

**REPORT ON THE IMPLEMENTATION OF REGULATION 1228/2003/EC ON
CONDITIONS FOR ACCESS TO THE NETWORK FOR CROSS-BORDER
EXCHANGES IN ELECTRICITY IN THE CONTRACTING PARTIES TO THE
TREATY ESTABLISHING THE ENERGY COMMUNITY**

ENERGY COMMUNITY SECRETARIAT

October 2007

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II LIST OF ABBREVIATIONS

Regulation	Regulation 1228/2003/EC on conditions for access to the network for cross-border exchanges in electricity
Guidelines	Annex of Regulation 1228/2003/EC, Guidelines on the management and allocation of available transfer capacity of interconnections between national systems, known as Congestion Management Guidelines
ITC	Inter-TSO Compensation mechanism
NTC	Net Transfer Capacity
ATC	Available Transfer Capacity
ECS	Energy Community Secretariat
PSO	Public Service Obligation
SEE	South East Europe
UIOLI	“Use-it-or-loose-it” principle
UIOSI	“Use-it-or-sell-it” principle
RA	Regulatory Authority
TSO	Transmission and System Operator
ERGEG	European Regulators Group of Electricity and Gas
ETSO	European Transmission System Operators
UCTE	Union for the Co-ordination of Transmission of Electricity

1 Introduction

Following a request from ECRB, addressed at its 3rd meeting held in Athens on 5th July 2007, the Energy Community Secretariat prepared the present report on the compliance of the Contracting Parties¹ of the Energy Community Treaty with the *Regulation (EC) 1228/2003* on conditions to the network for access to the network for cross-border exchanges in electricity and the amended Guidelines (known as Congestion Management Guidelines).

In principle, the assessment follows the structure of the Regulation, emphasizing on its key requirements. In parallel, references to the relevant texts of the Congestion Management Guidelines are also made.

Scope

On this ground, the Energy Community Secretariat has assessed the compliance with the obligations under the Regulation, targeting key areas as

- Inter TSO Compensation (ITC)
- Transmission Tarification (TT)
- Congestion Management (CM)

and within this scope Transparency and the construction of new interconnectors. However, further to this, other major requirements as envisaged in the Regulation and the Guidelines have been also subject to analysis.

The report is also based on the results presented within previous analytical work, reflected respectively in the

- *Report on State level Compliance with Regional Market Design as of March 2007*², prepared by the Energy Community Secretariat,
- *Report on the experience gained in the application of the Regulation (EC) No 1228/2003 "Regulation on Cross-Border Exchanges in Electricity"*³,
- *ERGEG Monitoring Report on Compliance with Electricity Regulation 1228/2003*⁴ and
- *Report on Congestion Management methods in SEE and work status of the Coordinated Auctions dry-run simulation*⁵ prepared by the SETSO SG NACMPF (with the information updated by Hunton & Williams)⁶.

Furthermore, this report aims to review the progress that has been achieved by the Contracting Parties by September 2007; it also evaluates some common major challenges

¹ Bulgaria and Romania are EU Member States since 01.01.2007 and respectively no longer Contracting Parties. However, as important players on the regional market, which have been Contracting Parties within the second half of 2006, some information for them is also provided.

² *Report on State level Compliance with Regional Market Design*, Energy Community Secretariat, March 2007 ([link](#))

³ *Report on the experience gained in the application of the Regulation (EC) No 1228/2003 "Regulation on Cross-Border Exchanges in Electricity"*, Communication from the Commission to the Council and the European Parliament (COM) 250/15.05.2007 ([link](#))

⁴ Compliance with Electricity Regulation 1228/2003 - An ERGEG Monitoring Report –E07-EFG-23-06, 18 July 2007 ([link](#))

⁵ *Congestion Management methods in SEE and work status of the Coordinated Auctions dry-run simulation* - SETSO NACMPF SG Document for 9th Athens Forum, October 2006 ([link](#))

⁶ Revised Version of *Preliminary Coordinated Auction Office Due Diligence Report*⁶ made available to ECS after the 10th Athens Forum in April 25, 2007
Report on Implementation of Regulation 1228/2003/EC

that the Contracting Parties are facing in the process of the implementation and the compliance with the *acquis* – these are mainly the development of a compensation scheme for costs due to transits (ITC), a solution for a transparent settlement system for network access charges, the full compliance with the Congestion Management Guidelines and the related issues as transparency and penalties in case of non-compliance.

The conclusions summarize the findings at regional and national level and highlight the critical aspects needing immediate actions in order to achieve the full compliance with the Regulation and its Guidelines.

2 Regulation (EC) 1228/2003 and the Congestion Management Guidelines

The Regulation aims at setting fair rules for cross-border exchanges in electricity within the internal European Electricity Market. Thus, it foresees to establish a compensation mechanism for cross border transit flows of electricity, harmonized principles for network access charges and rules for allocation of available capacities of interconnections between national transmission systems. After entering into force on 1st July 2004, the Guidelines on Congestion Management became legally binding. On 1st of December 2006, the amended Congestion Management Guidelines took legal effect.

These amended Guidelines also stress the importance of providing information to network users for transparency on a non-discriminatory basis, maximizing the capacity available and the use made of it while secure the network operation.

Furthermore, they define in § 3.2 7 regions without mentioning the South East European region. ECRB acknowledges the importance of defining the borders of the region and consequently the perimeter countries to it.

Thus, ECRB has asked the ERGEG Electricity Working Group to make a recommendation to ERGEG with regards to establishing an 8th region (South East Europe) and the Commission to start the common Commitology procedure between EU and EnCT Contracting Parties with establishing an 8th region. Up to now this hasn't been implemented.

In the following chapters, the main issues covered by the Regulation and the Congestion Management Guidelines as well as their implementation by the Contracting Parties shall be assessed.

3 Inter-TSO Compensation (ITC) Mechanism (Regulation Art. 3)

The Inter-TSO Compensation issue is an integral part of the Regulation and aims to compensate affected TSOs for infrastructure and network losses costs raised due to hosting transits. Up to now the Inter-TSO Compensation mechanism has been run on a voluntary basis, which means that it is up to each TSO to enter or leave this compensation scheme. This weakens especially the position of net receiving countries.

The Regulation provides the legal framework for transit compensation and requires explicitly that TSOs shall be compensated for costs related to hosting cross-border flows. Furthermore it is mentioned that the European Commission may adopt Guidelines in order to specify the compensation scheme.

As up to now there is no ITC Guideline for 2007 as foreseen in the EU Regulation, the European Commission (EC) and the European Regulators Group on Electricity and Gas (EREG) asked ETSO to propose a new voluntary agreement among TSOs for 2007.

Nevertheless significant progress has been made with the voluntary agreement for the inter-TSO compensation (ITC) for transits signed in June 2007. This agreement was signed by the TSOs in a majority of EU Member States and a number of non-member countries. The new countries to join the agreement were Estonia, Albania, Bulgaria, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, Romania and Serbia. Thus, all Contracting Parties, excluding UNMIK are involved in the ITC scheme.

The agreement was a landmark given that the formerly separate schemes and funds of ETSO and SETSO (South-East Europe Transmission System Operators) were joined for the first time. TSOs from 27 countries of Europe joined the interim ITC scheme valid until end of December 2007. This scheme is based on so-called IMICA model, which is used for the compensation of infrastructure costs, and the WWT for the compensation of loss cost. It is envisaged by the TSOs to extend the agreement to the years 2008/2009.

Although this was a big step forward in order to improve the integration of South East Europe into the internal electricity market of Europe, both regulators and TSOs are faced to big challenges for the future as there are still open questions to be answered. Main questions are the amount of the injection fee for Perimeter Countries (countries not participating the ITC scheme) and the implementation of market rules. Furthermore some Contracting Parties are still lacking a fair methodology for the handling of the ITC funds.

4 Charges for access to networks (Regulation Art. 4)

Beside the compensation of transits the Regulation aims to harmonize the transmission tariffication systems as they currently differ across the Member States. Furthermore, some main criteria were specified by the Regulation and it defines that the tariffication systems have to be:

- Transparent, for the need of security supply
- Cost reflective, include operational and capital costs of the transmission activity
- Structurally relative comparable schemes and components
- Entry-exit tariffs and not distance based
- Non-discriminatory applied to network users

Besides, some transmission tariffs could include cost of ancillary services (secondary, tertiary reserves or other) but not stranded cost, which is not compliant with the Regulation.

Generally, it could be noticed that transmission access charges in the Contracting Parties are still low compared to the charges in the EU Member States. They vary among 1.37-5.7 €/MWh (compared to a range of 3-14 €/MWh within EU) and reflect most of the requirements of the Regulation given as they are entry-exit tariff systems.

Referring to the Inter TSO compensation it has to be ensured that the national transmission tariffication systems harmonize with the ITC mechanism. Therefore ITC mechanism cost/revenues should be reflected into the national transmission tariffs, as network operation costs/revenues.

Table 1 presents the status of each Contracting Party related to tariffication regulations for access to network.

Table 1. Tarification Regulations within the Contracting Parties⁷

Contracting Party	Relevant Tarification Regulations
Albania	Access to the network is allowed on the basis of transparency and non-discrimination. Access is regulated and public, where the price shall be determined in the conformity of methodology approved by the ERE.
Bosnia and Herzegovina	Access to the network is allowed on the basis of transparency and non-discrimination. Access is regulated and public, where the price is determined in the conformity of the tariff methodology approved by the State Electricity Regulatory Commission. Transmission tariffs in 2007 are approved by SERC: Decision on Tariff for Transmission Services (Ref: 04-322-42/06, Official Gazette of BiH no.32/07) and Decision on Tariff for ISO Operation (Ref: 04-321-59/06, Official Gazette of BiH, no 32/07).
Bulgaria	Access to the network is based on the rules mentioned within the relevant articles of the Energy Act.
Croatia	Energy Act (Croatian Official Gazette 68/01 and 177/04) Articles 29, 29 a. Rules on Charges for Connection to the Network and for Increase in Connected Power (Croatian Official Gazette 28/06). Decision on the Amount of Charge for Connection to Electric Network and for Increase in Connected Power (Croatian Official Gazette 52/06).
The former Yugoslav Republic of Macedonia	No information available.
Montenegro	Methodology for defining of charges for access to the networks is under preparation by the regulatory authority which has introduced it as a topic. Proposed education and benchmarking at the regional level.
Romania	A revenue-cap methodology is applied for transmission tariffs regulation. The methodology was approved by ANRE Order no. 42/2006. The transmission tariffs in 2007 are approved by ANRE Order no. 7/2007.
Serbia	Access to the network is allowed on the basis of the principles of transparency and non-discrimination. Access is regulated and public, where the prices shall be determined in conformity with the pricing methodology for system access and use (Energy Law, Art. 36-38).
United Nations Interim Administration Mission in Kosovo	Charges for access to the networks are provisioned in primary legislation Law on Energy Regulator (Article 45). Rule on Pricing and Tariff Methodology are adopted. Price review is an ongoing process and transmission use of charges is part of it. The ERO Board has approved the technical results of the Tariff Calculations of KOSTT. Transmission Use of System (TUOS) charges for the year 2007 has come into effect starting May 2007 and are calculated based on the revenue-cap methodology.

Although most of the tarification regulations for access to the networks exist in most Contracting Parties it has to be mentioned that there is still need for harmonisation and the introduction of cost reflective transmission tariffs in order to create a level playing field for market participants in the region.

