



SOUTHEASTERN EUROPE ELECTRICAL SYSTEM TECHNICAL SUPPORT PROJECT

Regional
Activity REM-1202

**STUDY OF THE OBSTACLES TO TRADE AND
COMPATIBILITY OF MARKET RULES**

**Disclaimer: This report is without prejudice to the legal
issues that remain open between the contracting parties**

Final Draft Report	014551-REM-1202-47RA-I-0001-01
	June 2006

TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY	
1	INTRODUCTION 1-1
2	THE BACKGROUND OF THE ELECTRICITY SECTOR IN SEE 2-1
2.1	The Players in the Electricity Markets of Southeast Europe 2-1
2.2	The Current State of Wholesale Electricity Markets in SEE 2-4
2.2.1	National Wholesale Markets 2-4
2.2.2	Day Ahead Markets 2-12
2.2.3	Cross Border Trade 2-14
3	KEY ENABLING FACTORS AND OBSTACLES TO TRADE 3-1
3.1	Issues linked to EC Directives/Treaty identified as priority by the Athens Forum 3-2
3.1.1	Cross Border Capacity Allocation Procedure 3-2
3.1.2	Inter TSO Compensation (ITC) 3-10
3.2	Other Issues linked to EC Directives/Treaty 3-11
3.2.1	Access to National Networks and the Role of TSOs 3-11
3.3	Issues linked to development of competition in generation and supply 3-12
3.3.1	Market Concentration and Vertical Foreclosure 3-12
3.3.2	Operability of Market Rules at National Level 3-14
3.4	Issues specific to Southeast Europe reforms 3-18
3.4.1	Tariff issues 3-18
3.4.2	Harmonization/compatibility issues 3-19
3.4.3	Licensing regime 3-21
4	OUTLINE OF ACTION PLAN 4-1

LIST OF TABLES

Table 2-1	SEE Countries Basic Data and Players
Table 2-2	Structure and Size of Wholesale Market and Initial Retail Market
Table 2-3	Key Characteristics of Power Exchanges in SEE
Table 3-1	Sample of Available Transmission Capacity in the SEE region
Table 4-1	Outline of Action Plan
Table 4-2	Potential Training Modules for Regulators

LIST OF FIGURES

- Figure 2-1** Most common market design in SEE (contracts)
- Figure 3-1** Obstacles to trade-Methodology for Analysis
- Figure 3-2** Example of a Nomination/notification process
- Figure 4-1** Summary of Recommendations and Time Frame

APPENDICES

APPENDIX 1 WHOLESALE AND RETAIL PRICE COMPARISON

APPENDIX 2 BIBLIOGRAPHY

ACKNOWLEDGMENTS

SEETEC would like to thank all stakeholders, regulatory authorities, TSO, trading companies, generation and supply companies as well as industrial companies who took time to share their views with us.

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	
Funded by:  Canadian International Development Agency	Agence canadienne de développement international	SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

EXECUTIVE SUMMARY

Introduction

This Final Draft report discusses the current situation regarding wholesale and retail electricity trade in Southeast Europe. Following the electricity reforms of the past few years in the countries of the SEE region, wholesale electricity trade would have been expected to increase both nationally and across border, given the competitive advantages and opportunities across the region. Similarly, at the retail level, increased choices should have been made available to the large industrial consumers. The insufficient volume of trade leads to illiquid wholesale markets and thus the absence of price signals that could facilitate decisions regarding needed generation and transmission investments¹.

In order to identify potential obstacles to electricity trading in the region, the approach taken has been to carry out interviews with a wide range of stakeholders and market participants across the region including in the EC countries, which are trading with Southeast Europe. In parallel to these interviews, key documents such as market rules, grid codes, other relevant secondary legislation, tariffs, etc. have been reviewed. The European context is also in the background of the study including the different ERGEG Guidelines and Best Practices, the Sector Enquiry by DG Competition, the probes on a number of electricity and gas companies², as well as the recent letters of formal notice by the EC regarding the Energy Directives sent to 17 countries (problems with regulation of retail sales-persistence of regulated prices and issue of free choice of suppliers, inadequate regulatory institutions and powers, insufficient unbundling of networks and problems with network access.

Background: Who are the Players in Southeast Europe and what is the State of Wholesale Markets?

More than 24 generation companies (not including small hydros and CHPs) are licensed in the region. In addition, the EC countries trading with the region (Hungary, Austria, Slovenia, Italy and Greece) have an additional 10 to 12 generation companies. However, only Romania and partially Bulgaria have broken the generation sector to allow for some amount of national competition in generation. There are many traders active in the region. A major difference with trading activities in Western Europe is the fact that few of the dominant traders have generation and/or supply assets in the region. Traders probably handle between 70 and 90% of cross border trade. Dominant generators/suppliers in the region (EPRS, NEK, Hidroelectrica) are all using traders instead of developing the business internally. Large European integrated companies have started to enter the region via acquisitions and/or by trading (e.g. EoN, Cez, Verbund-EvN). In terms of licensing, there are some confusion in relation to the role of traders and suppliers. Table 2-1 in the main text presents the basic supply and demand situation for each country as well as the players: generators, suppliers, and traders.

Current State of Wholesale Markets - Cross Border and National

There is yet very little free national wholesale market activity within most of the SEE countries (as opposed to cross border trade) since the distribution companies (suppliers) are either still integrated with the generation company, or are not eligible, meaning suppliers are obliged to buy from a wholesale supplier usually attached to the TSO at regulated prices.

¹ World Bank GIS study, CEER Investment incentives working group.

² Example, EC Probes Hungarian TSO as part of MVM anti-trust case, Platt's, May 26, 2006

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	E-1
Funded by:  Canadian International Development Agency  Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

One exception is Romania, which has implemented over the last 5 years, a series of regulated contracts between generation companies and suppliers of the captive consumers with declining volumes over the years (currently approximately 40% of production for domestic consumption is sold at regulated prices)³. This means that, gradually, suppliers are learning how to forecast their load and to contract on the open market.

Table 2-2 in the main text presents the wholesale market structure as well as the eligibility threshold for the retail market.

