




# EASTERN PARTNERSHIP PLATFORM 3: "Energy Security"
# 3rd WORKSHOP OF EASTERN PARTNERSHIP ENERGY REGULATORY BODIES

## "BUILDING REGIONAL ELECTRICITY MARKETS"– REGULATORY ASPECTS OF MARKET INTEGRATION

*Executive Seminar*

# Cross-Border Activities in the Energy Community: Approach and Potential Blueprints for the Eastern Partnership Region

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# Topics of interest

Characteristics and major obstacles encountered in the process of enhancing cross border cooperation

Approach followed and the progress to date

Cooperation between stakeholders within Energy Community regarding opening of the electricity market


# ENERGY COMMUNITY

# Treaty establishing the Energy Community


**THE ENERGY POLICY IN EUROPE**

Generally, approach towards common principles (security of supply, competition, environment);

SEE: mostly bilateral relations;

Necessity for a common framework: **THE TREATY ESTABLISHING THE ENERGY COMMUNITY**

Signed on 25 October 2005
Came into force in **July 2006**

**CONTRACTED PARTIES:**

- Albania
- Bulgaria
- Bosnia and Herzegovina
- Croatia
- FYR of Macedonia
- Montenegro
- Romania
- Serbia
- The United Nations Interim Administration Mission in Kosovo

# Treaty establishing the Energy Community

**Changes in meantime:**

- Romania and Bulgaria became EU members in 2007; not CPs any more
- Moldova and Ukraine joined Energy Community, became EnC CPs, in May 2010

# Energy Community Regulatory Board (ECRB)

- ✓ shall discharge the tasks entrusted to it by Article 58 of the Energy Community Treaty → 1st ECRB meeting held in December 2006
- ✓ at the request of the European Commission, or on its own initiative and in accordance with the objectives of the Energy Community Treaty, shall undertake the function of advising on statutory, technical and regulatory rules in the region to the Energy Community Treaty Institutions.
- ✓ shall provide advice to the Ministerial Council and the PHLG with regard to monitoring and assessing the operation of the energy networks and network energy market and issue recommendations to the Parties when so entrusted by the Treaty or the Ministerial Council.
- ✓ shall facilitate consultation, co-operation and co-ordination amongst regulatory authorities to a consistent application of the Acquis Communautaire. The ECRB makes recommendations and reports with respect to the functioning of the energy markets.
- ✓ may determine the existence of a serious and persistent breach and bring it to the attention of the Ministerial Council.

# Who are the Members of ECRB?

- ECRB consists of representatives from NRAs from Contracting Parties (CPs), Participants and Observers to the Energy Community Treaty
- ECRB Members comprises high level representatives from **nine energy regulatory authorities** of the Signatory Parties:
  - Energy Regulatory Authority of **Albania** (ERE)
  - State Electricity Regulatory Commission of **Bosnia and Herzegovina** (SERC)
  - **Croatian** Energy Regulatory Agency (HERA)
  - Energy Regulatory Commission of the **FY Republic of Macedonia** (ERC)
  - Energy Regulatory Agency of **Montenegro** (REGAGEN)
  - Energy Regulatory Agency of the Republic of **Serbia** (AERS)
  - Energy Regulatory Office (ERO) of **Kosovo***
  - Energy Regulatory Agency of **Moldova** (ANRE)
  - Energy Regulatory Agency of **Ukraine** (NERC), and
  - a representative of the **European Commission**, representing the EU

*****This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and ICJ Advisory opinion on the Kosovo declaration of independence

# Who are the Participants of the ECRB and what distinguishes them from the Members?

- ECRB is also attended by thirteen energy regulatory authorities of the so called **Participants**. These are currently:

E-Control (Austria)
SEWRC (Bulgaria)
ERU (Czech Republic)
CERA (Cyprus)
CRE (France)
BNetzA (Germany)
RAE (Greece)

HEO (Hungary)
AEEG (Italy)
ANRE and ANRGN (Romania)
RONI (Slovakia)
AGEN-RS (Slovenia)
OFGEM (UK)
NMa (Netherlands)
URE/ERO (Poland)

- Participants have the right to **participate in the discussions**, however have **no voting rights,** they are **assisting EC**
- There is ACER representative

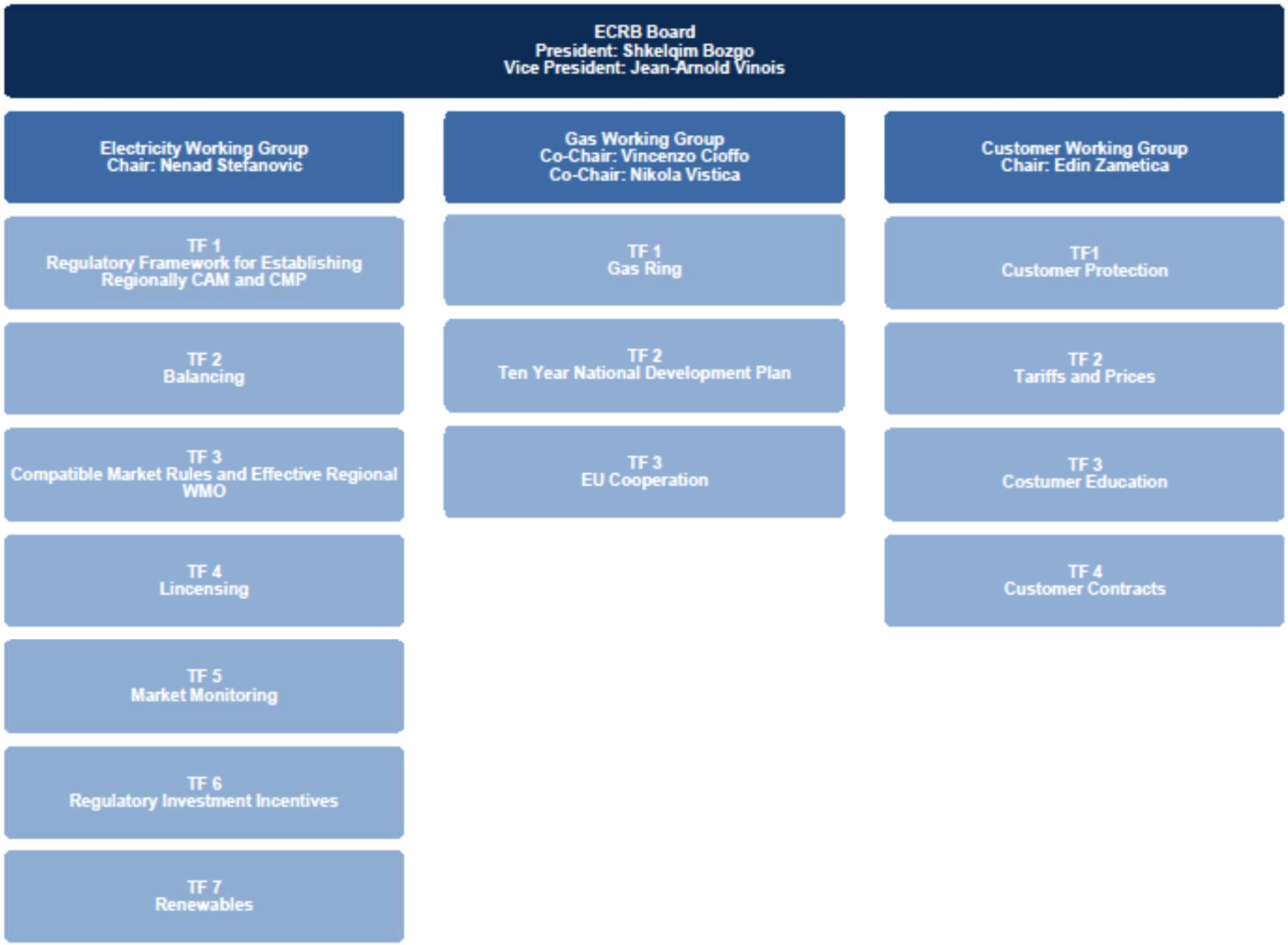
# Who are the Observers to ECRB?

- ECRB allows Observers to its meetings, currently attributed to the following energy regulatory authorities:

  - GNERC (Georgia)
  - NVE (Norway)
  - EMRA (Turkey)
  - PSRC (Armenia)

- Observers do generally not take part in the discussions

# ECRB structure and organisation



# How is ECRB organizing its work?

- ECRB organizes its work in three working groups (WGs):
  - Electricity Working group (EWG)
  - Gas Working group (GWG)
  - Customers Working Group (CWG)
- A fourth group was created with the purpose of bringing forward the project of creating a Coordinated Auction Office in SEE region and comprises both Regulators and Transmission System Operators under the Regulators' lead – terminated its task in 2012:
  - South East Europe Coordinated Auction Office Implementation Group (SEE CAO IG)
- ECRB and its Working Groups are supported by the ECRB Section of the Energy Community Secretariat, as a part of Energy Community Secretariat, located in Vienna

# Which are the main topics of the ECRB Work Program?

- **Electricity**: Congestion management and transmission capacity allocation, Regional Balancing Mechanisms, Compatible Market Rules, Wholesale Market Opening, Mutual recognition of trading licenses, Cross Border cooperation, Coordinated Auction Office
- **Gas**: Cross border gas trade, Interconnection and interoperability of transmission and transit pipelines, Balancing and flexibility tools including storage and LNG facilities, Cross border cooperation, Transmission tariffs
- **Customers**: Protection of vulnerable household customers, Quality of supply and commercial services, Standards and incentives, Tariff methodologies and transparency of prices

The ECRB Work Program provides detailed information on the activities of the ECRB and its Working Groups

# CROSS BORDER ISSUES

# TRANSIT

# HISTORY

# UCPTE – UCTE - SUDEL

# 1970-2009

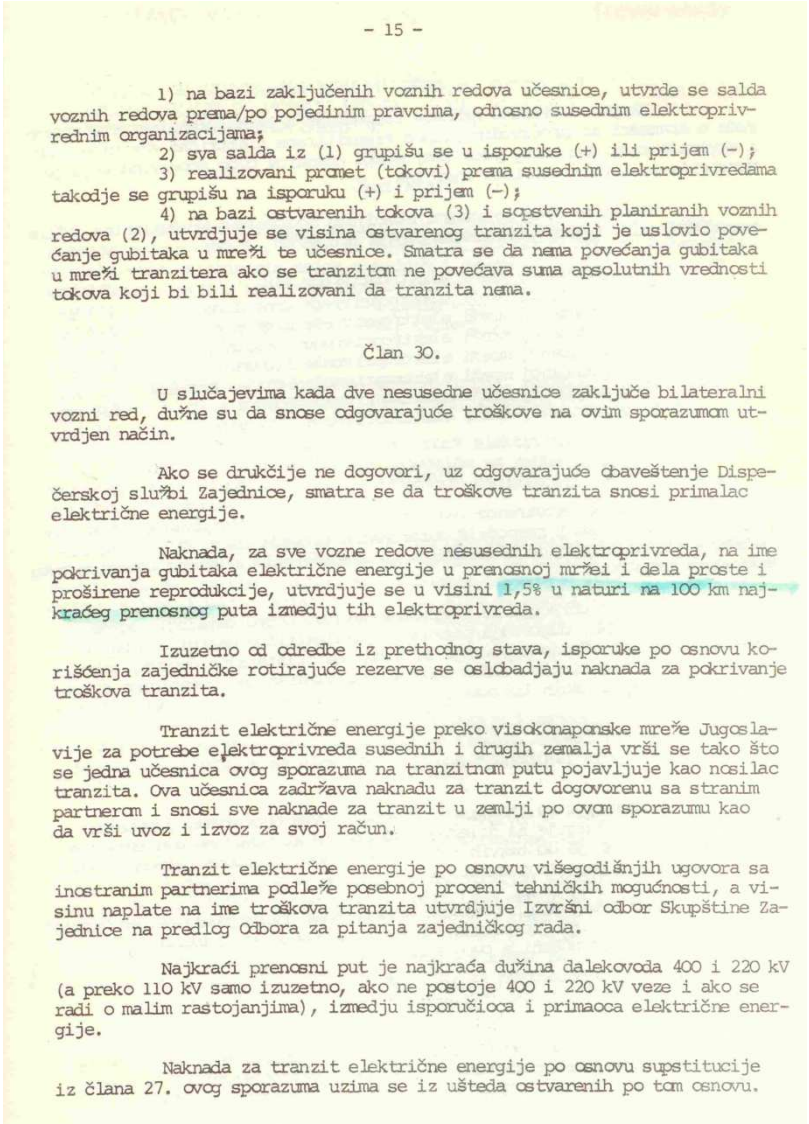
# History: European Transmission Network 1970-2009


UCTE

# History: SEE Transmission Network 1970-2009

- During 70ties and 80ties the transmission grid in ex-Yugoslavia (main part of today SEE region) was designed for operating with ex-UCTE/SUDEL in synchronous operation
- Transmission systems of neighboring Hungary, Romania and Bulgaria were not in synchronous operation at the time the transmission network was designed and constructed
- There were no congestions at the time
- UCTE was divided in two synchronous zones due to war operations during 90ties

# Ex-JUGEL Rule / Agreement



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1) na bazi zaključenih voznih redova učesnice, utvrde se salda voznih redova prema/po pojedinim pravcima, odnosno susednim elektroprivrednim organizacijama;
2) sva salda iz (1) grupišu se u isporuke (+) ili prijem (-);
3) realizovani promet (tokovi) prema susednim elektroprivredama takodje se grupišu na isporuku (+) i prijem (-);
4) na bazi ostvarenih tokova (3) i sopstvenih planiranih voznih redova (2), utvrdjuje se visina ostvarenog tranzita koji je uslovio povećanje gubitaka u mreži te učesnice. Smatra se da nema povećanja gubitaka u mreži tranzitera ako se tranzitom ne povećava suma apsolutnih vrednosti tokova koji bi bili realizovani da tranzita nema.

Član 30.

U slučajevima kada dve nesusedne učesnice zaključe bilateralni vozni red, dužne su da snose odgovarajuće troškove na ovim sporazumom utvrdjen način.

Ako se drukčije ne dogovori, uz odgovarajuće obaveštenje Dispečerskoj službi Zajednice, smatra se da troškove tranzita snosi primalac električne energije.

Naknada, za sve vozne redove nesusednih elektroprivreda, na ime pokrivanja gubitaka električne energije u prenosnoj mrži i dela proste i proširene reprodukcije, utvrdjuje se u visini 1,5% u naturi na 100 km najkraćeg prenosnog puta izmedju tih elektroprivreda.

Izuzetno od odredbe iz prethodnog stava, isporuke po osnovu korišćenja zajedničke rotirajuće rezerve se oslobadjaju naknada za pokrivanje troškova tranzita.

Tranzit električne energije preko visokonaponske mreže Jugoslavije za potrebe elektroprivreda susednih i drugih zemalja vrši se tako što se jedna učesnica ovog sporazuma na tranzitnom putu pojavljuje kao nosilac tranzita. Ova učesnica zadržava naknadu za tranzit dogovorenu sa stranim partnerom i snosi sve naknade za tranzit u zemlji po ovom sporazumu kao da vrši uvoz i izvoz za svoj račun.

Tranzit električne energije po osnovu višegodišnjih ugovora sa inostranim partnerima podleže posebnoj proceni tehničkih mogućnosti, a visinu naplate na ime troškova tranzita utvrdjuje Izvršni odbor Skupštine Zajednice na predlog Odbora za pitanja zajedničkog rada.

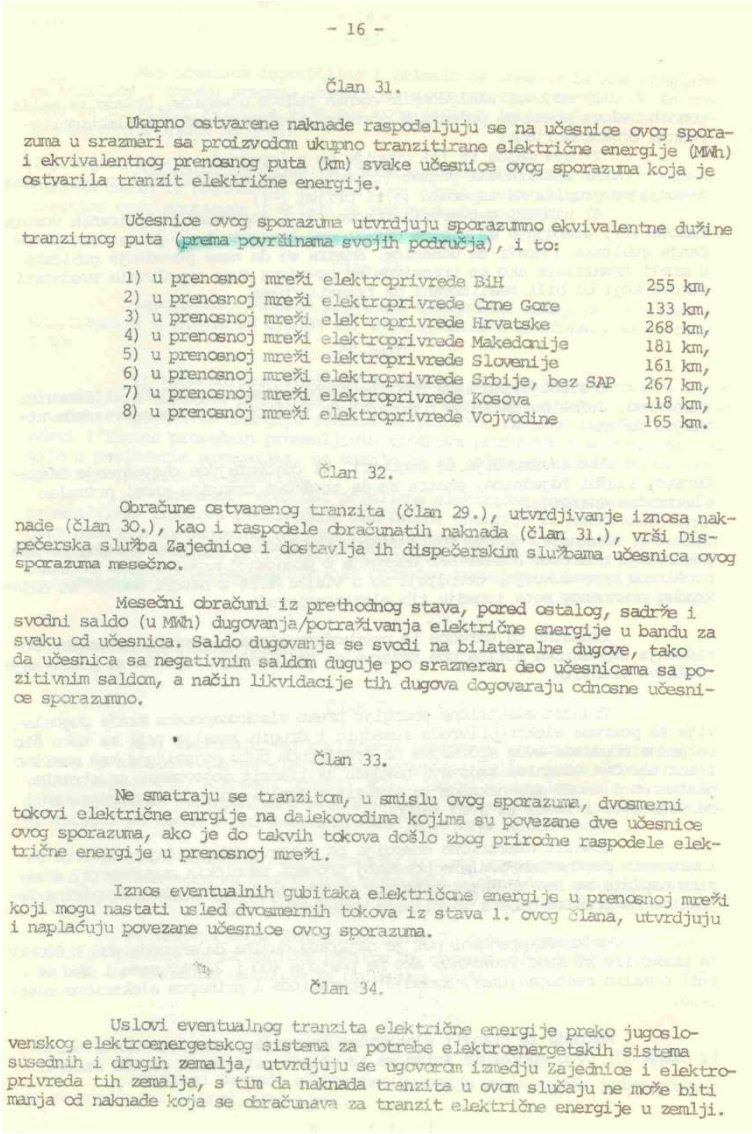
Najkraći prenosni put je najkraća dužina dalekovoda 400 i 220 kV (a preko 110 kV samo izuzetno, ako ne postoje 400 i 220 kV veze i ako se radi o malim rastojanjima), izmedju isporučioca i primaoca električne energije.

Naknada za tranzit električne energije po osnovu supstitucije iz člana 27. ovog sporazuma uzima se iz ušteda ostvarenih po tom osnovu.

ZAJEDNICA JUGOSLOVENSKE ELEKTROPRIVREDE

- 1.5% in nature at the 100 km of the shortest transit transmission path between the electric power industries (source and sink)
- transit path could be, however, chosen regardless this rule, and choosing the cheapest transit path-fee

# Ex-JUGEL Rule / Agreement



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Član 31.

Ukupno ostvarene naknade raspodeljuju se na učesnice ovog sporazuma u srazmeri sa proizvodom ukupno tranzitirane električne energije (MWh) i ekvivalentnog prenosnog puta (km) svake učesnice ovog sporazuma koja je ostvarila tranzit električne energije.

Učesnice ovog sporazuma utvrdjuju sporazumno ekvivalentne dužine tranzitnog puta (prema površinama svojih područja), i to:

| | | |
|---|---|---|
| 1) | u prenosnoj mreži elektroprivrede BiH | 255 km, |
| 2) | u prenosnoj mreži elektroprivrede Crne Gore | 133 km, |
| 3) | u prenosnoj mreži elektroprivrede Hrvatske | 268 km, |
| 4) | u prenosnoj mreži elektroprivrede Makedonije | 181 km, |
| 5) | u prenosnoj mreži elektroprivrede Slovenije | 161 km, |
| 6) | u prenosnoj mreži elektroprivrede Srbije, bez SAP | 267 km, |
| 7) | u prenosnoj mreži elektroprivrede Kosova | 118 km, |
| 8) | u prenosnoj mreži elektroprivrede Vojvodine | 165 km. |

Član 32.

Obračune ostvarenog tranzita (član 29.), utvrdjivanje iznosa naknade (član 30.), kao i raspodele obračunatih naknada (član 31.), vrši Dispečerska služba Zajednice i dostavlja ih dispečerskim službama učesnica ovog sporazuma mesečno.

Mesečni obračuni iz prethodnog stava, pored ostalog, sadrže i svodni saldo (u MWh) dugovanja/potraživanja električne energije u bandu za svaku od učesnica. Saldo dugovanja se svodi na bilateralne dugove, tako da učesnica sa negativnim saldom duguje po srazmeran deo učesnicama sa pozitivnim saldom, a način likvidacije tih dugova dogovaraju odnosne učesnice sporazumno.

Član 33.

Ne smatraju se tranzitom, u smislu ovog sporazuma, dvosmerni tokovi električne enrgije na dalekovodima kojima su povezane dve učesnice ovog sporazuma, ako je do takvih tokova došlo zbog prirodne raspodele električne energije u prenosnoj mreži.

Iznos eventualnih gubitaka električne energije u prenosnoj mreži koji mogu nastati usled dvosmernih tokova iz stava 1. ovog člana, utvrdjuju i naplaćuju povezane učesnice ovog sporazuma.

Član 34.

Uslovi eventualnog tranzita električne energije preko jugoslovenskog elektroenergetskog sistema za potrebe elektroenergetskih sistema susednih i drugih zemalja, utvrdjuju se ugovorom izmedju Zajednice i elektroprivreda tih zemalja, s tim da naknada tranzita u ovom slučaju ne može biti manja od naknade koja se obračunava za tranzit električne energije u zemlji.

ZAJEDNICA JUGOSLOVENSKE ELEKTROPRIVREDE

- Participants of this Agreement defined equivalent lengths of transit path, in line with their relevant areas, in kilometers

# SUDEL: How to treat cross-border transits in a fair way?

- Problems with transits of energy are significant and numerous, and they exist everywhere in the interconnected operation
- At the time of SUDEL, a way of realization transits was that two or more partners made an agreement for transit path, and payment is done according to this agreement
- Energy itself does not obey any agreement; it flows along rather many and not one path
- Sometimes it happens that the biggest amount of energy flows along path that isn't included in aforementioned agreement. In such cases power systems over which the most of energy is flowing are not paid at all, and some other systems get all the money from that cross-border transit
- Reasons for developing and implementing new and fair methodology for cross-border transits arise mostly from that fact, but there are also some other reasons as well
- Main aim was to develop simple-for-use and accurate enough methodology for cross-border transits. However, these requirements are usually in opposition. ETSO was working on such methodology
- The other, very important part of the problem with cross-border exchanges is security problem

# SUDEL: CROSS BORDER TRANSIT CONTRACT TARIFFS CALCULATIONS (CBT)

- Transmission capacity was not allocated at the time, but only transit as a way of usage of the transmission grid was remunerated
- Therefore, the interconnection lines were overloaded frequently due to growing trading transactions and transits
- Till 2001, only exporter was obliged to pay whole amount of transit fee - UCPTE/SUDEL (no deregulation and no unbundling at that time, vertically integrated utilities managed TSO functions)
- New approach proposed that transit fee shall be divided into two shares, one paid by exporter (up to 25% or 0.5 Eur/MWh) and another, higher one paid by importer of energy (at least 75% or 1.5 Eur/MWh)
- This division of transit fee was proposed by CEER in their document “Proposal of the Council of European Energy Regulators to accelerate the liberalization of the European energy market” published by CEER in January 2001; Basic principles of methodology remain the same.

# ETSO CBT MECHANISM
# II SYNCHRONOUS ZONE EFFORTS
# 2000 - 2006

# ETSO CBT: HN inventory, costs of elements and losses

- Identification of the horizontal network: All 380 kV and 220 kV networks are taken into consideration, as well as, transformers 380/220 kV, 380/110 kV, 220/110 kV
- All interconnection-lines on 110 and 150 kV level are also taken into account as well as relevant part of the network
- All correspondent fields are put in
- Collected data are total length of interconnecting lines, number of transformers, fields etc.
- Prices of the elements HN are also collected together with losses in HN calculated by τ-method

# ETSO Methodology description CBT: II synchronous zone

- Prices that have been collected by EKC from power utilities/system operators were very different, and in order to override these differences, calculation of annual cost of HN was done with the ***same prices for the same elements in the second synchronous zone*** (same specific prices mil EUR/km for same voltage level lines or  mil EUR/ 100 MVA of transformer capacity for same type of transformers with same primary and secondary voltage)
- Calculation was performed with prices obtained from Bulgarian TSO-NEK (price of transformers 400/150 kV and 150 kV fields in Greece were multiplied with following ratio: price of double 400 kV line in NEK/ price of double 400 kV line in HTSO)
- In order to calculate costs of HN which are assigned to transits it was necessary to calculate **annual costs of HN**, **transits through each power system** and **share of transit in each power utility** so called **'usage' of HN by transits**
- Data, which were required for this calculation, were: HN inventory, cost of each element of HN, annual losses and annual transit and consumption in each power utility

# Paying for cross border accounting CBT services: II synchronous zone

- Cross border accounting services were performed by EKC, Belgrade, and for such services a small part of transit fee was charged
- Collected money was used to finance further development of methodology, meetings of the working group and the costs of salary, computers and phone as well as security analysis of planned transactions
- In order to cover mentioned costs, 0.6% of transit fee if required for each MWh which is planned for exchange in second synchronous zone
- This fee was included in transit fee, i.e. transit fee remains 2 EUR/MWh
- EKC distributed invoice for cross border accounting services to power utilities/system operators together with invoices according to which settlement between to power utilities/system operators was performed
- Planned exchanges were approximately 10-15% higher then they were after adoption of this methodology for transit calculation
- It was due that presently energy is going in cascades through the second sync. zone, from point A to point A' to point A'' to point B (same energy is included in planed export 3 times, for 3 power systems A, A' and A''), and after methodology adoption it will go directly from point A to point B ( energy is included in planned export only once for 1 power system A). Mentioned percent for cross border accounting services will ensure about EUR 42,000.00 for one year.