⁷ Report on State level Compliance with Regional Market Design, Energy Community Secretariat, March 2007 ([link](#))

5 Congestion Management (Regulation Art. 6)

The Regulation defines the general principles for congestion management in the internal European Electricity Market. It mentions that congestions on cross border transmission lines should be solved by market orientated, non-discriminatory methodologies. The Guidelines (§.2) provide more detailed information about these methods and aim to ensure the effective access to transmission lines for the purpose of cross-border transactions. Furthermore they describe which kind of data has to be provided to the market participants in order to realize an integrated electricity market within the region.

5.1 Net Transfer Capacity (NTC) / Available Transfer Capacity (ATC) Method

Up to now, the only methods in line with the Regulation that are currently applied in EU Member States are the coordinated explicit and implicit auctions based on the calculation of Net Transfer Capacity (NTC) or Available Transfer Capacity (ATC) methodology developed by ETSO.

In 2007, TSOs from Contracting Parties have made a lot of efforts to develop the transmission capacity allocation procedures to comply with the Regulation and its Guidelines. Many of the Contracting Parties have already introduced explicit capacity auctions but some TSOs are still lacking a market based allocation scheme and use a pro-rata allocation which does not comply with the Congestion Management Guidelines. Furthermore it has to be noticed that in most cases capacity is not allocated jointly with the neighbouring TSO.

The key points of the Guidelines that have specific relevance and are binding to the Contracting Parties TSOs, starting 1 July 2007 are described in Annex 1.

Table 2 presents the current status related to implementation of congestion management methods per each Contracting Party.

However, a more detailed analysis regarding compliance with the Guidelines is presented in **Table 7** based on the *SETSO TF NACMPF SG Report on Congestion Management methods in SEE and work status of the Coordinated Auctions dry-run simulation*⁸. This update is mainly based on the information published on TSO web pages, laws, market rules and email information provided by TSOs to the consultant.

Table 2. Congestion management methods⁹

Contracting Party	Congestion management
Albania	TSO had limited possibility to import necessary transit capacity from neighbouring systems. Based on the obligation under Chapter III (Art. 11) of the Market Rules, the TSO is obliged to give the priority to the tariff customers for the capacity allocation and after that to the eligible customers. The TSO must make an explicit auction for the available capacity allocation. The TSO has reached two agreements with two eligible consumers (Darfo and Kurum). The TSO does not intent to sign any long term contracts for the use of existing interconnectors. Instead, the TSO plans to introduce allocation of transmission capacity (cross-border) on a monthly basis to interested parties/players. Albanian network, except in the cases of high level of import is usually available for regional transit demands causing no congestions. The only revenue that comes in these cases is the revenue from the CBT agreement and this revenue

⁸ Information was updated by Hunton & Williams in the Revised Version of *Preliminary Coordinated Auction Office Due Diligence Report*⁸ and made available to ECS after the 10th Athens Forum in April 25, 2007

⁹ *Report on State level Compliance with Regional Market Design*, Energy Community Secretariat, March 2007 ([link](#))

	is used to cover the TSO's expenses for import-export-fees, etc.
Bosnia and Herzegovina	ISO participates in SETSO CA dry run and will implement the CM Guidelines. The ISO has issued Temporary Rules for Use of Interconnectors' Capacity (in power until 1 July 2007), and expects an approval of the permanent ones from the SERC. The permanent ones will be based on the explicit auction method. The SERC will react when the ISO submits them for approval. In this period there are no congestions and it is not taken as a priority for determination. Currently, the ISO applies the pro-rata methodology (NTC based, 50%). The ISO noted that the neighbouring TSO recently started to apply the explicit auction method at the borders to BiH (NTC based, 50%).
Bulgaria	The articles of the Energy Act reflecting cross border trade: ITC mechanism, charges for access to the network, transparency, congestion management, new interconnectors and penalties are 24, 30, par.1, items 7 and 10, 31, par.3, item 5, 224a.
Croatia	Currently, there is a common explicit auctioning of monthly available transmission capacity between Hungary and Croatia in both directions using total available transmission capacity (without 50%:50% splitting of each TSO). On all other borders, the NTC monthly auctions started from 1 February 2007 (NTC based; 50%; both directions). The Rules on allocation and use of cross-border capacities of the Republic of Croatia are adopted in December 2006. The Rules defines periodical (yearly, half-yearly and quarterly) capacity allocation using tender procedure with no capacity charge applied to allocated capacity, and monthly and potentially daily capacity allocation using explicit auctions with marginal price to be paid by bidding market participants. Periodical capacity allocation in the import direction gives priority to the energy entity having public service obligation for tariff customers of electricity supply, in cases where available capacity is less than demanded by market participants (Croatia is net importing country). According to the Rules there are no already allocated capacities (AAC) although there is existing long term electricity supply contracts for Croatia's needs from generation facilities located on the territories of the former Yugoslavia.
The former Yugoslav Republic of Macedonia	MEPSO participates in the dry-run flow based capacity allocation mechanism. Additionally, a number of reinforcements are being built to reduce/eliminate congestions in the tie lines. Temporarily, MEPSO - Wholesale Supplier has a priority for capacity allocation to ensure security of supply. In case of congestion, pro rata is applied. On a yearly level, all qualified traders in the MEPSO's yearly tendering procedure for electricity supply automatically gain access to the network and necessary cross-border capacity, with no additional charge. Rules for capacity allocation are defined in the tendering documentation. MEPSO, as a wholesale supplier, uses this approach in order to safe security of supply of the customers. MEPSO confirms the cross-border transmission capacities on a monthly level by using the NTC based mechanism. If congestions occur, transactions are curtailed using simple pro-rata principle and no additional charges are imposed. By July 2007, MEPSO intends to propose a market based capacity allocation mechanism. Monthly NTC values and agreements for usage of the cross-border capacities between neighbouring TSOs are published on the MEPSO's web site: www.mepso.com.mk .
Montenegro	EPCG participates in a voluntary dry-run project for a coordinated explicit flow based auction for cross border capacity allocation. Pro-rata methodology has been replaced by the explicit auction one which is currently in use (NTC based; 50%; both directions). The allocation in the period March-July 2007 will be conducted according to the Temporary Rules for Allocation of Available Cross-border Transmission Capacities (EPCG-TSO submitted it for approval to the regulatory authority, available at the web page of the EPCG-TSO). Results of the auctions (monthly NTC & ATC values per border and direction) are also available at the web page of the EPCG-TSO. (www.tso-epcg.com)
Romania	In 2006, Romania has concluded agreements with neighbouring TSOs from Hungary, Bulgaria, Serbia and Montenegro on the NTC and ATC evaluation and convening, with 50:50 sharing of allocation responsibility in each direction; but not yet with Moldova and Ukraine. The allocation of capacity is done through monthly or yearly explicit auctions, as provided by ANRE Order 30/2005. A new allocation procedure where pre-allocated AAC related to old contracts will be removed - end 2006.
Serbia	Pro-rata and market-based explicit auction transmission capacity allocation mechanisms are used during monthly capacity allocation procedure (as of 1 January 2007). Market-based explicit auction mechanism is currently used on Serbia/Croatia and Serbia/Bosnia and Herzegovina borders (both directions), but the Rules allow for gradual introduction of explicit auctions on all borders. Both pro-rata and explicit auctions are based on "no congestion no payment" principle. According to the allocation rules TSMO can curtail allocated capacity in case the system security is endangered or on request from the neighbouring TSO (intra-daily curtailment of allocated capacity and curtailment of nominated and confirmed transactions). EMS is participating in the Dry-run Coordinated Explicit Flow-based Auctions in SEE during

	2007. For the time being, Serbian TSMO (“EMS”) is exclusively and strictly the only entity which is in charge of cross border mechanisms (ITC and transmission capacity allocation) in Serbia. Serbian TSMO is implementing SEE regional ITC rules according to SETSO/ETSO mechanism and the Temporary rules (pro-rata and market-based explicit auctions) for the allocation of transmission capacity. Grid Code and Market Code are being designed at the very moment, and only after its adoption the Energy Agency of the Republic of Serbia will be responsible and authorized for monitoring all cross border procedures in Serbia.
United Nations Interim Administration Mission in Kosovo	Congestion Management is under development. Based on KOSTT application, the ERO has approved in January 2007 the Transmission Capacity Allocation Procedures (TCAP) for interconnection lines with aim of application as soon as possible. KOSTT will negotiate with all adjacent TSOs regarding the NTC values of all interconnection lines.

5.2 Flow-based Capacity Allocation Method

The last years experience has shown that market based cross-border allocation methods may lead to inefficient usage of interconnections if physical realities are not taken into consideration in an appropriate manner.

As all cross-border exchanges between two countries in a meshed network affect the system loading in all other interconnected transmission systems also the NTC-values within a meshed network are strongly interdependent. Thus a publication of realistic international exchange scenarios based on bilateral NTC values for the meshed grid is practically impossible.

Thus, load flow based allocation methods were assessed by several TSOs and consultants.

In general, flow-based allocation is a supra-national approach. This means that all bids for energy and the related cross-border capacity are optimized by a centralized entity that takes care of the actual allocation ('auction office'). In the flow-based allocation mechanism, the commercial transactions are no longer limited to the interconnections where they are reported, but they are converted into physical power flows by using a simplified representation of the network so that their impacts on third interconnections can be considered in order to ensure overall security.

Presently, there is no flow-based capacity allocation scheme implemented in Europe. But due to the importance of this issue, a lot of investigations are undertaken by several stakeholders. There is a dry-run proof-of-principle implementation in the region of Central Eastern Europe (CEE) and a dry-run of coordinated auctioning project in the region of South Eastern Europe (SEE). In the Central-Western European (CWE) region a flow-based allocation mechanism is under development.

The recently proposed flow-based method, currently developed as Dry-Run Coordinated Auction Tool (DrCAT) for South Eastern Europe seems to be the most promising approach for the capacity allocation in highly meshed networks and might provide large potential benefits at the regional level.

Figure 1 presents the development path from NTC or ATC-based day-ahead allocation approach towards the flow-based one described in ETSO Report “Regional Flow-based allocations - State-of-play, issued in March 2007¹⁰

¹⁰ Regional Flow-based allocations - State-of-play, ETSO Final Paper, March 2007 ([link](#))
Report on Implementation of Regulation 1228/2003/EC

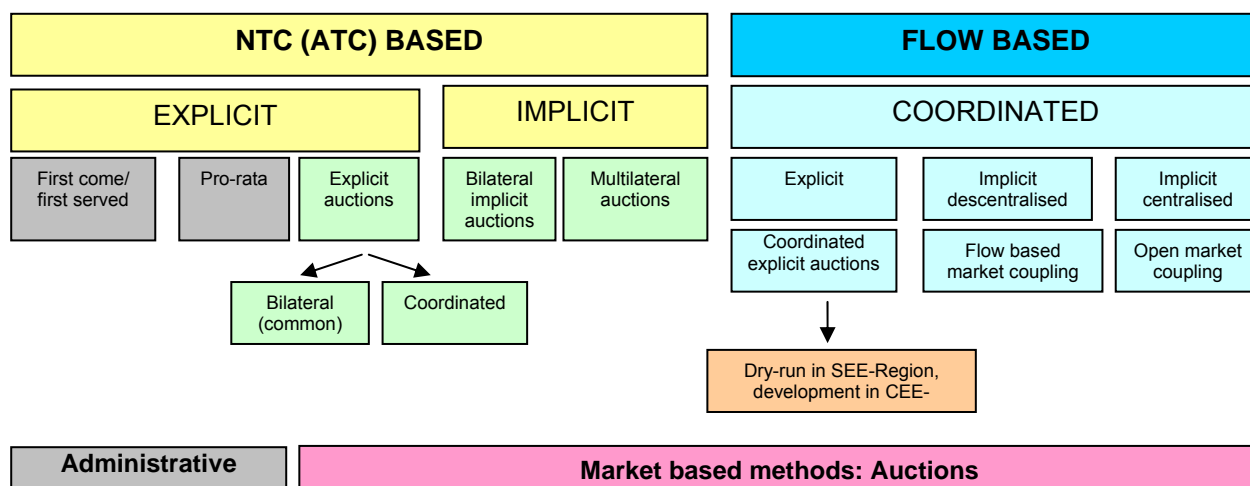


Fig. 1 Development of cross-border trading methods from NTC (ATC) towards the flow based one

5.3 Dry-Run Coordinated Auction Tool for SEE Project

The Dry-run for Flow-based Coordinated Capacity Allocation is a project mainly developed by the TSOs of the Contracting Parties and of their neighbouring countries Austria, Bulgaria, Hungary, Romania and Italy. The TSOs have established the project within the SETSO subgroup NACMPF (Network Access, Congestion Management and Power Flows) and elaborated the necessary technical, economic and organisational aspects. The Dry-run in SEE for 2006 was supported by the consultants Consentec (Germany) and APCS (Austria) which have been financed by KfW from Germany. The second phase, starting 2007, is financed by the Energy Community through a project carried out by Verbund.

