4M Market Coupling
Extended High Level Market Design

Defining the planned 4M MC solution

29 April 2014

Table of contents

1. Introduction

This document describes high level market design extended with the outcome of the design phase (including the technical solution as well) to be implemented for the day-ahead Market Coupling of the Czech Republic, Slovakia, Hungary and Romania (hereafter also so called 4M Market Coupling or 4M MC) based on the implemented CZ-SK-HU MC solution defining the necessary changes. 4M MC is an ATC based day-ahead implicit allocation process striving on the compatibility with the EU Target Model as much as possible while taking into account the fact that 4M solution is to be considered as an interim step before the Central Eastern European ("CEE") regional solution.

The 4M MC is open for every other parties willing to join it, and who are able to meet in time the high level requirements described in this document and further ones elaborated in the related contracts without hindering the 4M parties' Go-Live by the planned target deadline: 11 November 2014.

Legal Disclaimer: *This document is not legally binding and does not constitute any legal obligations or agreement whatsoever. This document cannot be considered in any possible way as an alteration of existing contracts or as a new legally binding standalone contract.*

The document limits its general description (high level concept) to normal operation procedures, only the need of preparing back-up and fall back solutions is mentioned.

1.1. History of the project

According to the Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003 (Regulation 714/2009/EC) the regionally harmonized scheduling process and the coordinated capacity allocation is set. The common allocation is, in addition to the long term, generally for the day-ahead timeframe organized by the Central Allocation Office GmbH owned by the CEE TSOs.

Before the launch of CZ-SK-HU MC (only the daily (D-1) market-coupling CZ-SK was functional, it was organized by OTE and OKTE as market organizers (PX) and supported by ČEPS and SEPS as the respective transmission system operators (TSO). The algorithm of evaluation of cross-border transactions (market-coupling algorithm) has been created and implemented on a contractual manner as part of business system of OTE and OKTE. The results of implicit auctions and of nominations were handed over to the TSO´s systems on both sides of the border by one of the market organizers in the master role, their master/slave role was changed in regular intervals.

Hungary was not involved in any operating market coupling solution before the CZ-SK-HU MC. The Hungarian day-ahead organized market has been operated by HUPX, owned by MAVIR, since 20 July, 2010. On the spot market only hourly products were traded till August 2011, when block orders were introduced.

In order to implement the CZ-SK-HU MC the regulators, the power exchanges/market organisers and the transmission system operators of the Czech Republic, Slovakia and Hungary have signed a Memorandum of Understanding on 30 May, 2011.

As a result of the CZ-SK-HU MC Project the operation of an ATC based day-ahead implicit allocation has started on 11 September 2012 in the involved market areas and on the borders between them.

Romania, as an EU member state, is also committed to meet the requirements and expectations set up for the countries of the CEE Region to which it is adjacent. Namely, thanks to Romania's close

geographical proximity to them, the Romanian Parties are keen on cooperating with the Czech Republic, Slovakia and Hungary. Romanian NRA, TSO and PX sent their Letter of Intent on 6 December 2011 to emphasize their willingness to join the CZ-SK-HU MC.

The project started in 2013 where technical, procedural and legal possibility of extension was investigated. In August 2013 national regulatory authorities (NRA) approved to start the design and implementation of the ATC and PCR based extension of the CZ-SK-HU MC towards Romania (4M Market Coupling – 4M MC) and since then the project aimed to go-live as soon as possible.

In April 2014, the project announced the go-live date to be set to 11 November 2014.

The Extended High Level Market Design as result of the feasibility and design phases is described in this document. Further details are to be elaborated during the implementation phase.

1.2. Goals of the project

From the technical and economical point of view centralized architecture for many functions is beneficial because it translates complex and complicated many-to-many relationships among participants into one-to-one relationship, thereby facilitating further enlargement of the market coupling to other market areas.

Before the implementation and taking into account above mentioned facts, Parties agreed to implement the solution, which is as much as possible compatible with NWE, at least as follows:

- Full compatibility of inputs and outputs of the algorithm for evaluation of MC with NWE (implementation of PMB and Euphemia) to enable linking the two regions or newcomers in the future. This efficient approach means implementing a NWE solution as close as it is possible, while adapting it to the 4M MC circumstances (e.g. in case of PXs adaptation to gate closure time (GCT) at 11)..
- Same roles and responsibilities, where feasible and rational, stemming from CZ-SK-HU MC arrangement (e.g. centralized TSO system and TSO shipping).