# Role of EKC (Electricity Coordinating Center)

- All system operators were obliged to submit their exchange programs every day for next day and on Friday for weekend days and Monday to EKC till 12:00h CET
- EKC was obliged to check if these programs can jeopardize the system operation of the Interconnection as a whole, taking into consideration the n-1 criterion on the basic transit paths and calculated values of the net transfer capacities
- If the security was jeopardized, EKC was obliged to warn and request TSOs, whose transactions affect the system operation security, to decrease the exchange programs to the allowed value
- After taking into account the objections and corrections of the exchange programs (if any), the exchange program could be considered as final at 16:00h CET
- Following the principle of full transparency, EKC was obliged to submit information on all transactions within Interconnection to all TSOs
- System operators could use this information for system operation only
- Parties in the Agreement could not give such information to the market players, according to the principle of confidentiality
- At the end of the month every power utility/system operator were obliged to send to EKC data for its monthly consumption

# CBT Payments

- The unique total price for all cross border transactions between CBTBs within Interconnection was **2 Euros for each scheduled MWh**
- According to the principle of the socialization of the costs, each system operator whose system exports electricity will be charged with 0,50 Euros for each scheduled MWh and the rest of 1,50 Euros for each scheduled MWh will be the obligation of the system operator importer
- In the case when one or both partners in transaction were not in parallel operation with Interconnection and realized their transaction using island operation with the system operator(s) within Interconnection, the price for cross border transaction was charged to the system operator(s) in the Interconnection within whose system the island operation is realized
- Both system operators, exporter and importer, could charge market players involved in the transaction with this price for cross border transaction only and without extra charges on this position
- The way of payment for network access within system operators was not subject of this Agreement

# Clearing CBT mechanism

- The clearing mechanism for cross border tariffication was done on monthly basis, till 25th in the month for the previous month
- The clearing-house was EKC: For this service, EKC charged system operators up to 0.6% of the total income defined in the Agreement and invoiced to them by EKC
- The clearing mechanism assumed calculation of the income by all system operators and benefit of the system operator, realized by cross border transactions
- The final difference between these two values was a total account for each system operator
- EKC was obliged to prepare elements for making invoices by system operators for which this final difference is positive
- The system operators, which were obliged to pay in accordance with the procedure explained above, realized payments in 15 days after receiving the invoice
- The additional taxes, bank expenses and similar could not be charged
- The clearing procedure was monitored by SUDEL ad hoc group Ring flows established within SUDEL WG Market facilitation and SUDEL WG Interconnection, authorized to propose eventual changes in this Agreement

# ETSO INTER-TSO COMPENSATION (ITC) MECHANISM IN SEE

## 2007

## Legal Basis

## ITC Contract

# Inter TSO Compensation (ITC) mechanism

- Establish one single ITC mechanism within EU
- Single EU-SEE ITC fund was created in June 2007
- Monitor ITC process
- Cooperation with ETSO/SETSO TF
- ITC Guidelines introduced

Regulatory role:

- Define loss prices to calculate value of transit losses (each year for the following year)
- Infrastructure costs, value of assets based on regulated costs as covered by national tariffs
- Commenting proposed (signed) ITC Agreement

# ETSO/ENTSO-E ITC Agreements

- ITC Clearing and Settlement Agreement signed by TSOs
- Deadline for regulatory complaints was prescribed by ITC Agreement-approval
- ENTSO-E put in place an enduring Inter-TSO Compensation Mechanism
- The present **Agreement** aims at setting up a legal framework implementing the principles related to the inter TSOs compensation ("**ITC**") mechanism, as stipulated in Regulation 838/2010/EU and more specifically in the Guidelines, starting from 1st of March 2011 on and for the duration as specified in the Agreement
- On 3 March 2011 a new, legally binding Inter TSO Compensation (ITC) Mechanism entered into force
- It has been signed by ENTSO-E and 39 Transmission System Operators from 34 countries in line with the requirements of new EC Guidelines (Regulation (EU) No 838/2010)
- The ITC contract is now a multiyear agreement, and replaces the previous voluntary agreement
- URL: www.entsoe.net

# EU Legislation basis for ITC

- COMMISSION REGULATION (EU) No 774/2010 of 2 September 2010 on laying down guidelines relating to inter-transmission system operator compensation and a common regulatory approach to transmission charging
- Binding guidelines establishing an Inter-TSO Compensation mechanism should provide a stable basis for the operation of the ITC mechanism and fair compensation to TSOs for the costs of hosting cross border flows of electricity
- TSOs from third countries or from territories which have concluded agreements with the Union whereby they have adopted and are applying Union law in the field of electricity should be entitled to participate in the ITC Mechanism on an equivalent basis to TSOs from Member States
- It is appropriate to allow TSOs in third countries which have not concluded agreements with the Union whereby they have adopted and are applying Union law in the field of electricity to enter into multi-party agreements with the TSOs in the Member States which enable all parties to be compensated for the costs of hosting cross- border flows of electricity on a fair and equitable basis
- TSOs should be compensated for energy losses resulting from hosting cross border flows of electricity. Such compensation should be based on an estimate of what losses would have been incurred in the absence of transits of electricity

# General Provisions

- TSOs shall establish an ITC fund for the purpose of compensating TSOs for the costs of making infrastructure available to host cross border flows of electricity
- ITC fund shall provide compensation for:
  1. the costs of losses incurred on national transmission systems as a result of hosting cross-border flows of electricity; and
  2. the costs of making infrastructure available to host cross-border flows of electricity
- The value of this fund should be based on a Union wide assessment of the long run average incremental costs (LRAIC) of making infrastructure available to host cross border flows of electricity
- TSOs in third countries should face the same costs for using the Union transmission system as transmission system operators in Member States
- TSOs shall be responsible for establishing arrangements for the collection and disbursement of all payments relating to the ITC Fund, and shall also be responsible for determining the timing of payments
- All contributions and payments shall be made ASAP, and at the latest within six months of the end of the period to which they apply
- Transit of electricity shall be calculated, normally on an hourly basis, by taking the lower of the absolute amount of imports of electricity and the absolute amount of exports of electricity on interconnections between national transmission systems

# Participation in the ITC mechanism

- Each regulatory authority shall ensure that TSOs in its area of competence participate in the ITC mechanism and that no additional charges for hosting cross-border flows of electricity are included in charges applied by TSOs for access to networks
- TSOs from third countries which have concluded agreements with the Union whereby they have adopted and are applying Union law in the field of electricity shall be entitled to participate in the ITC mechanism
- TSOs may conclude multi-party agreements relating to the compensation for the costs of hosting cross-border flows of electricity between TSOs participating in the ITC mechanism and those TSOs from third countries which have not concluded agreements with the Union whereby they have adopted and are applying Union law in the field of electricity, and which, on 16 December 2009, signed the voluntary agreement between TSOs on ITC
- Perimeter Countries: Byelorussia (BY), Morocco (MA), Russian Federation (RU), Turkey (TR), Ukraine (UA), Moldova (MD)

# Compensation for Losses

- Compensation for losses incurred on national transmission systems as a result of hosting cross-border flows of electricity shall be calculated separately from compensation for costs incurred associated with making infrastructure available to host cross-border flows of electricity
- The amount of losses incurred on a national transmission system shall be established by calculating the difference between:
  1. the amount of losses actually incurred on the transmission system during the relevant period; and
  2. the estimated amount of losses on the transmission system which would have been incurred on the system during the relevant period if no transits of electricity had occurred
- The value of losses incurred by a national transmission system as a result of the cross-border flow of electricity shall be calculated on the same basis as that approved by the regulatory authority in respect of all losses on the national transmission systems
- **With and Without Transit (WWT)** calculates the compensation of losses caused by transits

# ITC Contract

- Inter TSO Compensation Agreement is a multiparty agreement concluded between ENTSO-E and ENTSO-E member countries and Albania
- It is designed to compensate parties for costs associated with losses resulting with hosting transits flows on networks and for the costs of hosting those flows
- The contract has been signed by all ITC parties and consequently all parties have obligations under the contract
- The provisions of the contract and the accurate determination and payment/receipt of monies can only take place if all parties meet their obligations under the contract

*All TSOs have legal obligations under the ITC contract. These must be fulfilled.*

# ANNUAL COLLECTION & AUDIT OF DATA

- The efficient management of the ITC mechanism is dependent on robust input data
- There is a single opportunity each year to update data
- This is the audit process; run by ENTSO-E
- Parties will be asked to provide:
    - o The vertical load for the system
    - o The cost of losses
    - o Details of capacity allocated in a manner not compliant with the Congestion Management Guidelines (these values also have to be forwarded also in the course of each settlement year)
- All parties will be given an opportunity to check data provided by all other ITC parties

*A single, annual audit process will collect and audit data related to vertical loads and costs of losses. All parties are required to provide this information to ENTSO-E in a timely manner.*

# DELIVERY OF INFORMATION

- Non-delivery of data breaches the terms of the contract and means accurate settlements cannot be carried out
- All TSOs are therefore required to provide matched data in agreement with his relevant counterpart to enable settlements, in the correct form and at the correct time
- No later than 10 days after the completion of each settlement month, each TSO shall provide the following:
    - o 6 snapshots per month
    - o Hourly Metered and scheduled imports/ exports per border
    - o Hourly capacity allocated in a manner not compatible with the congestion management guidelines

*All ITC SPOCs are contractually obliged to deliver:*

- *Snapshot data*
- *Metered imports and exports for all borders with ITC parties*
- *and scheduled imports/exports for all borders with non-ITC parties*
- Hourly capacity allocated in a manner not compatible with the congestion management guidelines

*To the relevant Data Administrator*

# NON DELIVERY OF INFORMATION

- If information is not delivered, steps will be taken to notify parties of the problem
- This will involve:
    - o Sending an email to all SPOCs identifying parties which have not provided data.
    - o If no or insufficient / incompatible data is provided, relevant MC members will be informed.
    - o If no or insufficient / incompatible data is forthcoming, the contract requires the ex-ante financial spreadsheet to be used

*A report will be regularly published on the ENTSO-E Extranet containing information on which Data is not delivered on time or to the required standard. Parties who have not delivered will be identified in this report..*

# INVOICING

- Once the settlement notification is issued, parties should feel free to raise invoices

*Invoices should only be raised once the notice has been issued. Any other invoices are invalid.*

# YEARLY DATA COLLECTION

- Each Edge ITC Party shall charge and collect a Perimeter Contribution on scheduled imports and/or exports of electricity between the Edge ITC Party and the Perimeter Country(ies) under the terms and conditions of the Guidelines
- In case an Edge ITC Party is not able to collect the Perimeter Contribution on scheduled imports and/or exports of electricity between the Edge ITC Party and the Perimeter Country(ies), the said Edge ITC Party shall bear and pay the amount corresponding to the said Perimeter Contribution
- **Yearly data collection** to be performed by ENTSO-E Secretariat:
  - **Losses Costs**-value approved by the relevant regulators in the tariff setting process for the concerned Settlement Year shall be used;
  - **yearly Vertical Load**;
  - **Capacity allocated** in a manner not compatible with the Congestion Management Guidelines;
  - **Preliminary Ex Ante Financial Spreadsheet** including the preliminary Perimeter Contribution)
- ENTSO-E Secretariat shall submit, for approval, the above updated data/documents to the ENTSO-E Market Committee

# MONTHLY DATA COLLECTION

- Each ITC Party shall, during the first 9 Business Days of the month following each Month, collect, assimilate and validate all data necessary as input for the calculation in respect of such Month, namely:
  - Comprehensive network description in snapshots
  - Hourly physical flows at every border, including borders with Perimeter Countries
  - Hourly netted import and export scheduled flows at every border with Perimeter Countries and
  - For each border that may be hosting capacities allocated in a manner not compatible with Congestion Management Guidelines, the hourly scheduled exchanges related to these capacities, and total scheduled exchanges
- The Monthly Information as well as the yearly data shall be used by Data Administrators for the preparation of the Settlement, the Compilation Report and the Report on Capacity Allocated in a Manner not Compatible with Congestion Management Guidelines as well as for the preparation of the Report on the Snapshots

# Obstacles and Confidentiality

- Following Council Directive 2003/92/EC that harmonises VAT rules governing the place of supply of the electricity transmission services as of 1.1.2005, the place where the transmission services are supplied shall be the place where the customer has established its business:
- Therefore, **VAT shall not be charged on payments to be made under this Agreement**
- Some VAT adjustments in relation to non-EU countries may be inserted in the Agreement following the conclusion of an opinion on the issue that ENTSO-E shall ask to a tax consultant on behalf of the Parties
- Information considered as confidential shall include all Commercially Sensitive Information, information clearly marked as "confidential" and information which by its nature must be considered or qualified as confidential, whether relating to a Party, a transmission network or the users of such networks (the "**Confidential Information**")

# CONGESTION MANAGEMENT IN SEE

## Legal Basis

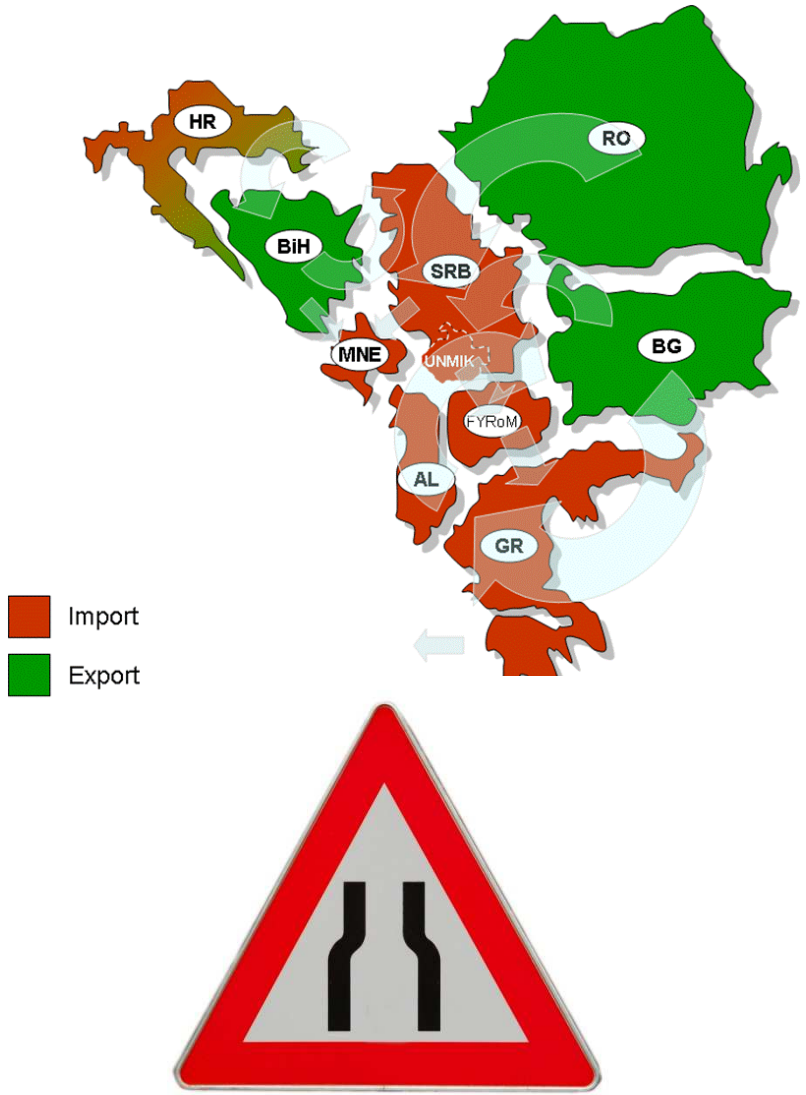
## Basic elements for CACM

## EU Target Market Model

## SEE experiences: SEE CAO

# Congestion Management in SEE

- SEE national transmission systems are faced with a complex international **electricity market**, **transits** and a **growing number** of market **participants** → SEE network designed during 70-80'ties
- Thus, Cross-Border **congestions occur** and create a **barrier** for international electricity trade within SEE (transits: North → South)
- Therefore it was necessary to **implement** proper **rules** for **Market-based Congestion Management**



# Legal basis for Cross-Border issues in EU

**Legal basis** for cross-border issues defined within EU Legislation:

- Directive 2009/72/EC 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC
- Regulation (EC) No 713/2009 of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators
- Regulation (EC) No 714/2009 of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003

- **EU Legislation implementation within SEE Region** (for Contracting Parties)**:** Each CP shall bring into force the laws, regulations and administrative provisions necessary to comply with Directive 2009/72/EC, Directive 2009/73/EC, Regulation (EC) No 714/2009 and Regulation (EC) No 715/2009, as adapted by the PHLG Decision (Jun/Oct 2011), by 1 January 2015

➢ **Task for CPs: Transposition of EU Legislation and Regulation provisions** within Local / National CPs legislation

# General Principles for Congestion Management

- *Regulation (EC) 1228/2003, Article 6:*
- "…Network congestion problems shall be addressed with non discriminatory **market based** solutions which give efficient economic signals to the market participants and transmission system operators involved..."
- "… The **maximum capacity** of the interconnections and/or the transmission networks affecting cross-border flows shall be **made available** to market participants, complying with safety standards of secure network operation …"

No pro-rata allocation of capacity & No long term contracts

# Regulation:
# Requirements for allocation schemes

- "… The maximum capacity of the interconnections and/or the transmission networks affecting cross-border flows shall be made available to market participants, complying with safety standards of secure network operation…."

- "… Congestion management methods shall be market-based in order to facilitate efficient cross-border trade. For this purpose, capacity shall be allocated only by means of explicit (capacity) or implicit (capacity and energy) auctions…"

- "...Capacity allocation at an interconnection shall be coordinated and implemented using common allocation procedures by the TSOs involved. In cases where commercial exchanges between two countries (TSOs) are expected to significantly affect physical flow conditions in any third country (TSO), congestion management methods shall be coordinated between all the TSOs so affected through a common congestion management procedure…"

# Congestion Management Guidelines: Transparency

"…TSOs shall publish all relevant data concerning cross-border trade on the basis of the best possible forecast. In order to fulfill this obligation the market participants concerned shall provide the TSOs with the relevant data. The way in which such information is published shall be subject to review by Regulatory Authorities. TSOs shall publish at least:

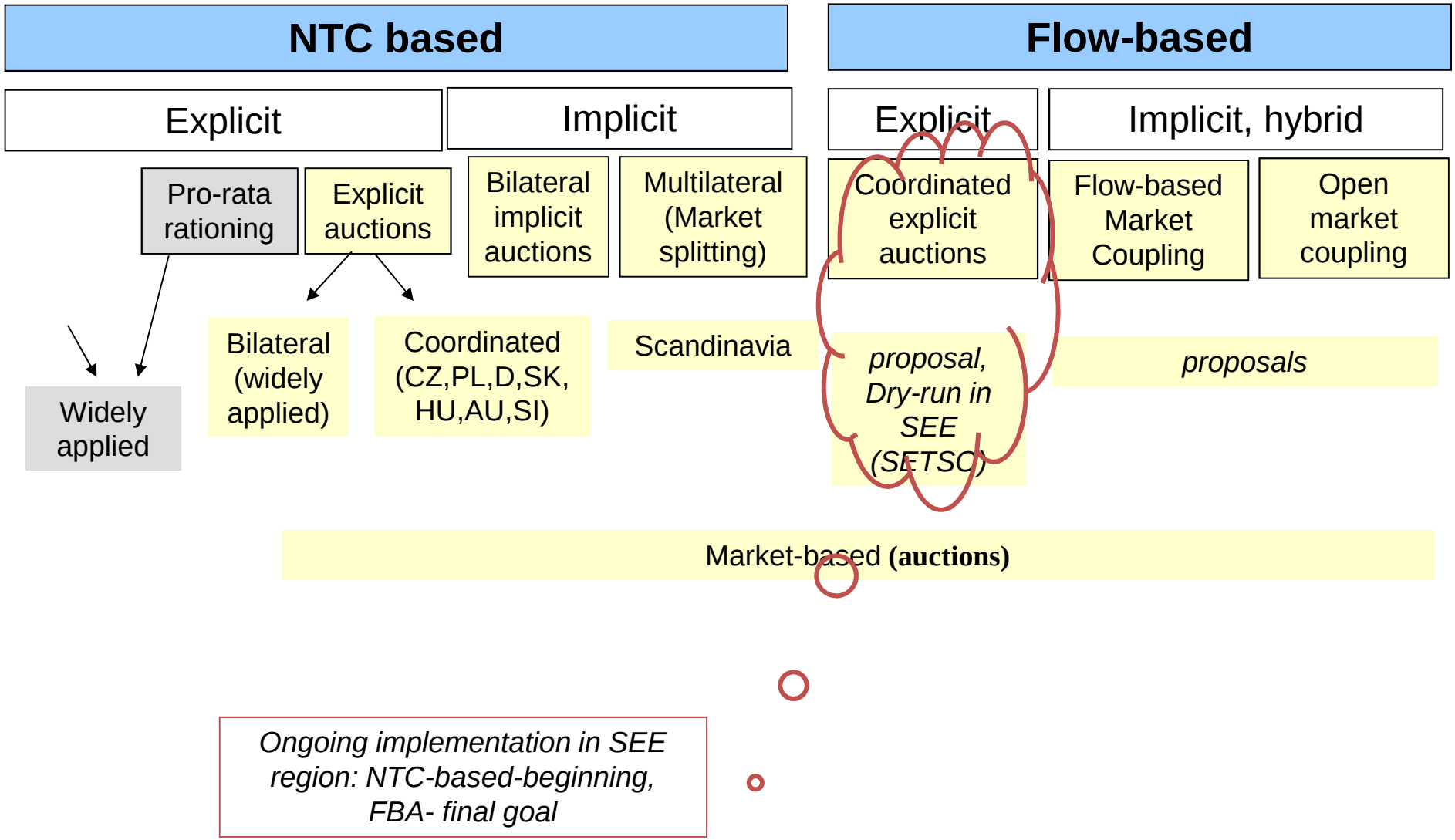
(a) **Annually:** information on the long-term evolution of the transmission infrastructure and its impact on cross border transmission capacity;

(b) **Monthly:** month- and year-ahead forecasts of the transmission capacity available to the market, taking into account all relevant information available to the TSO at the time of the forecast calculation (e.g. impact of summer and winter seasons on the capacity of lines, maintenance on the grid, availability of production units, etc.);

(c) **Weekly:** week-ahead forecasts of the transmission capacity available to the market, taking into account all relevant information available to the TSOs at the time of calculation of the forecast, such as the weather forecast, planned maintenance works of the grid, availability of production units, etc.;

(d) **Daily:** day-ahead and intra-day transmission capacity available to the market for each market time unit, taking into account all netted day-ahead nominations, day ahead production schedules, demand forecasts and planned maintenance works of the grid;…"

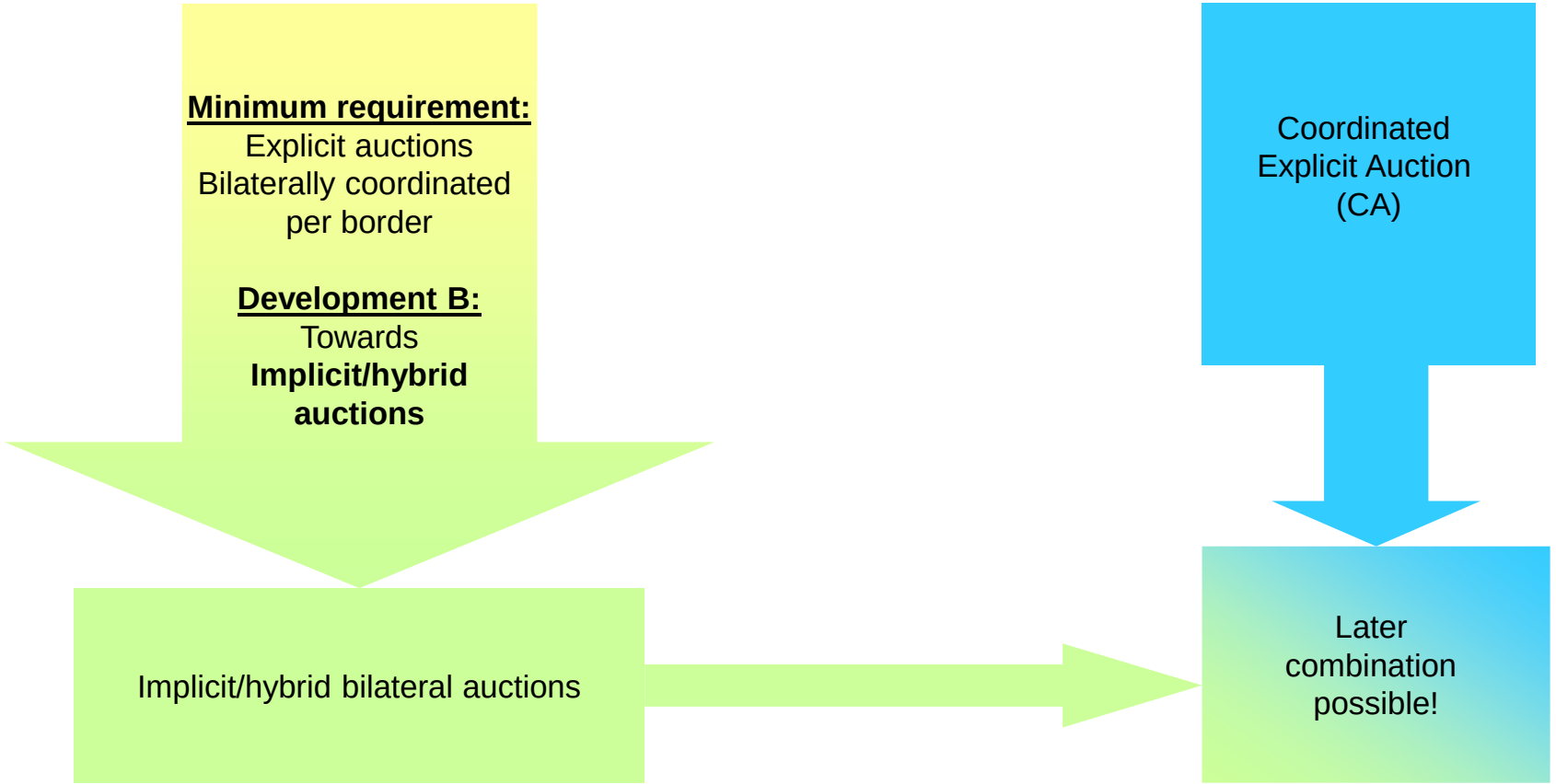
# Methods for Capacity Allocation- Classification




*Ongoing implementation in SEE region: NTC-based-beginning, FBA- final goal*

# Congestion Management: What are the options for the future?

- EC regulation 1228/2003 (714/2009) and accompanying CACM guidelines define minimum requirements and development paths



# Which development to prefer in SEE?

**Development A: Coordinated explicit auction (CA)**

- Allows for improved consideration of physical interdependencies between the transmission capacities at different borders → Especially suited for highly meshed networks, such as in SEE
- Offers uniform and efficient cross-border capacity allocation throughout the region
- Has low requirements as to harmonisation of national markets → Optimal support for emerging SEE regional electricity market

