Status NWE DA & ID Projects

European Market Design Working Group
October 26th 2012

29.10.2012

DAY AHEAD PROJECT

29.10.2012

NWE Day Ahead Project – Status Report

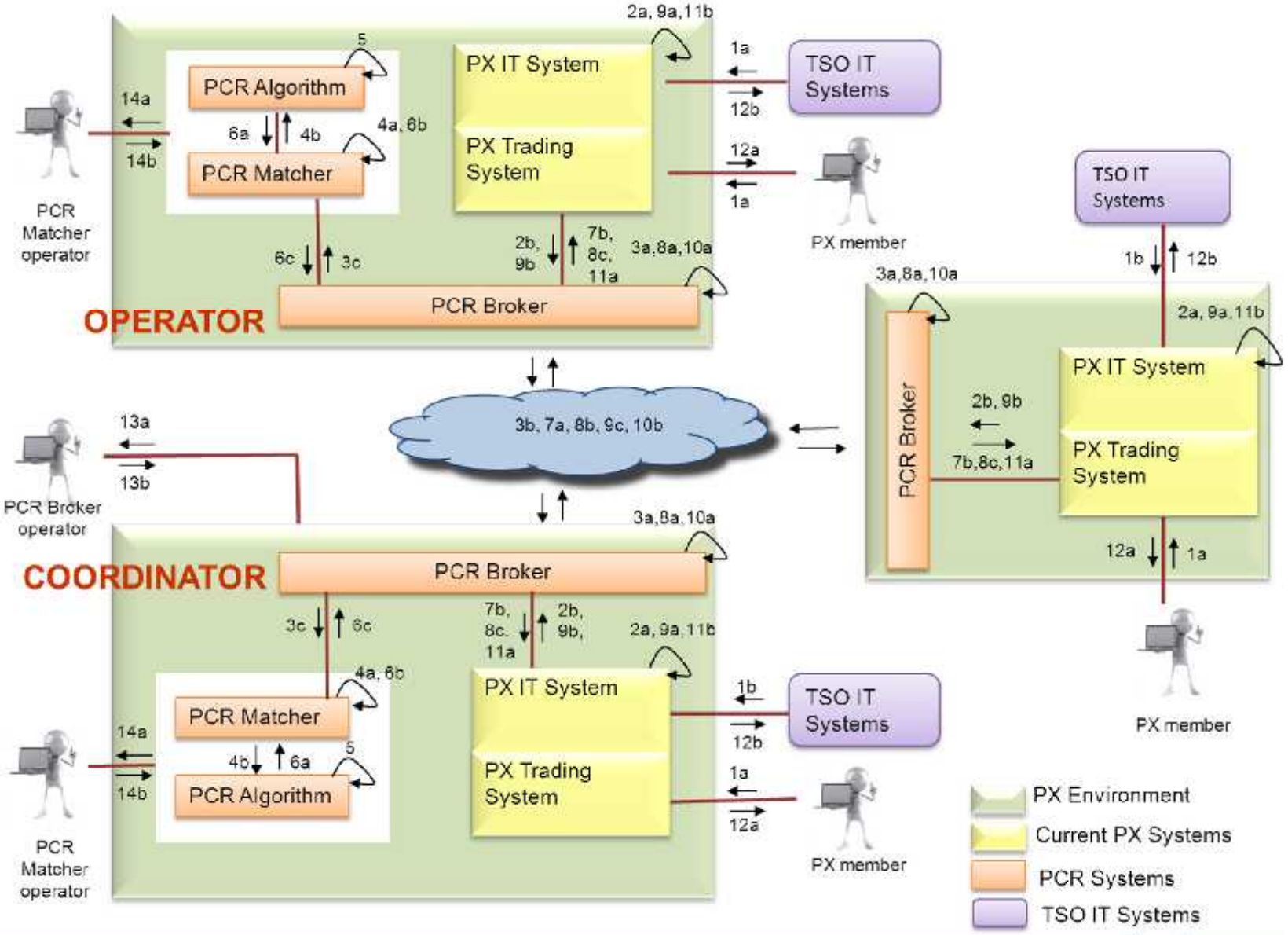
Design Assumptions

- The market coupling systems used in CWE, Nordic-Baltic and ITVC (via EMCC) will be replaced by the **PCR Matcher and Broker (PMB) systems** which will be **implemented in each NWE PX IT system** and operated by each NWE PX. This system embeds the PCR Algorithm developed by the NWE PXs together with OMIE and GME and is intended to be the algorithm used for European Price Coupling (EPC).
- All **systems and procedures of TSOs and PXs currently used in the CWE and Nordic-Baltic regions are re-used as much as possible**. It has become apparent however that some of these systems will need changes to adapt to the NWE solution.
- For the **CWE-Nordic interconnections**, the Central Counterparties (CCPs) of CWE and the Nordic region will handle the physical and financial settlement for the CWE – Nordic interconnections.
- To **integrate the GB market** into the Price Coupling solution, new systems and/or interfaces need to be developed and/or adapted between GB, FR and NL (including within GB as between the two GB PXs). Currently, discussions are still ongoing on how to implement the so-called “Virtual Hub” solution linking GB via IFA and BritNed to the EPC.

PCR Operation High Level Process

1. Regional TSO systems send their capacities to the corresponding PX system
2. Regional and participating PXs send their order books and capacities to the PCR Cloud
3. Coordinator, hot back-up coordinator and operators receive all capacities and order books from the PCR Cloud
4. Coordinator runs the algorithm and sends the market results to the PCR Cloud
   - Hot back-up coordinator runs the algorithm in parallel (shadow run for backup purposes)
   - Operators can also run the algorithm in parallel (shadow run for internal purposes , and validation process)
5. All PXs receive the results from the coordinator and validate them