Given the overall market structure in most SEE countries, it becomes difficult to differentiate between wholesale and retail markets. In most countries, the retail market for large eligible industrial consumers is in fact, more open than the wholesale market since eligible consumers can import directly or sign contracts with traders (e.g. Croatia, FYR of Macedonia, Montenegro, Serbia). There are currently few real suppliers even if the role of suppliers will become crucial when there will be no more published regulated industrial/commercial tariffs and no more regulated contracts between generators and wholesale suppliers.

Day Ahead Market

A quick snapshot of the volumes and prices in the region's day ahead markets shows a wide range of prices (large differences between base and peak prices) as well as between the different day ahead markets. The Romanian and Greek prices seem to be getting closer. The Austrian prices are highly correlated with the German Px price while Italy prices are the highest in Europe. Even if OPCOM has managed to capture a respectable 7% of the total wholesale market volume, the day ahead markets in the region have not yet reached a corresponding degree of coordination and efficiency to fully exploit corresponding potentials.

Cross Border Trade

Access to networks and regulatory/administrative requirements in the SEE region involve sometimes complicated procedures. This may well be the reason why most cross border trade is carried out by traders (EFET estimate is at least 90%) who act as intermediaries between countries with deficit and exporting countries such as Romania, Bulgaria and Bosnia and Herzegovina (EPRS basically). This means that NEK-Wholesale supplier for example, is selling to traders who resell the energy to Greece, Albania or FYR of Macedonia and similarly for EPRS.

In summary, trade is happening on a regional level since there are a few countries with large exports potential and a few countries with large import needs. However, given large administrative and market obstacles, traders are handling most of the trade. One reason might also be their ability to handle current risks associated with illiquid markets even if prices coming out of public tender procedures are sometimes published. In the future, bilateral contracting across borders shall gradually replace current arrangements. More liquid day ahead markets should give some price signals combined with the development of standardized OTC products.

³ in 2001, at the opening of the market, 90% of the expected load of regulated suppliers was contracted at regulated prices with different GenCos. Gradually, the suppliers had to learn to contract on the open market and GenCos had to sell on the open market as well.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	E-2
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

Methodology to assess obstacles to trade

The different issues identified by stakeholders have been divided into four types:

- Issues linked to implementation of EC Directives/Treaty and already identified as priority by the Athens Forum. These issues are:
 - **Cross border allocation procedure;**
 - **ITC**
- Other issues linked to EC Directives/Treaty
 - **Access to national networks and role of TSOs**
- Issues linked to development of competition in generation and supply
 - **Market concentration and vertical foreclosure**
 - **Operability of market rules at national level**
- Issues specific to Southeast Europe reforms
 - **Tariff issues**
 - **Harmonization/compatibility issues**
 - **Licensing**

There are thus a total of 8 different issues that were identified as important by stakeholders falling into 4 different categories. Figure 2-1 in the main text presents the overall methodology to assess the obstacles to trade and to propose recommendations.

For each issue, there is an explanation as to why this is important and should there be some changes. Recommendations are then provided for each issue at both the national and regional level when necessary. The recommendations are ranked from 1 to 3, from the critical (1) to (2) very important and to (3) important. Finally, there is a discussion and recommendations regarding who shall be the responsible entity for implementation, what is required in terms of output and the time frame: short versus longer term.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	E-3
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

ISSUES LINKED TO IMPLEMENTATION OF EC DIRECTIVES/TREATY AND ALREADY IDENTIFIED AS PRIORITY BY THE ATHENS FORUM

Cross Border Allocations

In order to ensure effective access to transmission systems for the purpose of cross-border transactions, regulation EC 1228/2003 has established principles for congestion management⁴. The latest “Draft congestion management guidelines for the Electricity cross-border Committee meeting 25 January 2006” further elaborates on the above principles. All Southeast Europe stakeholders agree that cross border capacity allocation is a key for increasing regional trade. Some of the countries in the region have initiated yearly and monthly auctions in recent months, this being the first step towards a more transparent and market-based allocation of interconnections rights.

A SETSO working group is currently working on a dry-run for a coordinated flow based monthly auction procedure. While the proposed Southeast Europe approach, being flow based, is more efficient than the current West European practices, the question about the timetable for its implementation should be raised. There might be a need for a more incremental approach, for example by initially benefiting from the netting of transactions by having the two TSOs in each border carrying out joint auctions (e.g. Croatia-Hungary monthly joint auctions).

In terms of allocation methods, only Romania has fully implemented market-based methods.. EMS in Serbia has implemented a hybrid methodology where there is pro-rata allocation and payments only on congested borders (price is determined by EMS as a function of auction prices in other borders - i.e. Romania, normally between 0.5 and 2.5 €/MWh). Until recently, the Romanian TSO had been allocating capacities to some traders directly under the AAC mechanism, however, according to OPCOM, this practice will be discontinued starting in July 2006. The total transmission capacity (minus the TRM) will then be auctioned. For the Croatian-Hungarian border, a monthly joint auction will be carried out by HEP-OPS and MAVIR starting also in July 2006. In Bulgaria, there is still a legal monopoly for export-import while Albania, Bosnia and Herzegovina, Montenegro and FYR of Macedonia still have pro-rata allocation but are working on the development of auction rules. In UNMIK, draft rules envisioned auctions. However, according to the Temporary Technical Arrangement between UNMIK and the Ministry of Energy and Mining of Serbia, the Serbian TSO has undertaken the role of system coordinator for the interconnections of the whole system with neighbouring systems. The signature by the TSO of the above mentioned EMS rules for allocation of available transfer capacities on interconnections for the period from January 1st – June 30th, 2006, is still pending.

A complementary issue which will have to be solved in parallel to the development of market based methods is what to do in countries where there is still tendering for import-exports. The European Court of Justice has recently forbidden the system of reservations on interconnections for older contracts. In principle, the issuing of new AAC should be abolished in SEE and old contracts with AAC should be gradually phased out. . At least, the holders of AAC justified by old long-term contracts should pay a congestion fee linked to the results of the auction in case of congestion of the interconnector.