**Development B: Implicit / hybrid auctions**

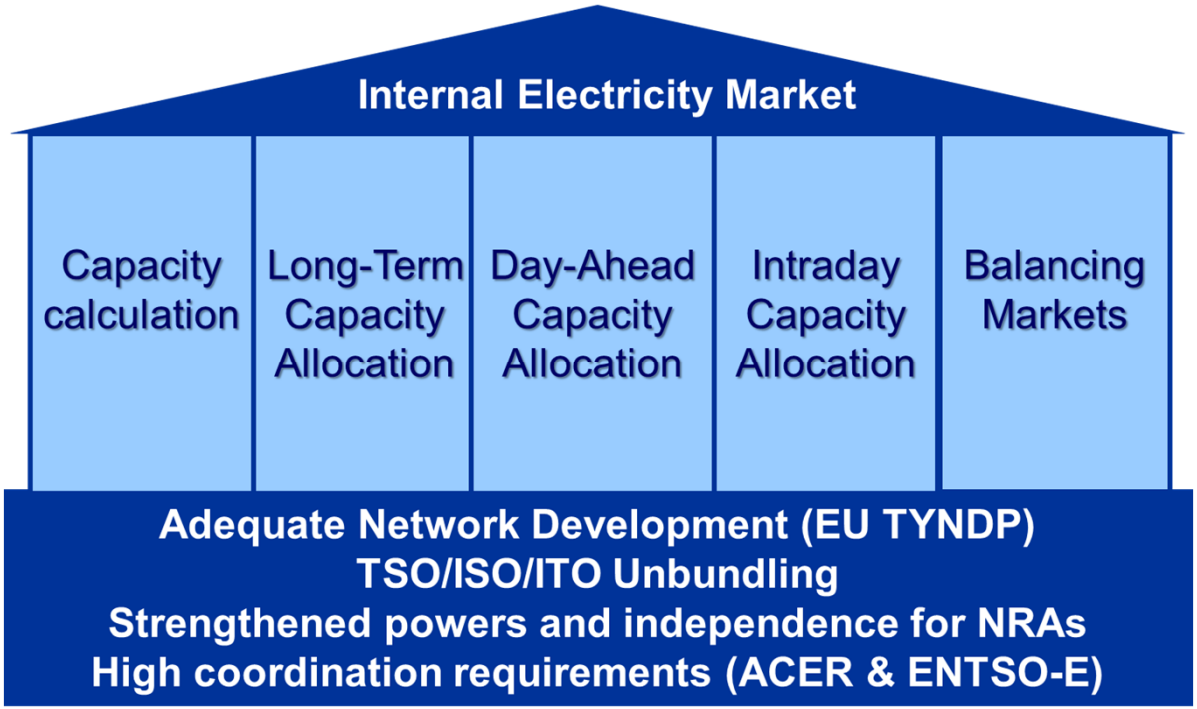
- Improved efficiency through coupling of capacity and wholesale electricity markets
- Requires power exchanges to provide standardised spot markets on national level

  → Required market maturity that is not reached yet

→ For the time being, CA seems most desirable CM method for SEE

→ Extension to multilateral hybrid auction is possible at a later stage

# EU Target Model for Electricity Market Integration



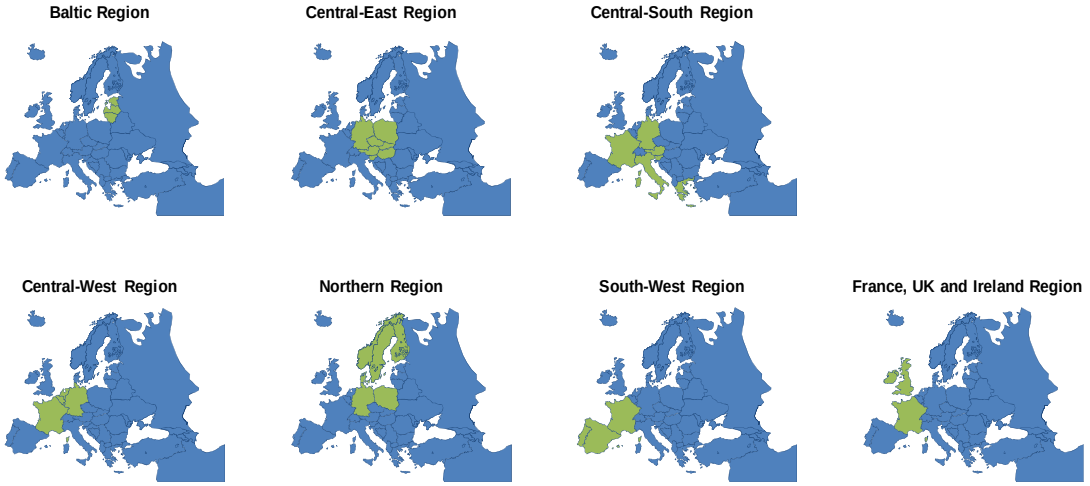

- Common vision for completion of IEM in Electricity by 2014
- Electricity markets across Europe must share a set of common features and be linked by efficient management of interconnection capacities
- In order to achieve this: CACM and Balancing have been identified as priority areas → 3rd Legislative Package

# Implementation of CACM Target Models

- In order to implement **CACM Target Models for Electricity** across Europe, **four priority projects** have been **identified**:

1. **Single European Price Coupling** aims at optimising the use of existing day-ahead cross-border capacities at European level, reducing the day-ahead price volatility and improving confidence in organised price references
2. **Single European Continuous Implicit Mechanism for cross-border Intraday trade** aims at enabling market participants to adjust their position before the closure of the market and, possibly, short-term arbitrage. This Intraday timeframe is becoming increasingly important in the context of growing intermittent generation
3. **European Platform for the allocation of Long-Term Transmission Rights** aims at delivering one single point of contact for the allocation of harmonised long-term transmission rights across Europe
4. **Flow-Based Capacity Calculation Method for short-term capacity allocation in highly meshed networks** aims at improving the network security and the level of capacity made available to the market, by taking into account the influence of cross-border flows on the congested lines in a more transparent and effective way

# Coordinated capacity allocation – recent developments in the EU: ACER Electricity Regional Initiatives




- EU-ACER: 7 Electricity Regions defined (ex-ERGEG)
- Each Region is represented by the Leading Regulator within ERI
- Each Region has its RCC: discussion floor for NRAs

- Each Region chose its own way forward regarding cross-border capacity allocation mechanism (coordinated auctions, market coupling, etc.), which is in line with the Regulation (3rd Package)
- Each Region defined its Regional Action Plan regarding cross-border capacity mechanism
- Elaboration of the Cross Regional Action Plan, which would define common principles regarding cross-border issues on pan-European level and thus facilitate achieving of EU Target Market Model in 2014
- The 8th Region included in ACER ERI Quarterly Report as Annex

# Ongoing development in different Regions

- **CWE-Region:**
  - Project for Market Coupling (TLC → MLC)

- **CEE-Region:**
  - Currently: Coordinated explicit NTC-based auctioning (CEE CAO in Freising, Germany)
  - Goal: Coordinated explicit flow-based auctioning

- **SEE-Region:**
  - Currently: Split 50/50 Explicit auctioning + Common Explicit auctioning at several borders
  - Goal: Coordinated Explicit flow-based auctioning (SEE CAO, Project Team Company in Podgorica, Montenegro)

# Status of Coordinated Auction (CA) in Europe

**EU**

- ACER ERI
- Initiatives (e.g. Open Market Coupling, Flow-based market coupling) are based on CA essentials
- Explicit coordinated auction based on composite NTCs (technical/commercial profiles) for time being in Central East Europe

**SEE**

- Analysis of CA as potential method for capacity allocation was initiated by TSOs in SEE region
- Dry-run application of CA in SEE (first time in Europe) provides realistic data and experience as a basis for practical implementation

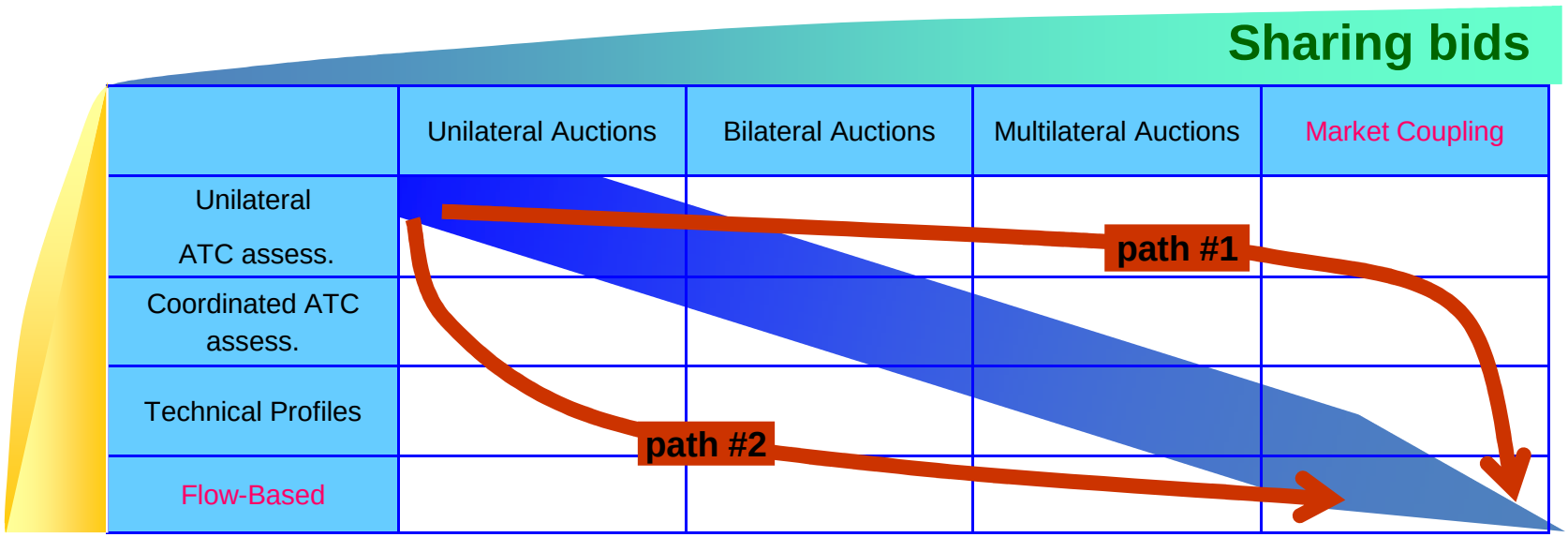
→ By introducing explicit auctions, SEE followed the mainstream on the European continent and will to ensure EU compatibility

→ By introducing a coordinated flow-based explicit auction, SEE will follow the European electricity market mainstream development

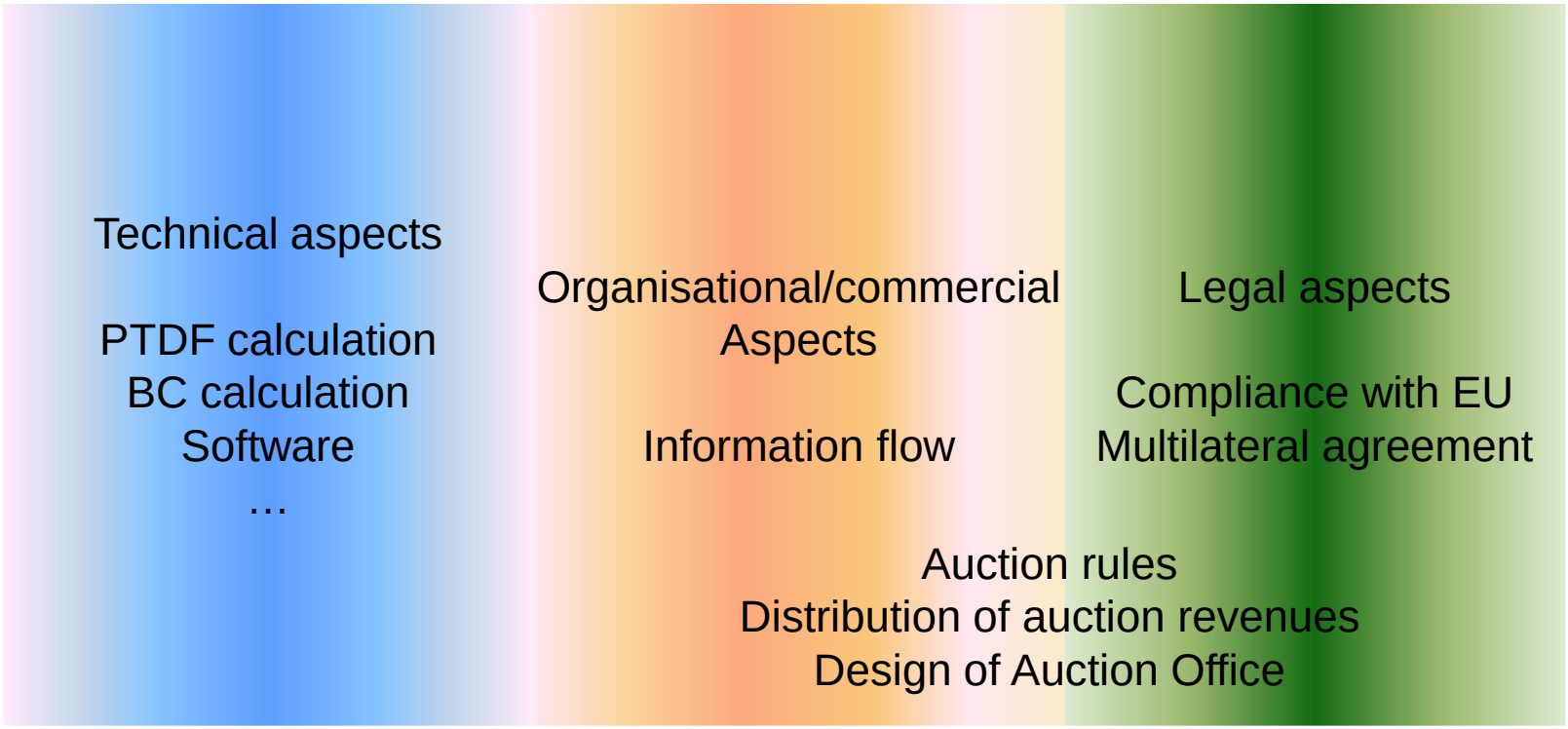
# Developments: Flow-based market coupling

Two path towards social welfare maximization for regional capacity allocation

- market coupling first (sharing energy bids)
- flow-based modelling first (optimal use of the system)



# Which aspects have to be considered in CA?




- → Many aspects are interdependent and cannot be treated separately
- → Many aspects require involvement of different stakeholders (e.g. TSOs, Regulators, Electricity traders)

# SEE CACM process:
# Roles and responsibilities

**TSOs**

- Operation and analysis of dry-run application (until end of 2006)
- Drafting a harmonised procedure for CA (agreed by all participating TSOs)
- Coordination with other involved parties (Regulators, traders, …)

**Regulators**

- Support and enforce CM development as part of implementation of Energy Community
- Approval of TSOs proposals related to organisational, commercial and legal aspects
- Verification of compliance with national legal framework and development schedules and with EU legal framework

**Consultants**

- Moderation and organisation of the further process preparing the implementation of CA in the SEE region
- Consultancy projects

→ TSOs to develop concepts and make proposals
→ Consultants to moderate and make recommendations
→ Regulators to decide or approve

# Coordinated Explicit Flow-based Auctions

**COORDINATED**

**…means: simultaneous capacity allocation at more than one border,**

Not bilateral allocation

**EXPLICIT**

**…means: process of allocation of transmission capacity only (MW),**

without electricity trade (not implicit method)

**FLOW-BASED**

**…means: with considering real power flow paths (through PTDFs) originated by the transactions, and physical limitations (BC).**

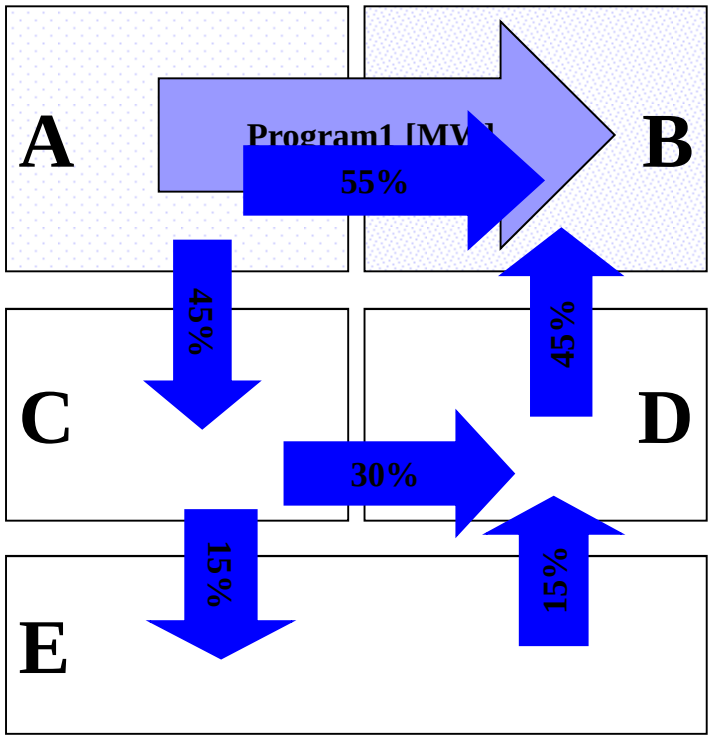
Not based on programs constraints (NTC)

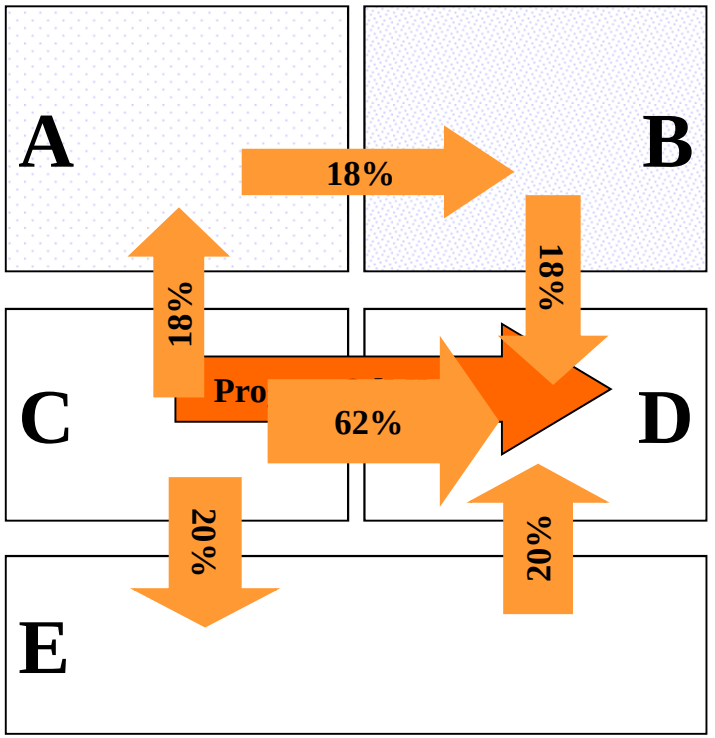
**AUCTIONS**

**…means: market-based clearing, based on offered prices for transmission capacity.**

Not pro-rata, Not first come-first served

# CA - following physical flows through PTDF



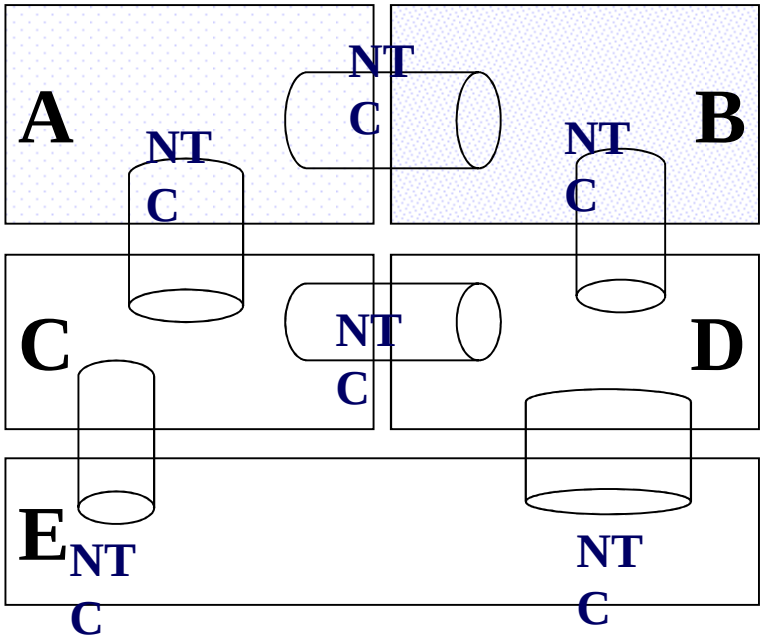

Exchange program between A and B

Corresponding distribution of real power flows i.e.
**P**ower **T**ransfer **D**istribution **F**actors

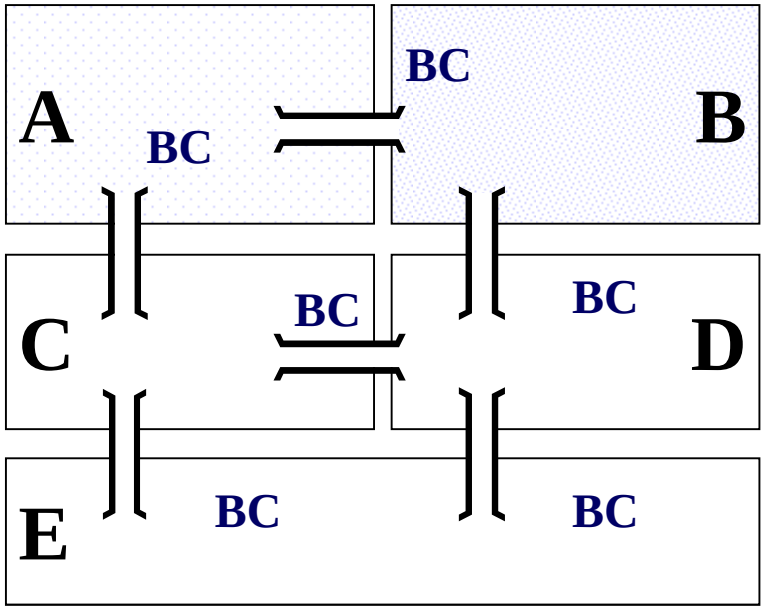
PTDF factors can be defined for scheduled exchange between each pair of zones, e.g. C→D

PTDF matrix easy to calculate – from load flow models

# Constraints: Border Capacities (BC)




**NTC** means: What is the maximum allowable sum of commercial exchanges ("programs") over some border?




**BC** means: What is the maximum allowable POWER FLOW over some border?

This power flow is the sum of the influences of all commercial exchanges ("programs").

The programs are converted into power flows by using PTDFs.

# Definitions of physical transmission capacities

- **Dry run Report (published on ex-ETSO web-page)**: definitions of Total, Net, Available Border Capacities…

**NBC = TBC – FRM – NF – OF**

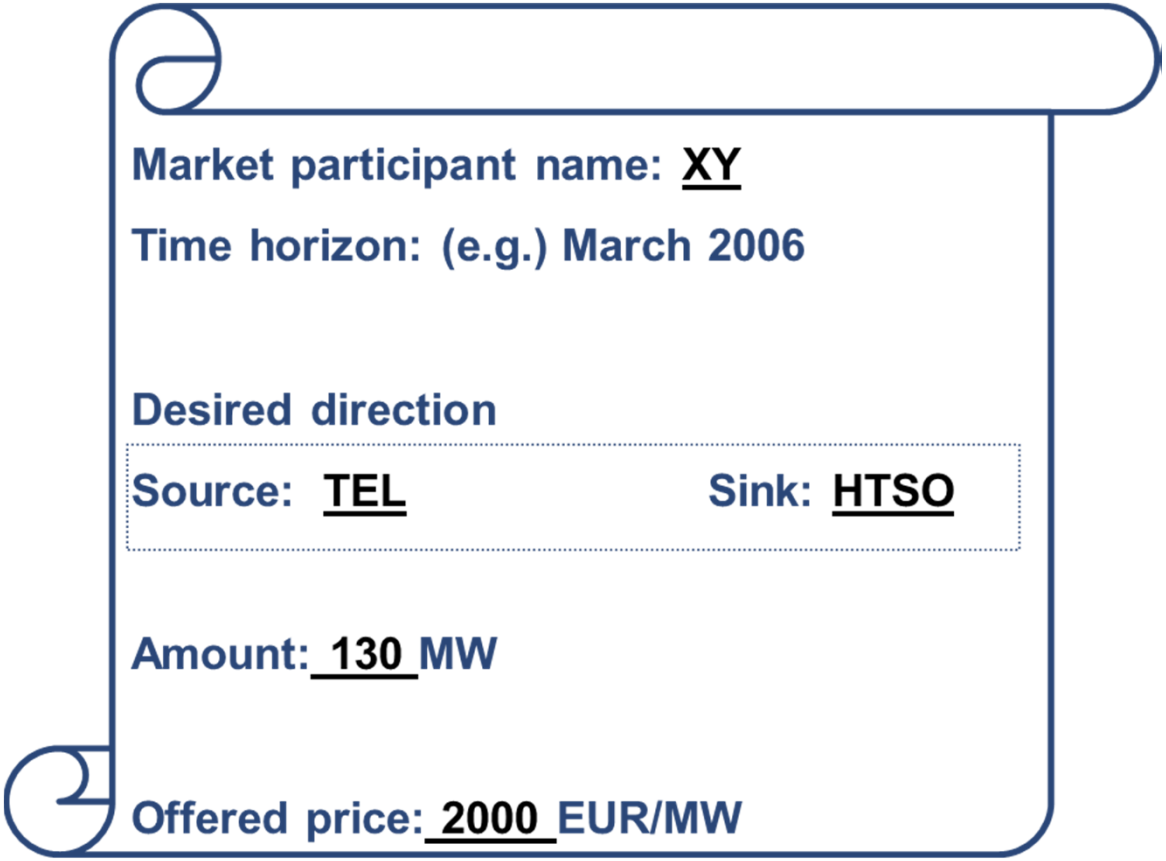
Net Border Capacity (NBC),
Total Border Capacity (TBC),
Flow Reliability Margin (FRM) - *uncertainties*
Natural Flows (NF) - *for zero exchanges*
Outside Flows (OF) - *influence of rest of UCTE*

**ABC = NBC – ANF**

Avaliable Border Capacity (ABC),
Already Nominated Flows (ANF), - *from previous allocations*

# Market participants: Sending of bids

- The participants send the bids for transmission rights, e.g.: if market participant XY wants to buy the transmission rights:



# Auctioning Office (CAO): Administration

- Auctioning Office administrates the clearing according to the received data from TSOs (*PTDF, BC*) and Market participants (*Bids*).
- CAO: Has no effect on the auction outcome
- CAO organization: under elaboration in SEE
- Simultaneous auction of transmission capacities for all concerned borders