Further, the project strives to:

- Determine a model of accountability for individual activities and define a contractual framework among the participating entities.
- Set the conditions for enlargement to additional market areas mainly focusing on other CEE borders but South Eastern European (SEE) borders are also welcome.
- Fix fallback procedures for a case of “decoupling”.

The solution is developed in harmony with the anticipated Capacity Allocation and Congestion Management Framework Guideline, the relevant Network Codes and the mechanism in the NWE solution[1] to ensure the simplest and quickest way of coupling towards the NWE region according to the Joint Declaration of ACER and NRAs of CEE region[2] and not to hinder the implementation of the European Internal Energy Market for electricity.

[1] In case of PXs the solution of Price Coupling of Regions (PCR) is being implemented.
[2] http://www.acer.europa.eu/Electricity/Regional_initiatives/Meetings/27th_CEE_IG_meeting/Document%20Library/1/CEE%20NRAs%20joint%20declaration_20120326.pdf

2. Governance of the 4M MC solution

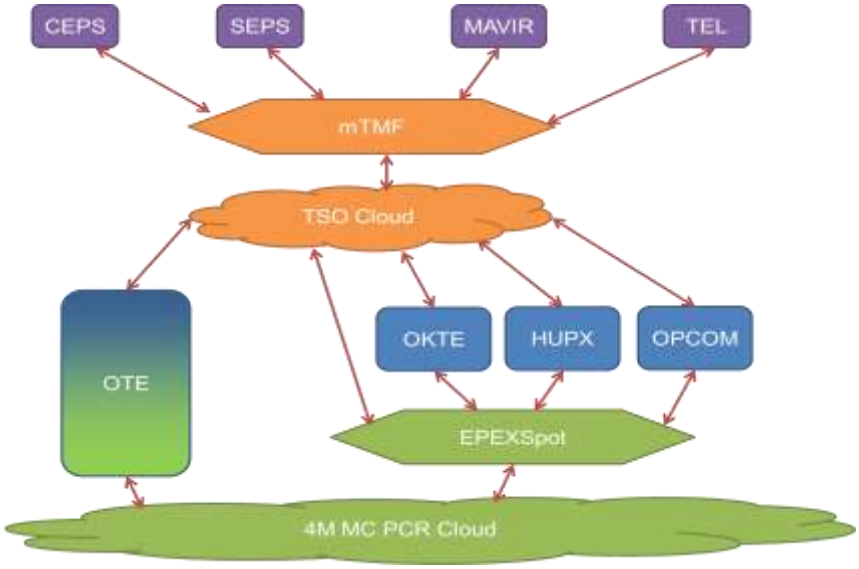
The 4M MC Project parties believe that the governance structure for 4M MC should aim towards a simple structure, which is similar to the NWE solution while respecting/adopting the 4M circumstances. The governance structure should enable reliable and secure operation and enlargement to new members without any major modification of the MC architecture.

In the planned 4M Market Coupling:

- TSOs are responsible for at least the following functions:
  - Individual grid analysis and coordinated capacity calculation.
  - Provision of the capacity data necessary for operation of MC.
  - Scheduling management: reception of cross-border flows, internal nominations and transmission of nominated cross-border flow.
  - Physical and financial settlement of cross-border flows – i.e. energy shipping.
  - Congestion Revenue Calculation and Distribution (invoicing and settlement).
  - Publication according to the European and the national legislation.
- PXs are responsible for at least for the following services:
  - Collect the bids from market participants, transform them (aggregate and anonymize).
  - Perform Price Coupling calculation and validation.
  - Mutually sharing the anonymized supply/purchase aggregated curves and block bids and outputs with protecting the necessary confidentiality.
  - After the coupling, the aggregated results are split to the individual bids according to calculated Net positions of each bidding zone and its clearing price. Allocate the individual results to the market participants and the local shipper.
  - Local hub nominations (one or two sided, up to the local design).
  - The individual trades are cleared and settled by respective PXs in the relevant market areas.
  - Publication according to the European and the national legislation.