Coordinated explicit flow-based Auction (CA) method is expected to have a better performance comparing to the usage of non-coordinated or bilateral mechanisms for allocation of the scarce transmission capacity, within which the ATC is used as a constraint for the commercial exchanges. Therefore it is technically very suitable for the SEE region, as an area comprising many relatively small and medium-size TSOs with high level of interdependence.

The efficient use of the cross-border capacities is a prerequisite to promote the SEE electricity regional market. A more efficient and secure use of available capacities, addressing in a more accurate way the needs of cross border investment and improving firmness of transmission rights needs a coordinated approach, possibly through a joint Auction Office.

The initial development of the CA has been exercised during Dry-run 2006, on the basis of the monthly simulations. Dry-run 2007 is envisaged to simulate the CA procedures more closely to the expected real implementation, such as:

- Simulating auctions at multiple rounds (monthly/daily)
- Involvement of the traders in bidding procedures

For the simulation of clearing procedures, and share of congestion charges, the web-based Dry-run Coordinated Auction Tool (DrCAT) is used by the SEE companies; DrCAT was developed by the Austrian TSO Verbund APG and is available at the website www.drecat.at.

The dry-run coordinated auction tool (DrCAT) is used to calculate the outcome of a flow based coordinated auction for transmission rights in electricity networks. The input data for the calculation comprise zones that act as sources and sinks for electricity transport, the interconnections between these zones, and bids. A bid consists of a source zone, a destination zone, a bid price and a bid volume. The output data provide information about accepted bids including respective prices and volumes. Furthermore, the flows and congestions are displayed as well as different allocation schemes for payments to TSOs can be calculated.

For the first phase of the Dry Run for Coordinated Auctioning in the SEE Region, Verbund-APG has developed simulation software in order to test the concept of a load-flow based coordinated allocation system in the SEE area. The software simulates the monthly auction of available border capacities. It was the task of the TSOs to define the available border capacities on the inter-connectors and the matrix for the sensitivity of load flows on the interconnecting lines (PTDFs).

In addition, the TSOs also fulfilled the function of the bidding parties, where the introduced bids at the auctions should reproduce as accurately as possible the real exchanges in the SEE area. The following SEE TSOs participated actively: ATSO (Albania), NOS BiH (Bosnia-Herzegovina), NEK (Bulgaria), HTSO (Greece), MEPSO (FYR of Macedonia), TEL (Romania), EPCG (Montenegro), EMS (Serbia), TEIAS - not modelled (Turkey).

Based on the bids the simulation software calculates the expected physical load flows on the lines and executes the coordinated auction according the defined action algorithm.

For the second phase of the Dry-Run for Coordinated Auctioning in the SEE Region, the so-called “Hot stand-by operation”, the structure has been changed to include traders. Further additional functions should be developed and tested with market participants – such as Risk-Management, Billing, Secondary Trading and Scheduling – in order to take full advantage of the load flow based coordinated auction concept.

The second phase of the project requires more commitment on behalf of market participants, professional guidance and of course more resources related to man-power and finances and the project is expected to deliver added value to the market development in the SEE region, in terms of preparing the necessary preconditions for the establishment of the Auction Office for 2008.

TERNA Italy and Verbund-APG Austria prepared and presented at the 10th Athens Forum the Business Plan¹¹ for the set up of the “SEE Auction Office Ltd.” This plan was prepared as a guide for starting and managing this new business and will also serve as the basis for a possible financing from EBRD. TSOs from SEE-Region which could potentially be part of the SEE Co-ordinated Auction scheme are the ones from Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, FYR of Macedonia, Montenegro, Romania, Serbia and UNMIK. Further TSOs can be added to the SEE AO perimeter if requested and compliant with EU regulatory framework on Congestion Management.

¹¹ *Plan for the Formation of SEE Auction Office*, Report at the 10th Athens Forum, 24-25 April 2007, [\(link\)](#)
Report on Implementation of Regulation 1228/2003/EC

To speed-up co-operation and facilitate decision making for SEE Auction Office implementation, *The Implementation Group for SEE Coordinated Auctioning* was established. This Implementation Group envisages the participation of SEE TSOs, SEE Regulators, EBRD and Donors organisations involved (e.g. USAID). The Group will represent a centralised stakeholders' body to compile/agree upon technical and legal aspects and provide solid basis for final agreements among Countries.

Expected advantages of the SEE-Auction Office using coordinated flow-based auctions are:

- better utilization of existing interconnections
- higher level of transmission system security
- facilitating regional trading activities due to the efficient use of network capacities and the increase of firmness of transactions
- increasing transparency among all parties involved
- encouraging infrastructure investments (due to transparent and easier trading with other areas in Western Europe)

Present results of the ongoing Dry-Run show that flow-based allocation method seems to be the best solution in order to solve congestions and to comply to the Regulation. Nevertheless some measures have to be undertaken in order to have a sound basis for the implementation of these methods for congestion management among the Contracting Parties as they are the implementation of a harmonized marked design and of a higher degree of coordination within the region. Thus, the implementation of coordinated explicit auctions by all Contracting Parties seems to be worth to follow until the full implementation of the load flow based allocation scheme. Therefore a common Implementation Group, including both regulators and TSOs, for establishing a common auction office has been created.

6 Use of Congestion Income (Regulation art.6, Guidelines §6)

The congestion revenues generated during the allocation of cross-borders capacities have to be shared based on an agreed criteria between TSOs. To comply with the Regulation and Guidelines provisions (art.6, §6), the revenues resulting from the allocation of interconnection shall be used for one or more of the following purposes:

- guaranteeing the actual availability of the allocated capacity
- network investment maintaining or increasing interconnection capacities
- as an income to be taken into account by regulatory authorities when approving the methodology for calculating network tariffs, and/or in assessing whether tariffs should be modified

The use of these revenues has to be set in advance by the Regulators and TSOs in the market rules considering that it will have an impact on TSOs financial model and investment financing. The use of these incomes for investment to maintain or increase the interconnection capacities shall be preferably assigned to specific projects which will relieve the cross-border congestion within a reasonable period of time.

Within the SEE region there is still no common procedure for the use of congestion income.

As there are still some countries without a market based allocation scheme for cross border transmission capacities there are also no provisions about the use of congestion rents within the national legislations.

Nevertheless the establishment of such a common procedure would be important in order to guaranty the investment of congestion income into new infrastructure.

7 New interconnectors (Regulation Art. 7)

For a well developed European electricity market it is equally necessary that adequate infrastructure exists in parallel to common rules and standards that link the Member States. Thus the European Commission put forward a number of measures, including a 10% electricity interconnection target and the priority for Trans European Network Funding of certain projects identified as being Priority Projects of European interest.

In this context, the construction of the new infrastructure seems to be one of the key topics for the future. Nevertheless the Contracting parties follow various approaches. Some of them have provisions about new interconnectors in their primary legislation (Bulgaria, Croatia) while others deal with this issue on a project based level.

For example a Memorandum of Understanding has been signed between Montenegro and Albania regarding the construction and operation of a high voltage 400 kV OHL. According to the applicable Energy Law, interconnectors will be constructed based on authorisations. UNMIK follows also a project related approach and plans the construction of a new 400 kV line to Albania.

8 Regional Coordination (Regulation Art. 9, Guidelines § 3)

Various systems and a high number of different auction rules, closure times, allocation methods and contracts complicate the work for market participants. Thus, the envisaged harmonization of the contractual framework in a region and a high level of compatibility between the regions is a factor which eases market integration and market entry.

In case where auctions are already implemented the contractual framework is for the time being coordinated mainly bilaterally. Thus, Regulation Article 9 and Guidelines § 3 require cross-border coordinated approach.

The areas where an increased degree of coordination is essential to create a level playing field and to foster the cross-border trade within the regional market are referring to the Guidelines (§ 3.5 – 3.6):

- common transmission model, including standardization of contracts
- dealing efficiently with physical loop-flows
- identical obligation for nomination, timeframes, closing times, products, contractual framework;
- verification of flows to comply with network security;
- harmonization of accounting and settlement;
- exchange of information between TSOs;

Furthermore a higher level of coordination could be achieved when a common network model for capacity calculation is adopted in order to maximize available capacities while providing the security of network operation. Such a network model is under development in the SEE region and based on the coordinated flow-based auctioning method for capacity allocation which represents a major change from NTC (ATC) based explicit or implicit capacity allocation.

Most countries have provisions in their primary legislation regarding cross-border trade issues, application of Guidelines, market rules or international agreements. Only three countries (Bulgaria, Montenegro and Serbia) do not have stated specific provisions for cooperation with regulators from neighbouring countries in their primary legislation regarding cross-border trade issues (**Table 3**).

However in the Market Rules these issues have to be explicitly tackled and to be harmonised at regional level.