# Advantages/prerequisites of Flow Based CA

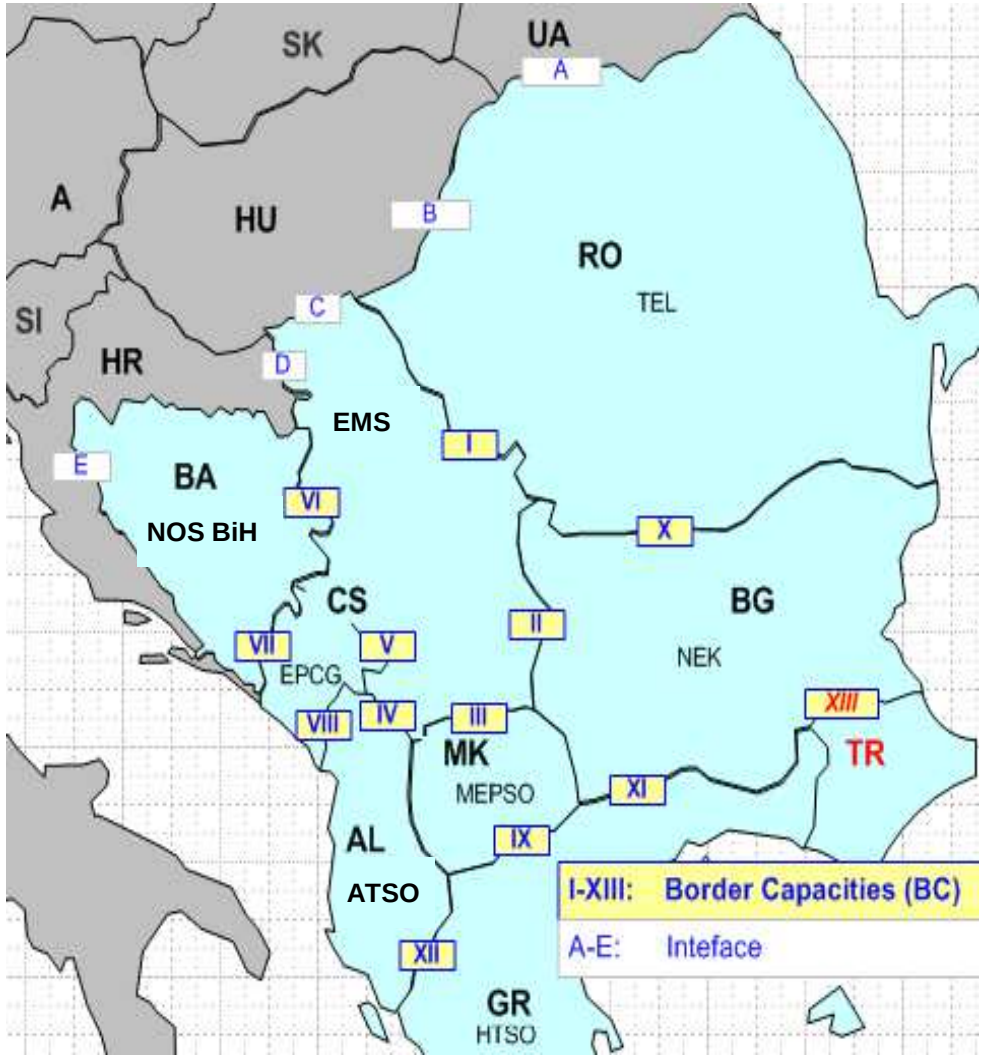
**Advantages -** when compared to bilateral, NTC-based mechanisms:

- ✓ CA improve the network security (flow-based)
- ✓ CA enable better utilization of the grid - under investigation for SEE region!
- ✓ CA is transparent and more convenient for market actors
- ✓ First investigations show increased social welfare for the whole region; market income is depending on individual stakeholders – needs more discussions both in CEE and SEE region

**Prerequisites:**

- Unbundling
- Close collaboration of TSOs
- Intensive data exchange
- Establishing the common Auctioning Office
- Joint design: TSOs, regulators, market participants

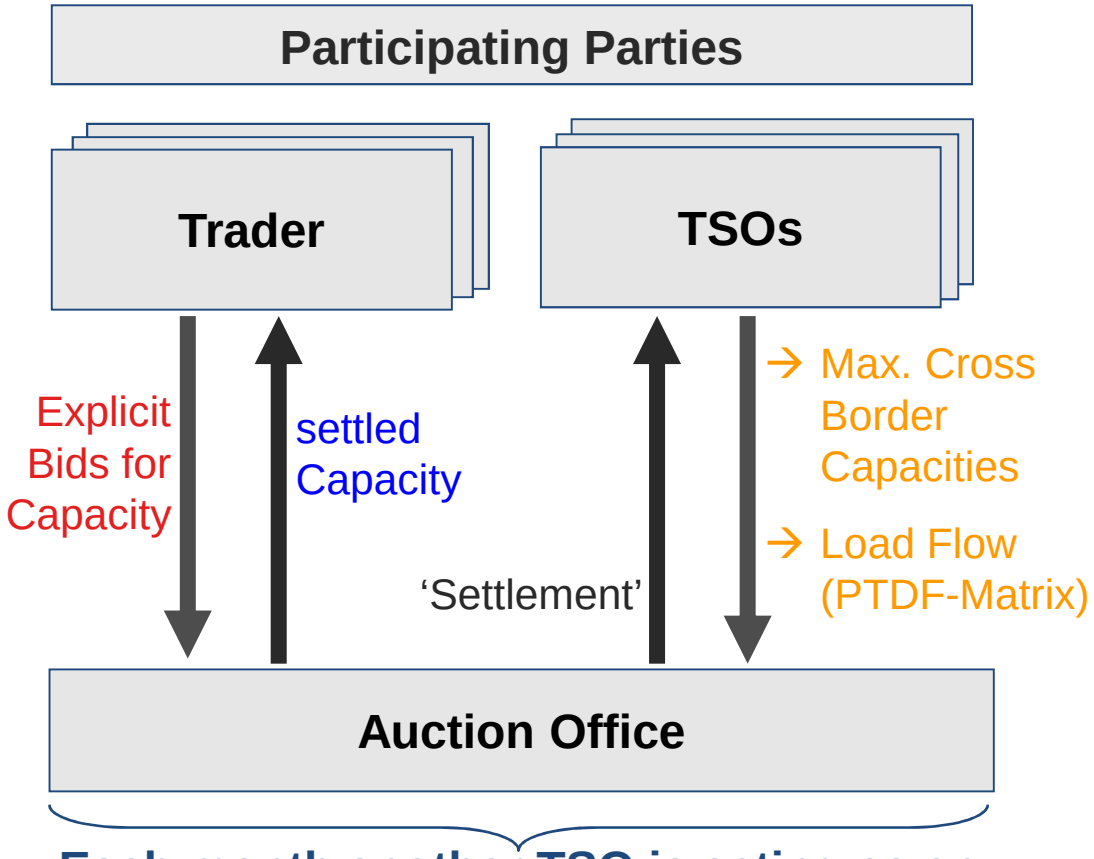
# CA Dry–run implementation: basic info




- **Simulation of coordinated auction on monthly basis**
- **Started in January 2006 (for March 2006)**
- **8 TSOs participate in dry-run**
  *+Turkey +neighbours in LF model*
- **Rotation of the CAO role:**

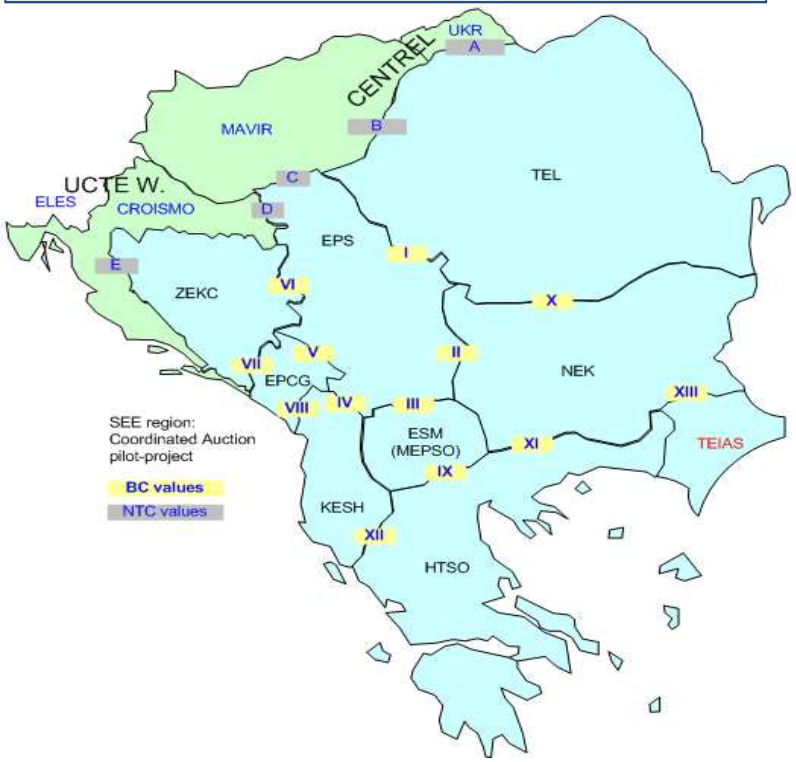
| Round: | Who: | Status: |
|---|---|---|
| 1 | EKC | ✓ |
| 2 | EMS | ✓ |
| 3 | NEK | ✓ |
| 4 | EPCG | ✓ |
| 5 | HTSO | ✓ |
| 6 | NOS BiH | ✓ |
| 7 | ATSO | ongoing |
| 8 | TEIAS | ongoing |
| 9 | MEPSO | |
| 10 | TEL | |

# Concept of CA Dry-run in SEE-Region



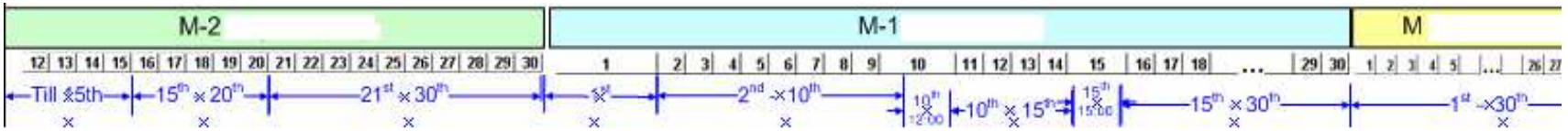

- **Each month another TSO is acting as an Auction Office**
- **Internet based Software DrCAT is used for clearing!**

**Participating TSOs in Dry-Run**

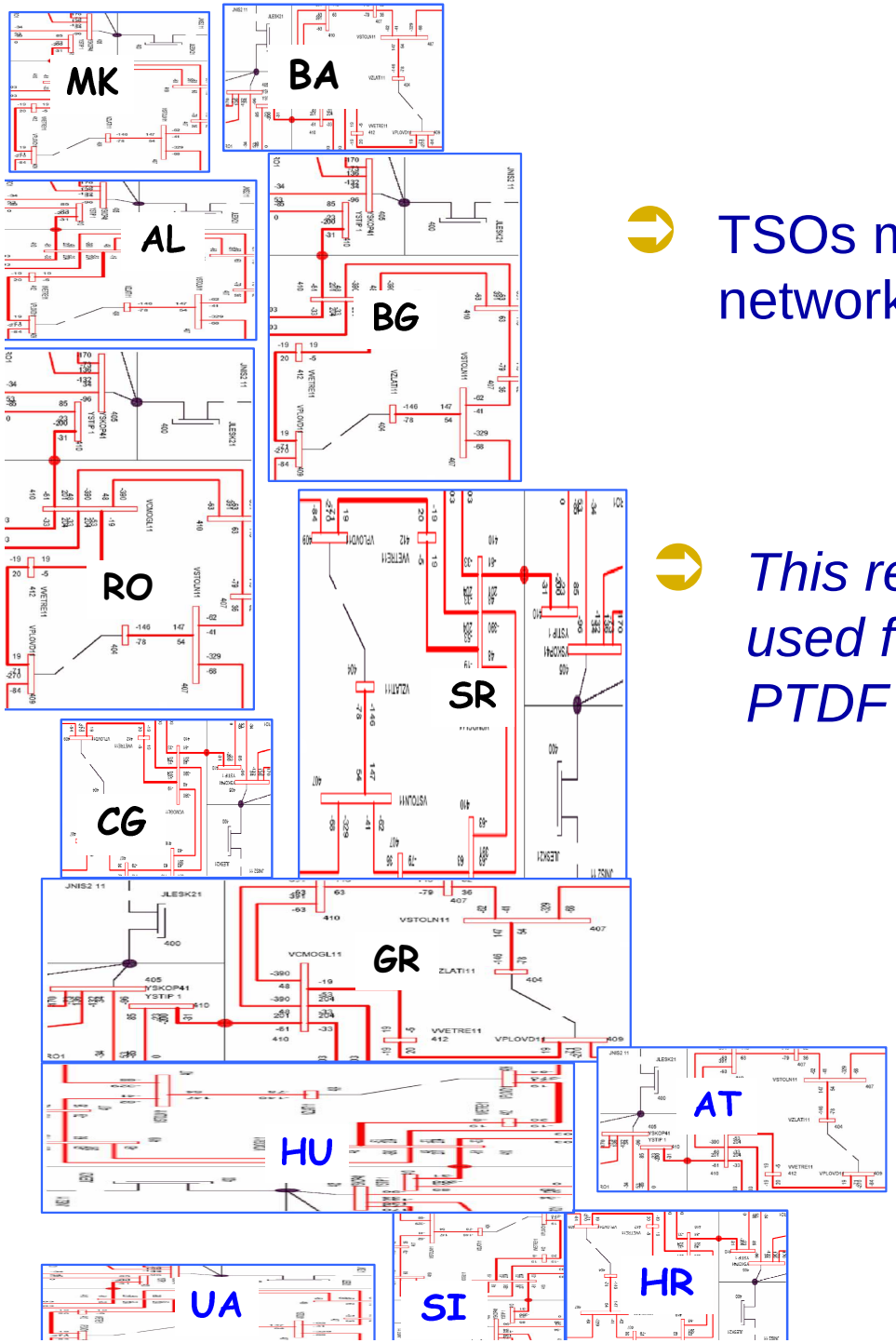



**Currently 9 TSOs are participating actively at the Dry-run!**

# CA Dry-run time schedule

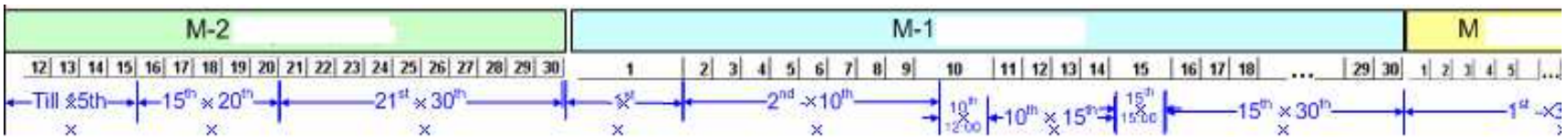



| MODEL EXHANGE | MODEL MERGING |
|---|---|
| Each TSO send the reference monthly network model<br><br>Near neighbours also included/ modelled:<br><br>+UA, HU, HR, SI, AT | Merging of the models into SEE model<br><br>Verification by TSOs |




- TSOs made and exchange network models via e-mail
- *This regional network model is used for the calculation of PTDF and BC*
- Models are sent also to CAO, who merges them into Regional network load-flow model

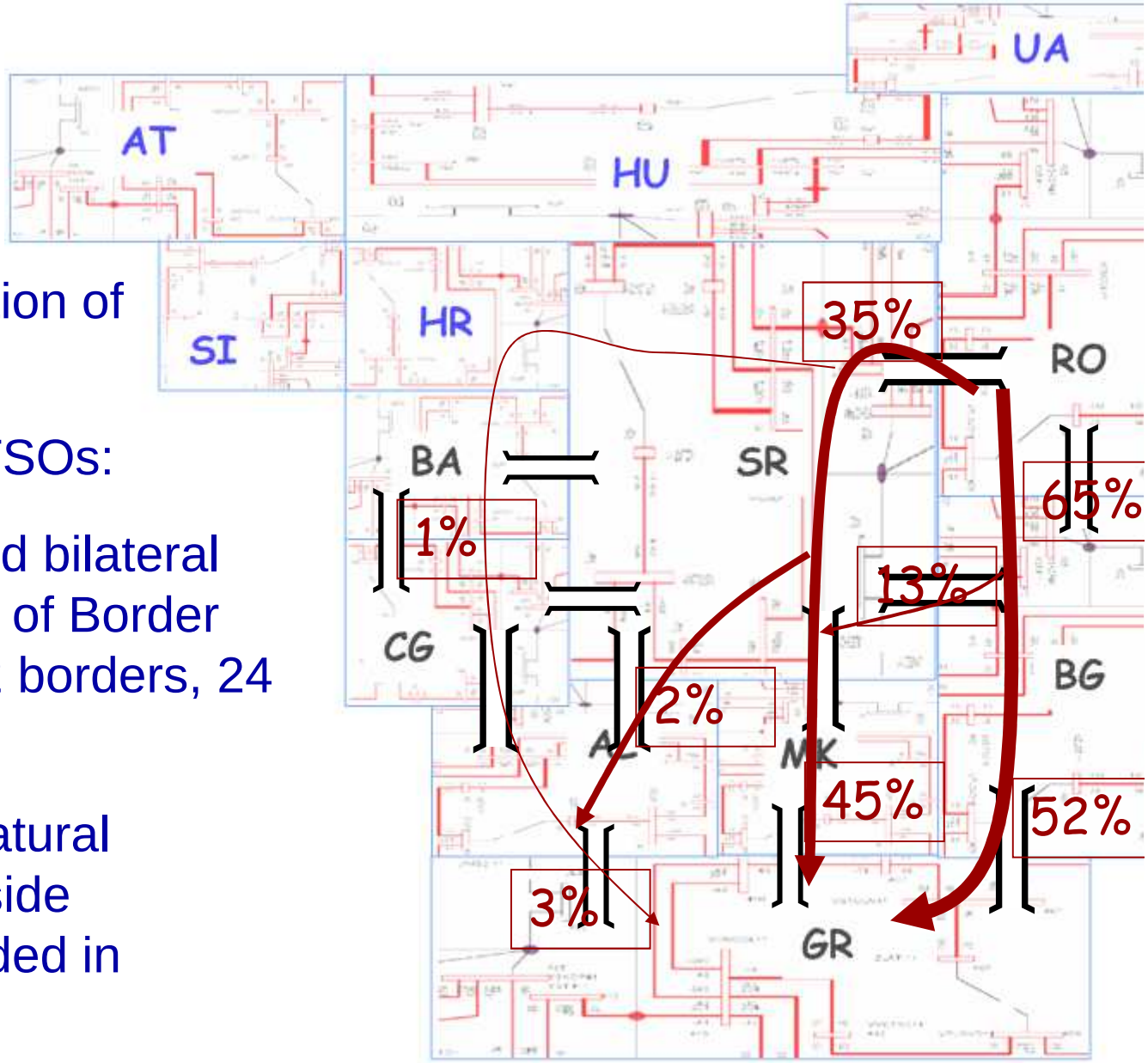
# CA Dry-run time schedule



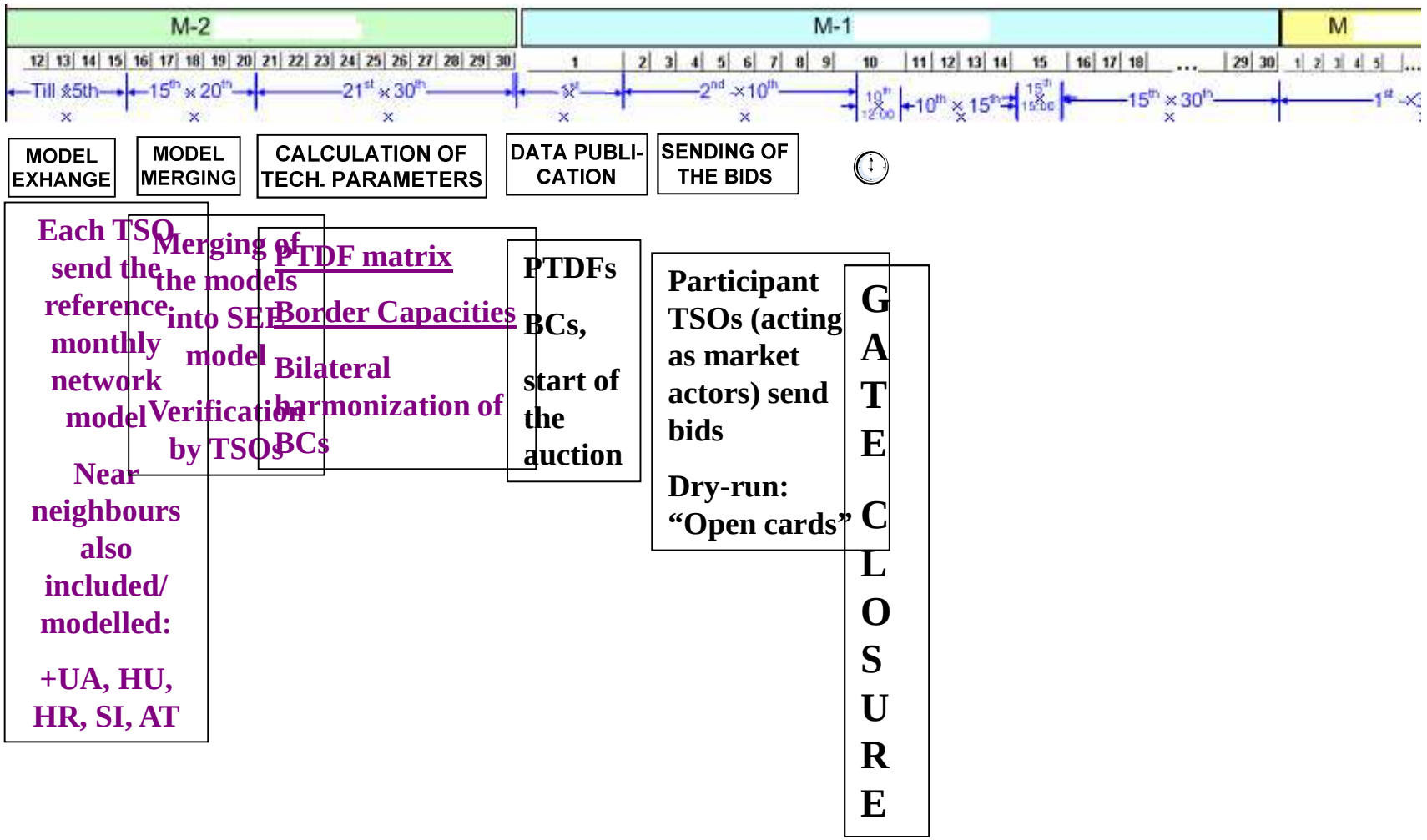

| MODEL EXHANGE | MODEL MERGING | CALCULATION OF TECH. PARAMETERS |
|---|---|---|
| Each TSO send the reference monthly network model<br><br>Near neighbours also included/ modelled:<br><br>+UA, HU, HR, SI, AT | Merging of the models into SEE model<br><br>Verification by TSOs | PTDF matrix<br><br>Border Capacities<br><br>Bilateral harmonization of BCs |

- CAO: Calculation of PTD Factors
- Participating TSOs:

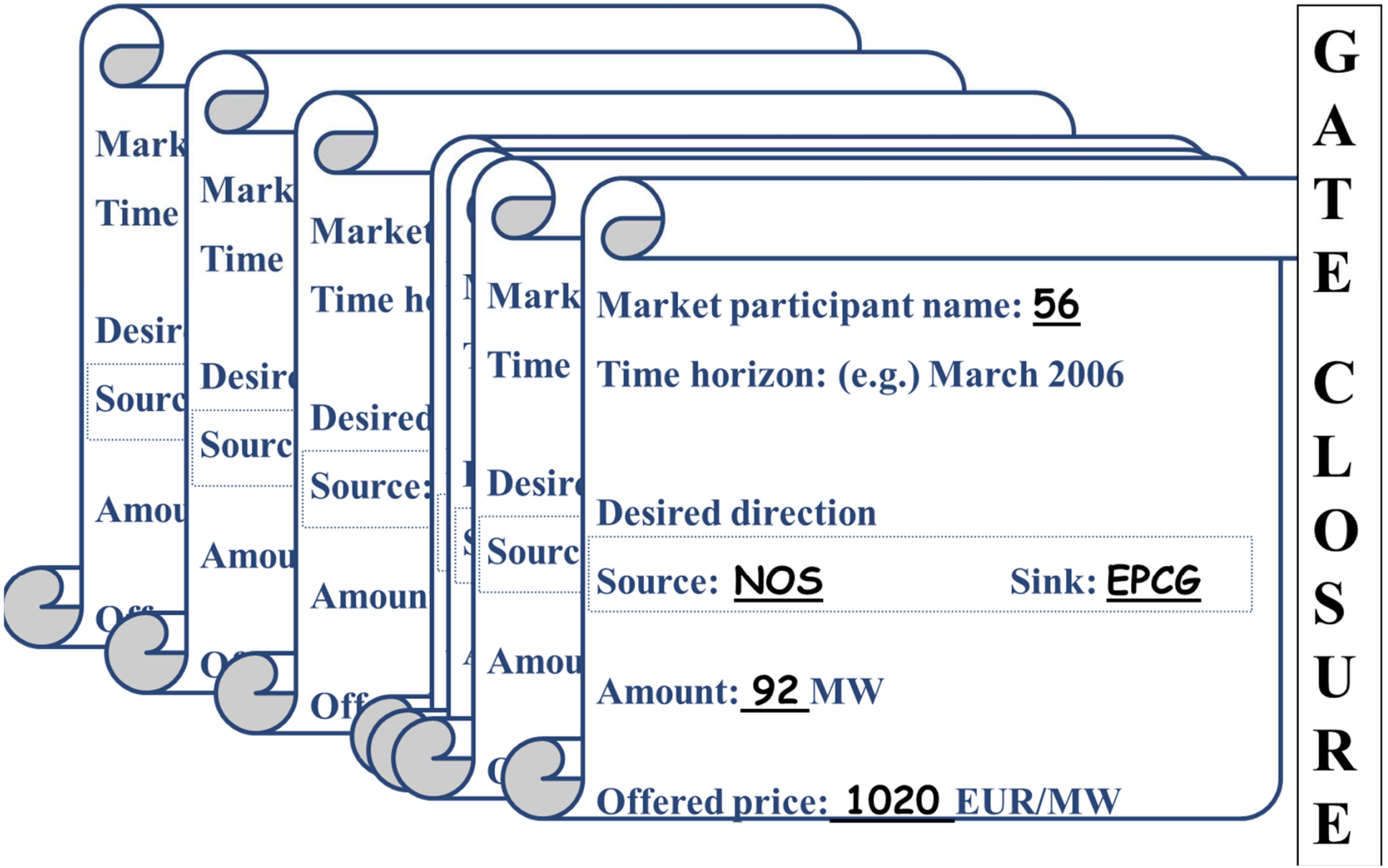
  Calculation and bilateral harmonization of Border Capacities (12 borders, 24 directions)
- Influence of natural flows and outside systems included in BCs



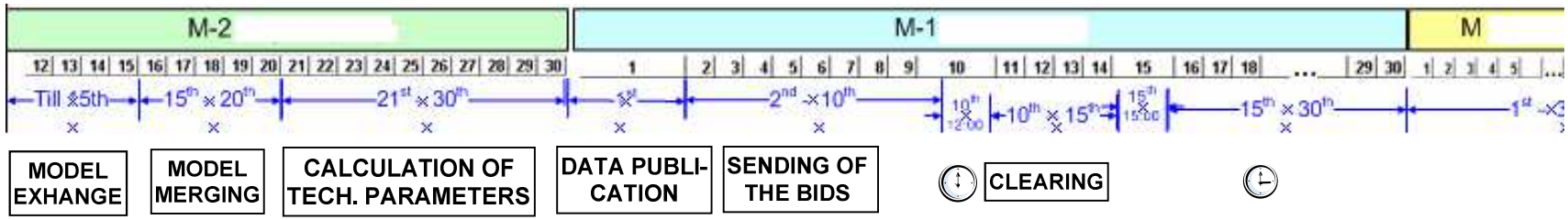
# CA Dry-run time schedule



# Bids: sent to CAO till gate closure



# CA Dry-run time schedule




Each TSO send the reference monthly network model

Near neighbours also included/ modelled:

