where the concerns, the options and their feasibility were discussed in detail. Some proposed performance measures are incremental, some are more radical**

- **In the decision process about the future developments, we must be aware of:**
  - The anticipated evolutions of the market and the coupled regions
  - The fact that some of the possible design options still need further R&D to prove their effectiveness
  - The cost of the further developments and R&D

- **PCR wishes to present an overview of the design options to its stakeholders in a dedicated stakeholder forum**

Approach to further Euphemia Developments

Concept of the PCR Stakeholder Forum

Date: January 11th 2016

Venue: Brussels Airport Sheraton Hotel

Envisaged Participants:

- Representatives of the PCR stakeholders (NRAs, TSOs, MPs, Associate Members) with competency to participate in the debate about the design of the Euphemia algorithm (80 participants on site – max. 2 per party - online broadcasting will be facilitated)

Focus: Next steps in the Euphemia Development

- Inform the Stakeholders about current status, performance and improvement areas of Euphemia
- Explain and discuss the way forward for the further development of Euphemia
- Structured process to receive suggestions/feedback from the stakeholders via the respective interest groups after the forum

Agenda Stakeholder Forum Jan 11th

09.00: Conference Room accessible

10.30: Registration and welcome coffee

11.00: Introduction of the topic by the PCR Chair /Start online broadcasting
- Current status PCR
- Recap and acknowledgement of the concerns expressed by the stakeholders regarding Euphemia
- Purpose of the day

11.15: Overview of the current concept and requirements of the algorithm
   (goal = explanation of the concerns versus the complexity to deal with)
- Proactive tackling of known questions : Overview of the current top concerns expressed by the stakeholders (equal treatment of different size of bids and market areas, numerical instability, PRBs, Optimization function and optimality gap, …)
- Diversity product types per area, Number of areas
- FB/ATC
- Heuristics principles – consequences of the chosen heuristics
- Any available results from the current nSide research

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Agenda (ctd)

12.15: Overview of Performance measurements

(goal = explain the results of the coupling so far and overview of the progress areas)

- Objective performance data:
  - Time to first solution
  - Number of solutions
  - Increase of welfare after computation time extension
  - Number of PRB
  - DeltaP
  - Time spent in each submodule
- Release history of Euphemia until today Euphemia 9.3 (goal = show the continuous improvement measures that PCR has taken regarding performance)
- Overview of the future progress areas for the algorithm

13.00 : Walking Lunch Buffet

14.00 : Next development steps for the Euphemia algorithm

- Overview and progress of the ongoing research goals and initiatives in PCR with nSide
- Euphemia Release planning for 2016
- Introduction for the structured feedback from the representative groups

15.00: Coffee Break

15.30: Q&A - debate

16.15 : Recap of the day and closing word by the PCR Chair

16.30 : End

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Cost recovery of further PCR Development

CACM implementation influences the cost management of the future developments in PCR

This implies that:

- **PCR needs to receive recognition as the future day-ahead market coupling solution according to the CACM**

- **Cost recovery and cost sharing for further developments must also be ensured according to the CACM guidelines**

Therefore :

PCR parties have sent a letter to ACER on November 13th 2015 requesting comfort about these subjects

PCR Membership Update

Evolution of the PCR Memberships

New Full PCR Memberships:

- **TGE** has signed the adherence agreements to PCR co-operation and coownership agreements and finalizing the payment process of historical cost.

- **OPCOM** finalizes the signature process of its adherence agreement to PCR

New serviced PXs, also becoming associated PCR members:

- NPS will start to service **IBEX** with the PCR – MRC solution
- NPS will start to service **CROPEX** with the PCR – MRC solution
- EPEX will start servicing **SEEPEX** with a separate instance of Euphemia

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Thank you - Q&A