6. PXs send agreed information to the National/Regional TSO systems according to their privately agreed content and mechanisms

PCR Architecture



PCR High Level System Design: Technical Principles

- **All PXs are connected** to each other through MPLS (or an alternative mean) using secure channels
- **Each PXs is connected to the related TSOs** for receiving capacity information and sending the required information (nominations, clearing info,…) as today
  - This is **responsibility of** each particular/regional **PX**
- A **data sharing solution** is created based in the implementation at each PX of a PCR Connection Broker (**PCR Broker**) which is responsible of interfacing the PX systems with the rest of the PXs
  - Together, all the PXs' PCR Brokers form the **PCR Cloud**
- Each PCR Broker is in **continuous connection** to the other PCR Brokers, **access** to the internal PX market information**, validates it, and publishes it** to the PCR Cloud
- Several **validation layers** to ensure the detection of potential errors or problems as soon as possible in the information flows
- The **PCR Matcher** wraps the algorithm and ensures that each exchange runs the **same common algorithm** with the same data and the same configuration parameters
- **PCR results** provided by the **Coordinator PX**. Operator PXs may verify results through a shadow matching for internal and validation purposes

NWE Day Ahead Project – Status Report

High level architecture of NWE Price Coupling

- HLA finalized for CWE & Nordic region, inlc ITVC connectors – HLA GB still under discussion

Losses on DC cables in NWE Price Coupling

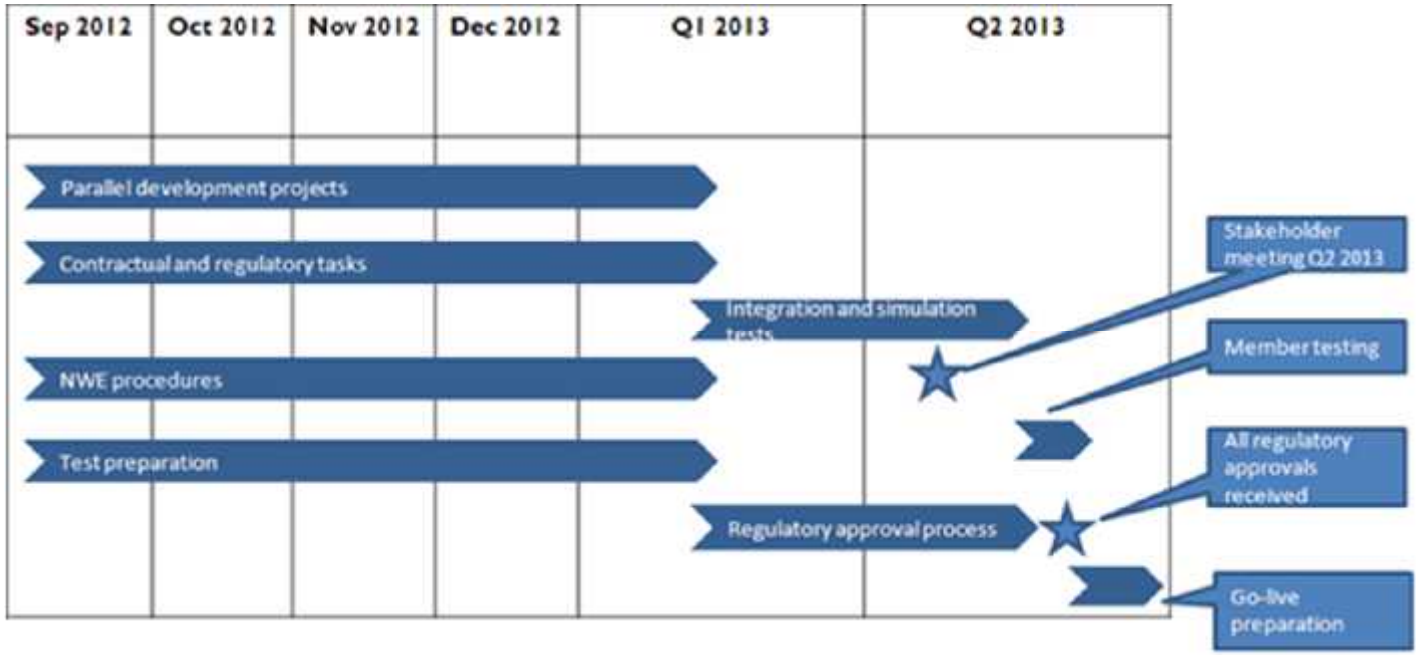
- Meeting and discussion on losses on DC cables between the NWE parties and the NRAs has taken place. The NWE Price Coupling project takes notice that the **NRAs' working assumption** is that **losses should be taken into account by the algorithm for all HVDC connections with a common method** unless there are other technical constraints for certain interconnections which would pose a social cost and reduce social welfare.