+UA, HU, HR, SI, AT

Merging of the models into SEE model

Verification by TSOs

PTDF matrix

Border Capacities

Bilateral harmonization of BCs

PTDFs

BCs,

start of the auction

Participant TSOs (acting as market actors) send bids

Dry-run: "Open cards"

GATE CLOSURE

Clearing procedure (DrCAT)

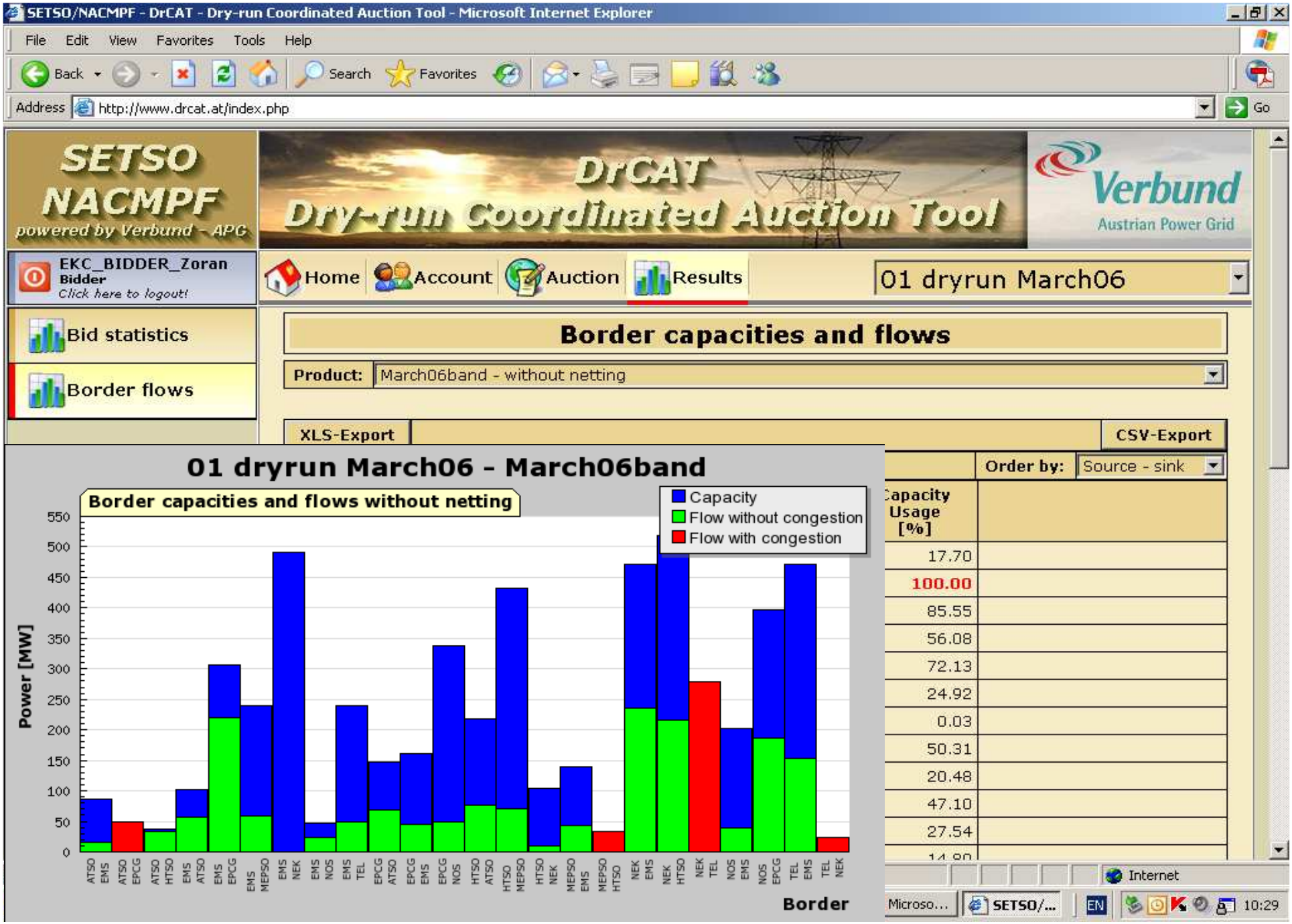
Calculation of the "virtual" share of the congestion charges: DrCAT

AUCTION RESULTS

# Software tool DrCAT

- DrCAT… Dry-run Coordinated Auction Tool

- WEB based software (accessible via internet) for clearing flow-based coordinated auctions
- database concept for storing individual auctions and results (max. flexibility)
- optimisation procedure (according to ETSO) is used for clearing the auctions
- Different roles implemented (to simulate the “real life” user handling)
- …


SETSO/NACMPF - DrCAT - Dry-run Coordinated Auction Tool - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://www.drcat.at/index.php
Go
SETSO NACMPF
powered by Verbund - APG
DrCAT
Dry-run Coordinated Auction Tool
Verbund
Austrian Power Grid
EKC_BIDDER_Zoran
Bidder
Click here to logout!
Home
Account
Auction
Results
01 dryrun March06
Bid statistics
Border flows
Border capacities and flows
Product:
March06band - without netting
XLS-Export
CSV-Export
Order by:
Source - sink
Capacity Usage [%]
17.70
100.00
85.55
56.08
72.13
24.92
0.03
50.31
20.48
47.10
27.54
01 dryrun March06 - March06band
Border capacities and flows without netting
Capacity
Flow without congestion
Flow with congestion
Power [MW]
Border
Internet
Microso...
SETSO/...
EN
10:29

# DrCAT methodology

- Market participants place bids (till now TSOs) consisting their desired transmission path from zone to zone, bid volumes and bid prices
- Objective is to maximize system usage – i.e. the social welfare (obligations, options)
- According to: line flows (PTDF), border capacity constraints
- Optimization calculates the clearing prices and volumes
- Individual results (allocated capacities and prices) are available

**→ According to ETSO* (2001) and recent developments as e.g. OMC****

*Coordinated Auctioning – A Market Based Method for Transmission Capacity Allocation in Meshed Networks.

** Open Market Coupling, proposal from EEX

# The 8th Congestion Management Region - SEE

- The most pressing issue was the pending definition of a Congestion Management area in the South East European region and definition of consisting countries as prerequisite for SEE CAO establishment
- The need of a definition for SEE region became evident during the Action Plan drafting process for the SEE CAO as Regulation 1228/2003 and its Congestion Management Guidelines consists no definition for the SEE region
- At the same time, the definition is essential for the SEE CAO project as it predefines the future participants of the SEE CAO
- The so called 8th Congestion Management Region was established according to the approach used within the EU (ERGEG Electricity Regional Initiatives)
- The agreement on the South East European region was reached at the Ministerial Council in June 2008: The 8th Region was created by MC decision in June 2008
- The definition of the 8th Region was an important step towards the establishment of a SEE Regional Market for electricity

# The 8th Congestion Management Region - SEE

- As a result, a common Coordinated Congestion Management method, including capacity allocation, is to apply for the **following territories**:
  - the **nine** Energy Community Treaty **Contracting Parties**
  - the neighboring countries **Bulgaria**, **Greece, Hungary, Romania** and **Slovenia**
  - **Italy** with regard to the interconnections between Italy and the CPs to the EnC Treaty (DC undersea cables)
  - **Moldova** and **Ukraine** are not technically in parallel synchronous operation within ENTSO-E, and thus cannot perform operationally CACM mechanisms in the 8th region


| SEE |
|---|
| **9 contracting parties** |
| **>20 borders** |
| **Population: 137,12 million** |

# Regionally Coordinated Mechanism: SEE CAO


⏩ Legal requirement of <u>regionally</u> coordinated CAM & CMP

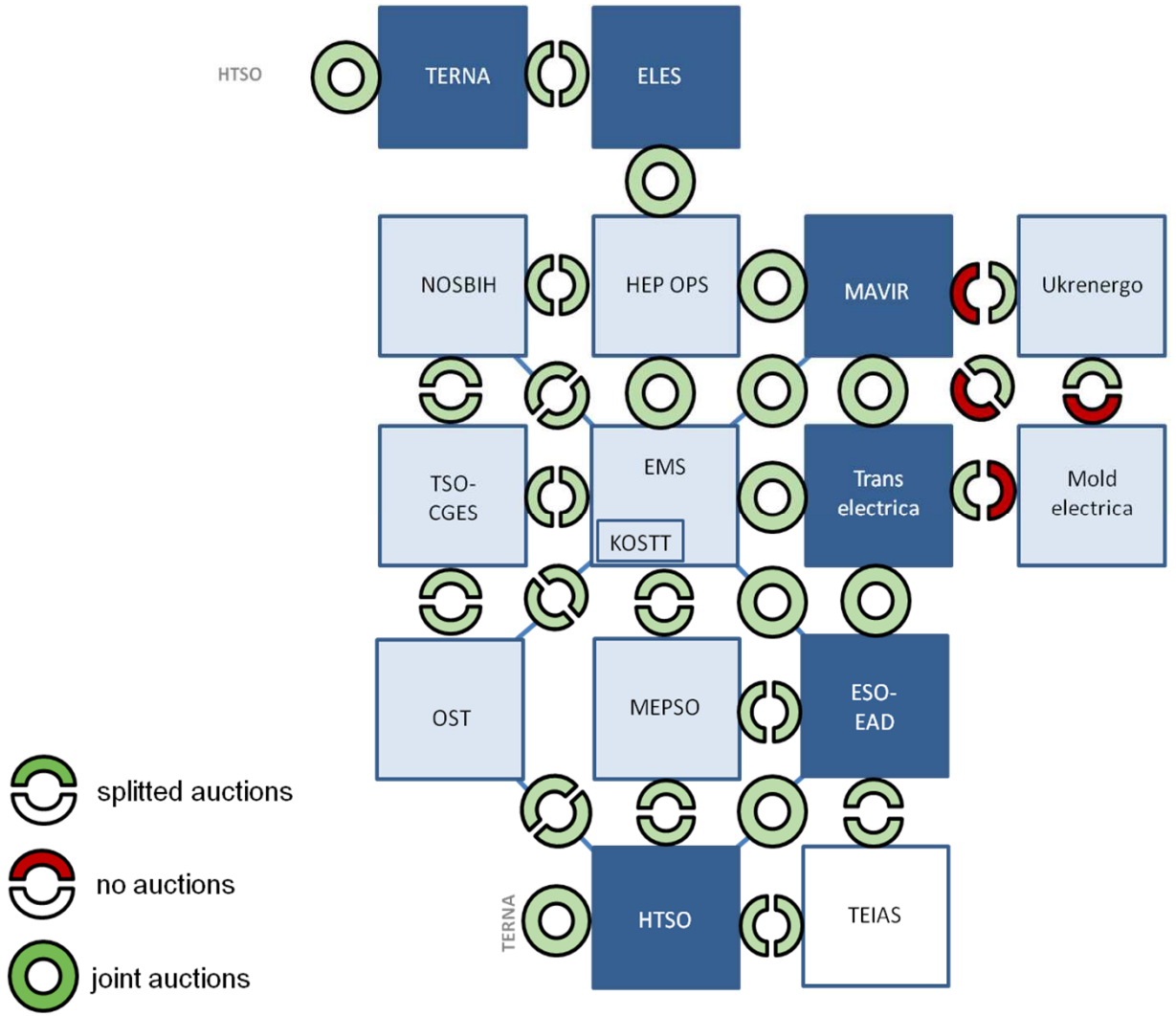
# SEE Coordinated Auction Office (1)

- CEE and SEE TSOs decided to implement Explicit Flow-based CA mechanism in SEE Region ... vs. CWE, SWE and Nordic Region where Implicit NTC based mechanism is implemented (Market Coupling, Market Splitting)
- Coordinated Auctions and SEE CAO are in compliance with Regulation 1228/03 (714/2009) and CACM provisions
- Majority of EnC Contracting Parties supported the establishment of a Cooridinated Auction Office in the SEE region + Turkish TSO is member of SEE CAO Project Team Company
- Via MoU the SEE TSOs of the Region supported the setting up of SEE CAO at the MC meeting on 11 Dec 2008 in Tirana
- PTC for SEE CAO established in Podgorica, Montenegro in June 2012 + SEE CAO started to operate in 2013
- First allocation procedure to be organized by SEE CAO: Monthly allocation for Q3 2014

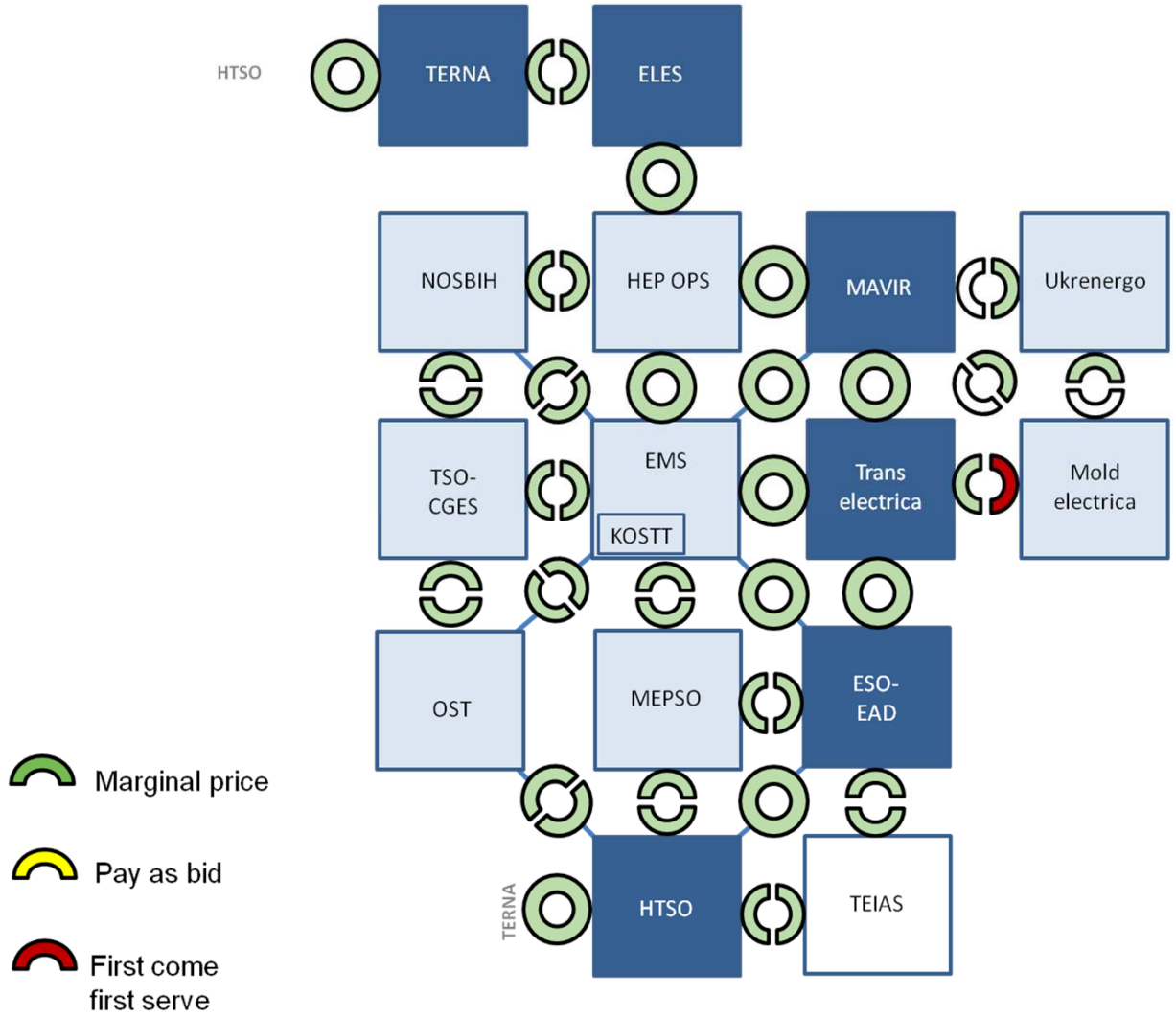
# SEE Coordinated Auction Office (2)

- Steering Committee for Project Team was responsible for establishing SEE CAO: TSOs and donors participated in meetings –early 2009
  - Agreed structure for SEE CAO Project Team Company
    - Budget
    - Co-financing by IFI´s (subject to TSO co-financing)
    - Structure: project company
    - Members
    - Project Team is not yet the CAO!
- Action Plan update was elaborated by SC Project Team (SEE TSOs)
- ECS studies related to SEE CAO (technical and legal study) done
- Project Team established with tasks to draft: Business Plan, Auction Rules, NTC vs. Maximum Flow approach, etc.
- NTC based approach for SEE CAO as the first step
- SEE TSOs drafted Aruction Rules and SEE Regulators approved SEE CAO related rules and will perform CA and SEE CAO Monitoring + define revenues distribution

# Cross Border Capacity Allocation Mechanisms in the 8th Region – Q1 2014



# Mechanisms for Capacity Price determination in the 8th Region – Q1 2014



# SEE Regulators' feedback on WMO process in SEE Region

- It is necessary to take an efficient Step-by-step approach when introducing WMO in the 8th Region
- WMO is mainly driven by political influence and national strategies !

  → Regulators could just support WMO and propose solutions, but cannot decide or make strong influence to decisions
- Regulators are supposed to implement the recommendations into their market models
- Regulators addressed the fact that the willingness of regulators to adapt their systems was not the key problem, but limitations related to their powers and acceptance by governments would exist
- Regulators should more actively raise the restriction of powers they are facing
- Ministries representatives and Governments to be much more involved in the implementation phase, as they are key elements and most responsible entities for accelerating wholesale market opening in the eight region
- SEE regulators support WMO process, advice and work on creating an appropriate regulatory framework for the proposed solutions

# SEE WMO Implementation phase

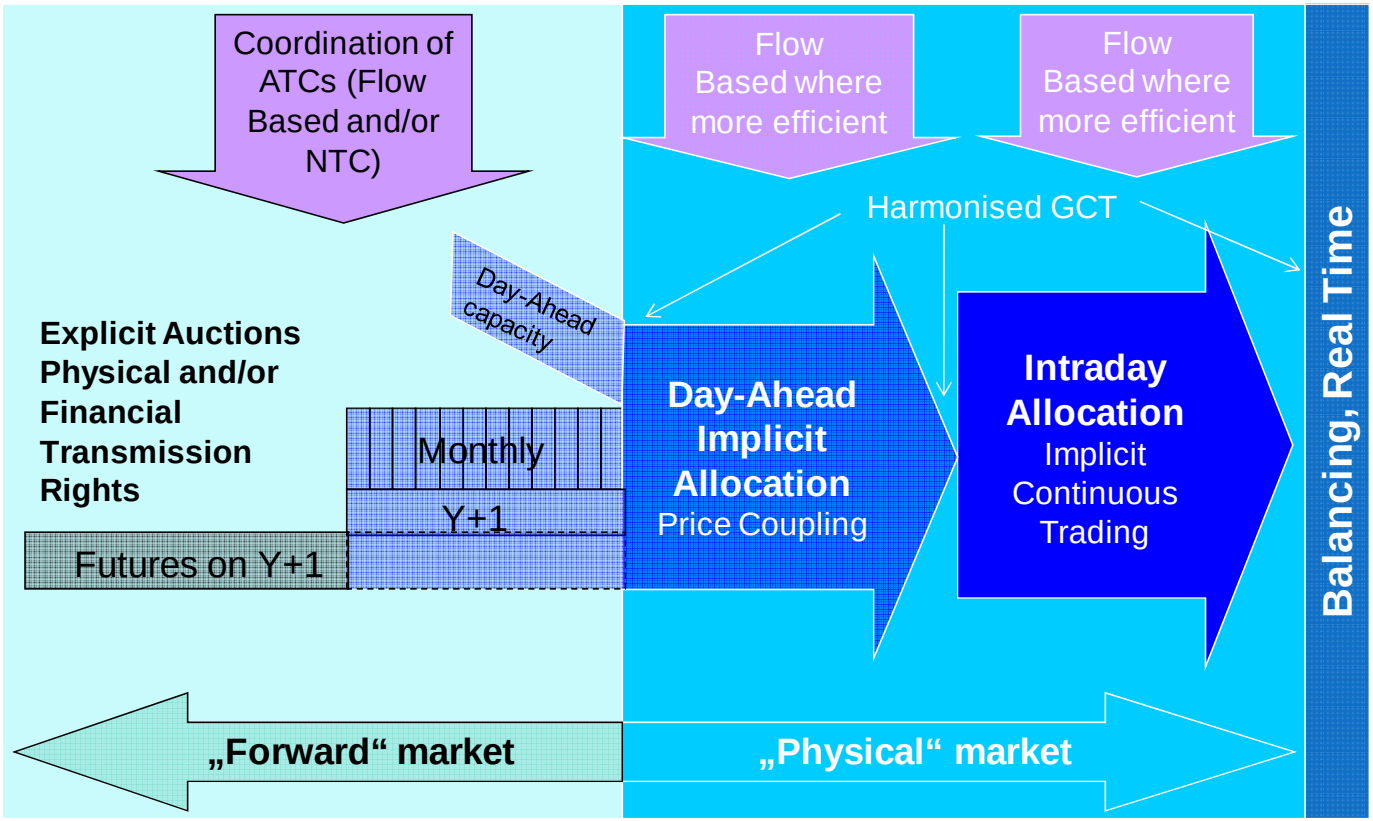
- SEE Regulators - Need for WMO project in the 8th region to be fully in compliance with new developments in EU - Target Market Model, Framework Guidelines, Network Codes:
  - Main concept in line with EU developments
  - Need to adjust some details from the WB WMO Study
  - Ensure compatibility between the Consultant's/ECRB EWG and ENTSO-E RG SEE Action Plans
- Urgent involvement of SEE TSOs in the WMO Project was necessary, especially for drafting the SEE RAP
- Need for a realistic WMO Regional Action Plan which is fully harmonized between the Regulators (ECRB) and SEE TSOs (ENTSO-E RG SEE) and in compliance with EU TMM
- EnC CPs are responsible for elaborating National Action Plans (by Ministries, TSOs, NRAs and Power Exchanges, if applicable), based on Regional Action Plan
- Guidance received from PHLG and Consultants' proposal for National Action Plans is welcome
- Full implementation of National Action Plans is the prerequisite for the SEE RAP successful implementation

# SEE RAP Document Structure

**SEE Regional Action Plan** structure comparable to Framework Guidelines structure:

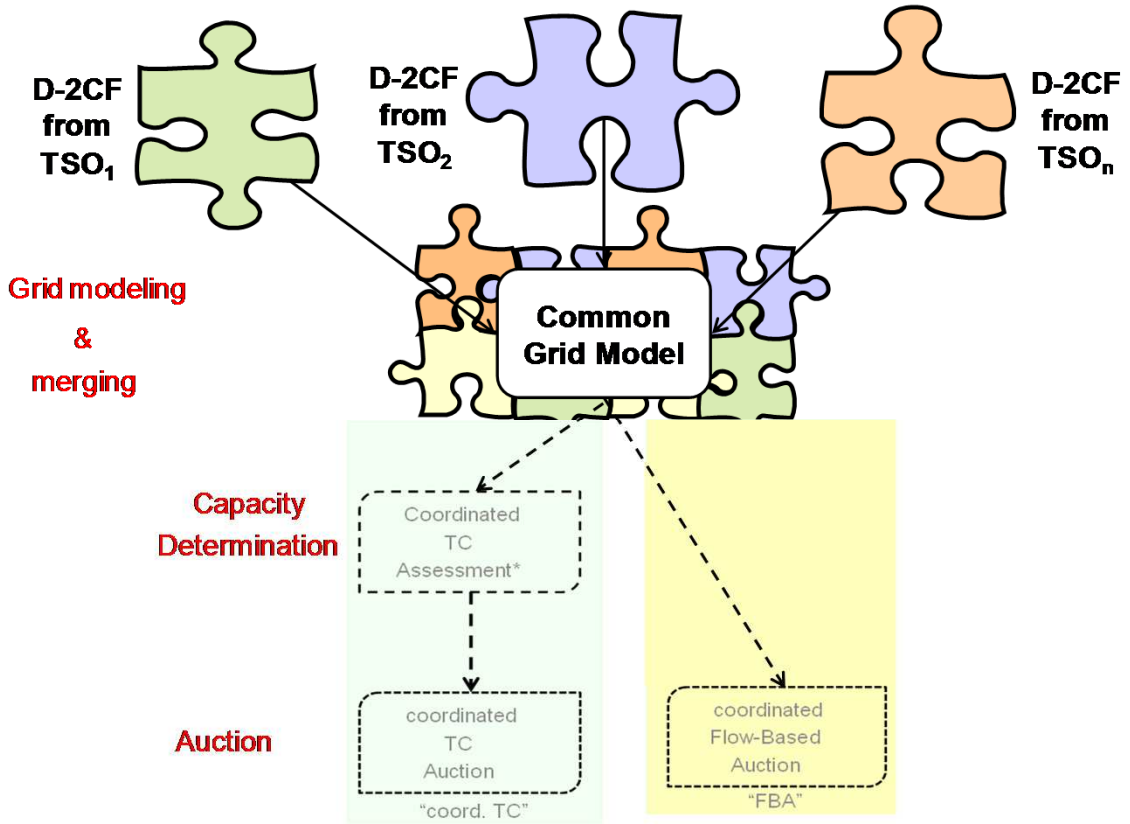
- **CAPACITY CALCULATION**
- **FORWARD CAPACITY MARKETS**
- **DAY-AHEAD MARKET**
- **CROSS-BORDER INTRADAY MARKET AND XB BALANCING NARKET (MECHANISM)**

# SEE RAP is based on EU Target Model for Market integration



# Capacity Calculation

- Development of common grid model and coordinated capacity calculation method in the SEE region in line with the EU Target Model



# Capacity Calculation

## Goals achived in 2012

- The procedure for providing the common regional yearly and monthly grid model was set-up and the function of TSO-coordinator is performed by SEE TSOs on the rotation basis
- The written document which describes methodology and procedure for NTC/ATC calculation for different time-frame was prepared