This agreed governance is also influencing the architecture of the IT solution of all parties. In light of high-level architecture used for NWE MC and expected to become pan European Target Model, it was decided to use the PCR solution at the PX side and keep the centralized TSO system called mTMF on TSO side updated to the 4M design. High level TSO-PX architecture is as follows:

TSOs are building a *TSO Cloud* that represents a single source of necessary data, both for TSOs and PXs (and/or their Service Providers). The TSO Cloud uses PCR interface standards/file formats and is accessible for any MC party. TSO Cloud is going to be operated by SEPS and is implemented within its Damas Energy System (DaE). This architecture ensures that all MC parties can access to relevant data files (PXs to ATCs and TSOs to MC results) and it minimizes number of data flows and interfaces. The access to TSO Cloud by PXs and their Service Provider is automated as much as possible using standard IT system methods ensuring easy extension.



The topology on PX side consists of the Operators (OTE and EPEX Spot as Full Member PXs[3], the latter being involved in 4M MC as Service Provider[4] for OKTE, HUPX and OPCOM) who act as a Coordinator in a rotational basis and PXs that are not Full Member PX (Serviced PXs[5], i.e. OKTE, HUPX and OPCOM).

The coordinated capacity calculation is under TSO governance as required by EU legislation. The TSOs operate it within the TSO Management Function (mTMF). Congestion Revenue Calculation, management of Market Results, creation of nomination files and Data Publication are covered by mTMF as well since it is beneficial to perform these functions in a centralized manner.

The Market Coupling Function (MCF) is under PX governance performed by all PXs either directly as Full Member PX or via the Service Provider contracted by each Serviced PXs as it directly links to the operation of the local energy market. The selected matching algorithm (Euphemia) is used in NWE region and pan European MC as well and approved by NWE NRAs. So it may be understood that this algorithm would fulfill efficiency, non-discriminatory, transparency requirements. PXs provided TSOs and NRAs with the description of the algorithm[6]. As Euphemia is able to calculate cross-border exchanges, the project parties use it also for their determination.

Following roles can be identified for the MCF subject to PX-PX Agreement and service agreements between Serviced PXs and their Service Providers (in order of MC relevance):

- Coordinator: one of the Operators performing MC matching and calculation of the MC results each day in a rotational basis.
- Operator: party having installed the PCR assets (Euphemia and PMB) acting on its own behalf (if 4M MC PX) or on behalf of the Serviced PX(s) in the MC session) performing shadow MC operation with necessary cross-check validation as described in PCR procedures. The Operator can take over the MC session and Coordinator role in case of technical problems of Coordinator subject to Incident Committee decision.

[3] Full members of the PCR initiative
[4] Full Member PX providing market coupling services (e.g. acting as Operator and Coordinator on behalf of other PX) using PCR solution
[5] Serviced PXs in the light of PCR cooperation – serviced by other full PCR member
[6] http://www.ote-cr.cz/kratkodobe-trhy/elektrina/files-pcr/euphemia-public-description.pdf

- Serviced PX: a PX that is connected to its service provider ("Service Provider"), who acts on behalf of this party in the MC session.

The MC session is run daily by the Coordinator composing of:

- Leading the MC session including organization of operational call and Incident Committee, if necessary;
- Performing the calculation of MC Preliminary Results;
- Distribution of the MC Preliminary Results;
- Distribution of the Global Preliminary Confirmation subject to approval of the MC Preliminary Results by PXs;
- Distribution of the Global Final Confirmation of the MC Results, subject to approval of the MC Preliminary Results by PXs.

The agreed TSO-PX architecture is designed to flexibly handle any number of participants (both at PX and TSO side). Rotation of roles at PX side is going to be defined in a commonly agreed detailed PX procedure. The information flow related to switching of Coordinators is going to be commonly agreed in TSO-PX procedure.

Post-coupling functions related to cross-border aspects of Market Coupling, e.g. Cross-border Energy Shipping (Nomination and Cross-border Financial Settlement), Congestion Revenue Distribution, are under TSO governance and operated individually by each TSO with close cooperation with its adjacent TSO.

2.1. Technical solution of the Market Coupling

Existing TSO back-end systems can be used without significant modifications. In order to ensure standard PX services towards market participants, existing PX trading systems towards market participants are used as they represent a gate to market coupling for market participants with respect the current national rules. The main market characteristics and timings are harmonized – see chapter 5.

Many functions are operated centrally on TSO side. These are performed similarly for each border by the same entity (mTMF). Some functions are designed in a more flexible ways that respects border/local specifics. These functions are performed locally - each TSO acts in its own market area as the local shipper in tight cooperation with its adjacent TSO and local PX/Market organizer being member on the local organized market.