Fallback solutions in NWE

- For the fallback solution the NWE parties will **continue with the current arrangements** in place for the CWE region, the Nordic-Baltic region and the CWE-Nordic interconnectors (except the Baltic cable).
- For the internal borders in the CWE region and for the CWE-Nordic interconnectors (except the Baltic cable) this means **using the shadow auction system of CASC**.

NWE Day Ahead Project – Status Report

Overall Target Planning



Contractual Framework

- **PCR Agreements** between PXs - signed
- **APCA Design & Implementation** - signed between PXs and TSOs
- **APCA Operations** ("European Price Coupling Agreement") – under discussion

INTRADAY PROJECT

29.10.2012

NWE Intraday Project – Status Report

Tendering Process launched

- Concerned PXs, supported by Europex, submitted **procurement proposal to ACER** on Sep 14th . Procurement proposal consists of a **tender** for the selection of an ID system to accommodate the Interim Solution.
- ACER endorsed the tendering procedure with a strict **planning**

1. Launch of the tender by the PXs (end October / beginning November)
2. Tender closing (end November / beginning December)
3. System Provider selection by PXs (end 2012)
4. ENTSOE validation of the selected System Provider (end 2012)

- TSO requirements have been submitted to PXs for inclusion in Request for Proposal (RFP).
- Request for Information (**RFI) launched** on Oct 18th on website of concerned PXs
- PXs are currently building their RFP in order to launch a tender, aiming at selecting a Service Provider that will develop and implement a “CMM/SOB” system by end of 2012.
- PXs are finalizing a PX-PX Cooperation Agreement (cf PCR Agreement in DA)

NWE Intraday Project – Status Report

TSO Requirements

- NWE and non-NWE requirements are approved by ENTSO-E
- Main requirements attributed to CMM-function :
  - Cross zonal capacities reception and confirmation
  - H2H matrix and ATCs table computation and publication
  - Cross zonal capacities update
  - Halt and un-halt allocations on a specific border
  - Reception of explicit capacity requests
  - Allocation of capacity and confirmation of results
  - Net position computation and communication
  - Schedule exchanges computation and communication
  - Communication flows have been defined (format, protocol, language, frequency of update and timing)
- Extendibility of the system to take into account future enduring requirements