The system of explicit yearly/monthly auctions being currently implemented in some countries in the region will require that the transmission capacity market be cleared before the energy markets. What will

⁴ The regulation also establishes a compensation mechanism for cross-border flows.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	E-4
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

be required in the future is also a system of daily auctions. Some stakeholders have mentioned that these are crucial. The Use it or lose it (UIOLI) principle will also have to be developed. In the other countries where there are no market-based mechanisms, there are currently some pro-rata methods with no UIOLI principles. The capacities are usually allocated to wholesale suppliers or traders. The mechanisms are vague in general, and there have been problems in relation to the level of firmness, potential compensation and in the definition of force majeure.

ITC Mechanism

The implementation of a regional ITC mechanism has been one of the top priorities of CEER and ETSO/SETSO over the last few years. The scheme has encountered a few problems that are inherent to the adopted methodology. One underlying problem with the revenues or expenditures created by the ITC mechanism is the fact that the TSOs have incentives to maximize their net revenues (or to lower their disbursements to the fund) since TSOs are still not totally independent. In the absence of transmission tariff methodologies and clear rules regarding how to charge and credit the network users, the incentives for TSOs to try to maximize their revenues will be present.

The reconnection of the two UCTE zones has made obvious the need to merge the two CBT funds (ETSO and SETSO) into one. Moreover, the current situation of loop flows is such that the countries of Southeast Europe are hosting large flows from ETSO countries without receiving sufficient compensation. SETSO ITC members have made several petitions to ETSO in this respect. At the time of this writing ETSO had not decided on the new methodology to be applied for 2007. Meanwhile CEER/ERGEG have been unable to agree on guidelines regarding the issue. All this seems to make more likely the deferral of a decision by ETSO to merge the two ITC funds for 2007. There might be a need to increase the injection fee from ETSO countries to compensate SEE TSOs and try to keep the separate fund alive for one more year.

OTHER ISSUES LINKED TO EC DIRECTIVES/TREATY

Access to National Networks and the Role of TSOs

The process of unbundling of former utilities has been initiated in the last 3-5 years. However, only one TSO from the SEE region (TEL from Romania) has been admitted to ETSO. The process of unbundling is not only a yes or no issue, where companies are either unbundled or not. TSOs have very important roles in making the markets to work.

Except for Montenegro, all countries/entities in the region have legally created their TSOs. In Bosnia and Herzegovina, there is an Independent System Operator (ISO) and a Transmission company (Transco) already unbundled from the generation-supply companies. NEK in Bulgaria has still not separated its hydro generation business and the wholesale supply business from the TSO function.

More important, in general, the TSOs do not have yet all functions or the financial means to carry out their role properly. Key prerequisites for effective TSOs are:

- Cost reflective transmission tariff – (the publication of the unbundled regulatory accounts and of the transmission pricing methodology will help in this regard);
- Market rules administered by the market department of the TSO and grid code;
- Network access model contract;
- Market-based mechanism for alleviation of internal network congestions;

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	E-5
Funded by:  Canadian International Development Agency  Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

- Transparency in terms of information provision provided in the market rules

ISSUES LINKED TO DEVELOPMENT OF COMPETITION IN GENERATION AND SUPPLY

Market Concentration and Vertical Foreclosure

The recent report by DG Competition has highlighted the market concentration in the generation sector as well as the vertical foreclosure (integration of generation and supply businesses), which is detrimental to new entrants. A minimum level of unbundling of national companies, new entrants at the supply level, and a significant number of eligible customers with access to the network must be achieved for proper market functioning. The critical issues are thus unbundling and the degree of national market monopolization (i.e. competition in generation and supply), with relation to both: (i) relative size of national markets, especially with regard to the number and size of eligible customers; and (ii) structure (e.g., number and size) of domestic generation.

The dominant market model in the region has been to keep generation and supply integrated into a single company (acting as the public supplier) and/or to create a wholesale supply functions (e.g. single buyer for the regulated market and for eligible consumers not switching). Given the requirements in terms of market opening in the coming years, the question is whether these current market models are sustainable? The results of these market models are the difficulty for new participants to enter the market and the detrimental effect for the creation of wholesale national competitive markets. Furthermore, the former utilities are not developing trading or real supplier businesses to do cross border trade and are thus, relying on traders as intermediaries.

Only Romania has implemented a market design with possibilities for the development of a competitive and liquid wholesale market with at least 3 efficient generating companies. In Bulgaria, there are many generation companies (more than 6) and in theory, at least 3 large suppliers. In addition, there are already 12 licensed traders. It is the current regulatory framework, which prevent the development of a Bulgarian wholesale market. The situation is partly similar in Bosnia and Herzegovina where there could be 3 integrated generation/supply companies competing against each other. The political situation, in addition to the regulatory framework, prevents this from happening. In FYR of Macedonia, there could be competition eventually between the ELEM and a future privatized gas-fired Negotino plant. In the other countries, there is basically a single generation-supply company (even if there are legally separated generation and supply companies in Serbia, but under EPS). At the retail level, only a few large industrial consumers have been able to switch suppliers in a limited number of countries.

Given the timeframe for market opening in the Treaty, the wholesale supplier model could be in place up to 2015. The road map for market opening across the region and the gradual development of competition in generation and supply is not clear. In other region of Europe, ERGEG is defining regional priorities and inviting stakeholders to participate. In SEE, there is currently a void given that regulators are not full members of CEER and that the Regional Regulatory Board (RRB) is not yet in place. In this context, it is difficult to set priorities especially in the absence of Guidelines for market opening and/or some kind of standardized market design (SMD). It is also not clear when and if the different other ERGEG Guidelines or Best Practices should be binding. Some stakeholders have mentioned that it could be time to develop a revised SMD.