2.1.1. TSO Management Function (mTMF)

All a priori TSOs' coordinated tasks are covered within by the mTMF system. It secures timely and faultless preparation of all input capacity data from TSOs' side necessary for market coupling.

This function serves all participating TSOs in the Market Coupling.

- Collect the required individual capacity data (ATC) from the participating TSOs.
- Coordinated capacity assessment / determination of ATC parameters.
- Provision of final offered capacity values (ATC) for TSOs and via the TSO Cloud for the MCF and PXs.

The mTMF manages receiving of agreed MCF outputs (Market Clearing Prices / Net Positions / Cross-border Flows) via the TSO Cloud and distributes them to the TSOs. mTMF calculates the capacity price based on the relevant Market Clearing Prices provided by PXs.

Based on the Market Results the mTMF also:

- prepares the nomination files and sends it to the relevant TSOs for shipping purposes;
- determines the total congestion revenue and its shares of each TSO per border and sets a basis for settlement and invoicing among them.

2.1.2. Market Coupling Function (MCF)

MCF represents the crucial system covering the principle of the market coupling. The core of the MCF is the unified matching algorithm - Euphemia[7], which executes the common bid matching. PXs are jointly responsible for the MCF.

The calculation of the MC Results is performed daily by the Coordinator.

Despite the fact that MCF is provided jointly by PXs each PX is responsible for following:

- Collect respective Orders (bids and block bids),
- Provide aggregated Orders to 4M MC PCR cloud,
- Calculate and validate the price Coupling Results.

A deviation resulting from rounding is solved on a local level. The solution is out of scope of this document.

The outputs of the system are:

- Trading position of each market zone (Net Position),
- Market Clearing Price in each bidding area,
- Accepted blocks,
- Cross-border Exchanges.

2.1.3. Cross-border Exchange Validation

Calculated cross-border energy flows between each bidding area are checked by at least each respective PX, which is responsible for this Cross-border flow (i.e. CZ-SK by OTE and OKTE, SK-HU by OKTE and HUPX and HU-RO by HUPX and OPCOM) against the capacity limits. TSOs do not condition the publication of the MC results with their approval/validate the Cross-Border flows against provided ATCs.

2.2. Data Publication

In light of EU and national requirements on market transparency, it is necessary to ensure periodical publication of entire trading results via the web interface. As the requirements differ for TSOs and PXs, it is necessary to automate and coordinate the publication process for all parties. It is critical to publish data without any discrepancy and with the precise and adequate timing. This duty might be divided as follows:

- TSO – the required information (e.g. capacity provided for MC, cross-border schedules, congestion rents) are going to be published on the mTMF homepage (https://dae.sepsas.sk/) in a centralized way. Publication on entso-e.net / EMFIP[8] is going to be ensured in a centralized way by the mTMF operator (capacity provided for MC and congestion rents per border) and individually by the TSOs

[7] http://www.ote-cr.cz/kratkodobe-trhy/elektrina/files-pcr/euphemia-public-description.pdf
[8] Obligation effective from 5 January 2015

for cross-border schedules. The description of capacity calculation and congestion management is also published (done by TSOs individually). TSOs publish all above mentioned market coupling results after the publication of results is performed by PXs.

- PX – the required information (e.g. market clearing price and volumes for every bidding area, matched curves, indexes) are going to be published on the respective PX individual sites. The description of the Euphemia algorithm is published by each PX.

2.3. Cross-border shipping of electricity

4M MC parties agreed that the shipping function, mediating electricity calculated by MC algorithm between adjacent market areas, is ensured by TSOs. Each TSO is then responsible for shipping the Market Coupling results (both physically and financially) towards adjacent TSO(s) and manage congestion revenue for its border.

2.3.1. Cross-border Flow nomination (Physical Shipping)

Each TSO is responsible to nominate the resulting bilateral Cross-Border Energy Flow(s) (one decimal resolution being equal to the local organized markets resolution) according to the agreed rules. Internal nominations are not affected because they remain the same regardless any implementation of a MC.