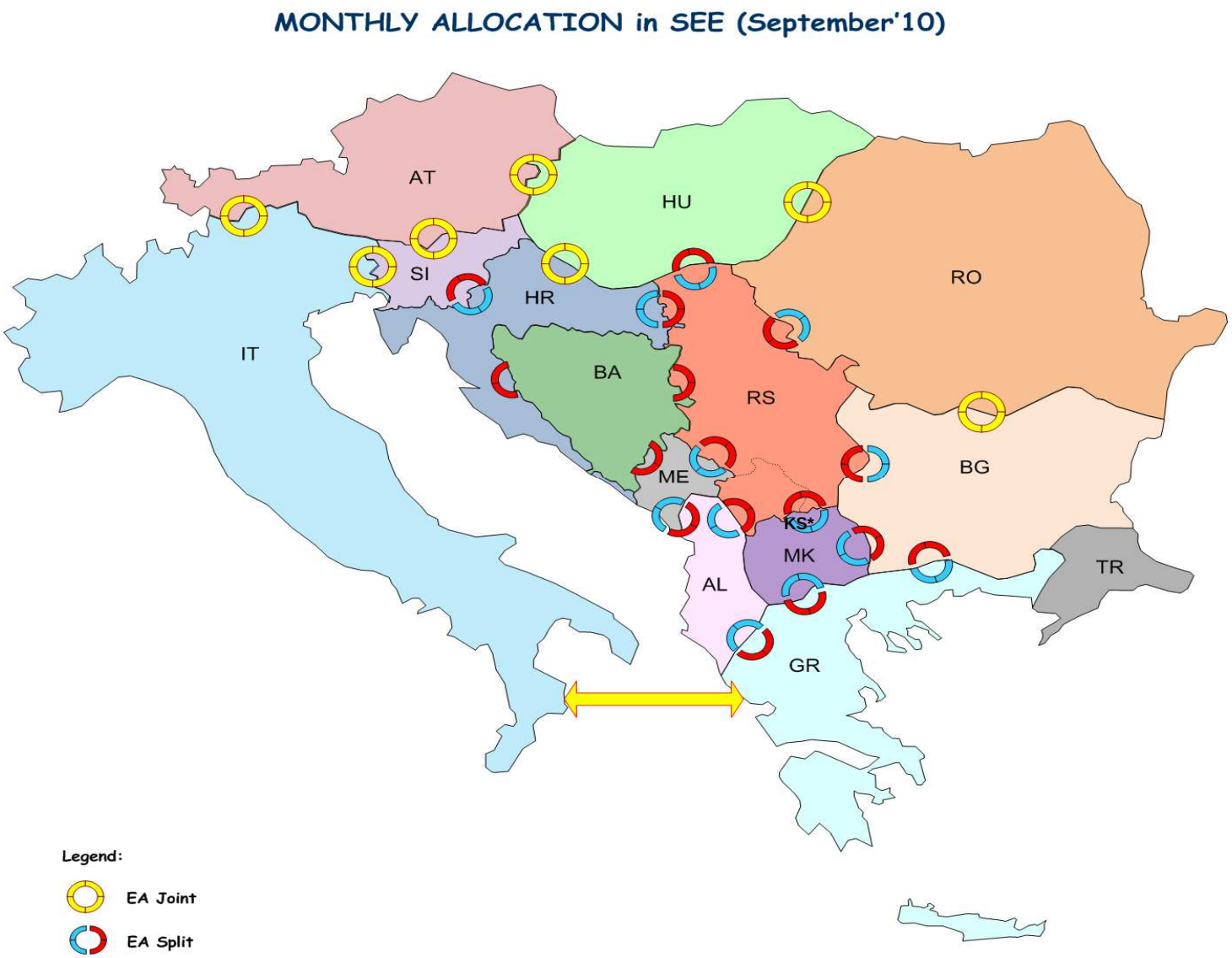
## Main topics achieved in 2013

- To implement procedure for providing the regional daily common grid model
- Application of the procedure for NTC/ATC calculation in practice among SEE TSOs
- To increase the resolution of calculation forecasted yearly/seasonal NTC values on regional level
- To assess current European practice related to the implementation of the implicit flow-based approach

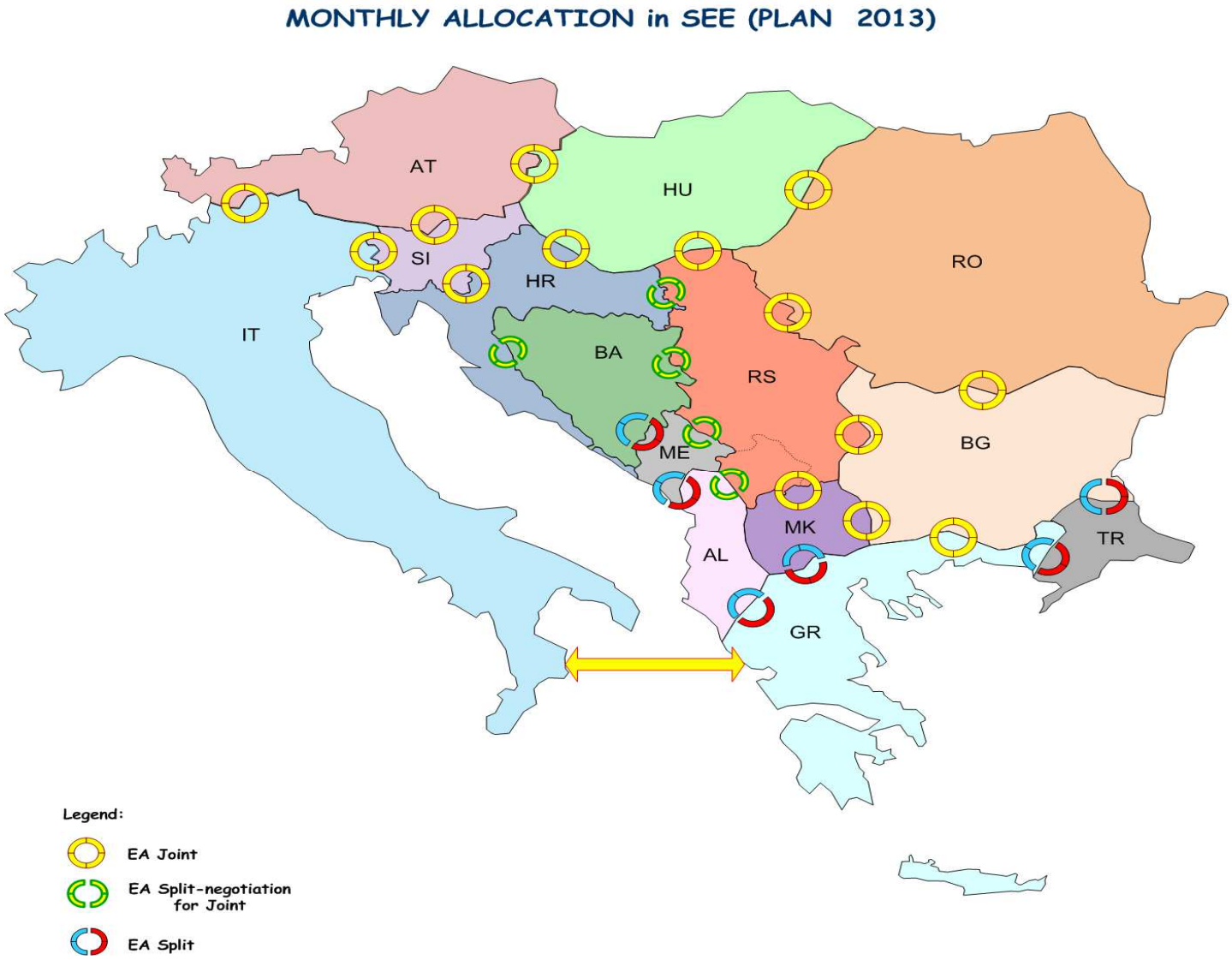
# Forward Capacity Market

- Step by step (“glide-path”) approach
- Implementation of coordinated bilateral explicit auctions in the SEE Region
- Establishment of multilateral coordinated (NTC based) explicit auctions on several borders (based on technical and organizational feasibility)
- Establishment of centralized multilateral coordinated (NTC-based in a first step, flow based method is still under concideration) auctions on most of SEE borders
- Multilateral coordinated auctions on all borders within the SEE region (regional one-stop-shop or EU-wide solution)

# Forward Capacity Market



# Forward Capacity Market



# Day-Ahead Market

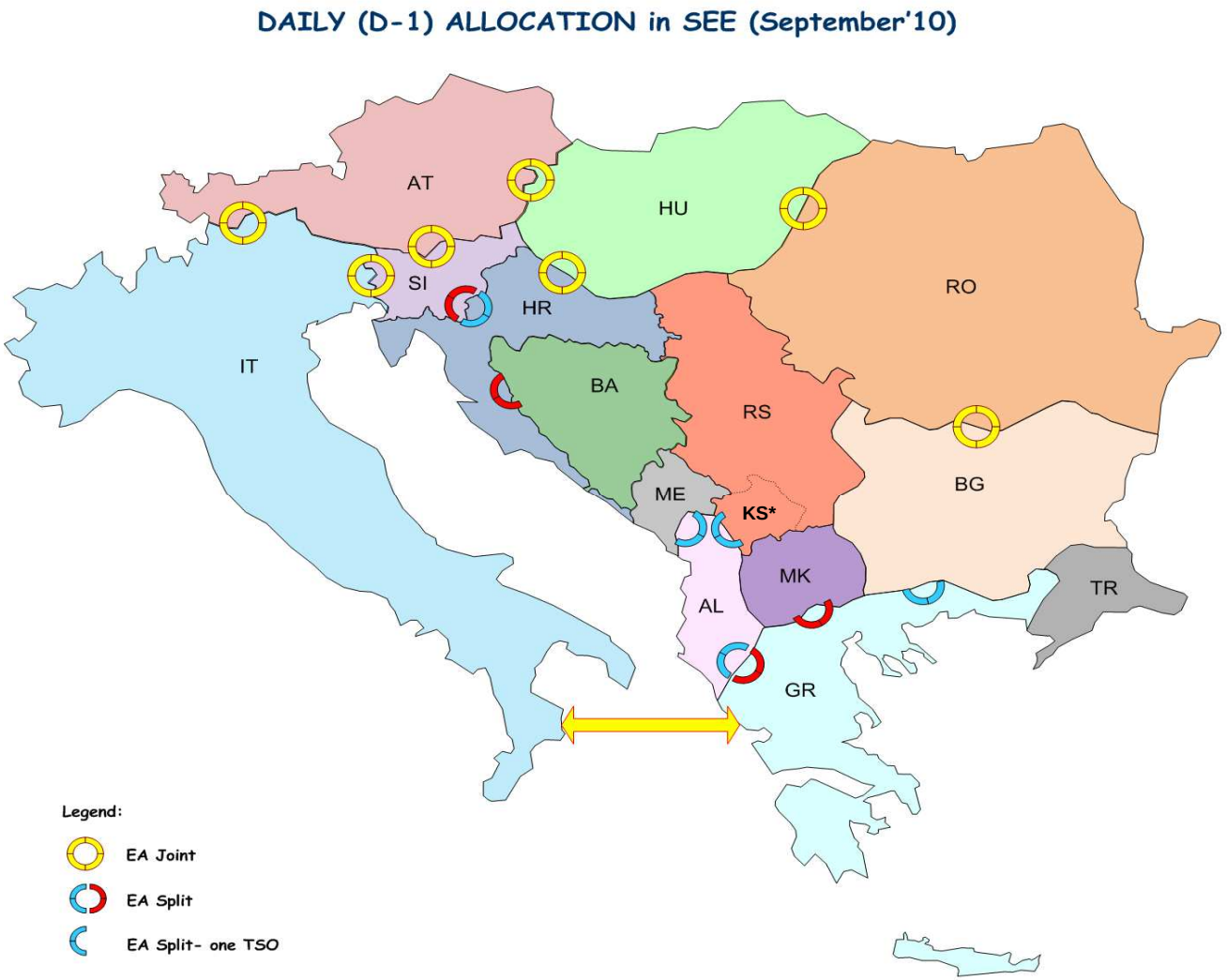
- Price Based Market Coupling as Target Model for SEE DAM
- Staged Implementation of the Regional DAM
- Parallel Development of Regional and Local Electricity Markets (each CP obligation and duty to make National Action Plan)
- Bilateral/ trilateral market coupling in the SEE region (nucleus approach or different regional initiatives)
- Integration with neighbouring regions/markets
- Pan-European market coupling including the SEE region operational

# Day-Ahead Target Model

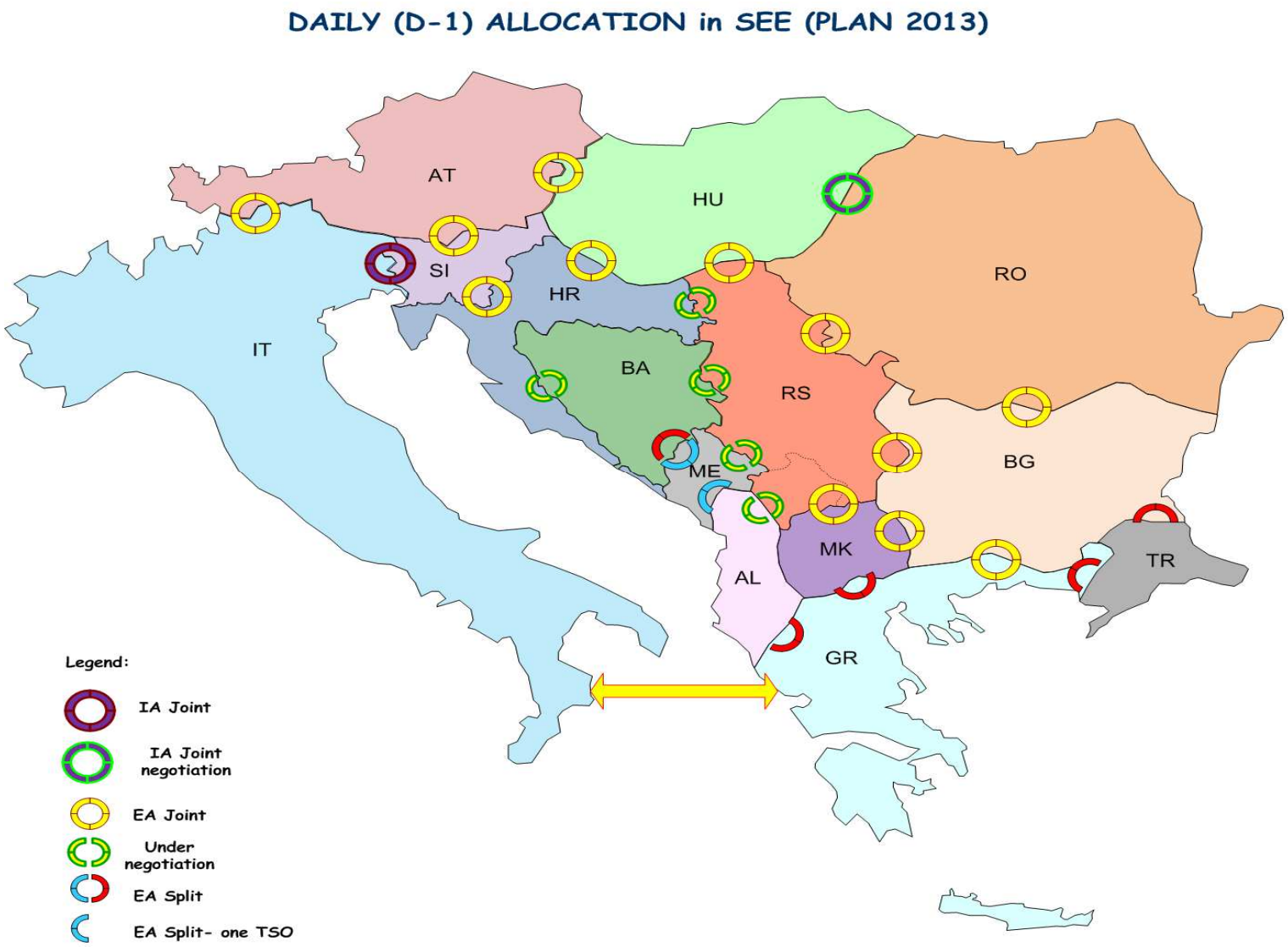
## European Single Price Coupling

- → Market Coupling to replace explicit auctions in Day-Ahead timeframe
- → Allocation of cross-zonal capacity & clearing of Spot Markets (energy) in a single step
- → Reduces transaction costs and maximises the value of scarce resources (cross zonal capacity) for the market → alogrithm‘s target function is to maximise social welfare/economic surplus
- → Change in scheduling mechanisms → reduction to a single PX schedule in only one direction
- → Single Price = One single clearing (one algorithm) for entire IEM, not per border anymore
- → Prices converge, but differences still possible & required

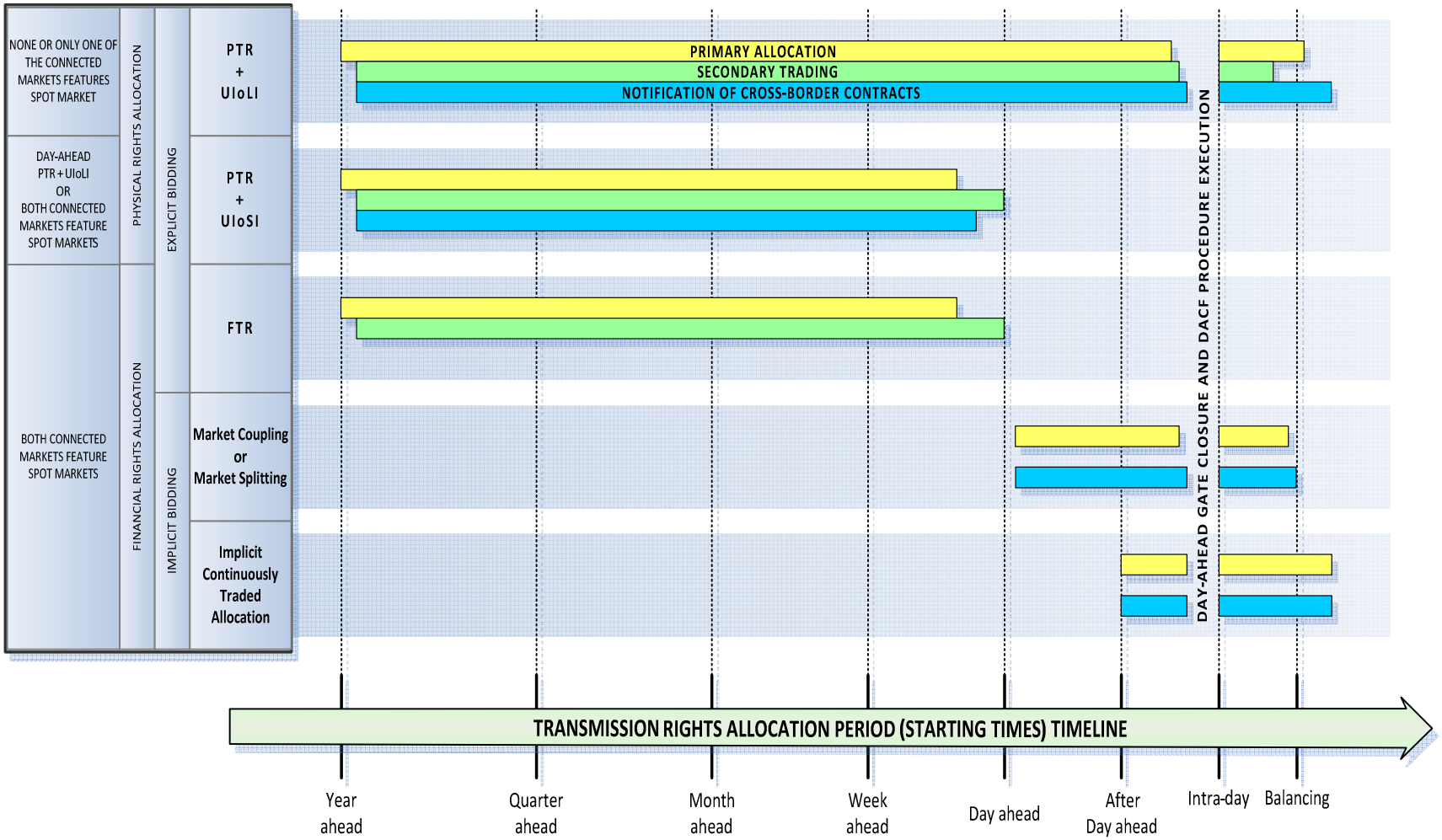
# Day-Ahead Market - Explicit



# Day-Ahead Market - Explicit

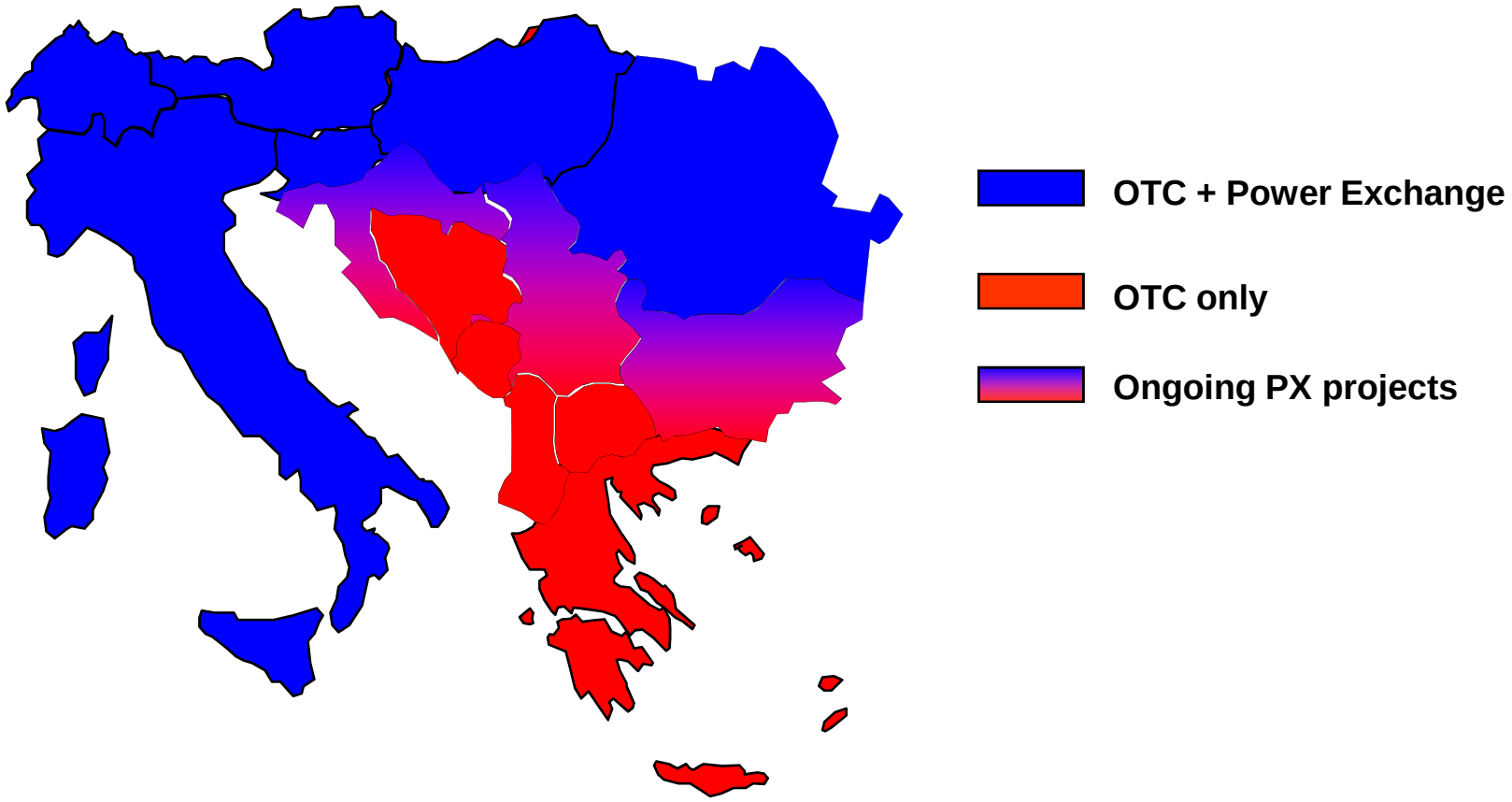


# Day-Ahead Market



# Day-Ahead Market - Implicit

- Ongoing initiatives



# SEEPEX IMPLEMENTATION – legal aspects

- According to the Energy Law, JP EMS is entitled to develop organized market until the establishment of MO
- JP EMS has provided Ministry with the Basic principles for SEEPEX establishment – JP EMS – SP cooperation envisaged
- Energy Law will be amended – Organized market is not the Activity of public interest
- Ministry has prepared corresponding information for the Government (in the procedure)
  - EU Directives and Regional Action Plan elaborated
  - JP EMS – Strategic partner cooperation recognized
  - Pave the way for the next steps – Ministry of Energy, Ministry of Economy and Ministry of Finance to prepare appropriate proposal for the SEEPEX establishment within 30 days
- Governmental decision – until the end of 2013

# SEEPEX – Next steps

- SEEPEX establishment – Q2/Q3 2014
  - Cooperation Agreement JP EMS – Strategic Partner (possible options: SLA, JV, SLA with SP later participation in the ownership structure…)
  - SLA SEEPEX – SP (preparation and implementation)
  - Establishment of the Clearing function
  - Registration of the company in the Serbian Business Registers Agency and other statutory registers
  - Constitution of SEEPEX governance (Supervisory Board, CEO) and execution of necessary by-laws
  - All necessary preparatory activities (eg. premises, employees, opening of accounts, etc.)
- SEEPEX DAM in operation – Q4 2014 !!!