Operability of Market Rules at National Level

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	E-6
Funded by:  Canadian International Development Agency  Agence canadienne de développement international	SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro		

Each country should develop a set of market rules dealing at least with the following key elements of trade:

- Registration procedures for participants;
- Scheduling process for physical nomination/contract notification for internal bilateral contracts (imports-exports could be subject to a separate process or be treated as generation and load);
- Gate closure;
- Bids and offers rules (if balancing market) or rules for regulated prices;
- Imbalance prices quantities and price calculation;
- Commercial aspects of ancillary services;
- Guarantees to cover imbalances; and trading in day ahead market if any
- Dispute resolution;
- Information to be collected and disseminated by TSOs;
- Auction rules for interconnection capacity rights

The issue of counter-party risk associated with bilateral contracting has been raised by stakeholders and by the first Athens Mini Forum. EBRD mentioned the possibility of developing a regional clearinghouse. Nord Pool Consulting study will discuss this issue in their forthcoming report. This issue is not a market rules issue per se. When a generator sells to suppliers or when suppliers sell to eligible consumers, they both take a credit risk and must analyze the risks carefully. Companies will have to develop this expertise internally.

Three of the 8 SEE control areas have already implemented market rules: Croatia, Bulgaria, and Romania in addition to the EC Countries trading with SEE: Hungary, Slovenia, Austria, Italy and Greece. In the case of Romania, the day ahead market rules are integrated with the bilateral contracts and balancing rules.

The ISO in BiH and the Macedonian TSO are in the process of final discussions with stakeholders and submission for approval to their regulators. Albania, Serbia, Montenegro and UNMIK led Kosovo are also in the process of developing the rules. There seems to be a large diversity of approaches to the development of market rules with no harmonization between countries.

In terms of constraints to trade, one element that is emerging is the early gate closure: one week in the case of Croatia (to be changed soon), Bulgaria, FYR of Macedonia. It is not possible to have a day ahead market or to participate in such a market in another country if the national gate closure is one week ahead. In this context, the region's Power exchanges should investigate offering weekly products in the short term while trying to develop complementary products for the time when gate closures will be closer to real time (e.g. at least afternoon ahead). The offering of such a product shall nevertheless be combined with an efficient balancing market and/or a not too punitive imbalance settlement process. Some rules impose as well different constraints on bilateral contracting from the duration of the contract (e.g., one week starting at 00h on Saturday in Bulgaria to limits on import or export, requirements to tender or sell at regulated prices, etc.). Table 2-3 in the main text summarizes the main content of market rules.

ISSUES SPECIFIC TO SOUTHEAST EUROPE REFORMS

Tariff issues

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	E-7
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

In most countries of the region, the level of final retail tariff is still too low and does not reflect costs. With the unbundling process, this issue will become even more crucial when separate tariff setting process will have to be implemented for generation, transmission, supply and distribution. Without having carried out a deep analysis, it seems that some categories of consumers (e.g., commercial) are subsidizing others in many countries. This leads to distortions and the lack of incentives for eligible consumers to go on the open market. The regulators should initiate a regional discussion on future ways to regulate the suppliers' purchases when these suppliers will be free to purchase freely including for the regulated residential market. The regulators should also assess the impacts of the future abolition of regulated industrial and large Commercial Tariffs.

Harmonization/compatibility issues

CEER developed single market design for the whole SEE region a few years ago. There was no follow up to the discussion paper. In the mean time, each country has initiated the implementation of its own market model. Most countries are moving towards the gradual implementation of bilateral contracts and balancing market model with (often) the presence of a wholesale supplier and regulated imbalance prices in the transition period. Only Greece has a different market model (mandatory pool and now explicit capacity payment).

In the short term, the absence of Guidelines for market opening and for the development of market rules (or a revised regional market design) is leading to a series of different initiatives and each country developing its own rules without harmonization. For the medium term, just some degree of harmonization and compatibility in the market structure and the timetable for the trading day could generate significant improvements to competition and efficiency. While developing their rules, countries should pay attention to the gate closure for the day-ahead interconnection capacity auctions if any, day ahead market clearing (e.g., Noon of day ahead) and physical nomination & contract notification gates closure (e.g., 15h00 in the afternoon ahead).

Licensing

In the last few years, the regulatory authorities have been busy licensing participants (GenCos, TSO, Suppliers, Traders, DisCos). Some have been issuing trade licenses, while others have been issuing supply licenses. There are wide differences in the region regarding the definition of traders and suppliers. Each regulatory agency must license suppliers, but a trader license should not be necessarily be an obligation. More details on these issues are presented in the main text.

Recommendations

Table 4-1 in the main text presents an outline for an action plan and Figure 4-1 presents a summary of all recommendations and time frame.

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	E-8
Funded by:  Canadian International Development Agency  Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

1 INTRODUCTION

This Final Draft report discusses the current situation regarding wholesale electricity trade in Southeast Europe, focusing on the identification of obstacles limiting the volume and efficiency of trading and providing recommendations for further development of competition in generation and supply.

Following the electricity reforms of the past few years in the countries of the SEE region, wholesale electricity trade would have been expected to increase both nationally and across border, given the competitive advantages and opportunities across the region. Similarly, at the retail level, increased choices should have been made available to the large industrial consumers. Despite expectations, however, both the volume and the qualitative characteristics of trading indicate that there are still significant obstacles to trade. The insufficient volume of trade leads to illiquid wholesale markets and thus the absence of price signals that could facilitate decisions regarding needed generation and transmission investments⁵.

The report is divided into three main parts. The first part describes the Players in the region as well as the supply and demand situation, and status of wholesale markets. The second part looks at all the key issues enabling trade, considering whether and which ones of them constitute obstacles to trade, and provides recommendations. The final part presents all the recommendations in details in a table format.

This Final Draft report follows the interim report, which was presented, at the Dubrovnik Mini Forum on March 27-28. It builds on all the comments received by countries and other stakeholders. While the core of the analysis remains the same with some additional analysis, the methodology is more explicit and the recommendations are more precise and detailed. Countries and stakeholders shall have another chance to comment. The Final report is scheduled for the next Mini-Forum, sometime in the fall 2006.

The background of the study is the signature of the Treaty by the European Commission and the Southeast Europe countries not yet members of the European Union. The report has to be read in the context of the recent ERGEG Conclusions paper⁶ and different draft Guidelines and Best Practices, and the recent DG Competition, Energy Sector Inquiry⁷.