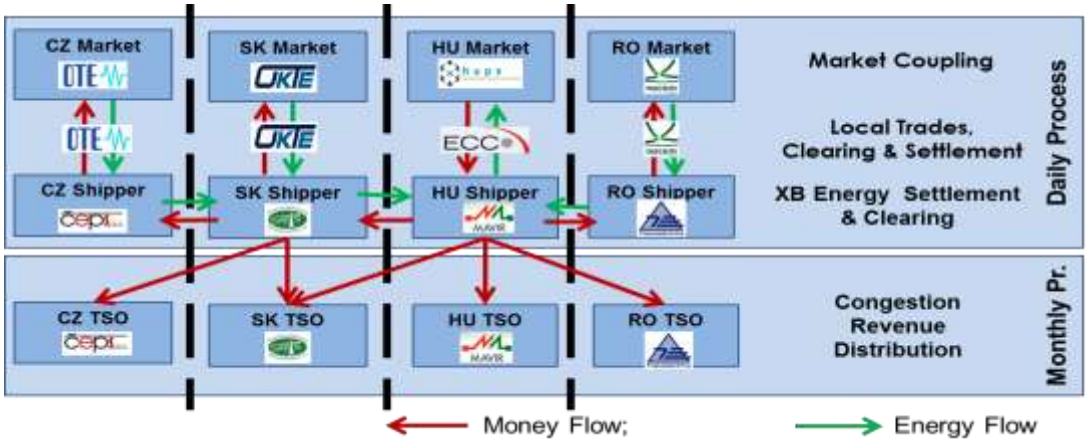
2.3.2. Cross-border Financial Settlement (Financial Shipping)

TSOs acting as a Shipper perform the financial settlement of the Cross-Border Energy Flows, i.e. commercially transmit the energy across borders. The Shipper is registered at the local PX and/or its clearing house (if there is any) according to the local market rules. When there is a cross-border energy flow, the Shipper in an exporting area takes over energy from the PX and transmits it to the neighboring Shipper in an importing area who further transmits the energy to its local PX. The energy in the cross-border relation is settled on the exporting (not higher) price. This is why the Congestion Revenue arises (if any) at the importing Shipper. During the daily clearing, the trades are netted and financially settled. Invoicing is on monthly basis. As this represents a bilateral relation between the neighboring Shippers, different detailed rules can be agreed per border subject to the TSOs preference and the national specialties.

2.3.3. Congestion Revenue Distribution

The arising Congestion Revenue for a specific business hour, if any, is collected by the importing Shipper on a given border. Based on the MC results the Shipper distributes the Congestion Revenue to the respective TSO(s) in a monthly settlement.

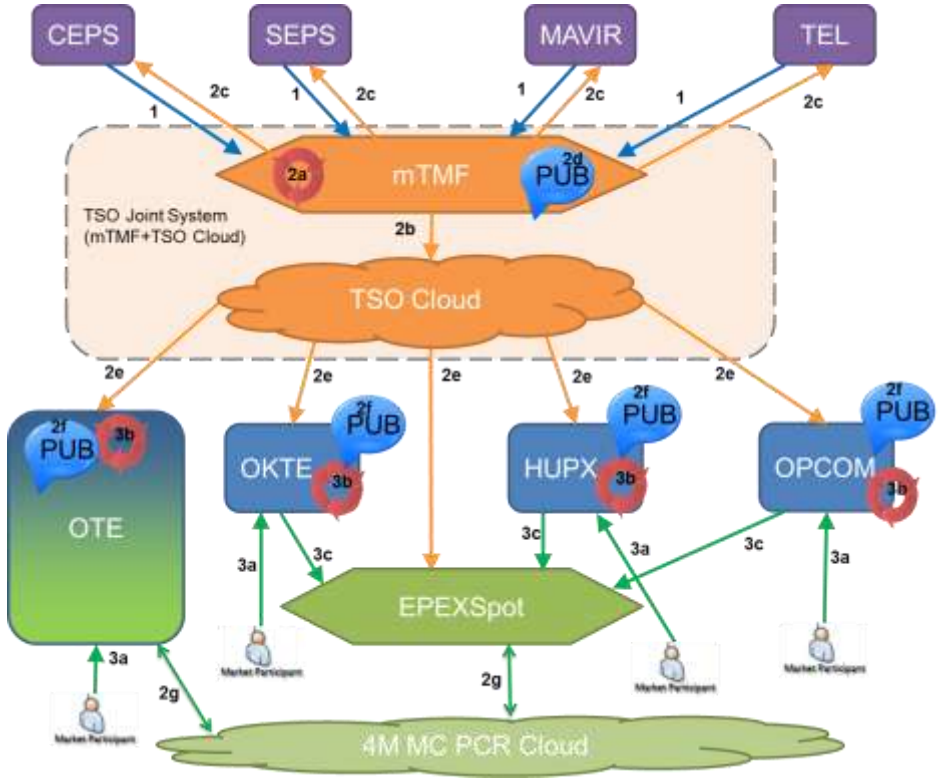
The 4M MC is designed in a way that does not allow negative price spread between the market areas. Therefore, the congestion revenue is always positive.