Table 3 - Coordination¹²

Country	Regulators empowered to cooperate with other regulators on CB issues	Compliance	Regulators empowered regarding application of the Guidelines, market rules or international agreements	Compliance
Albania	Power Sector Law 2003, Art. 8(2)(k) (ERE "cooperates with corresponding authorities of other countries...")	YES	Power Sector Law 2003, Art. 55, ("ERE will collaborate with all energy sector participants to establish ...interconnection rules that conform to ...the requirements of a regional market, including transit protocols and the energy Charter Treaty)	YES
Bosnia and Herzegovina	Transmission of Electric Power Act, Art.4.1 (SERC has jurisdiction over "foreign trade in electricity in accordance with international norms in harmony European Union Standards")	YES	Transmission of Electric Power Act, Art.4.1 (SERC has jurisdiction over "foreign trade in electricity in accordance with international norms in harmony European Union Standards")	YES
Bulgaria	Not available	NO	Energy Act, Art.21 (7) (SEWRC to "adopt the rules for trade in electricity and natural gas (Market Rules) and the technical rules for the networks (System Code), acting on a proposal by the energy companies, and control compliance with the said rules;")	YES
Croatia	Regulation of Energy Activities Act, Art. 10(2) ("The Agency shall monitor in particular: - rules on managing and allocating interconnection capacity in cooperation with regulatory bodies of neighbouring countries...")	YES	Regulation of Energy Activities Act, <i>ibid</i> ; and Art. 10(2) ("The Agency shall monitor in particular: - congestion management within the national transmission network/system,"	YES
The former Yugoslav Republic of Macedonia	Energy Law, Art. 19(12) ERC "cooperates with other regulatory authorities so as to contribute to the development of regional energy markets;"	YES	Energy Law, Art. 19(2) ERC "monitors any mechanisms used to deal with congested capacity on the electricity system... within the Republic of Macedonia"	YES
Montenegro	Not available	NO	Energy Law, Art. 12(2)(a)(iii) ERA's powers include approving "market rules; technical codes, terms and conditions for connection and access to networks;"	YES
Romania	Electricity Law, Art. 11(2)(§) (ANRE "collaborates with regulatory authorities of neighbouring countries with a view to harmonizing the regulatory framework for the development of the regional market, including the cross-	YES	Electricity Law, Art. 11(2)(§) (ANRE "collaborates with regulatory authorities of neighbouring countries with a view to harmonizing the regulatory framework for the development of the regional market, including the cross-border exchanges of electricity and the rules regarding	YES

¹² Revised Version of *Preliminary Coordinated Auction Office Due Diligence Report*, Hunton & Williams, 10th Athens Forum April 25, 2007
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	<i>border exchanges of electricity and the rules regarding the management of interconnection capacity”)</i>		<i>the management of interconnection capacity”)</i>	
Serbia	Not available	NO	Energy Law, Arts. 15(5) (The Agency “approves grid codes, the energy market code...”)	YES

9 Penalties (Regulation Art.12)

The Regulation explicitly requires that all Member States should foresee rules on penalties for infringements of the provisions of the Regulation (Article 12).

However, not all the Contracting Parties have adopted their legislation and introduced provisions related to penalties applicable to infringements of the Regulation.

A detailed analysis of the enforcement of penalties is presented in Table 4.

Table 4 Penalties¹³

Contracting Party	Penalties
Albania	The Power Sector Law (Arts. 8, 19, 63, and 64) envisages specific penalties upon breaching the law and regulations adopted by the ERE. Pursuant to its legal authority (Art. 18), the ERE may withdraw the license.
Bosnia and Herzegovina	The legislation does not envisage specific penalties upon breaching the Regulation.
Bulgaria	The articles of the Energy Act reflecting cross border trade: ITC mechanism, charges for access to the network, transparency, congestion management, new interconnectors and penalties are 24, 30, par.1, items 7 and 10, 31, par.3, item 5, 224a.
Croatia	Electricity Market Act (Croatian Official Gazette 177/04), Article 38.
The former Yugoslav Republic of Macedonia	Not available.
Montenegro	Penalties for breaching of Regulation 1228/2003 are based on the UCTE MLA.
Romania	Specific penalties for breaching the Regulation 1228/2003 are included in the new Electricity Law no 13 as of January 2007.
Serbia	The legislation does not envisage specific penalties upon breaching the Regulation.
United Nations Interim Administration Mission in Kosovo	There is not set up yet any penalties related to requirements of the Regulation 1228/2003.

¹³ Report on State Level Compliance with Regional Market Design, Energy Community Secretariat, March 2007 ([link](#))
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10 Public Service Obligations (Regulation Art. 6)

In Article 6, §1 of the Regulation, the general principles of congestion management are presented and it is mentioned that the network congestion problems shall be addressed with the non-discriminatory market based solution.

Table 5 summarised information related to Public Service Obligation in addressing the congestion management issues.

Table 5 Public Service Obligation¹⁴

Country	PSO priority	Relevant Law or Market Rule Giving Priority to Suppliers of Tariff Customers under PSOs
Albania	YES	Market Rules for Electricity Market, Art. 12(8) (priority in fulfilling demand given to “market participants licensed by ERE on account of Tariff customers that according to article 25 of PSL is performed as public service”)
Bosnia and Herzegovina	YES	2007 Annual Cross-Border Transmission Capacity Allocation Regulations (imports limited to suppliers of domestic consumers)
Bulgaria	YES	Energy Act, Art. 102 (making energy transactions with entities outside Bulgaria subject to numerous conditions, including that household customers and companies with fewer than 50 occupants and annual turnover not exceeding BGN 19.5 million “have been provided the electricity they need...”)
Croatia	YES	Rules on Allocation and Use of Cross Border Capacity, Arts. 33 and 62, (in the event of congestion “entity that has public service obligation” has priority)
The former Yugoslav Republic of Macedonia	YES	Wholesaler serving tariff customers gets priority allocation under rules
Montenegro	YES	Draft Market Rules give priority to suppliers of tariff customers
Romania	NO	
Serbia	YES	Temporary Rules (EMS can allocate in advance as priority (AAC), part of full transmission capacity...“if it is in function of supplying tariff consumers...”)

With the exception of Romania, each Contracting Party gives priority in cross-border allocation to providers with Public Service Obligation which is not compliant with the principle of non-discriminatory market based solutions.

At its 3rd meeting on 5th July 2007, ECRB Customers Working Group adopted the paper “Best Practice Guidelines on the Protection of Vulnerable Household Customers” (R07-WGC-01-05) as a non-binding recommendation pursuant to the provisions of Article 33 of the Energy Community Treaty. Further on, more actions are needed at national level to protect vulnerable household customers and ECRB invited individual regulators to draw up national implementation plans based on the Best Practice Guidelines and present them at the 4th

¹⁴ Revised Version of *Preliminary Coordinated Auction Office Due Diligence Report*, Hunton & Williams, 10th Athens Forum, April 25, 2007
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ECRB meeting. The ECRB welcomed the idea of addressing the Consumers' aspect during the "Social Conference" (on signing the Social Memorandum of Understanding) being prepared by the EC and the Secretariat.

The Contracting Parties need to pay special attention to the protection of the vulnerable customers and therefore further work is needed to implement social support scheme at national level to make the energy affordable for each customer.

As regard to the congestion management methods, the principle of non-discriminatory should not be affected by provisions in the market rules for specific treatment of suppliers with public service obligations. Furthermore, the Regulatory Authorities might wish to consider implementing relevant provisions in the Market Rules regarding the appointment of suppliers of last resort.

11 Transparency (Regulation Art. 5 and 10, Guidelines § 4 and 5)

Transparency is a key driver for the implementation of a liberalized European electricity Market. Therefore the Regulation mentions in its article 5 the minimum requirements for a transparent market.

Regarding compliance with transparency requirements as stated in the Regulation and especially within the Guidelines Articles 5, TSOs have to publish all relevant information including network availability, network access and network use, as well as information regarding already allocated capacity and forecasted ATC/NTC values.

Compliance with Transparency requirements is presented in **Table 6**. A more detailed analysis is presented in **Tables 9 and 10** based on findings from the Revised Version of *Preliminary Coordinated Auction Office Due Diligence Report* by Hunton & Williams presented at the 10th Athens Forum in April 25, 2007.

Table 6 Compliance with transparency requirements¹⁵

Contracting Party	Transparency
Albania	Under the Chapter V (Art. 18) of the Market Rules approved by the ERE with its Decision Nr. 1, date 25.01.2005., the TSO is obliged to give to all the interested parties and market players, the information related to the market operation, under request which is not treated as confidential. TSO's website: www.kesh.com.al . New web-site of Albanian TSO OST (ATSO) is under preparation.
Bosnia and Herzegovina	ISO publishes overall information regarding Article 5 at its web page. TSO's website: www.nosbih.ba
Bulgaria	The articles of the Energy Act reflecting cross border trade: ITC mechanism, charges for access to the network, transparency, congestion management, new interconnectors and penalties are 24, 30, par.1, items 7 and 10, 31, par.3, item 5, 224a. TSO's website: http://www.nek.bg/tso/eng/index.htm
Croatia	Electricity Market Act (Croatian Official Gazette 177/04), Articles 11-14. HEP-TSO has improved transparency lately, expecting further development and improvements. TSO's website: www.hep.hr/ops . Particularities related to capacity allocations are provided (rules, forms, procedures, results). Daily system load curve as well. Market Operator (www.hrote.hr) publishes market related information (description of market design, laws,

¹⁵ Report on State Level Compliance with Regional Market Design, Energy Community Secretariat, March 2007 ([link](#))
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	sub-laws, market rules, grid code...).
The former Yugoslav Republic of Macedonia	Not responded directly, but monthly NTC values and agreements for usage of the cross-border capacities between neighbouring TSOs are published on TSO's web site: www.mepso.com.mk .
Montenegro	TSO's website exists according to the ETSO standards, www.tso-epcg.com . Information is given about the transmission system (daily system load – forecasted per hourly intervals and realised on 5-minute intervals, total MW domestic consumption and total MW transit, on-line MW loadings of cross-border transmission lines and MW total power exchanges with neighbours, daily hourly reports per tie-lines, ACE registrator). It is enabled by connecting the web page to the real-time SCADA system.
Romania	The Grid Code was approved by the RA in 2004 (amended and completed by the RA), as well as the Long-term plan for the development of the electricity transmission network (the period 2004 – 2008 to reach 2014). The RA sanctions (ANRE Sanctions 14/2005) are published on the TSO's website (www.transelectrica.ro). The procedure regarding allocation of the national power system transfer capacity to the neighbouring power systems is published in the Balancing Market Operator's web site (www.ope.ro). The information on available transmission capacity is also published on the website (www.ope.ro).
Serbia	Not responded. TSO's website: www.ems.co.yu
United Nations Interim Administration Mission in Kosovo	Transparency is envisaged in Primary Legislation (Law on Energy Article 2 and 3) and Law on Energy Regulator (Article 49). TSO's website: http://www.kostt.com

Special attention has to be paid for the compliance with the transparency requirements that has to be further developed in order to not create asymmetries in the market due to information inconsistency.

12 Conclusions

The implementation status of Regulation 1228/2003 and its Guidelines in the Contracting Parties show that there are still some significant challenges ahead. Cross-border issues (Inter-TSO Compensation, network capacity allocation, congestion management, transmission tariffs structures) are of critical importance for the effective electricity market operation. Thus it seems absolutely necessary that all Contracting Parties follow the requirements due to the Regulation as soon as possible. Nevertheless, the infrastructure constraints have to be taken out into consideration.

A complete description of the implementation status of the Regulation per each Contracting Party could be found in **Annex 1 – Cross Border Arrangements of the Electricity Market Design – Main Characteristics per each Contracting Party**.

Notably progress in the region has been achieved with the signing of the voluntary interim ITC agreement valid until the end of 2007 and it is expected that this load flow based compensation scheme will be extended to 2008, as well. This agreement was a landmark given as the formerly separate schemes and funds of ETSO and SETSO (South-East Europe Transmission System Operators) were joined for the first time.

Taking into account that not all the principles of congestion management are implemented by the Contracting Parties and that there are limitations in the allocation of interconnection capacities due to public service obligations, the cross-border trade volumes between the Contracting Parties are still very low compared to the installed net interconnection capacities and the total electricity demand in the area.

With the exception of Bosnia and Herzegovina, Bulgaria and Romania, all Contracting Parties are net electricity importers and subjects to cross-border trade. Taking into account that also other neighbouring EU Member States (Austria, Greece, Hungary, Italy and Slovenia) are net importers it could be expected that there will be high electricity transits flows from the net exporter countries like Bulgaria, Romania, Poland, Slovakia, Ukraine etc. through the Contracting Parties networks. Thus it seems to be necessary to extend the already existing mechanisms for cross border trade according to the Regulation 1228/2003.