The initial findings of DG Competition in terms of impediments to competition on EU energy markets can be categorized under five main headings:

- Market concentration: i.e., a high level of concentration persisting in generation, creating scope for market power for incumbent generators;
- Vertical foreclosure: i.e., the vertical integration between generation and supply;
- Market integration: i.e., insufficient integration of EU electricity markets, because of inadequate interconnections and different market design between different transmission areas;
- Transparency: lack of transparency on wholesale markets which undermines confidence in trading;

⁵ World Bank GIS study, CEER Investment incentives working group.

⁶ The Creation of Regional Electricity Markets, an ERGEG Conclusions Paper, 8 February 2006.

⁷ European Commission, DG Competition, Energy Sector Inquiry – Issues Paper, 2005

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	1-1
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

- Price issues: large energy consumers doubt that prices on spot (day ahead) and forward wholesale markets result from fair competition

Later in 2006, the Commission will discuss and propose necessary structural, regulatory and competition law-based remedies.

Since the issuing of the interim report in March 2006, the EC has sent letters of formal notice regarding the Energy Directives to 17 countries. The items about which the EC is complaining fall into 4 distinct categories: 1) problems with regulation of retail sales-persistence of regulated prices and issue of free choice of suppliers, 2) inadequate regulatory institutions and powers, 3) insufficient unbundling of networks and 4) problems with network access.

In this general European context, the Athens Treaty on the establishment of the Energy Community aims at developing competition in both the domestic electricity markets of the respective signatories, as well as among them. The small size of some of the SEE countries as well as the objective of creating so-called national champions render the regional competition aspect even more important. Nevertheless, the Energy Community includes the implementation of the Acquis Communautaire on energy, environment, competition and renewables, and de facto participation of the Southeast Europe countries in the Single European Energy Market.

All SEE countries have signed the Treaty⁸. Moreover, Romania and Bulgaria are acceding countries to the EU (expected to join the EU on January 1, 2007); and Croatia, the FYR of Macedonia, and Turkey, are candidate countries for accession to the EU. There are certain timeframe differences between the deadlines regarding certain actions in the Directives and in the Treaty, as for example, residential market opening should happen only in 2015 according to the Treaty while it should happen in July 2007 according to the Directives. There are a few more differences (e.g. deadline for distribution network operators unbundling). These differences, combined with the relatively small size and large numbers of countries in SEE could lead to the development in the short term of a regional SEE electricity market with an eventual full integration in the European one later on.

ERGEG has been proposing that each regional market inside the EC develops a road map for integration. While SEE regulators are CEER/ERGEG observers, they are not currently developing this road map for SEE. The situation is similar for ETSO, where only the Romanian TSO is a full member of ETSO. SEETEC is proposing specific recommendations in order to overcome the problems resulting from this institutional context, and to facilitate the development of a SEE integrated regional electricity market.

⁸ Albania, Bulgaria, FYR of Macedonia, and UNMIK led Kosovo, as well as the European Parliament have ratified it so far.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	1-2
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

2 THE BACKGROUND OF THE ELECTRICITY SECTOR IN SEE

2.1 The Players in the Electricity Markets of Southeast Europe

The region is comprised of 8 control areas, in which the system operated by the TSO in UNMIK is not taken into account as a separate control area. In addition, companies from the neighboring countries: Austria, Hungary, Italy, Greece and Slovenia, are actively trading within the region. More than 24 Generation companies (not including small hydros and CHPs) are licensed in the region; in addition, the EC Countries trading with the region (Hungary, Austria, Slovenia, Italy and Greece) host an additional 10-12 generation companies. However, only Romania and partially Bulgaria have unbundled their generation sectors to allow for some amount of national competition. In Bosnia and Herzegovina, there are 3 integrated generation and supply companies, of which EPRS is allowed to offer surpluses (after covering the tariff customers' needs) at market prices; while the other two EPs in the Federation of Bosnia and Herzegovina are allowed to sell any such surpluses at regulated prices; thus there is limited scope for internal competition. The other countries of the region still have large integrated generation-supply companies and/or have created a wholesale supplier function, which serves as a single buyer for the regulated market.

There are very few private IPPs in the region and few generation assets (as opposed to distribution assets) have been privatized, while some are, currently, in the process of privatization (e.g. the thermal plant in Montenegro and the Negotino oil-fired plant in the FYR of Macedonia as well as the 1200 MW Varna plant and the 600 MW Bobov Dol plant in Bulgaria) The few IPPs have long term PPAs: ENEL and AES (yet to be built) in Bulgaria. The exception is the Hellenic Petroleum (T-Power)-owned 600 MW gas-fired combined cycle power plant in Thessaloniki (one of the few gas-fired plant in the region), which is currently acting as a pure merchant plant bidding into the Greek power pool.

The structure of generation-supply in the EC countries bordering the region is quite similar. In Greece, PPC is a dominant generator-supplier. In Slovenia, HSE has more than 90% of the generation capacity but no supply businesses. In Hungary, there are a series of PPAs between GenCos and MVM, the wholesale supplier who resells the power to privatized suppliers. Finally, Austria has the most open market but with a dominant player in Verbund. In Italy, the former dominant generator has seen its market share reduced a lot. Virtual capacity auctions have been used in Hungary to promote competition in supply as well as recently in the Czech Republic.

There are many active traders in the region. A major difference with trading activities in Western Europe is the fact that few of the dominant traders own generation and/or supply assets in the region. The trading arms of integrated Generation/supply Western Europe companies are however moving rapidly in the region⁹.

Only a few traders probably handle between 70% and 90% of current cross border trade in SEE. It is not clear why generators with surplus power in the region (such as EPRS, NEK, Hidroelectrica) are trading through traders instead of developing an internal trading business. The most important cross border traders in SEE are: EFT, Energy Holding, EGL, ATEL Montmontaza, and PCC. The companies owning generation assets in Europe who are also trading in the region are: Verbund, EoN, Rwe, Electrabel, etc.