NWE Intraday Project – Status Report

TSO involvement in selection process

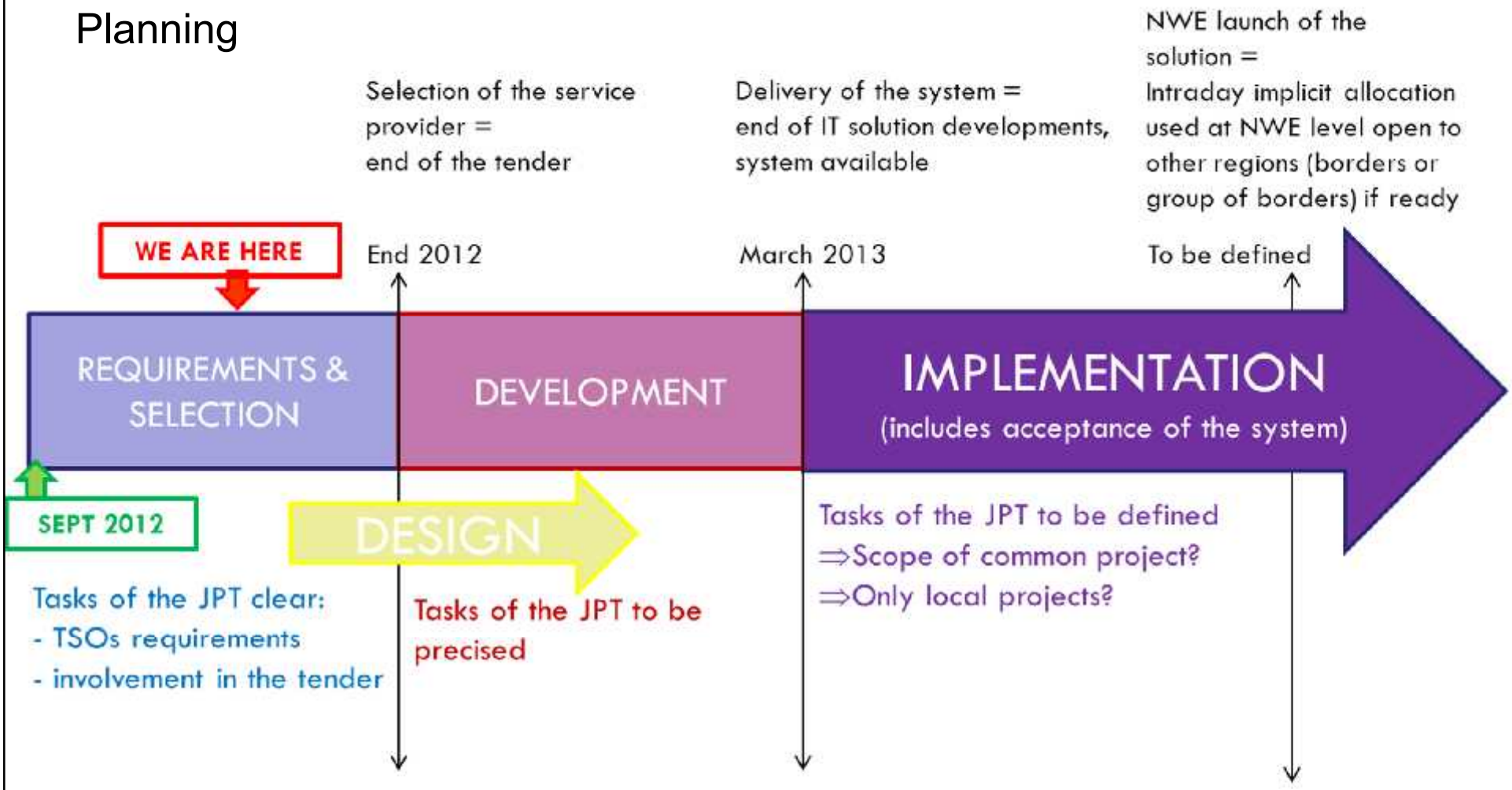
- **TSOs validate RFP document** against the submitted TSOs requirements
- Usual regular meetings to get PXs' progress status about the Service Provider selection with full transparency – if needed, ad-hoc meetings to tackle specific issues dealing with TSOs requirements only
- Observer in teams evaluating the bids during selection process
- Receive also PXs weekly progress status that are reported to ACER and EC
- **Validation of the system proposed** for selection by PXs against the TSOs requirements

Challenges Ahead

- Besides the inclusion of functional requirements, a transparent TSO/PX cooperation framework is needed.This includes mainly :
  - **Governance Principles** (a.o. decision making, transparency to stakeholders,…),
  - setting up a **Contractual Framework** (for design & implementation as well as operations- cf APCA)
  - provide a clear **Extension Process** (extension rules & roadmap to inlcude other countries) and
  - assure the inclusion of **Enduring Requirements** (flow-based compatibility; capacity pricing; sophisticated products,…)

NWE Intraday Project – Status Report

Planning



- Planning based on the dates given to the PXs proposal to ACER of 14/09/12
- Project scope and organization for the development/design and implementation phase will have to be defined during design phase