Almost all Contracting Parties (with the exception of Romania) have only a small number of formal provisions implemented that are completely in line with the Regulation 1228/2003. However, it shall be noted that recently a majority of the TSOs started to conduct explicit auctions of cross-border transmission capacity, while the rest of them announced the intention to implement them by mid 2007. Furthermore a better coordination concerning auction procedures and contracts seems to be necessary. Some of the Contracting Parties still have to include in the primary and secondary legislation provisions related to cooperation and coordination at regional level among Regulatory Authorities and among TSOs.

Improved cooperation is expected in the year 2008 as the Contracting Parties TSOs consider the year 2007 as the period of final preparation for the full operation of Coordinated Auctions in the region, where the remaining aspects of the auctions design should be finalized. They also expect that the technical preconditions such as software for the calculation of technical parameters and the auction procedures will be finalized within 2007. Further improvements are possible and expected by the introduction of coordinated load flow based auctions in future.

As transparency is a prerequisite for an open market without barriers, further measures have to be taken by the Contracting Parties in order to provide all necessary information to the market participants. One possible approach for creating market transparency in the region could be the introduction of a common transparency platform for the region - comparable to ETSOvista platform developed by ETSO. Such an approach would harmonize the way of providing information to market participants and create a level playing field in the region.

On this ground, it is evident that the role of the regulatory authorities at national and – via their coordinated activities – at regional level in relation to the implementation of the Regulation and the Guidelines seems to be crucial. Thus, further work towards completion of the market rules is needed; besides, additional attention should be paid as to harmonise the provisions related to market design, charges for access to networks and mainly compliance with the congestion management principles requirements among Contracting Parties.

Therefore, the Regulatory Authorities are invited to consider next steps towards implementation of the Regulation and its Guidelines in the Market Rules that have to be developed in a harmonised approach.

Table 7. Currently applied allocation methods in the Contracting Parties and compliance with Guidelines requirements on congestion management principles¹⁶

Country (TSO or ISO)	Involved interconnection (border)	Direction (import, export, both)	Time frames for the allocation	Only explicit and implicit auction allowed (§2.1)		Common allocation procedure (for 100% capacity) (§3.1)		No reserved price (§2.9)		"UIOLI" or "UIOSI" to be applied for long and medium terms (§2.5)		Rights tradable on secondary markets (§2.12)		TSO coordination...common model used (§3.6)		Plan until end 2007: possible upgrade/ introducing new allocation procedure?
				Methods	OK with Guidelines?	Unilateral method, capacity split 50:50 or joint method?	OK with Guidelines?	Est. reserve prices in capacity allocation methods?	OK with Guidelines?	"Use it or lose (sell) it" principle applied?	OK with Guidelines?	Possibility for reselling of the capacity?	OK with Guidelines?	Usage of the common network model for capacity calculation?	OK with Guidelines?	
Albania (ATSO)	Greece*	Both	Y,M,W	Priority list	NO	Unilateral	NO	No	YES	Yes	YES	Yes	YES	Yes	YES	Monthly explicit auctions planned to be implemented in the beginning of 2007 TBC
	Montenegro	Both	M	Pro-rata (AL part)	NO	Split 50:50	NO	No	YES	Yes	YES	Yes	YES	Yes	YES	
	Serbia	Both	M		NO	Split 50:50	NO	No	YES	Yes	YES	Yes	YES	Yes	YES	
Bosnia and Herzegovina (NOS BiH)	Croatia	Both	Y,M,D	Pro-rata monthly, priority list daily (BA part)	NO	Split 50:50	NO	No	YES	Yes plus penalty	YES	No	NO	Yes	YES	NoS BiH is planning to start with monthly and daily auction, during the first half of 2007 TBC
	Montenegro	Both	Y,M,D		NO	Split 50:50	NO	No	YES	Yes plus penalty	YES	No	NO	Yes	YES	
	Serbia	Both	Y,M,D		NO	Split 50:50	NO	No	YES	Yes plus penalty	YES	No	NO	Yes	YES	
Bulgaria (NEK ESO EAD)	Greece*	Export	/	In process of establ.	/	/	/	/	/	/	/	/	/	Yes	YES	In process of complying with R1228 (by July1, 2007) TBC
	Romania	Both	M	Pro-rata (BG part)	NO	Split 50:50	NO	/	?	No	NO	No	NO	Yes	YES	
	Serbia	Both	M	Pro-rata (BG part)	NO	Split 50:50	NO	/	?	No	NO	No	NO	Yes	YES	
	Macedonia	/	/	In process of establ.	/	/	/	/	/	/	/	/	/	/	/	
Croatia (HEP – TSO)	Bosnia and Herzegovina	Both	M	Explicit auction (HR part)	YES	Split 50:50	NO	No	YES	No, penalty	NO	No	NO	Yes	YES	Explicit auctions
	Hungary	Both	M	Common explicit auction (M)	YES	Joint HR-HU (M)	YES	No	YES	No, penalty	NO	No	NO	Yes	YES	
	Serbia	Both	M	Explicit auction (HR part)	YES	Split 50:50	NO	No	YES	No, penalty	NO	No	NO	Yes	YES	
	Slovenia	Both	M	Explicit auction (HR part)	YES	Split 50:50	NO	No	YES	No, penalty	NO	No	NO	Yes	YES	
The former Yugoslav Republic of Macedonia (MEPSO)	Greece*	Both	Y,M	Priority list/common auction pending	NO/YES	Unilateral	NO	No	YES	Yes	YES	No	NO	Yes	YES	Explicit auctions
	Bulgaria	Import	/	/	NO	/	NO	/	YES	Yes	YES	No	NO	/	/	
	Serbia	Both	Y,M	Pro-rata	NO	Split 50:50	NO	No	YES	Yes	YES	No	NO	Yes	YES	
Montenegro (TSO-EPCG)	Albania	Both	M,D	Explicit auction ME 50%	YES	Split 50:50	NO	No	YES	Yes	YES	No	NO	Yes	YES	New allocation procedure
	Bosnia and Herzegovina	Both	M,D		YES		NO	No	YES	Yes	YES	No	NO	Yes	YES	
	Serbia	Both	3/M,D		YES		NO	No	YES	Yes	YES	No	NO	Yes	YES	
Romania (Transelectrica)	Bulgaria	Both	Y,M	Explicit auction	YES	Split 50:50	NO	No	YES	Yes	YES	Rights transfer	YES/NO	Yes	YES	Common explicit auction in discussion – no decision yet
	Hungary	Both	Y,M		YES		NO	No	YES	Yes	YES	Rights transfer	YES/NO	Yes	YES	
	Serbia	Both	Y,M		YES		NO	No	YES	Yes	YES	Rights transfer	YES/NO	Yes	YES	
Serbia (EMS)	Albania	Both	M	Explicit auction all borders of SR 50%	YES	Split 50:50	NO	No	YES	Yes	YES	No	NO	Yes	YES	Permanent rules to be implemented in 2007; common allocation procedure (for 100% of capacity) with neighboring TSOs is planned to be implemented during the second half of 2007
	Bosnia and Herzegovina	Both	M		YES		NO	No	YES	Yes	YES	No	NO	Yes	YES	
	Bulgaria	Both	M		YES		NO	No	YES	Yes	YES	No	NO	Yes	YES	
	Croatia	Both	M		YES		NO	No	YES	Yes	YES	No	NO	Yes	YES	
	Hungary	Both	M		YES		NO	No	YES	Yes	YES	No	NO	Yes	YES	
	FYR Of Macedonia	Both	M		YES		NO	No	YES	Yes	YES	No	NO	Yes	YES	
	Montenegro	Both	M		YES		NO	No	YES	Yes	YES	No	NO	Yes	YES	
Romania	Both	M	YES	NO	No	YES	Yes	YES	No	NO	Yes	YES				

* On interconnections between Greece and Albania, and Greece and Macedonia, there has been an arrangement in place since 1.1.2007 whereby HTSO allocates via explicit auctions (Y,M,D) the entire NTC in both directions. Congestion revenues are shared 50%-50% between ATSO and MEPSO. For the interconnection between Greece and Bulgaria, a somewhat similar arrangement exists, whereby HTSO allocates (explicit Y,M,D auctions) the entire NTC in the direction of GR-BG (50%-50% sharing of revenue) and 50% of NTC in direction BG-GR, with the remaining 50% being allocated by the Bulgarian TSO (ESO EAD). These transitional arrangements reflect the fact that Albania, Macedonia and Bulgaria are not obliged to comply with the Regulation and the Guidelines until 1.7.2007 and were agreed upon with a view to being able to migrate to bilaterally (or multilaterally) coordinated capacity allocations in compliance with § 3.1 of the Guidelines.

¹⁶ Revised Version of Preliminary Coordinated Auction Office Due Diligence Report, Hunton & Williams, 10th Athens Forum in April 25, 2007
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Table 8 Additional Compliance requirements with congestion management principles¹⁷

Country (TSO or ISO)	Network security standards?	OK with Guidelines?	Highest Bid Wins? (2.7)	OK with Guidelines?	Transaction distinction? (16)	No congestion, no auction price?	OK with Guidelines?	Unused capacity to be reallocated	OK with Guidelines?
Albania (ATSO)	No	No	No	No	Yes	-	-	No	No
Bosnia and Herzegovina (NOS BiH)	Yes	Yes	No	No	Yes	-	-	Pre-M only	Yes
Bulgaria (NEK ESO EAD)	Yes	Yes	No	No	Yes	-	-	No	No
Croatia (HEP – TSO)	Yes	Yes	Yes/No	Yes/No	Yes, periodic imports only for retailers	Yes	Yes	Yes	Yes
The former Yugoslav Republic of Macedonia (MEPSO)	Yes	Yes	No	No	Yes	Yes	Yes	No	No
Montenegro (TSO-EPCG)	Yes	Yes	No	No	Yes	Yes	Yes	No	No
Romania (Transelectrica)	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Serbia (EMS)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No

¹⁷ Revised Version of Preliminary Coordinated Auction Office Due Diligence Report, Hunton & Williams, 10th Athens Forum in April 25, 2007
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Table 9. Currently status regarding compliance with Guidelines requirements on transparency¹⁸