⁹ It is possible to have an integrated generation-supply company as long as the distribution networks associated with the supplier is unbundled (accounts for now and legally separated from 2007)

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	2-1
Funded by:  Canadian International Development Agency Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

On the other hand, the commercial function of “supplier” as a provider of electricity to final customers has not been effectively implemented in the region with the exception of Romania. There is in fact, lack of consistency in the definition of traders and suppliers in the various jurisdictions in the region, with many countries issuing only suppliers’ licenses, others only trading licenses, and others both. . Basically, a trader is an intermediate commercial entity, standing between a producer and a supplier, normally buying a large amount of electricity from various sources, and reselling it into smaller packages to suppliers; whereas a supplier is actually selling to final consumers, and in order to optimize its portfolio, possibly to non final customers, as well. The difference in the nature of the two businesses may impose different regulatory requirements for each, which is often not reflected in the regulatory framework, when there are single licensing provisions for either function. This inconsistency often results in increased costs or risks, thus impeding trading activity in the region.

NEK, the Bulgarian TSO, is still also the owner of the large hydro plants and, due to its export monopoly and Bulgaria’s large surplus, is one of the most important players in the region.

The following table presents the basic supply and demand situation for each country as well as the players: generators, suppliers, and traders.

Table 2-1
SEE Countries Basic Data and Players

	2004 a) Installed Capacity b) Peak load c) Production d) Consumption e) Net (+) import/ (-) export	Number of GenCos	Number of suppliers	Number of licensed traders
Albania	a) 1,564 MW b) 855 MW c) 5,368 GWh d) 5,847 GWh e) 479 GWh	1 (KESH)	Wholesale supplier attached to TSO 1 regulated supplier & DisCo (KESH) 2 independent suppliers (1 who is also an eligible consumer)	2 independent suppliers have been licensed
Bosnia and Herzegovina	a) 4,062 MW b) 1,803 MW c) 12,600 GWh d) 10,516 GWh e) -2,084 GWh	3 - EP BiH EP HZ HB EP RS	3 integrated with their respective GenCo (see previous column)	3 licenses for international trade (see previous column) One international trader is applying for license
Bulgaria	a) 12,130 MW b) 5,458 MW c) 41,538 GWh d) 35,660 GWh e) -5,878 GWh	More than 7 + small hydros + CHP	NEK as wholesale supplier; concept of public provider (non eligible DisCos)	11 licensed traders but cannot be responsible for imbalances under current rules;
Croatia	a) 3,746 MW b) 2,692 MW c) 12,432 GWh d) 16,094 GWh e) 3,662 GWh	1 GenCo 1 IPP with PPA	1 integrated generation-supply; HEP as public supplier; some new suppliers have been licensed	Montmontaza



	2004 a) Installed Capacity b) Peak load c) Production d) Consumption e) Net (+) import/ (-) export	Number of GenCos	Number of suppliers	Number of licensed traders
FYR of Macedonia	a) 1,510 MW b) 1,243 MW c) 6,213 GWh d) 7,389 GWh e) 1,176 GWh	1 GenCo (ELEM) 1 GenCo (Negotino) up for privatization Some embedded GenCos (part of ESM)	1 supplier (ESM) distinct from Generation and up for privatization MEPSO as wholesale supplier	No license issued yet
Montenegro	a) 859 MW b) n/a c) 2,589 GWh d) 4,369 GWh e) 1,780 GWh	1 GenCo (1 thermal plant up for privatization – 210 MW)	1 integrated genco-supplier	N/a
Romania	a) 16,743 MW b) 7,548 MW c) 51,934 GWh d) 50,746 GWh e) -1,188 GWh	More than 6	More than 50 suppliers acting also as traders	No specific trading license – traders thus have a supply license: ATEL, Eon, EFT, EGL, Dalkia, etc.
Serbia	a) 6,842 MW b) 6,601 MW c) 32,328 GWh d) 32,115 GWh e) -213 GWh	-5 GenCos under EPS Holding -potential IPP joint venture- Kolubara 700 MW	5 DisCos under EPS Holding EPS as public supplier	No license issued yet
UNMIK	a) 1,513 MW b) 811 MW c) 3,484 GWh d) 3,932 GWh e) 448 GWh	1 GenCo	1 integrated genco-public supply	
Turkey	a) 32,300 MW b) 23,485 MW c) 149,800 GWh d) 149,200 GWh e) 1,100 GWh	114 private and 137 public generation licensees	14 private and 1 public wholesale licensees	

BiH (notably EPRS), Romania and Bulgaria have large reserves and are net exporters. Albania, FYR of Macedonia, Montenegro and Croatia are large net importers. Serbia is usually a net importer except when there are significant inflows (was a net exporter in 2004). With tariff rationalization, Serbia could have a more balanced supply and demand. Bulgaria has been supplying between 50% and 90% of the electricity shortfall of the region in the last 5 years. Total exports (net physical flows) of Bulgaria were 7 600 GWh in 2005.

Among the EC countries trading with the region, Greece and Italy are net importers while Austrian companies seem to be taking advantage of arbitrage opportunities, since they seem to be both large importers and exporters.

2.2 The Current State of Wholesale Electricity Markets in SEE

2.2.1 National Wholesale Markets

There is yet very little free market wholesale activity within most of the SEE countries (as opposed to cross border trade) since the supply business of the distribution companies is either still integrated with the dominant generation company or is not eligible; i.e. suppliers are obliged to buy from a “wholesale supplier” (in fact, a single buyer acting as a wholesale trader), usually attached to the TSO, at regulated prices, or there are still integrated generation-supply businesses.

The first impact of the generation – supply integration, or the wholesale supplier (= single buyer) concept, is that in some countries, the retail level (large industry) is opening up faster than the wholesale level. The second impact, as it will be illustrated later in this report, is that there are no standardized products or wholesale liquidity and even less price indexes.

Only Romania has implemented over the last 5 years, a series of regulated contracts between GenCos and suppliers of captive consumers with declining volumes over the years (those regulated contracts have declined from 90% of total load to approximately 40%). This arrangement has gradually taught suppliers how to forecast their load as well as to contract on the open market. In Bulgaria, GenCos sell directly or via traders to eligible consumers but suppliers to captive customers are not eligible for the time being. This means, that Generators are mostly selling to NEK Wholesale supplier who resells the electricity to the distribution companies (regulated suppliers are called public providers in the Bulgarian legal terminology).