3. The Market Coupling process in the aspect of time

The Market Coupling comprises of 3 phases called pre-coupling, coupling and post-coupling. Main activities of each phase are described below:

3.1. Pre-Coupling



Flow Number	Information	Produced by	From	To
1	Individual TSO ATC for ATC calculation		TSOs	mTMF
2a	ATC Calculation	mTMF		
2b	ATC Upload in TSO Cloud	mTMF		
2c	ATC		mTMF	TSOs
2d	ATC Publication	mTMF		
2e	Downloaded ATC from TSO Cloud	PXs (Serviced and PCR Full Member PXs) and SP		
2f	ATC Publication	PXs (Serviced and PCR Full Member PXs)		
2g	ATC shared via 4M MC PCR Cloud	PCR Full Member and SP		
3a	Orders		Market participants	PXs (Serviced and PCR Full Member PXs)
3b	Aggregated Orders	PXs (Serviced and PCR Full Member PXs)		
3c	Aggregated Orders		Serviced PXs	SP

3.1.1. Provision of capacity data

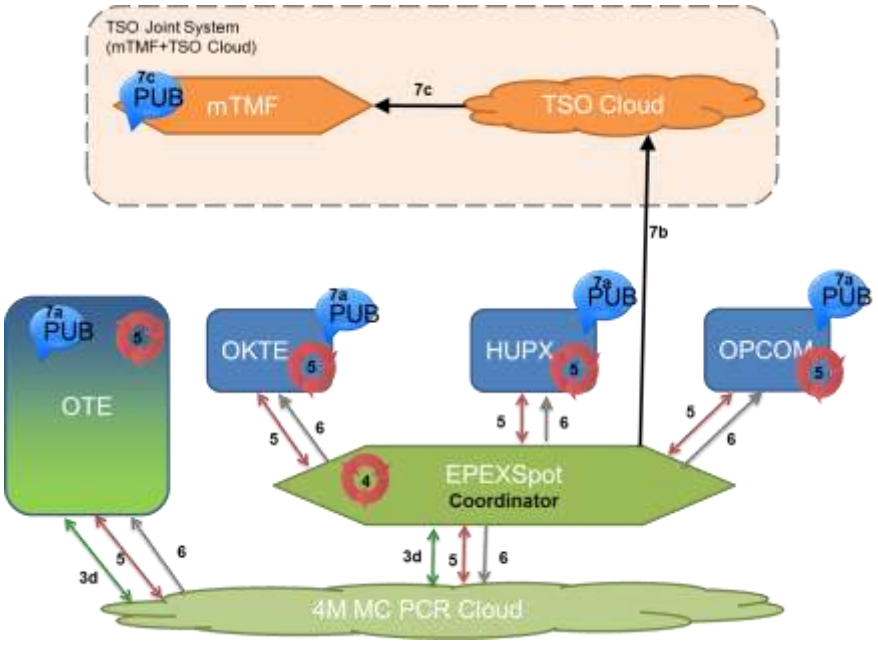
- TSOs are fully responsible for:
  - Provision of individually defined offered cross-border capacities to mTMF (1);
  - Final offered capacity (ATC) calculation (2a);
  - ATC provision to all PXs and their Service Provider via TSO Cloud[9] (2b);
  - mTMF provides ATC to TSOs (2c);
  - ATC publication to Market Participants (2d);
- PXs and Service Provider download ATCs from the TSO Cloud (2e).
- ATC is shared via 4M MC PCR Cloud by PCR Full Member and SP (2g).
- Capacity values (ATC) are published on:
  - the individual PXs homepages (2f);
  - the mTMF homepage (https://dae.sepsas.sk/) (in 2d);
  - entsoe.net (optional) (later mandatory on EMFIP) by mTMF.