Country (TSO or ISO)	Involved intercom-nection (border)	Publication of Congestion Managements Methodologies (§ 5.1.- 5.3)			Results (volumes, timeframes) (§ 5.5)		Capacity used info; net physical flows (§ 5.5)		Institution that organize the allocation? (TSO, PEX, auction office..)
		Web-address with transfer capacity	Web-address with allocation procedure description	OK with Guidelines?	Web-address with allocation results?	OK with Guidelines?	Actual net physical flows published? Where?	OK with Guidelines??	
Albania (ATSO)	Greece	No ATC	www.kesh.com.al	No/Yes	No access to data without fee	NO	No	NO	Albanian TSO
	Montenegro			No/Yes					
	Serbia	No/Yes							
Bosnia and Herzegovina (NOS BiH)	Croatia	www.nosbih.ba	www.nosbih.ba	YES/YES	www.nosbih.ba	YES	No	NO	NOS BiH
	Montenegro								
	Serbia								
Bulgaria (NEK ESO EAD)	Greece	/	/	No (NTC only)/Yes	/	/	/	/	TSO
	Romania	www.nek.bh	www.nek.bh	No (NTC only)/Yes	No	NO	No	NO	
	Serbia	www.tso.bg	www.tso.bg	No (NTC only)/Yes	No	NO	No	NO	
	Macedonia	/	/	/	/	/	/	/	
Croatia (HEP – TSO)	Bosnia and Herzegovina	www.hep.hr/ops	www.hep.hr/ops	YES/YES	www.hep.hr/ops	YES	No	NO	TSO
	Hungary								
	Serbia								
	Slovenia								
The former Yugoslav Republic of Macedonia (MEPSO)	Greece	www.mepso.com.mk	www.mepso.com.mk	No (ATC only)/YES	www.mepso.com.mk	NO/ ATC only	No	NO	MEPSO
	Bulgaria	/	/	No (ATC only)/YES					
	Serbia	www.mepso.com.mk	www.mepso.com.mk	YES/YES					
Montenegro (TSO-EPCG)	Albania	www.tso-epcg.com	www.tso-epcg.com	YES/YES	www.tso-epcg.com	YES	No	NO	TSO-EPCG
	Bosnia and Herzegovina								
	Serbia								
Romania (Transelectrica)	Bulgaria	www.ope.ro	www.ope.ro	YES/YES	www.ope.ro	YES	No, only daily nominated exchange balance	NO	TSO-Transelectrica
	Hungary								
	Serbia								
Serbia (EMS)	Albania	www.ems.co.yu	www.ems.co.yu	YES/YES	www.ems.co.yu	YES	No	NO	EMS – Serbian TSO
	Bosnia and Herzegovina								
	Bulgaria								
	Croatia								
	Hungary								
	FYR Of Macedonia								
	Montenegro								
	Romania								
	FYR Of Macedonia								
	Serbia								

¹⁸ Revised Version of Preliminary Coordinated Auction Office Due Diligence Report, Hunton & Williams, 10th Athens Forum in April 25, 2007
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Table 10. Additional requirements regarding compliance with Guidelines requirements on transparency¹⁹

Country (TSO or ISO)	Advance Notice	Forecast of ATC/NTC	Info on AAC	Web address
Albania TSO	Yes	Yes/No	Yes/No	www.kesh.com.al Some English (no ATC)
BiH (Nos BiH)	Yes	Yes	Yes	www.nosbih.ba Multiple languages
Bulgaria (NEK ESO EAD)	No	Yes	No	www.tso.bg Some English (no ATC)
Croatia (HEP-TSO)	Yes	Yes	Yes/No	www.hep.hr/ops Full English
The former Yugoslav Republic of Macedonia (MEPSO)	Yes	Yes	Yes	www.mepso.com.mk Some English
Montenegro (TSO-EPCG)	Yes	Yes	Yes/No	www.tso-epcg.com Some English
Romania (Transelectrica)	Yes	Yes	Yes/No	www.transelectrica.ro Full English but two sites
Serbia (EMS)	Yes	Yes	Yes/No	www.ems.co.yu Some English

¹⁹ Revised Version of *Preliminary Coordinated Auction Office Due Diligence Report*, Hunton & Williams, 10th Athens Forum in April 25, 2007

Annex 1

CROSS BORDER ARRANGEMENTS OF THE ELECTRICITY MARKET DESIGN - MAIN CHARACTERISTICS PER EACH CONTRACTING PARTY²⁰

The first and the sixth Chapter of the Road Maps and the Electricity Action Plans, 1 - Acquis Communautaire and 6 - Market Integration, provide information on the cross border arrangements of the electricity market. In the first Chapter, Regulation is given a priority, while in the sixth Chapter the items necessary for the regional level are discussed.

In the former, adequate actions are expected mainly from the national stakeholders – TSOs and RAs, dominantly – on the following issues: Inter-TSO Compensation mechanism, charges for access to networks, transparency, congestion management, new interconnectors, penalties (Annex 2, Tables 24-29). In the latter, the institutions recognised by the Treaty, such as the Regulatory Board, are needed to agree on compatibility measures on the following issues: interconnection capacity, Inter-TSO Compensation, market design / market rules, and licensing (various tables in Annexes 3-6).

In what follows hereafter, main characteristics of cross border arrangements of the electricity market design are singled out per each Contracting Party.

Albania

Regulation 1228/2003/EC provisions	Compliance	Explanation
ITC MECHANISM (Art.3)	YES	ITC agreement signed and valid until the end of 2007
CHARGES FOR ACCESS TO NETWORKS (Art. 4)	Partially	Values for access to networks tariffs (T&D) are still missing and have to be followed by contractual arrangements for access to network.
CONGESTION MANAGEMENT METHOD (Art. 6, § 2)	Partially	Still pro-rata method applied for congestion management. No compliance with network security standards. The highest bid is not winning. There is a transaction distinction. Unused capacity is not reallocated.
TRANSPARENCY (Art. 5 and 10, § 4 and 5)	Partially	ATC is not published and there is no public access to data without fee. The net physical flow and outages are not published. There is no forecast on NTC or AAC. TSO website not full English.
USE OF CONGESTION INCOME (Art. 9, § 3)	NO	No reference to the use of congestion income in the market rules and/or in the transmission tariff methodology
NEW INTERCONNECTORS (Art. 7)	Partially	Memorandum of Understanding between Albania and Montenegro regarding construction and operation of HV OHL 400 kV.
COORDINATION (Art. 9, § 3)	YES	Specified in the Power Sector Law as from 2003 (Art. 8(2)(k) and Art 55)
PENALTIES (Art. 12)	YES	The Power Sector Law as from 2003 (Arts. 8, 19, 63, and 64) envisages specific penalties upon breaching the law and regulations adopted by ERE.
PUBLIC SERVICE OBLIGATION (Art. 6)	NO	Market Rules for Electricity Market, Art. 12(8) (priority in fulfilling demand given to “market participants licensed by ERE on account of Tariff customers that according to article 25 of PSL is performed as public service”)

²⁰ Report on State Level Compliance with Regional Market Design, Energy Community Secretariat, March 2007 ([link](#))

TSO has signed the interim ITC Agreement valid until end of 2007 and has previously participated in the SETSO ITC last three years. The tariff of import-export or transits between interconnections is calculated every year on the basis of a special Inter-TSO Compensation mechanism which is part of the CBT agreement. These tariffs are different for the exchanges between participants of the CBT agreement and/or other perimeter countries.

Access to the network is allowed on the basis of transparency and non-discrimination. Access is regulated and public, where the price shall be determined in the conformity of methodology approved by the RA.

Under the Market Rules (2005), the TSO is obliged to give to all the interested parties and market players, the information related to the market operation, under request which is not treated as confidential. TSO's website: www.kesh.com.al. New web-site of Albanian TSO OST (ATSO) is under preparation.

In 2005 and 2006, the TSO had limited possibility to import necessary energy due to insufficient transit capacity with neighbouring systems. Based on the Market Rules, the TSO is obliged to give the priority to the tariff customers for the capacity allocation and after that to the eligible customers.

The TSO must make an explicit auction for the available capacity allocation. The TSO has reached two agreements with two eligible consumers (Darfo and Kurum). The TSO does not intent to sign any long term contracts for the use of existing interconnectors. Instead, the TSO plans to introduce allocation of transmission capacity (cross-border) on a monthly basis to interested parties/players.

Albanian network, except in the cases of high level of import is usually available for regional transit demands causing no congestions. The only revenue that comes in these cases is the revenue from the CBT agreement and this revenue is used to cover the TSO's expenses for import-export-fees, etc.

The Power Sector Law envisages specific penalties upon breaching the Law and regulations adopted by the RA. Pursuant to its legal authority, the RA may withdraw the license.

Bosnia and Herzegovina

Regulation 1228/2003/EC provisions	Compliance	Explanation
ITC MECHANISM (Art.3)	YES	ITC agreement signed and valid until the end of 2007
CHARGES FOR ACCESS TO NETWORKS (Art. 4)	YES	Transmission Tariff published and in force
CONGESTION MANAGEMENT METHOD (Art. 6, § 2)	Partially	Pro-rata monthly and priority list daily, rights not tradable on secondary market, highest bid doesn't win, there is still a transaction distinction, unused capacity reallocated only pre-monthly.
TRANSPARENCY (Art. 5 and 10, § 4 and 5)	Partially	Actual net physical flows and outages are not published.
USE OF CONGESTION INCOME (Art. 9, § 3)	NO	No reference to the use of congestion income in the market rules and/or in the transmission tariff methodology
NEW INTERCONNECTORS (Art. 7)	NO	No information available
COORDINATION (Art. 9, § 3)	YES	Transmission of Electric Power Act, Article 4.1
PENALTIES (Art. 12)	NO	The legislation does not envisage specific penalties upon breaching the Regulation.

PUBLIC SERVICE OBLIGATION (Art. 6)	NO	2007 Annual Cross-Border Transmission Capacity Allocation Regulations (imports limited to suppliers of domestic consumers)
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ISO has signed the interim ITC Agreement valid until end of 2007 and has previously participated in the SETSO ITC last three years. SERC provides consent annually. Addendum for the first 3 months of 2007 is signed.

ISO publishes overall information at its web page. TSO's website: www.nosbih.ba.

ISO participates in the SETSO CA dry run and will implement the Guidelines. The ISO has issued Temporary Rules for Use of Interconnectors' Capacity (valid until 1 July 2007), and expects an approval of the permanent ones from the SERC. The permanent ones will be based on the explicit auction method. The SERC will react when the ISO submits them for approval. In this period there are no congestions and it is not taken as a priority for determination. Currently, the ISO applies the pro-rata methodology (NTC based, 50%, both directions). ISO noted that the neighbouring TSOs recently started to apply the explicit auction method at the borders to BiH (NTC based, 50%, both direction).

For the time being there is no revenue resulting from the allocation of interconnectors.

Bulgaria

NEK EAD EOS has signed the interim ITC Agreement valid until end of 2007 and has previously participated in the SETSO ITC last three years.

The Energy Act brings the following articles reflecting cross border trade (ITC mechanism, charges for access to the network, transparency, congestion management, new interconnectors and penalties): 24, 30, par.1, items 7 and 10, 31, par.3, item 5, 224a. TSO's website: <http://www.nek.bg/tso/eng/index.htm>.

Croatia

Regulation 1228/2003/EC provisions	Compliance	Explanation
ITC MECHANISM (Art.3)	YES	ITC agreement signed and valid until the end of 2007
CHARGES FOR ACCESS TO NETWORKS (Art. 4)	Partially	Methodology for setting the Transmission and Distribution tariffs is published but no tariff values set yet.
CONGESTION MANAGEMENT METHOD (Art. 6, § 2)	Partially	Not common allocation procedure (split 50:50) for borders with BiH, SR, SL; UIOLI, UIOSI not applied, rights are not tradable on secondary market, not always highest bid wins; there is a transaction distinction for suppliers with PSO
TRANSPARENCY (Art. 5 and 10, § 4 and 5)	Partially	Actual net physical flows and outages are not published. AAC is not published; there are long term supply contracts for electricity generated in power plants located on the territory of former Yugoslavia.
USE OF CONGESTION INCOME (Art. 9, § 3)	NO	No reference to the use of congestion income in the market rules and/or in the transmission tariff methodology, but hot topic in the future.
NEW INTERCONNECTORS (Art. 7)	YES	Electricity Market Act (Croatian Official Gazette 177/04), Articles 21, 35.
COORDINATION (Art. 9, § 3)	YES	Regulation of Energy Activities, Article 10 (2)

PENALTIES (Art. 12)	YES	Electricity Market Act, Article 38
PUBLIC SERVICE OBLIGATION (Art. 6)	NO	Rules on Allocation and Use of Cross Border Capacity, Arts. 33 and 62, (in the event of congestion "entity that has public service obligation" has priority)

HEP-TSO has signed the interim ITC Agreement valid until end of 2007.