In Albania, Croatia, and Montenegro, there are for the time being, integrated generation and supply companies –thus no wholesale market. The case is similar in Serbia, since the 5-generation companies and 5 distributions supply companies that legally operate, are all under the EPS Holding. The Serbian market design does not envision competition between EPS owned generation and supply companies.

In FYR of Macedonia, there is one GenCo (ELEM) selling all its output to the Wholesale Supplier that resells it to the recently privatized distribution company (supplier - ESM). In the current market model, ESM is not eligible to select its supplier or import, meaning that it has to buy from MEPSO as well as from its own embedded generation. There are also plans to privatize the current Negotino oil-fired plant (which could be converted into a gas-fired plant), which could lead to some initial competition.

In the UN administered Kosovo, market rules are being prepared. According to the Law on Electricity, GenCoa power generator with capacity above 5MW will sell to the public supplier (supplying captive customers at regulated tariffs) on a priority, at a regulated price.

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	2-4
Funded by:  Canadian International Development Agency Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

In the EC Countries, trading with Southeast Europe, Slovenia has 4 distribution companies (suppliers) who are usually negotiating and signing 1-year supply contracts with the Slovenian Generation Holding Company. Greece has a different market model, since GenCos and importers are obliged to sell into a pool. There is thus a wholesale level price index (the system marginal price) but given its dominant position, PPC has excessive market power potential. In Italy, the suppliers serving the regulated market must buy from the Single Buyer (Acquirente Unico) who in turn, buys energy from the day ahead market. There is a series of financial contracts to alleviate the price risks. In Hungary, PPAs have been signed between GenCos and MVM, the wholesale supplier, who then resells to suppliers. MVM has also organized virtual auctions to resell some of the capacity. Hungary has been under fire over its market structure and was even the focus of a probe recently by the EC (anti-trust case against MVM).

The following table presents the wholesale market structure, the threshold for the retail market, as well as additional relevant information for each country.

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	2-5
Funded by:  Canadian International Development Agency Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

Table 2-2
Structure and Size of Wholesale Market and Initial Retail Market

	Wholesale market structure	Eligibility threshold	Additional information
Albania	<ul style="list-style-type: none"> ✓ Integrated GenCo-DisCo (supplier) ✓ Wholesale supplier within ATSO ✓ Tendering process for import 	Regulated Supplier integrated with GenCo; Eligibility threshold: 100GWh/year = 1 eligible consumer	Thermal plant under construction
Bosnia and Herzegovina	<ul style="list-style-type: none"> ✓ Three integrated GenCos-suppliers ✓ Must fulfill their local load first, tenders for export and imports; ✓ Trade between companies inside the Federation at regulated prices; ✓ Trade between Federation companies and RS at open market prices 	January 2007: 10GWh January 2008: 1GWh Jan 2009, all customers except households Jan 2015 all electricity customers	There is both an ISO and Transmission company. Tariffs are increasing gradually in the Federation. Limited trading between Federation companies and between the RS company and the two Federation companies
Bulgaria	<ul style="list-style-type: none"> ✓ GenCos sell to NEK (wholesale supplier) or directly to eligible consumers; ✓ DisCos (suppliers) must buy from NEK Wholesale supplier; ✓ Eligible consumers can contract directly with traders or GenCos ✓ NEK has an export-import monopoly till admission of Bulgaria to EC 	Now: 20 GWh (40 sites) 9 GWh in July 2006 (100 sites) January 2007: all except domestic July 2007: all consumers	There is no specific supplier license, only trader license; the current rules do not allow traders to take responsibility for imbalances, thus most contracts are between GenCos and eligible consumers. Market has been open through a system of quotas for GenCos = quantities that they are able to sell to eligible consumers. In theory, GenCos/load may make bids and offers for the balancing market, but in practice, most balancing energy comes from NEK hydro plants at regulated prices.
Croatia	<ul style="list-style-type: none"> ✓ Integrated genco-supplier (HEP); <p>Eligible consumers could import directly</p>	Now: 20 GWh 9 GWh in June 2006 (200 sites) July 2007: commercial July 2008: all consumers	New rules/grid code under development Separate market operator
FYR of Macedonia	<ul style="list-style-type: none"> ✓ GenCo (ELEM) sells to Wholesale Supplier (MEPSO) who resells to DisCo (supplier - ESM) 	Now: 20 GWh and connected to high voltage. Threshold shall be reduced in 2007	Negotino oil-fired plant may be privatized and converted into gas-fired plant

	Wholesale market structure	Eligibility threshold	Additional information
Montenegro	✓ Integrated GenCo-supplier	One third of needs for large industries (aluminum smelter, steel factory and trains) is imported directly by them from traders at the border	Given the large import needs, large industries must import;
Romania	✓ Open wholesale market represents approximately 60% of total volume ✓ 40% of contracts between GenCos and suppliers are regulated (residential)	Now: all non households 2007: all consumers	Only country with liquid wholesale market;
Serbia	✓ Integrated GenCo-supplier (EPS holding controlling 5 separated GenCos and 5 DisCos)	Eligibility Threshold: Not yet defined	Rules under development
UNMIK	✓ Integrated Genco-supplier Public supplier	Eligibility threshold for 2006. All customers connected to 110kV	TSO under development but no control over border (agreement with Serbian TSO);
Turkey		7.8 GWh	
EU Countries			
Austria	✓ 100% open wholesale market	100% open Switching ratio: High level of switching for large industrial users less than 5% for small commercial/households	
Greece	✓ Mandatory pool	All industrial and commercial – but practically none is switching	
Hungary	✓ Wholesale market dominated by PPAs; ✓ Some virtual auctions of capacity ; ✓ GenCos sell to MVM that resells to suppliers	All industrial and commercial. Switching ratio: High level of switching for large industrial users less than 5% for small commercial/households	
Italy	✓ Suppliers for the regulated market must buy from the Acquirente Unico	All industrial and commercial. High level of switching for large industrial users and commercial; less than 5% for small commercial/households	
Slovenia	✓ 100% open wholesale market but only one seller	All industrial and commercial	

Source for switching ratio: European Commission, Communication on progress in creating the internal gas and electricity market, January 2006

Given the overall market structure, it becomes difficult to differentiate between wholesale and retail markets. In most countries, the retail market for large eligible industrial consumer is in fact, more open than the wholesale market, since eligible consumers can import directly or sign contracts with traders (e.g., Croatia, FYR of Macedonia, Montenegro, Serbia). Eligibility thresholds are quite different from country to country, with only limited opening (20-25GWh threshold) in many countries. There will be a need to install meters in many countries before the next stage of market opening: all industrial and large commercial, followed by all commercial.