3.1.2. Collection of energy bids and processing

- PXs collect orders and aggregate them after the Gate Closure Time (3a);
  - PXs provide to their market participants an interface / platform to respective bidding zone.
  - PXs provide variety of orders compatible with the matching algorithm (hourly, block bids, etc.) to their market participants.
  - Serviced PXs and Full Member PX(s) transform the orders to aggregated curves (3b).
- Serviced PXs deliver their aggregated orders with block bids to their own Service Provider (3c).

[9] In fact all PXs shall have same access to ATCs early in the morning to give the same opportunity to all market participants.

3.2. Coupling



In this case SP is the Coordinator but in rotation OTE can also act like that

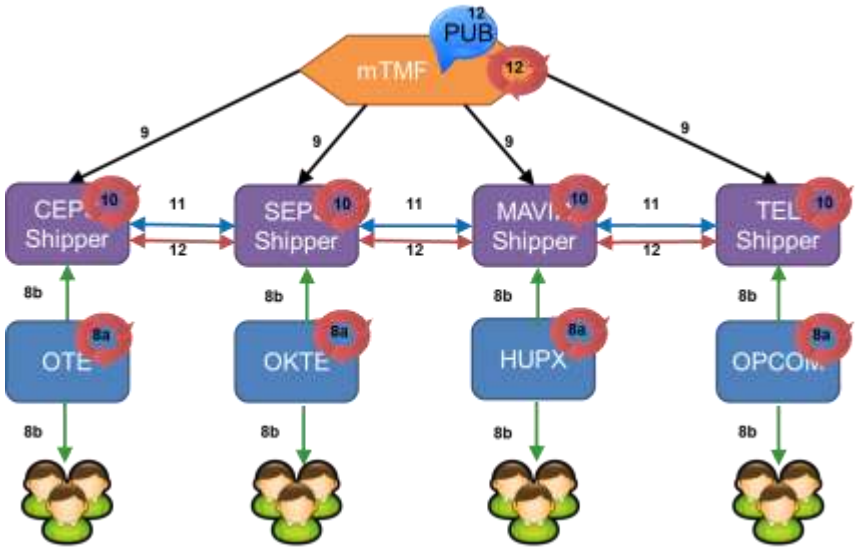
Flow number	Information	Produced by	From	To
3d	Aggregated Orders [and Capacities] shared in 4M MC PCR Cloud	PCR Full Member and SP		
4	Preliminary Price Coupling Results calculation,	Coordinator		
5	Preliminary Price Coupling Results sharing and validation according to PCR procedures	PXs (Serviced and PCR Full Member PXs) and SP		
6	Global Final Confirmation shared to PXs		Coordinator	PCR Full Member and SP
7a	Price Coupling Results Publication	PXs (Serviced and PCR Full Member PXs)		
7b	Uploaded TSO Results Document in TSO Cloud	Coordinator (Operator)		
7c	Downloaded TSO Results Document and publication	mTMF		

- All Operators share all necessary data for MC Results Calculation via the 4M MC PCR Cloud among themselves (3d).
- The Preliminary Results are calculated by Coordinator while respecting the capacity limits set by the TSOs and individual bids' restrictions (4). All other Operators may perform the calculation of shadow results in order to validate the calculated results also (5).
- The Preliminary Results calculated by Coordinator are shared via 4M MC PCR Cloud (and Service Providers provide these results to respective Serviced PX(s)) in order to check and validate:
  - the correctness of the Preliminary Results by the Operators and Serviced PXs (5) and
  - that all results are successfully received and reallocated to the market participants (i.e. portfolio allocation performed by all PXs).
- As the anonymized aggregated supply/purchase curves and block bids are mutually shared among PXs, the outputs for each market areas are also mutually shared. Each PX check the

calculated cross border flow on its respective borders against ATC limits downloaded from TSO Cloud.

- After Coordinator receives all confirmations from PXs and/or Service Providers (5), then the results are globally confirmed (6) (to Operator(s) directly and to Serviced PXs via Service Provider(s)).
- At the same time, all PXs are allowed to publish the final values (7a) (market clearing price and market clearing volumes/net market position/cross-border exchanges).
- After publication of the results the Coordinator (Operator) provides the selected Results (calculated market prices, net market positions and cross-border flows) (7b) to the mTMF system via TSO Cloud for the post-coupling functions.
- TSOs may then publish the provided results via mTMF (7c) to TSOs and/or other platforms (TSOs, entsoe.net, EMFIP), i.e. the data cannot be used before official publication time on PXs. This secures that all market participants have the same access to information, particularly market clearing prices etc.