# SEEPEX contribution to REM

- SEEPEX will promote effective implicit allocation of cross-border capacity
- With all relevant stakeholders (Regulators, TSOs, PX) and regional partners - involvement in the region-wide market coupling

**Cooperation with Strategic Partners:**

Development Stage I

- Day-ahead reference price formation – initially SEEPEX zonal price
- Transparent and non-discriminatory access to the market, standardization of products etc.
- Introduction of “hybrid” coupling– possibility for MP from neighbouring countries to participate on SEEPEX via available XB capacities

Development Stage II

- Market coupling – integrated regional price formation (expected uniform wholesale price index for more than 50% of the time)
- Ensuring efficient use of interconnector capacity

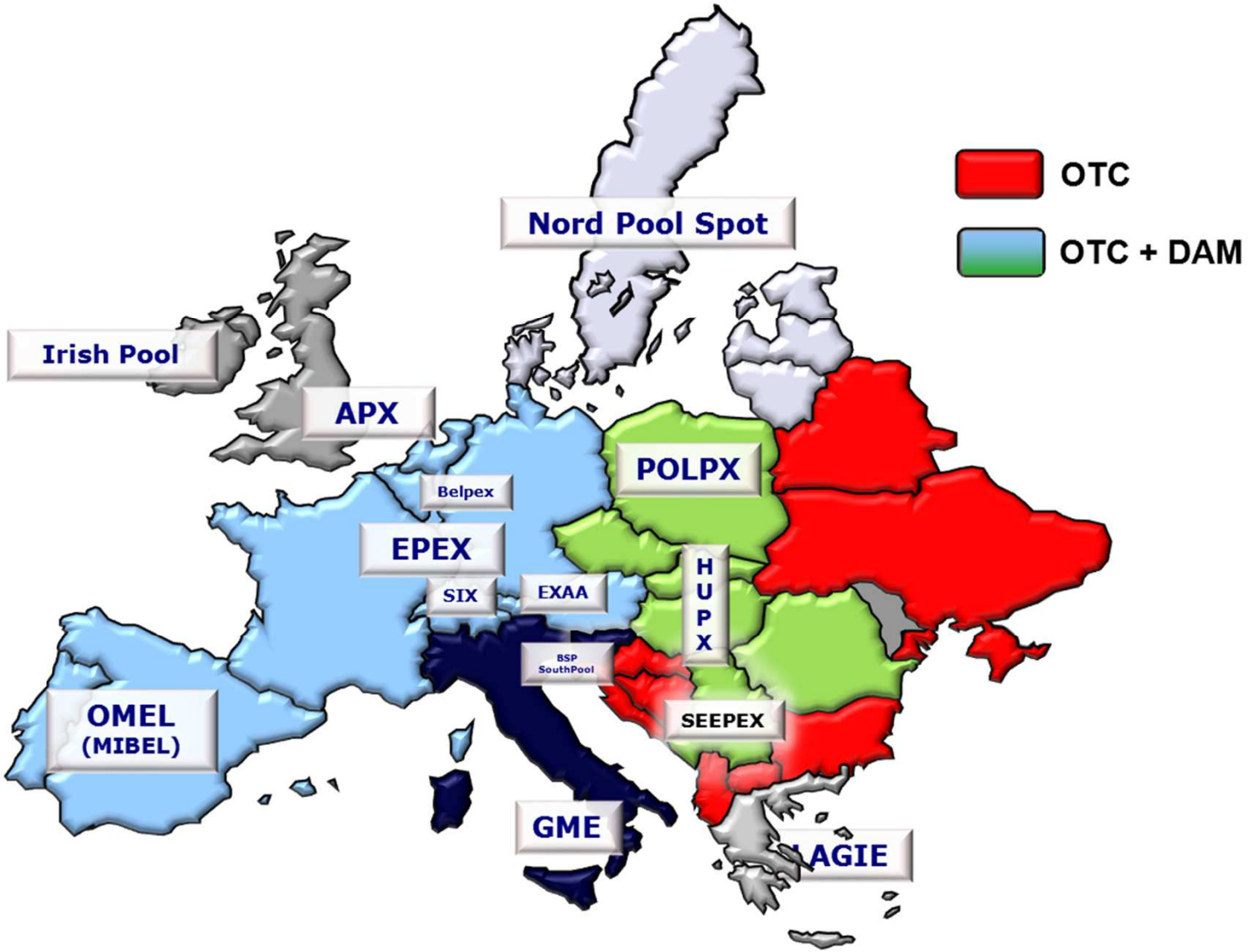
# Regional Day-Ahead Market – SEEPEX project

## 18th Athens Forum conclusions

*11. The Forum supported the proposal to use the SEEPEX project as pilot project for setting up a power exchange in the region and to prepare coordinated day-ahead and intraday capacity allocation… The SEEPEX can be extended to other Contracted Parties on a step by step basis as soon as possible.*

# Day-Ahead Market 2013/2014

# Day-Ahead Market: Plan for 2015



# Intraday Market: EU Target Model

**European intraday target model for Inter-Regional cross-border intraday (XBID) capacity allocation and energy trading based on implicit continuous allocation (continuous trading) (*)**

- **Market parties shall have continuously real time information on:**
  1. All bids of participating local order book ID platforms filtered using available XB capacity.
  2. Updated available trading capacities between all price/delivery areas.
- **The relationship between SOB function and CMM will be one-to-one.**

**(*) Where appropriate, specific National/Regional ID trading solutions may be developed**

# XB Intraday Market

- **Common regional solution for XB Intraday Market**

➢ First step as simple as possible (FCFS or pro-rata)

➢ Interim step of sub-regional integration before implementing an entirely regional solution (market integration would start with a nucleus consisting of two to three jurisdictions)

➢ Final solution in line with EU Target Model (continuous trading)

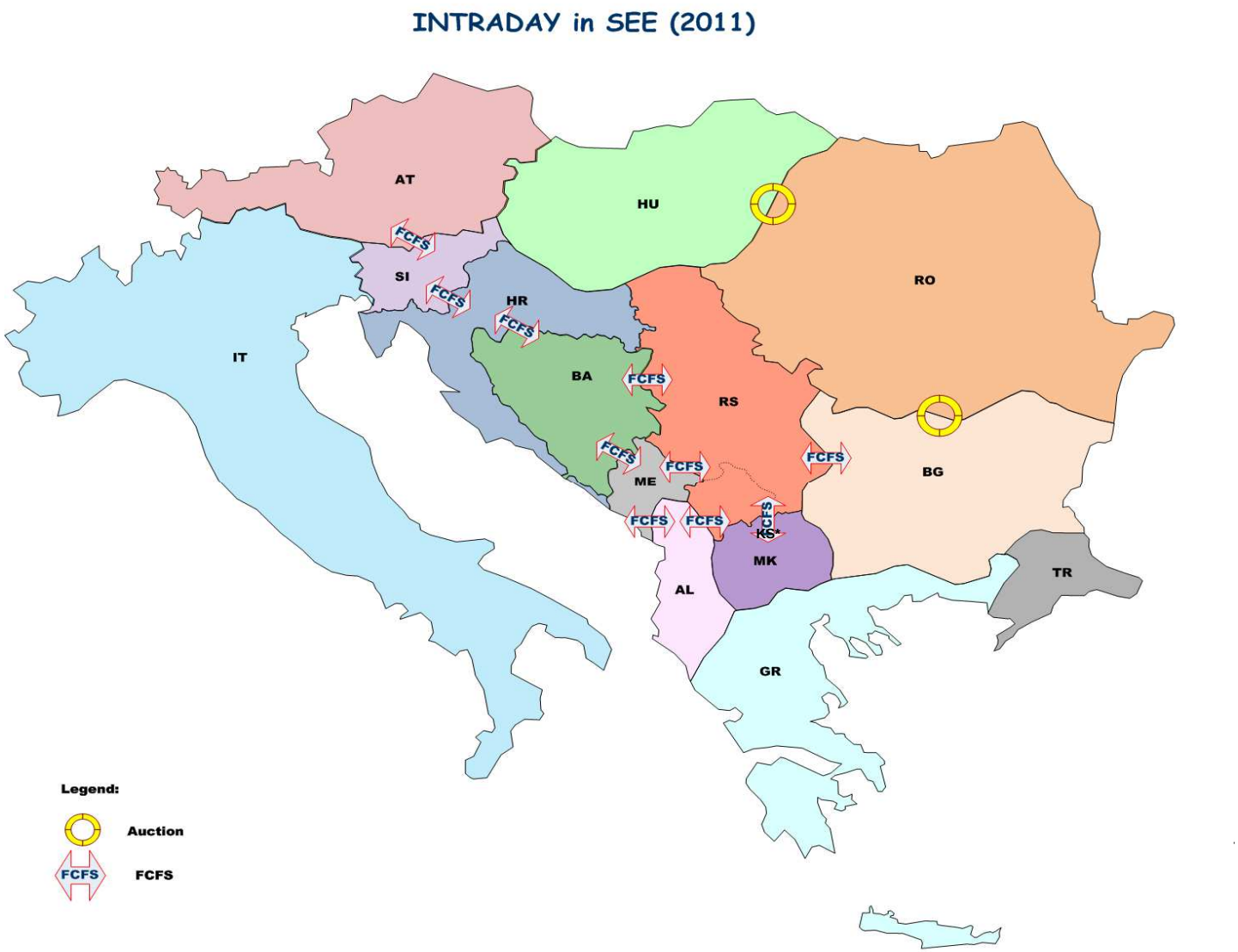
➢ **XB Balancing Market**

➢ Investigation of the options for integration of national balancing mechanisms (taking into consideration timeframe and results achieved on ENTSO-E level)

➢ TSO-TSO mechanism without common merit-order list as an interim solution

➢ Final solution – XB Balancing mechanism with common MO list

# XB Intraday Market



# XB Intraday Market

# Governance

- **Top-Down Guidance:**

✓ European regulation, Framework Guidelines on CACM, Network Codes

- **Governance within the SEE Region**

➢ MC (supported with PHLG): General policy guidance to the process and harmonization of the national legal and regulatory frameworks

➢ ECRB: Harmonization of Market Rules and Network Codes, Regional Market Monitoring Process

➢ ENTSO-E RG SEE: Development of the regionally coordinated CACM mechanism and harmonization with the corresponding EU-wide mechanism

➢ EnC Secretariat: Support to the Energy Community institutions in the Treaty implementation process

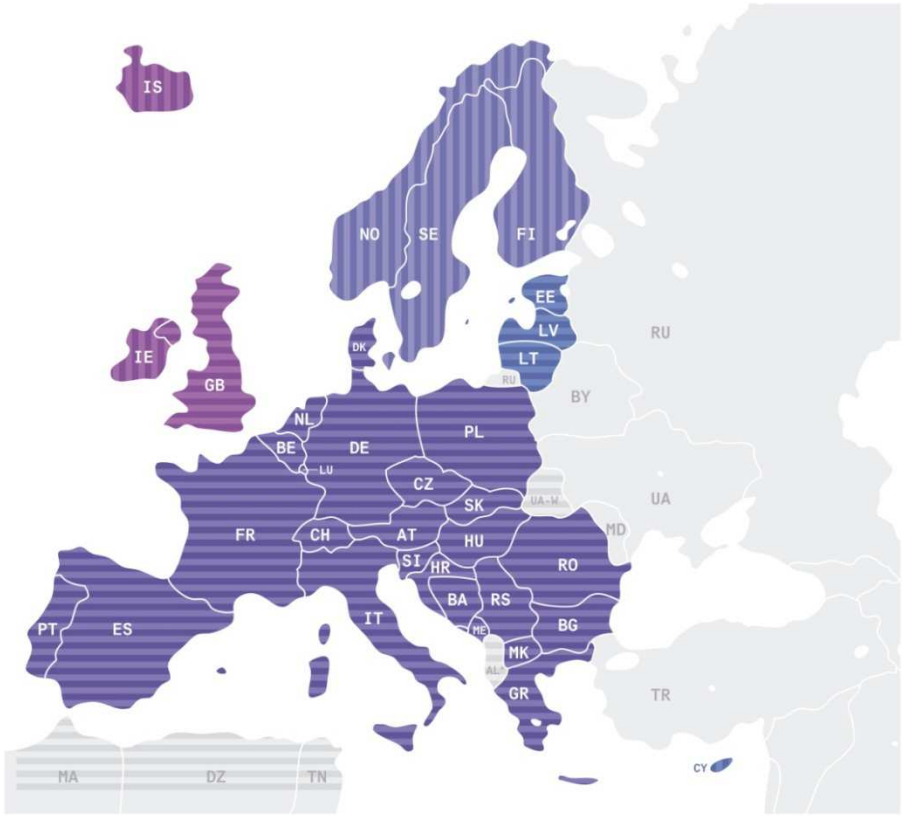
- **Governance at Local Level**

➢ Development and implementation of the Local Action Plans

# ENTSO-E

- European Network of Transmission System Operators for Electricity

- ENTSO-E Represents 41 TSOs from 34 countries
  - 532 million citizens served
  - 880 GW net generation
  - 305,000 Km of HV lines managed by the TSOs
  - 3,200 TWh/year demand
  - 380 TWh/year exchanges



# What is Network Code?

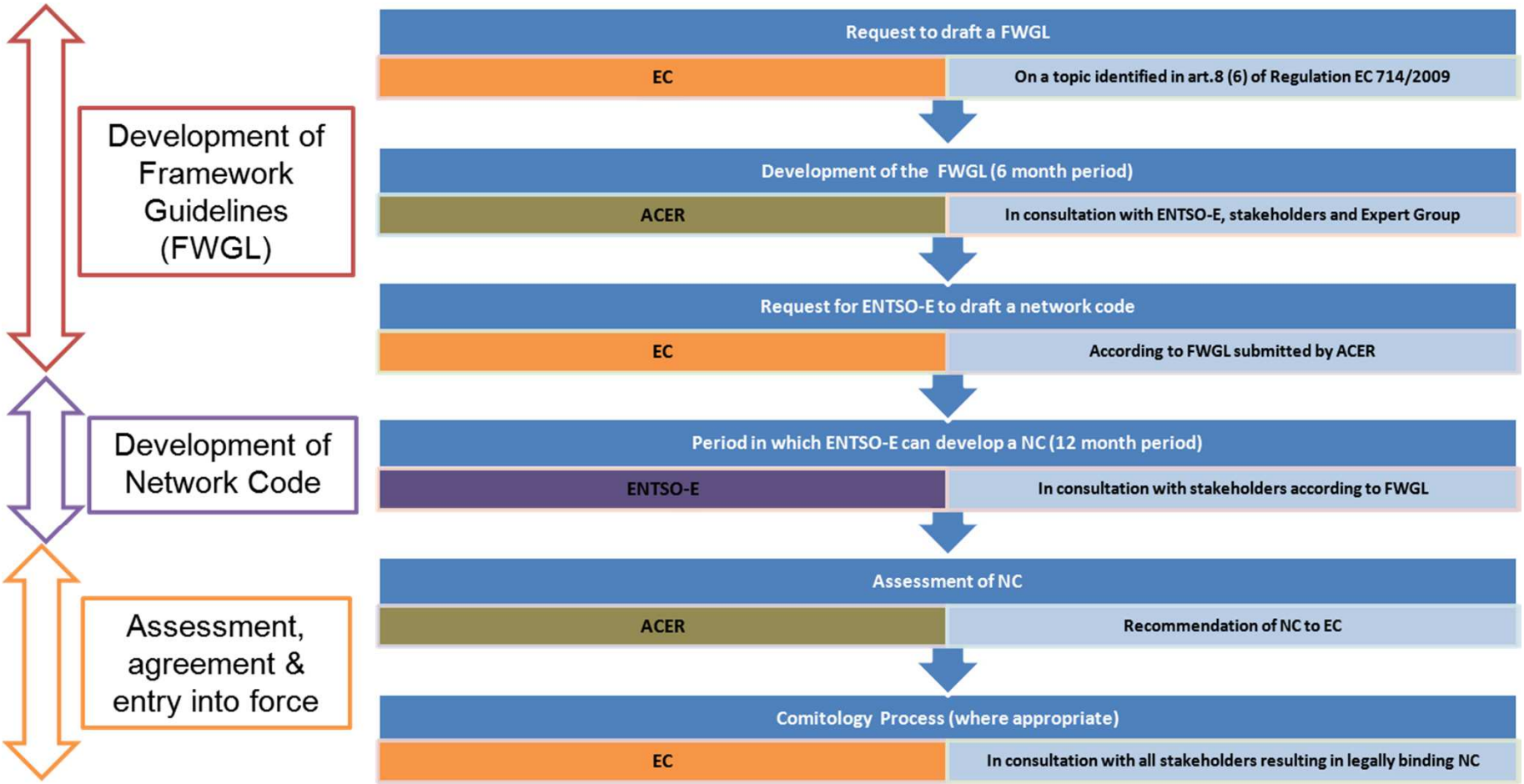
A set of rules applying to one aspect of the energy sector

Whish are developed by ACER, ENTSO-E & Market Participants

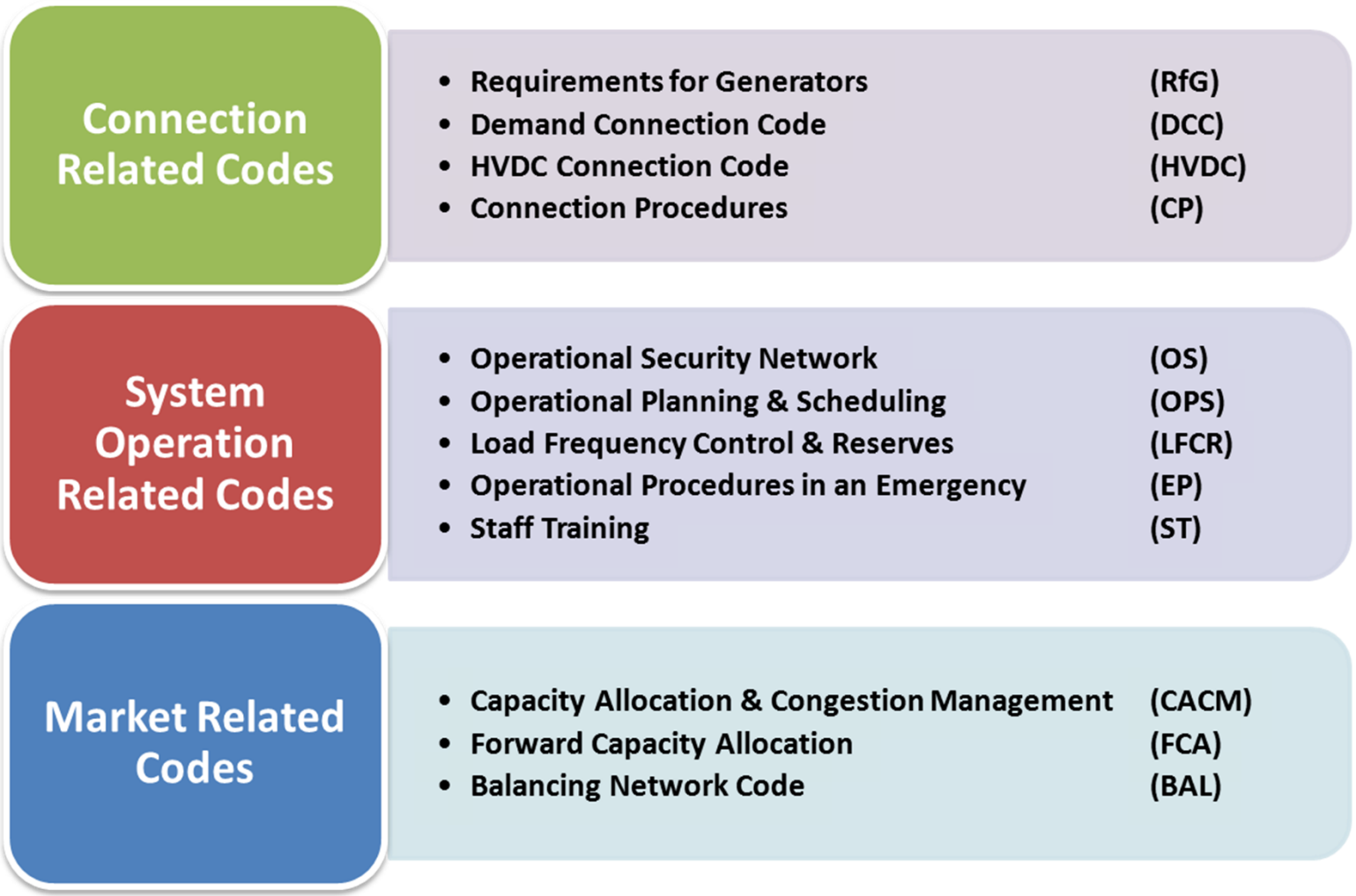
And become legally binding after the Comitology process

Hence they will have the same status as any other Regulation

# How are Network Codes developed?



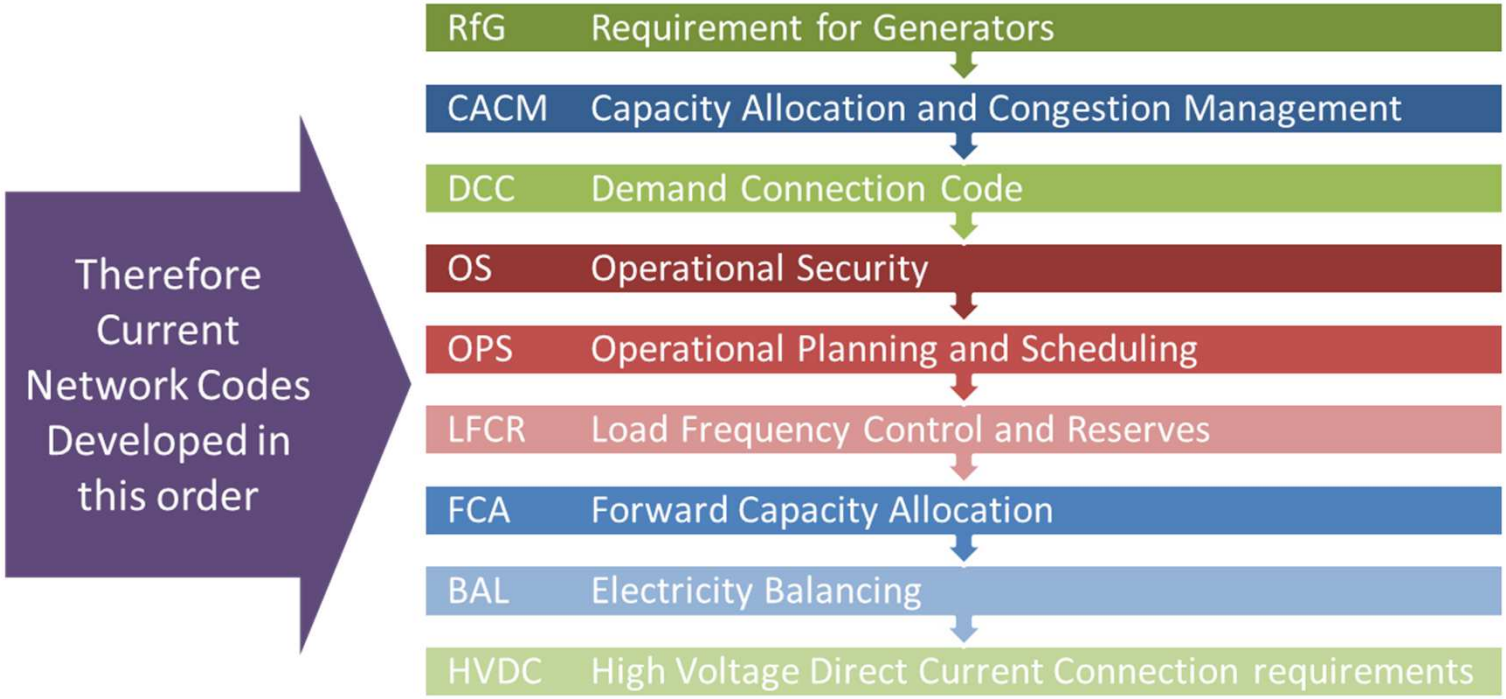
# Overview of Current and Future Network Codes



# Overview of Current and Future Network Codes

**Decided By EC** — Through a 'Priority List' agreed upon through consultation

**Influenced by and informs** — ENTSO-E's 3 year work plan



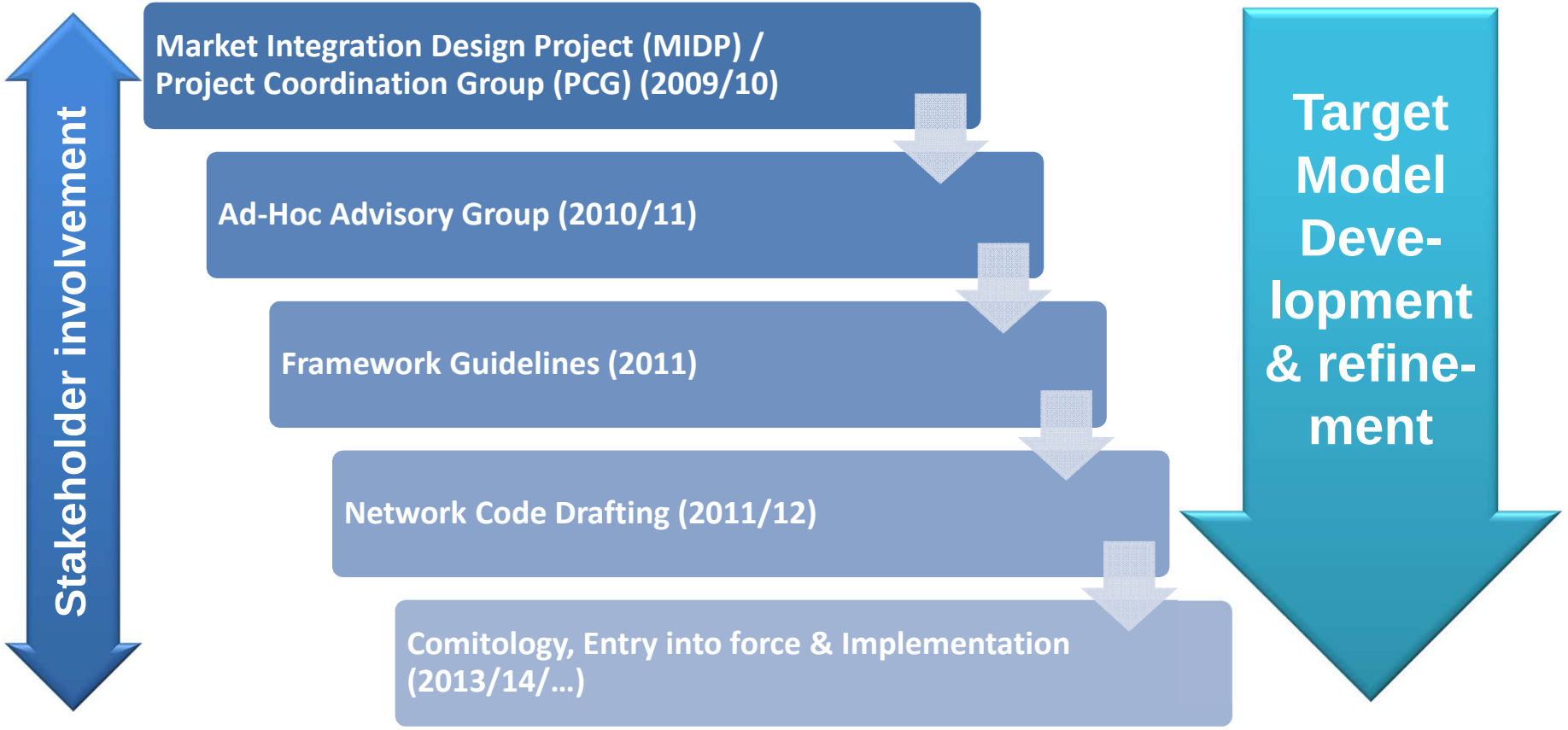
# CACM Network Code

- **<u>The Code's main target:</u>**

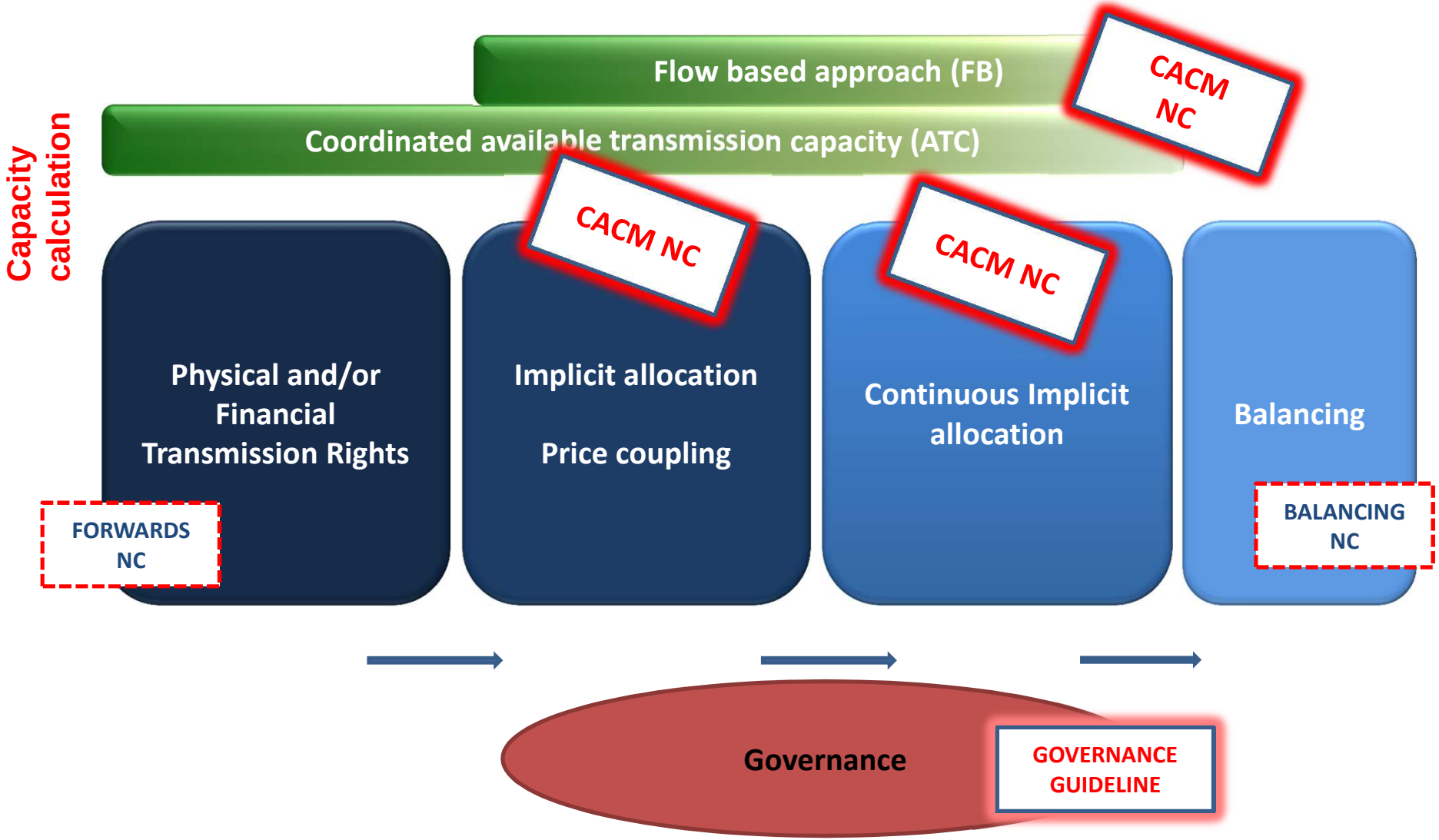
  **→Translate the vision of a European Target Model into a set of binding rules**