Charges for network access are defined in the Energy Act, the Rules on Charges for Connection to the Network and for Increase in Connected Power, the Decision on the Amount of Charge for Connection to Electric Network and for Increase in Connected Power.

HEP-TSO has improved transparency lately, expecting further development and improvements. Relationship between HEP-TSO and holding company need further clarification and transparency, especially when it comes to possible interference with activities of HEP-Trade which was formally established recently and started its operations since 1 March 2007 (clarification needed on the roles of public supplier/independent supplier). TSO's website: www.hep.hr/ops. Particularities related to capacity allocations are provided (rules, forms, procedures, results). Daily system load curve as well. Market Operator (www.hrrote.hr) publishes market related information (description of market design, laws, sub-laws, market rules, grid code...).

Currently, there is a common explicit auctioning of monthly available transmission capacity between Hungary and Croatia in both directions using total available transmission capacity (without 50%:50% splitting of each TSO). On all other borders, the NTC monthly auctions started from 1 February 2007 (NTC based; 50%; both directions). The Rules on allocation and use of cross-border capacities of the Republic of Croatia are adopted in December 2006. The Rules defines periodical (yearly, half-yearly and quarterly) capacity allocation using tender procedure with no capacity charge applied to allocated capacity, and monthly and potentially daily capacity allocation using explicit auctions with marginal price to be paid by bidding market participants.

Periodical capacity allocation in the import direction gives priority to the energy entity having public service obligation for tariff customers of electricity supply, in cases where available capacity is less than demanded by market participants (Croatia is net importing country).

According to the Rules there are already allocated capacities (AAC) due to long term electricity supply contracts for Croatia's needs from generation facilities located on the territories of the former Yugoslavia.

The former Yugoslav Republic of Macedonia

Regulation 1228/2003/EC provisions	Compliance	Explanation
ITC MECHANISM (Art.3)	YES	ITC agreement signed and valid until the end of 2007
CHARGES FOR ACCESS TO NETWORKS (Art. 4)	NO	No information available
CONGESTION MANAGEMENT METHOD (Art. 6, § 2)	Partially	Still priority list for interconnection with Greece, pro-rata for interconnection with Serbia, capacity rights are not tradable on secondary market, the highest bid doesn't win, there is transaction distinction, unused capacity is not reallocated
TRANSPARENCY (Art. 5 and 10, § 4 and 5)	Partially	NTC not published, no allocation results, net physical flows and outages are not published, TSO website not full English
USE OF CONGESTION INCOME (Art. 9, § 3)	NO	No reference to the use of congestion income in the market rules and/or in the transmission tariff methodology

NEW INTERCONNECTORS (Art. 7)	NO	No information available
COORDINATION (Art. 9, § 3)	YES	Energy Law, Article 19 (12)
PENALTIES (Art. 12)	NO	No information available
PUBLIC SERVICE OBLIGATION (Art. 6)	NO	Wholesaler serving tariff customers gets priority allocation under rules

MEPSO (TSMO) has signed the interim ITC Agreement valid until end of 2007 and has previously participated in the SETSO ITC mechanism based on the Multilateral Agreement, signed year by year.

Monthly NTC values and agreements for usage of the cross-border capacities between neighbouring TSOs are published on the TSO's web site: www.mepso.com.mk.

MEPSO participates in the dry-run flow based capacity allocation mechanism. Additionally, a number of reinforcements are being built to reduce/eliminate congestions in the tie lines.

Temporarily, MEPSO - Wholesale Supplier has a priority for capacity allocation to ensure security of supply. In case of congestion, pro rata is applied.

On a yearly level, all qualified traders in the MEPSO's yearly tendering procedure for electricity supply automatically gain access to the network and necessary cross-border capacity, with no additional charge. Rules for capacity allocation are defined in the tendering documentation.

MEPSO, as a wholesale supplier, uses this approach in order to safe security of supply of the customers. MEPSO confirms the cross-border transmission capacities on a monthly level by using the NTC based mechanism. If congestions occur, transactions are curtailed using simple pro-rata principle and no additional charges are imposed.

By July 2007, MEPSO intends to propose a market based capacity allocation mechanism. Monthly NTC values and agreements for usage of the cross-border capacities between neighbouring TSOs are published on the MEPSO's web site.

Montenegro

Regulation 1228/2003/EC provisions	Compliance	Explanation
ITC MECHANISM (Art.3)	YES	ITC agreement signed and valid until the end of 2007
CHARGES FOR ACCESS TO NETWORKS (Art. 4)	Partially	Methodology for defining of charges for access to the networks is under preparation by the regulatory authority which has introduced it as a topic. Proposed education and benchmarking at the regional level.
CONGESTION MANAGEMENT METHOD (Art. 6, § 2)	Partially	Explicit auction is split 50:50, capacity rights are not tradable on secondary market, the highest bid doesn't win, there is transaction distinction, unused capacity is not reallocated
TRANSPARENCY (Art. 5 and 10, § 4 and 5)	Partially	Actual net physical flow and outages are not published, not all information about AAC is published, TSO website not full English.
USE OF CONGESTION INCOME (Art. 9, § 3)	NO	No reference to the use of congestion income in the market rules and/or in the transmission tariff methodology
NEW INTERCONNECTORS (Art. 7)	NO	Memorandum of Understanding between Albania and Montenegro regarding construction and

		operation of HV OHL 400 kV. According to the Energy Law, interconnectors will be constructed based on authorisations.
COORDINATION (Art. 9, § 3)	NO	Regulatory Authority is not empowered to cooperate with other Regulators on cross-border issues
PENALTIES (Art. 12)	YES	Penalties for breaching the Regulation 1228/2003 are based on UCTE MLA.
PUBLIC SERVICE OBLIGATION (Art. 6)	NO	Draft Market Rules give priority to suppliers of tariff customers

EPCG has signed the interim ITC Agreement valid until end of 2007.

Methodology for defining of charges for access to the networks is under preparation by the regulatory authority which has recently introduced it as a topic. Proposed education and benchmarking are needed at the regional level.

TSO's website exists according to the ETSO standards, www.tso-epcg.com. Information is given about the transmission system (daily system load – forecasted per hourly intervals and realised on 5-minute intervals, total MW domestic consumption and total MW transit, on-line MW loadings of cross-border transmission lines and MW total power exchanges with neighbours, daily hourly reports per tie-lines, ACE registrator). It is enabled by connecting the web page to the real-time SCADA system.

EPCG participates in a voluntary dry-run project for a coordinated explicit flow based auction for cross border capacity allocation. Pro-rata methodology has been replaced by the explicit auction one which is currently in use (NTC based; 50%; both directions). The allocation in the period March-July 2007 will be conducted according to the Temporary Rules for Allocation of Available Cross-border Transmission Capacities (EPCG-TSO submitted it for approval to the RA, available at the web page of the EPCG-TSO). Results of the auctions (monthly NTC & ATC values per border and direction) are available at the web page of the EPCG-TSO.

MoU between Albania and Montenegro regarding construction and operation of HV OHL 400 kV has been signed. According to the Energy Law, interconnectors will be constructed based on authorisations.

Penalties for breaching of Regulation 1228/2003 are based on the UCTE MLA.

Romania

Romanian TSO - Transelectrica has signed the interim ITC Agreement valid until end of 2007 and has previously participated in the SETSO ITC mechanism based on provisions of Memorandum of Understanding on the Regional Electricity Market in SEE and its integration into the EU internal Electricity Market – The Athens Memorandum 2002. The RA approved the application of the interim version of Agreement for 2007 ITC mechanism.

A revenue-cap methodology is applied for transmission tariffs regulation. The methodology was approved by the RA in 2006. The transmission tariffs are approved by the RA for 2007.

The Grid Code was approved by the RA in 2004 (amended and completed by the RA), as well as the Long-term plan for the development of the electricity transmission network (the period 2004 – 2008 to reach 2014). The RA sanctions (ANRE Sanctions 14/2005) are published on the TSO's website (www.transelectrica.ro). The procedure regarding allocation of the national power system transfer capacity to the neighbouring power systems is published in the Balancing Market Operator's web site (www.ope.ro). The information on available transmission capacity is also published on the website (www.ope.ro).

In 2006, Romania has concluded agreements with neighbouring TSOs from Hungary, Bulgaria, Serbia and Montenegro on the NTC and ATC evaluation and convening, with 50:50 sharing of allocation responsibility in each direction; but not yet with Moldova and Ukraine. The allocation of capacity is done through monthly or yearly explicit auctions, as provided by

the RA in 2005. A new allocation procedure where pre-allocated AAC related to old contracts will be removed is expected to appear by the end of 2006.

Establishment of the competent authority which will decide on granting exemption for new direct current interconnections is expected by the end of 2006.

Specific penalties for breaching the Regulation 1228/2003 are foreseen in new Electricity Law no 13 / 2007.

Serbia

Regulation 1228/2003/EC provisions	Compliance	Explanation
ITC MECHANISM (Art.3)	YES	ITC agreement signed and valid until the end of 2007
CHARGES FOR ACCESS TO NETWORKS (Art. 4)	Partially	Methodologies for setting the tariffs for access to networks are published but no tariff values published yet.
CONGESTION MANAGEMENT METHOD (Art. 6, § 2)	Partially	Explicit auction is split 50:50, capacity rights are not tradable on secondary market, there is transaction distinction, unused capacity is not reallocated
TRANSPARENCY (Art. 5 and 10, § 4 and 5)	Partially	Actual net physical flow and outages are not published, not complete information about AAC, TSO website not full English
USE OF CONGESTION INCOME (Art. 9, § 3)	NO	No reference to the use of congestion income in the market rules and/or in the transmission tariff methodology
NEW INTERCONNECTORS (Art. 7)	YES	Energy Law Art. 31.
COORDINATION (Art. 9, § 3)	NO	Regulatory Authority is not empowered to cooperate with other Regulators on cross-border issues
PENALTIES (Art. 12)	NO	The legislation does not envisage specific penalties upon breaching the Regulation.
PUBLIC SERVICE OBLIGATION (Art. 6)	NO	Temporary Rules (EMS can allocate in advance as priority (AAC), part of full transmission capacity...if it is in function of supplying tariff consumers..."

TSMO has signed the interim ITC Agreement valid until end of 2007 and has previously participated in the SEE ITC Agreement for 2006 and its addendum for the first 6 months of 2007, signed by "EMS" (SEE CBT Clearing and Settlement Agreement). For the time being, Serbian TSMO ("EMS") is exclusively and strictly the only entity which is in charge of cross border mechanisms (ITC and transmission capacity allocation) in Serbia. Serbian TSMO is implementing SEE regional ITC rules according to SETSO/ETSO mechanism and the Temporary rules (pro-rata and market-based explicit auctions) for the allocation of transmission capacity. TSO's website: www.ems.co.yu.

Access to the network is allowed on the basis of the principles of transparency and non-discrimination. Access is regulated and public, where the prices shall be determined in conformity with the pricing methodology for system access and use.

Pro-rata and market-based explicit auction transmission capacity allocation mechanisms are used during monthly capacity allocation procedure (as of 1 January 2007). Market-based explicit auction mechanism is currently used on Serbia/Croatia and Serbia/Bosnia and Herzegovina borders (both directions), but the Rules allow for gradual introduction of explicit auctions on all borders. Both pro-rata and explicit auctions are based on "no congestion no payment" principle.