3.3. Post-Coupling



Flow Number	Information	Produced by	From	To
8a	Local clearing and settlement process	PXs		
8b	Settlement results		PXs	Market participants incl. TSOs acting as Shippers
9	Shared Cross-border Flow and Capacity Auction prices		mTMF	TSOs/Shippers
10	Cross-border Flow nominations	TSOs		
11	Cross-border Settlement		TSOs	TSOs
12	Congestion Revenue management	TSOs/Shippers and mTMF		

- Clearing and settlement of individual internal trades as well as clearing and settlement of Shippers are performed by each PX (8a).
- PXs provide settlement results to market participants and Shippers (8b).

- TSOs receive the data of the TSO Results Document from mTMF (9).
- Hub (local) nomination (not included in the picture).
- The cross-border nomination (physical energy shipping) (10) until the time of deadline for scheduling is done by TSOs (in the role of Shipper) or, if agreed, by mTMF on behalf of TSOs. TSOs or mTMF formally check the cross-border flows against capacity limits. The TSOs scheduling system curtails cross-border schedules exceeding the relevant capacity limit (this procedure happens after the publication of the results and causes imbalanced position for the respective Shippers).
- Financial Energy shipping (Cross-border settlement) (11) is performed by TSOs in the role of Shippers.
- In case of congestion (different market clearing prices in neighboring bidding areas) the cross-border exchanges and prices are used for congestion revenue calculation by mTMF. The related data are also published by the mTMF on behalf of TSOs. Shippers distribute the occurred congestion revenue to the relevant TSOs (12).

4. Backup and fallback solutions

Even though the solution is planned to be highly reliable and automatic, there are several backup procedures in case of failure within the MC related daily processes, and a last instance fallback one for each border, for the worst case (i.e. the case of decoupling of respective border(s) when market coupling becomes impossible on that border).

The backup procedures are part of standard daily procedures besides the normal ones and described in relevant documents (Operational Procedures).

Partial decoupling, which means performing market coupling only on reduced set of the 4M MC areas and borders while the others uses fallback solution due to any technical problem, is not going to be implemented in operation in 4M MC.

The fallback procedures differ from border to border, e.g.

- On the SK-HU and HU-RO cross-border profiles an explicit shadow auction service is provided by MAVIR in its KAPAR system on behalf of SEPS, Transelectrica and MAVIR. The detailed rules are described in the Daily Shadow Auction Rules[10].
- On the CZ-SK cross-border profile a shadow auction service is operated by CEPS on behalf of SEPS and CEPS.
- Further, isolated energy allocations are performed separately by each PX on its respective market area without taken into account the bids of other PXs.

[10] http://www.mavir.hu/c/document_library/get_file?uuid=d90b71bd-8337-41e4-8381-094ec246b28c&groupId=10262

5. Harmonization

The basic principles and characteristics of the market coupling have to be harmonized among Parties and markets. This implies especially harmonization of timing (time zone, Gate Closure Times, publication of capacities and results, time of nominations), data formats (communication interfaces, standardized file types), values formats (number of decimals, minimal/maximal values of prices and possibly volumes, tick size, price step, rounding). The harmonization is in accordance with the principles used in NWE region. The major difference is the GCT due to 4M market participant request and 4M NRA approval.

The presented list of harmonized issues is not exhaustive and the timings might be slightly modified before go-live based on outputs of the testing.

Parameter	Value[11]
Time zone	CET
Providing the Capacities to MCF	9:15
Standard Publication of Capacities	9:15 (by TSOs) 9:30 (by PXs)
Deadline for modification of capacities	10:30
Gate Closure Time	11:00
Standard Publication of Results by PXs[12] (Publication Time: Tp)	11:30-40
Standard Publication of Results by TSOs	Tp + 5 minutes
Nomination Deadline	14:30
Cross-border Flow decimals	One digit
Price decimals	Two digits
Min/Max prices	€/MWh -500/+3000
Second Auction Trigger	€/MWh -150/+500
Volume Tick size	One digit (0.1 MW)
Price Tick size	Two digits (0.01 €/MWh)

[11] The timings are subject to the procedural tests.

[12] Without Second Auction. In case of Second Auction or application of any backup/fallback procedure the publication time is postponed.