- **<u>Main Elements:</u>**
  - Capacity Calculation
  - Bidding Zones
  - Day Ahead Markets
  - Intraday Markets
  - Remedial Actions
  - Firmness rules

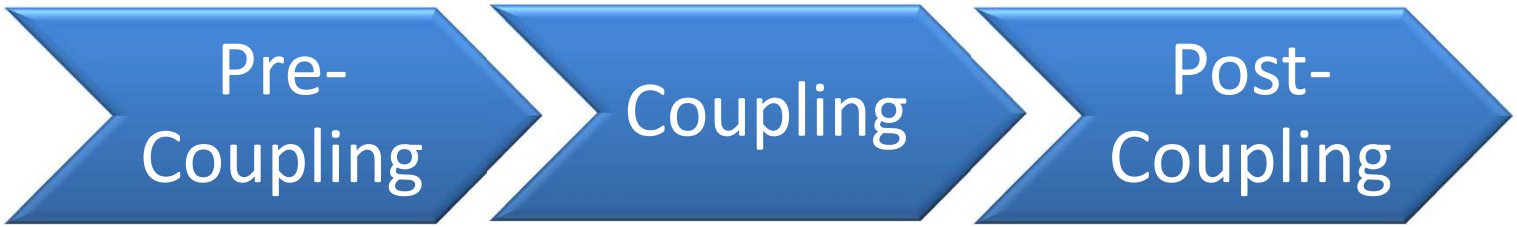
# CACM Development Process – coming a long way



# The market related network codes along the Target Model



# High Level Process Overview of Market Coupling




- TSOs calculate firm DA capacity (including UIOSI of forward rights)
- PXs receive orders from market parties

- PXs jointly calculate prices and net import/export positions of each hub
  - Welfare maximisation
  - Price differences when there is congestion

- Shipping:
  - Schedule and nominate cross-border flows
  - Settle exports and imports on relevant exchange; distribute any gain ("congestion revenue") to TSOs
- PXs nominate and clear local market trades

# EU Background on Market Monitoring

- The *Acquis Communautaire* commits contracting parties to harmonize energy policy with EU energy policy.
- The relevant EU policies that guide Market Monitoring are:
  - Regulation (EC) 713/2009 (created ACER and ACER/NRA duties to monitor electricity markets)
  - Regulation (EC) 714/2009 (congestion management including NRA duties to ensure compliance)
  - Regulation (EC) 1227/2011 (ACER/NRA duties to monitor wholesale electricity markets)

# SEE Market Monitoring Indicators

- The specific indicators in the SEE Market Monitoring Guidelines are in two general categories:

  (1)Indicators that monitor access to the grid;

  - ✓ Indicators that monitor calculations of cross-border transmission capacity

  (2)Market power manipulation is the other focus

  - ✓ Indicators that monitor users of the network (AAC Indicator, Auction Data)

# EU Regulations - Monitoring Access to the Grid

- Both Regulation (EC) 713/2009 and Regulation (EC) 714/2009 address monitoring of cross-border capacity access to the grid;
  - Regulation 713 (Article 11) specifies monitoring “access to the grid” in Article 11;
  - Regulation 714 (Article 16) specifies making available “maximum capacity of interconnections”
    - Article 19: NRA shall ensure compliance in accordance with Chapter IX of Directive 2009/72
    - Chapter IX of Directive 2009/72 (Article 37(6)-(9)) provides NRAs shall monitor congestion management (access to cross-border interconnection and including capacity allocation);
- These policies support the SEE MMG monitoring grid access.

# EU Regulations - Monitoring Market Power

- Regulation (EC) 1227 provides explicitly for market monitoring for market manipulation in wholesale electricity markets.
- In article 7 of Regulation 1227, market monitoring is addressed:
  - ✓ 1. [ACER] to monitor trading activity in wholesale energy products to detect and prevent trading based on inside information and market manipulation.
  - ✓ 2. National regulatory authorities shall cooperate at regional level and with the Agency in carrying out the monitoring of wholesale energy markets referred to [above].
- Therefore SEE Market Monitoring activity is contemplated within the EU policy.

# USAID Market Monitoring Project in SEE Region: History

- MM Project was initiated after invitation from the 8th Athens Forum in June 2006 to establish a Market Monitoring Pilot Plan
- In this phase, USAID/PE produced Quarterly Reports and various templates due to the importance of maximum and non-discriminatory access to interconnectors
- 12th Athens Forum (May 2008), ECRB and ECRB EWG recommended continuing MM Plan under a two-year transition phase that would lead to sustainable operations within ECRB
- ECRB EWG recommended changing Quarterly Report format and starting more operational phase: learning phase for regulators and direct cooperation between TSOs and regulators on data collection and analysis

# USAID Market Monitoring Project in SEE Region: History

- USAID/PE presented its proposal for MM indicators within MM general work-stream:
  - Seven monitoring Indicators to accomplish the objectives for monitoring Cross-Border transmission capacity market
  - Market Monitoring proposal was agreed and supported by ECRB EWG, based on PE Screens proposal
  - MM Dry-Run has started successfully with Indicator 1 in November 2009 as part of Transitional phase
- Since 2010, under the ECRB EWG, MM Project developed:
  - ➢ Market Monitoring Guidelines
  - ➢ Automated Market Monitoring System
  - ➢ Regional Monitoring Function (to coordinate activities across the region)

# Cooperation for the Market Monitoring Project

- The Market Monitoring Guidelines were adopted by the ECRB EWG and later approved by the ECRB in 2013 as the harmonized market Monitoring approach for defining common MM indicators within the 8th Congestion Management Region.
- Regulators collect national (control area) data from TSOs
  - Calculate screens
  - Conduct follow-up when Indicators indicate an anomaly that may adversely affect the market
  - Indicators are established in advance
  - Follow-up depends on circumstances

In addition to the NRAs' National focus, NRAs would "cooperate" by sharing the monitoring data:

- This enables the addressing of regional issues
- This cooperation is envisioned in Regulation EC 1228/03 (714/2009):

  *(Article 9): "Where appropriate to fulfill the aims of this Regulation [NRA's] shall cooperate with each other and with the Commission."*

- All 8th Region Countries have participated - Except Bulgaria, Hungary have not provided data for any period of Dry Run
  - The participation of others has been regular and thorough

# SEE Market Monitoring Dry-Run

- The SEE MM Dry Run is developing the capacity for NRAs to perform their own National monitoring
- Furthermore, as explained previously, there is a need for regional analysis
- Who is going to analyze the data on a regional level to help NRAs and EWG to “cooperate”?
- We do not believe it requires new authority for existing entities or a new supra-regional entity
- There are two options that appear to be practical

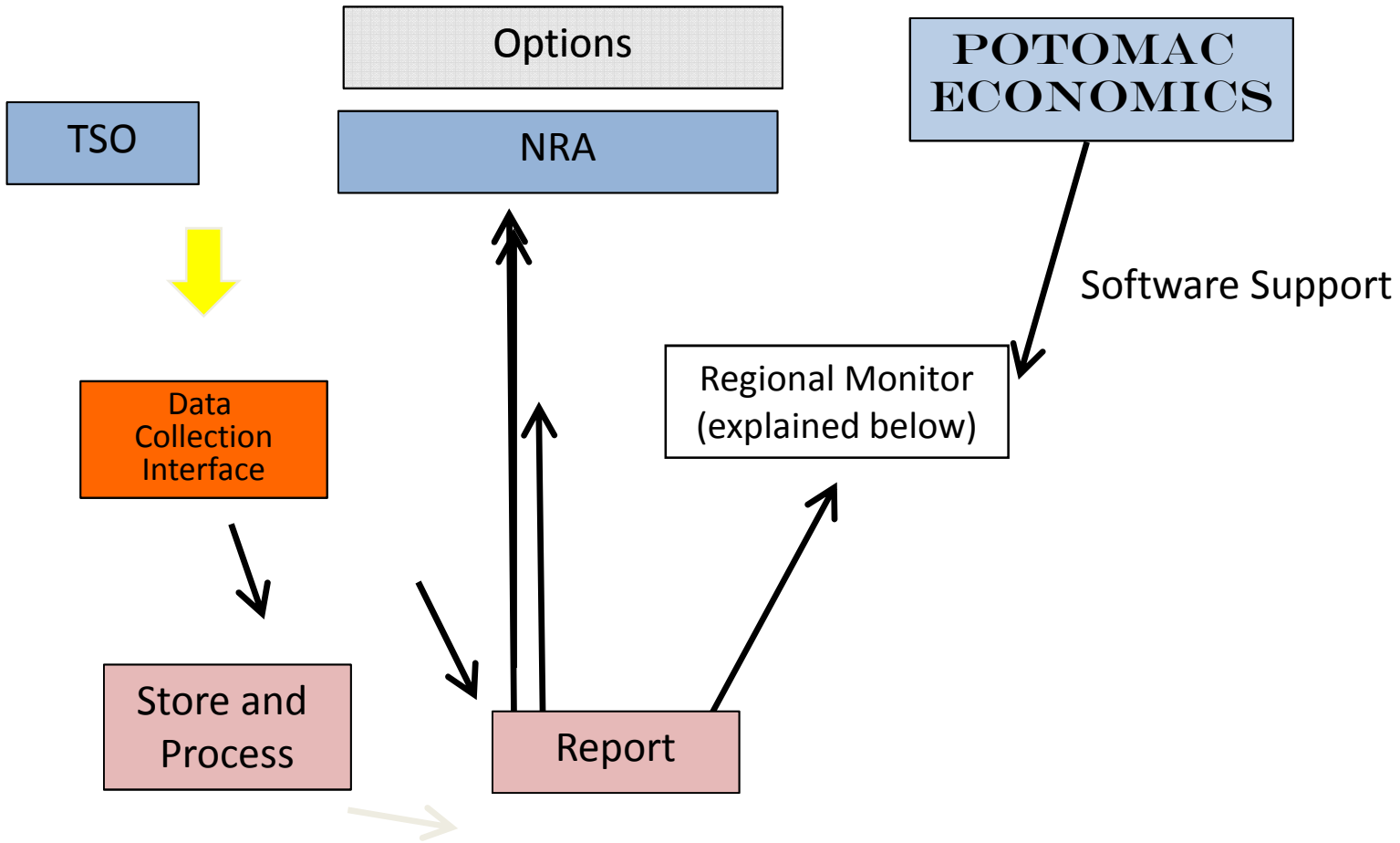
# Web-Based Data and Reporting Interface

- A key element of the implementation of the 8th Region Market Monitoring Guidelines is the Web-Based data collection and reporting data base system/Interface;
- South East Europe Automated Market Monitoring System (SEEAMMS) - SEEAMMS.COM
- This interface is intended to:
  - Simplify and Standardize data collection - Allow Direct Upload of Data
  - Check errors, organize data, regulate access
  - Automate screen and threshold calculations;
  - Report Indicator results;
  - Report Indicator violations;
  - Provide Regulator access to the data base

# SEEAMMS

- Our preliminary investigation into linkages to other regional data bases indicated that no standard data collection is present in the SEE region
- Data to ENTSO-E, for example, is sent manually
- EU is not having standardized MM structure, nor regional MM platform
- SEEAMMS is likely to be the leading data collection interface in the region
- Work on SEEAMMS can lend support to other processes, e.g., Entso.net (formerly ETSO-vista)
- Next Steps:
  - SEEAMMS System can be adopted to monitor the technical models used by the SEE Coordinated Auction Office
  - ECRB EWG is considering collection of generation data that will enable the calculation of regional generation market shares
  - This will extend the market monitoring to generation suppliers and traders

# SEEAMMS


Options
TSO
NRA
POTOMAC ECONOMICS
Software Support
Data Collection Interface
Regional Monitor (explained below)
Store and Process
Report

# Regional Market Monitoring

- There are three elements to Regional Market Monitoring:

1. Coordination among regulators to establish a consistent set of market monitoring Indicators
   - (8th Region Market Monitoring Guidelines)
2. Exchange of data among regulators to enable calculation of Screens and sharing of Indicator results
   - SEEAMMS allows collection and sharing of data
3. Coordination among regulators to share Indicator results and to coordinate response to Indicator violations
   - Instances can arise where a sustain Indicator violation will be addressed by coordination with neighbouring NRA;
   - Example, in Indicator 1, Guidelines suggest:

"Temporarily using the BCE values provided by a neighbouring TSO that has superior forecasts"

# Regional Market Monitoring

- Regional Monitoring can be beneficial and can be conducted through “cooperation” among NRAs:

➢ In a transition to a sustainable function in the region, NRAs can conduct national/control area MM through issuing standardized common minimum set of Screens

➢ Regional MM requires an entity to facilitate “cooperation” among NRAs

➢ NRAs should have an explicit role in detecting anomalies or deviations to Market according to MM reporting, and react accordingly (reporting to Competition Authorities or reacting by themselves in line with their authority)

✓ SEE regulators (EWG) shall decide on the structure of a Regional MM when Consultant offers additional details on proposals

# Regional Market Monitoring Process

**Regional Market Monitoring**

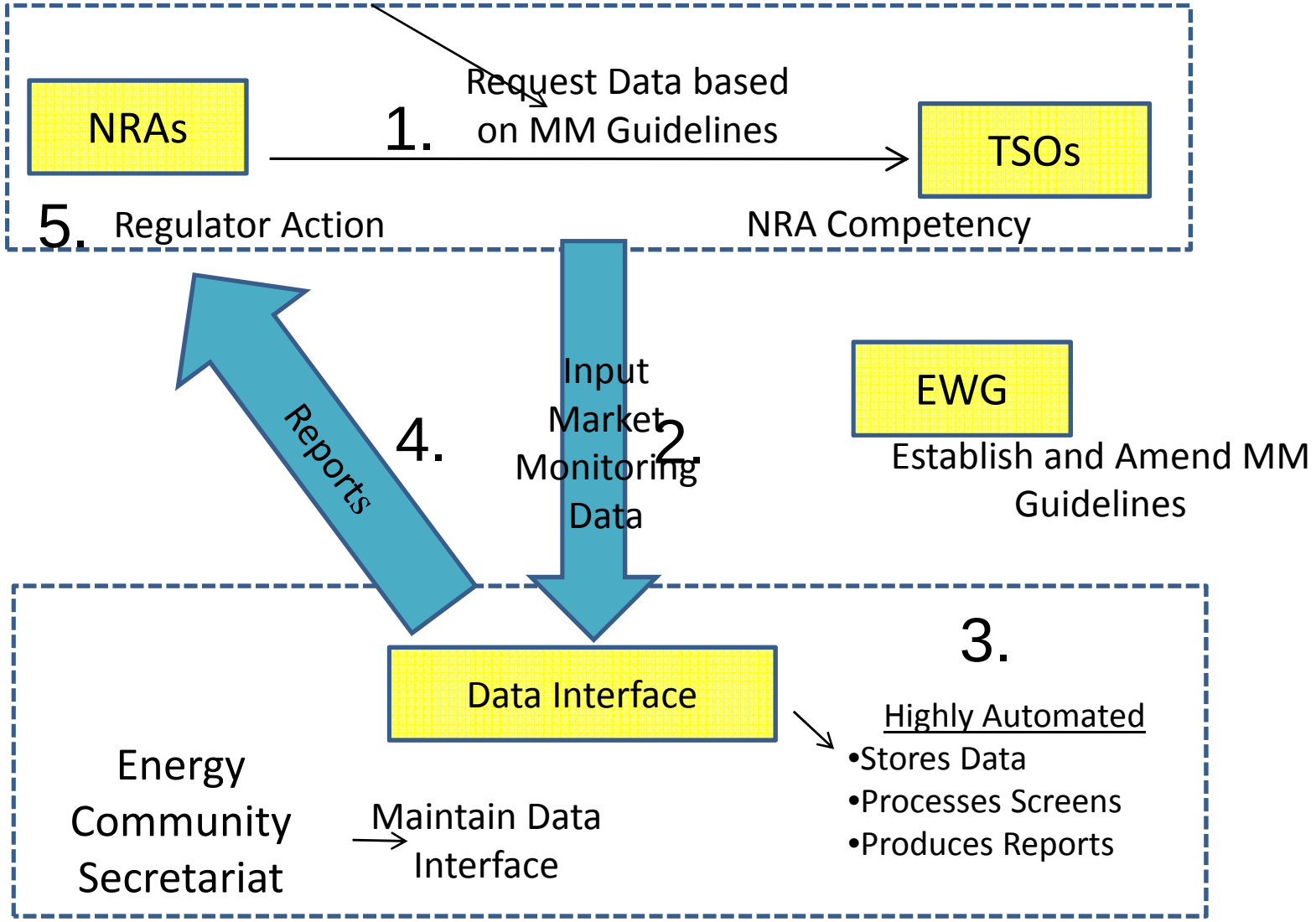
- Markets extended beyond a single regulatory authority, requiring coordination among regulators conduct market monitoring
- Regional Market Monitoring is the collection and screening of data so that regulators can detect regional market failures or abuse and respond in a coordinated manner
- To conduct Market Monitoring in the 8th Region, 8th Region regulators must collect and analyze data on a consistent basis and respond in a coordinated fashion to instances of market failures and abuse

# Regional Market Monitoring Structure

**Regional Cooperation**

- Regulators establish a consistent set of market monitoring Screens so that all regulators are working with the same data and market issues
- ECRB EWG, in cooperation with USAID/PE, has already facilitated the cooperation among 8th Region regulators in developing the 8th Region Market Monitoring Guidelines ("Market Monitoring Guidelines")
- The second level of cooperation is the sharing of data and analyses produced in accordance with the Market Monitoring Guidelines: This cooperation is facilitated by regulators collecting data and submitting the data to a central entity for processing and reporting
- Coordination is required for regional monitoring when a Market Monitoring Screen may be violated: Under such conditions, there may a need for a coordinated response by two or more regulators

# Regional Market Monitoring Structure



# Regional Market Monitoring Structure

- The Dry Run is developing the capacity for NRAs to do their own National monitoring, but…
- Furthermore, there is a need for regional analysis
- Determine a structure within which ECS or ECRB facilitates cooperation among NRAs and EWG for monitoring and contributes regional analysis for periodic reports
- Who is going to analyze the data on a regional level to help NRAs and EWG to “cooperate”…
- We do not believe it require establishing new authority for existing entities or a new supra-regional entity

# Regional Reporting

- Regional Reports are produced by SEEAMMS and are available only to the Regional “Coordinating” Entity
  - Currently, EWG has implemented a Monthly Rotation whereby National Regulators takes turns acting as the Regional Monitor.
- There are three Regional Reports:
  - Participation Report
  - Interconnection Variance Report
  - Control Area Variance Report

This function includes contacting NRAs:

Summarizing the Indicator results for each NRA

Sharing certain cross-border results

Indicating the appropriate follow-up with TSOs

# SEE Market Monitoring Project: Results

The rotations began in January 2013 and the results have been currently assessed

Regulators report a greater understanding of the process by being involved more directly in the regional monitoring

Regulators have been able to detect unusual assumptions in the net work model on a number of occasion in recent months

- ✓ Investigation by several regulators indicated that unexpected hydro conditions were the under lying cause of the errant assumptions in exchange values
- ✓ Some TRM values on some borders appear to be too high and these are under investigation
- ✓ Preliminary results indicate that some internal congestion identified in forecasts (and impacting NTC) may not actually occur in operations

# Regional Monitoring with Generator data

- Collecting Generator and Load data will more complete monitoring of generation markets
- The key metric is “Available Generation Capacity”
- = generating capacity plus the cross-border capacity less regulated load obligations:

Cross-border capacity into destination market

+

capacity owned in destination market

-

load obligations

# CONCLUSIONS

# Conclusion as message for Eastern Partnership Countries

- Each Electricity transmission/power system must find its own way to define cross-border issues, respecting its specificities and harmonizing the procedures with neighbouring systems on the regional level, by commonly agreed Regulations
- Energy Community Contracting Parties were using experience from EU Members States during 90ties and 2000 in order to develop the most appropriate cross-border mechanisms in the 8$^{th}$ region
- Even during the physical separation from the main UCTE interconnection in 90ties, the SEE region has done efforts to develop EU mainstream mechanisms in cross-border tariffication
- But, the SEE specificities in the 8$^{th}$ region has been always respected and implemented in the EU cross-border mechanisms in a most appropriate way
- Eastern Partnership Countries could gain experiences from the Energy Community efforts and experiences, trying to follow the justified EU mechanisms, which enables opening of the electricity markets with transparent and equal conditions for all market players

# The perspectives and advices for the Eastern Partnership Countries

- Agree and define common interconnection (electricity borders) and technical parameters within the Eastern Partnership Countries – synchronous work of power systems: discuss on enlargement of the synchronous work between the Eastern Partnership Countries
- Start joint work between TSOs, NRAs and Ministries of the Eastern Partnership Countries
- Establish regional TSOs, NRAs and Ministries' organizations under common umbrella
- Essentially work on common legislation regarding electricity issues (common Network and Market Rules and Codes) within the Eastern Partnership Countries as it is the prerequisite for opening the electricity market: calculation of available NTC, ATC, TRM, etc.

➢ European Union and Energy Community made it through the European Commission Regulation and Directives, introducing recently common Network Codes

# The perspectives and advices for the Eastern Partnership Countries

- Establishment of the regional institutions for NRAs, MOs and TSOs, which would work on introducing the common and harmonized platform for all electricity issues, as legislation requirements

➢ It was realized in EU and Energy Community by establishing ACER (for NRAs), ENTSO-E (for TSOs) and Energy Community institutions as ECRB (for NRAs), PHLG, MC

# The perspectives and advices for the Eastern Partnership Countries

- Establishing the common rules and mechanisms for allocation of transmission cross-border capacities, market-based, harmonized
- ➢ Experiences of EU and Energy Community are very useful: Regional Initiatives, creation of PXs

# The perspectives and advices for the Eastern Partnership Countries

- The Eastern Partnership Countries should look after the solution how to treat and remunerate the usage of the unwanted flows over each transmission system, caused by G and L components of other power systems, as the so called “transits” is a very important issue to solve
- The regional solution should be harmonized among the Eastern Partnership Countries as soon as possible as one of the most important topics regarding the cross-border issues:
- Establishing the common rules and mechanisms for Inter TSOs Compensation, for all electricity flows which cross neighbouring transmission systems, including transits and flows from G (generation) and L (load) components
- EU and Energy Community solved this topic using the so called ITC (Inter-TSO Compensation) Mechanism as the pan-European mechanism

# The perspectives and advices for the Eastern Partnership Countries

- Start with Market Monitoring the items which exist now in the Eastern Partnership Countries as issues which can be monitored, e.g. cross-border mechanisms for allocation or calculation of Net Transfer Capacity (NTC) calculated by TSOs

➢ EU is elaborating the Market Monitoring project and REMIT Project via ACER

➢ Energy Community introduced the South East Europe Market Monitoring Guidelines for monitoring cross-border indicators in order to monitor the TSOs activity regarding the ATC values and allocation results

# The perspectives and advices for the Eastern Partnership Countries

- Define essential factors which are crucial for opening the electricity market in the Eastern Partnership Countries;

Is it?

- Regulatory framework what is missing,
- TSOs commitment to cooperate and introduce market-based mechanisms and appropriate and transparent mechanisms for NTC calculation, or
- Ministerial and political commitment is missing

➢ Energy Community experience is that the Ministerial and political commitment is essential for the speed of electricity market opening process

# The perspectives and advices for the Eastern Partnership Countries

- Some of the Eastern Partnership Countries members are already within the Energy Community and they signed EnC Treaty, so they are already obliged politically to introduce and transpose provisions of EU Regulation and Directives within their domestic legislation (primary and secondary legislation), as Moldova, Ukraine, (Georgia in near future), which already introduced and accepted many of electricity mechanisms within its practices
- The Eastern Partnership Countries should look after the EU/Energy Community electricity practice and mechanisms and try to introduce it within their transmission systems, as few of the Eastern Partnership Countries members are already on the way to introduce it by legislative obligation
- Any introduce of other, or different electricity mechanisms would not be of the benefit for electricity market opening, and could jeopardize the essential prerequisites for market opening, and that is HARMONIZATION OF THE NETWORK and MARKET RULES in Eastern Partnership Countries

# Thank You !

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