According to the allocation rules, TSMO can curtail allocated capacity in case the system security is endangered or on request from the neighbouring TSO (intra-daily curtailment of allocated capacity and curtailment of nominated and confirmed transactions). EMS is participating in the Dry-run Coordinated Explicit Flow-based Auctions in SEE during 2007.

Grid Code and Market Code are being designed at the very moment, and only after its adoption the RA will be responsible and authorized for monitoring all cross border procedures in Serbia.

The legislation does not envisage specific penalties upon breaching the Regulation.

UNMIK

Regulation 1228/2003/EC provisions	Compliance	Explanation
ITC MECHANISM (Art.3)	NO	Until June 2004 Korporata Energjitike e Kosoves (KEK) has realised income from transits based on the existing mechanism KEK has realized their rights for the transit. In spite of a relatively high transit rate there is no compensation scheme in place since a new scheme entered into force in July 2004. There are ongoing negotiations between the Serbian TSO EMS and KOSTT about a procedure for the future. In October 2006, UNMIK Transmission System Operator became a full member of the SETSO TF.
CHARGES FOR ACCESS TO NETWORKS (Art. 4)	YES	Rules on Pricing and Tariff Methodology are adopted. Transmission Use of System (TUOS) charges for the year 2007 has come into effect starting May 2007 and are calculated based on the revenue-cap methodology.
CONGESTION MANAGEMENT METHOD (Art. 6, § 2)	NO	Congestion Management is still under development. UNMIK TSO participates in the subgroup of the NACMPF of SETSO TF but without effectively participating in dry-run exercise for the capacity allocation. Furthermore technical prerequisites for NTC based auctions as the calculation of NTC can't be fulfilled due to a lack of information about the regional grid situation.
TRANSPARENCY (Art. 5 and 10, § 4 and 5)	Partially	Transparency is envisaged in Primary Legislation (Law on Energy Article 2 and 3) and Law on Energy Regulator (Article 49), also are covered in the Market Rules. Most of the information could be found in the TSO's web site: http://www.kostt.com
USE OF CONGESTION INCOME (Art. 9, § 3)	NO	No reference to the use of congestion income in the market rules and/or in the transmission tariff methodology as there is still no market based allocation scheme implemented.
NEW INTERCONNECTORS (Art. 7)	Partially	UNMIK follows a project based approach without having provisions in its legislation about the construction of new interconnectors. UNMIK planned new transmission line 400 kV with Albania.
COORDINATION (Art. 9, § 3)	NO	Not implemented up to now.
PENALTIES (Art. 12)	NO	There is not set up yet any penalties related to requirements of the Regulation 1228/2003.
PUBLIC SERVICE OBLIGATION (Art. 6)	YES	Public Service Obligation is envisaged in the Primary Legislation (Law on Energy Regulator Article 51). In the primary law is envisaged that ERO shall impose a public obligation on enterprises carrying out public service. There is no priority given to suppliers of tariff customers in the Interconnector Capacity Auction and Cross-Border Capacity Nomination Procedure.

KOSTT (ITSMO, UNMIK) has professionally and technically accepted the CBT/ITC mechanism and is currently preparing application in order to include HN and VN and interconnection points in the CBT model. KOSTT supports the CBT/ITC mechanism although until recently was neither a participant in the CBT mechanism nor a full member of the SETSO TF. It became a full member of the SETSO TF on the 13 October 2006. KOSTT intends to discuss shortly, either bilaterally with EMS or in the context of the SETSO TF, possible compensations to the CBT mechanism during the period 2004-2006. Since July 2004, KOSTT has not received any compensation for transits, the amount being approx 3 M€. The Serbian TSO already has received this money and is holding it. Despite this KOSTT continues to operate in a transparent manner. UNMIK rights for ITC fund are not recognized by Serbia: from July 2004 Serbia refuses to pay UNMIK's part of this fund. Although the Serbian TSO has agreed on the volumes and values, payment to KOSTT was not made. Furthermore, KOSTT has not been recognized as the TSO of UNMIK with claims that Serbia retains the ownership of Transmission Network of UNMIK. KOSTT is maintaining its transmission assets and covering losses caused by transit. Also it is paying regularly for the Secondary Regulation to Serbia, thus accomplishing its responsibilities as the TSO.

Charges for access to the networks are provisioned in primary legislation Law on Energy Regulator. The Rule on Pricing and Tariff Methodology has been adopted and the Transmission Use of System (TUOS) charges for the year 2007 are published. Price review is an ongoing process and transmission use of charges is part of it.

Transparency is envisaged in the primary legislation (Law on Energy and Law on Energy Regulator). TSO's website: <http://www.kostt.com>. Congestion management procedures are under development. Based on the KOSTT's application, the RA has approved in January 2007 the Transmission Capacity Allocation Procedures (TCAP) for interconnection lines with aim of application as soon as possible. KOSTT will negotiate with all adjacent TSOs regarding the NTC values of all interconnectors. Planned new 400 kV OHL with Albania.

Annex 2

Principles requirements of congestion management methods

- all Congestion Management methods have to be explicit or implicit auctions, also continuous trading is allowed for intra-day trading (§ 2.1);
 - all other methods (first-come first-served, pro-rata) do not comply with Guidelines;
- Congestion Management methods may allow capacity allocation for both long and short term horizons, and the TSOs should evaluate the need for implementing CM methods for several timeframes (§ 2.2);
- Long and medium term allocations have to be firm capacity rights and have to be subject to the “use-it-or-loose-it” (UIOLI) or “use-it-or-sell-it principle” (UIOSI) (§ 2.5);
- Only if existing: termination of reserve prices in capacity allocation methods other than in the new interconnections’ situations (art.7) (§ 2.9);
- Capacity must be freely tradable on secondary market, and where is not accepted, sound justification is required (§ 2.12);
- Capacity allocation at an interconnection shall be coordinated and implemented using common allocation procedures by the TSOs involved (§ 3.1);
- At an interconnection involving countries belonging to more than one region, the congestion management method applied may differ in order to ensure comparability with the methods applied in the other region which these countries belong (§ 3.2);
- Additional compliance with Guidelines request that:
 - Unused capacity must be reallocated (§ 2.3)
 - No transaction based distinction allowed (§ 1.6)
 - Congestion managements methods to ensure compliance with network security standards (§ 1.3.-1.4.);
 - Capacity must be allocated by highest value bids (§ 2.7.)

Transparency requirements

- Congestion Management Methodologies (§ 5.1. – 5.3.):
 - CM method applied;
 - Capacity allocation procedure;
 - Calculation of available interconnection capacity;
 - Access rules and eligibility criteria;
- Capacity allocation information (§ 5.5);
 - Published as soon as possible after allocation;
 - Volumes (per timeframe)
 - Auction prices (per timeframe)
- Capacity use information (§ 5.5);
 - Total nominated flows (per timeframe)
 - Description of any corrective action taken by the TSOs such as curtailment;
 - Actual net physical flows;
- Additional request regarding transparency request that:
 - Nomination procedure shall take place sufficiently in advance of auctions (§ 4.1 – 4.4);
 - TSOs must published forecasts for year ahead, month ahead, day ahead and intra-day available capacity (§ 5.5.(a)-(d));
 - TSOs must publish information on Already Allocated Capacity (§ 5.5.(e));
 - Information must be readily accessible (§ 5.5.(f), (g), (h)).

Annex 3

Main features of the current cross-border congestion management methods in Europe²¹

Method	Description	Analysis, Observations & Financial Implications
Access limitation	Access rationed. The instances still present in the list, consist of DC links with ownership different from linked networks.	<p>Access rationed. The instances still present in the list, consist of DC links with ownership different from linked networks.</p> <ul style="list-style-type: none"> • No economic signal • Not market based • Absence of efficient cross-border economic signals for generation/transmission investment • No pan European incentive for <i>social welfare</i> maximisation and least-cost operation • A few users may retain benefits from cross-border trade
Priority List (First-Come First-Served)	The marketer gets capacity in a priority order until the whole ATC is allocated. Examples of priority criteria are: chronological order, past use of capacity, etc. Transparency limited by confidentiality of trade.	<ul style="list-style-type: none"> • Selection based on capacity used ratio and not on economic efficiency • Not market based • New entrants less favoured (discriminated) although it can also help to mitigate market power exercise if limitations (maximum purchase) are imposed • Absence of efficient cross-border economic signals for generation/transmission investment • No pan European incentive for <i>social welfare</i> maximisation and least-cost operation • Marketers capture <i>congestion rent</i> and pay capacity price (usually null or low) • Favours exporters (or importers) with a large portfolio of customers (suppliers) • Selection based on capacity used ratio and not on economic efficiency
Pro-rata Rationing	Capacity is allocated in proportion to requests if they exceed the announced ATC	<ul style="list-style-type: none"> • Non-discriminatory • Not market based • No economic signal • Transparent • Simple implementation when compared to other mechanisms • The capacity is arbitrarily priced by the Regulatory authorities at a level not equal to the efficient economic value (which is the 'opportunity cost' of trading between the countries) • No efficient cross-border economic signals for generation/transmission investment • No pan European incentive for social welfare maximisation and least-cost operation • Marketers capture congestion rent and pay capacity price (usually low) • Individual size of transmission right delivered inconsistent with standard trading products • Open to abuse by submission of excessive requests • Selection based in proportion to requests (if they exceed the announced ATC) and not on economic efficiency

²¹ An Overview of Current Cross-Border Congestion Management Methods in Europe, ETSO, May 2006 ([link](#))
Report on Implementation of Regulation 1228/2003/EC

<p>Explicit Auctions (ATC based)</p>	<p>The seller (TSO) determines ex ante ATC considering security analysis, accepts bids from potential buyers and allocates the capacity to the ones that value it the most</p>	<ul style="list-style-type: none"> · Economic signal · Non-discriminatory · Transparent · Often a joint co-ordinated mechanism between the concerned TSOs · Several significant implementation features: uniform clearing price vs. pay as bid · Different allocation products and frequencies (Y, M, D) · With perfect market assumption <ul style="list-style-type: none"> - price reflects cost of using capacity to the social welfare - internal and cross-border trade present the same profit opportunity for participants - efficient signals to market players for the operation and the value of the network
<p>Implicit Auctions (ATC based)</p>	<p>The TSO/Power Exchange (typically in import area) (TSO) determines ex ante ATC considering security analysis, accepts energy bids from potential buyers outside the area and accepts offers with lowest price for the electricity. Capacity is implicitly allocated to successful bidders.</p>	<ul style="list-style-type: none"> · Economic signal · Non-discriminatory · Transparent · Usually requires a Power Exchange in import area · Applicable for day-ahead and intra-day time horizons · Internal and cross-border trade present the same profit opportunity for participants · Efficient signals to market players for the operation and the · No separate trade with capacity and then with electricity
<p>Implicit Auctions (Market Splitting; Market Coupling)</p>	<p>The energy markets provide initially a common clearing. If ATC reached, markets "split" into pre-determined <i>price areas</i> cleared individually at area prices.</p>	<ul style="list-style-type: none"> • Economic signal • Non-discriminatory • Transparent • If multilateral, a joint co-ordinated mechanism between the concerned TSOs • If multilateral, requires homogenised energy markets • Requires centralised Power Exchange • Requires financial instruments for long term price-hedging and bilateral trade between priceareas • Internal and cross-border trade present the same profit opportunity for participants • Efficient signals to market players for the operation and the value of the network

As a general remark on the above table, there are two common features for all mechanisms:

- ex ante ATC assessment may be inconsistent with market output due to volatility of prices,
- ex ante ATC assessment may be inaccurate due to unpredictable trading patterns