One of the obvious consequences of the most common market model is the fact that the Supply arm of the DisCos is not learning to contract or to predict its load. The fact that most system operators still control the scheduling process of generation plants is also a constraint for generation and supply companies that cannot aim for now to optimize their generation and supply assets.

This is not the case in Bosnia and Herzegovina and Serbia where Generation companies send their production schedule to the TSOs but without formal approved market rules. In Romania, there is self-scheduling of GenCos based on market rules since June 2005. Market rules have been formally approved by Regulators only in Bulgaria, Croatia and Romania. In Croatia, new rules were expected in May 2006. In Bulgaria, there are some constraints on bilateral contracts but this did not prevent industrial consumers to sign contracts with GenCos. The following table presents a summary of the approved market rules as well as the draft market rules (under discussions).

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	2-8
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

Table 2-3
Summary of market rules

	Registration Process; Market Participants (MPs)	Contract Notification; Physical Schedule Nomination; Gate closure	Interconnection allocation: separate process (Yes or No)	Balancing regulation; Imbalances Calculation and Prices	Settlement Period; Invoicing Period; Guarantees	Other information
Albania Market Rules	<ul style="list-style-type: none"> Licence for all MPs: TSO?, Eligible Customers (EC), Public GenCo, Privileged Power Producers?, Qualified Suppliers, External Suppliers, etc.; EC may return to Tariff Customer subject to Regulator's conditions and/or approval; EC can only trade through a licensed Eligible Supplier No clear obligations/rights for Eligible Supplier (External, Local) 	<ul style="list-style-type: none"> Essentially regulated market with some provisions for non regulated MPs, TSO acting as single buyer TSO submitting Annual Year Ahead, Annual Balancing Energy and Ancillary Services, monthly plans 20 days prior to delivery, and then weekly plan 	<ul style="list-style-type: none"> In principle Annual allocation with priority allocation to capacity for Tariff Customers, for Eligible Cons., Auction if constrained on remaining ATC 	<ul style="list-style-type: none"> TSO acting as Single Buyer No balancing mechanism for inc./dec., load shedding included as mean for In-Day Adjustment (but no rules) No imbalance mechanism; deviation with +/- 5% tolerated, beyond that limit unclear (parties agreement?), no imbalance price but compensation in kind the following week 	<ul style="list-style-type: none"> Settlement: not specified None specified in the Market Rules 	<ul style="list-style-type: none"> Regulatory approach & control Public GenCo. with all existing hydro may enter into energy swap (e.g. barter) with other countries; EC can enter into Stand-By power contract with Dist. Unclear merit order process (Public GenCo, IPP, etc.) Regulated Annual and Additional Ancillary Services Agreements;
Bosnia and Herzegovina	<ul style="list-style-type: none"> Licence for GenCos, Eligible Customers, Traders, International Traders, Suppliers, EPs are Balance Responsible Parties (BRPs), ECs to enter into a Balance Responsibility Contract; ECs either under regulated tariff regime or open market 	<ul style="list-style-type: none"> Initial Phase of market opening: BRP to submit to ISO nomination with schedule up to D-1 Gate Closure (time not specified) MPs to have an annual contract with a BRP 	Not yet	<ul style="list-style-type: none"> Balancing by BRP (EPs) Initial phase, EPs' Imbalance weekly compensation in kind for secondary reserve only; Subsequent phase: regulated imbalance prices, 1 price (top up or spill) linked to system imbalance with bilateral netting 	<ul style="list-style-type: none"> Settlement period: 1 hour Monthly invoicing No guarantee by EPs (initial phase) 	<ul style="list-style-type: none"> EPs subject to Gen. availability declaration Ancillary Services: Primary reserve all GenCos, Cost of secondary/tertiary reserves by EPs regulated
Bulgaria (Market rules under revision)	<ul style="list-style-type: none"> GenCos, Traders, Eligible Customers need licence for electricity generation or trading; MP and Public Provider bound to conclude a Balancing Agreement and Trans. Agreement with TSO, 	<ul style="list-style-type: none"> Minimum 1 week contract, starting 00h00 Saturday; to be submitted by 10h00 on Wednesday, prior delivery Schedule Notification: final revision by 10h00 on Thursday, prior delivery; withdrawal of schedule by 14h00 on Thursday 	No	<ul style="list-style-type: none"> Balancing market notification Gate Closure at D-1; MP's free bids/offers (min. 20 MW for Gen. and 10 MW for EC); acceptance by TSO up to 2 min. prior to 	<ul style="list-style-type: none"> Settlement period: 1 hour 2 times per month invoicing Amount of guarantee set in market rules; revised every 6 months; 	<ul style="list-style-type: none"> MO establishes a common merit order, including both bids/offers and regulated sources (in reality: 98% of balancing energy is regulated)

Final Draft Report

014551-REM-1202-47RA-I-0001-01

June 2006

2-9

Funded by:



Canadian International Development Agency

Agence canadienne de développement international

SEETEC Consortium
SNC-Lavalin Inc., in association with
Manitoba Hydro

	Registration Process; Market Participants (MPs)	Contract Notification; Physical Schedule Nomination; Gate closure	Interconnection allocation: separate process (Yes or No)	Balancing regulation; Imbalances Calculation and Prices	Settlement Period; Invoicing Period; Guarantees	Other information
	other requirements by TSO; <ul style="list-style-type: none"> Approval/Rejection by TSO, subject to SERC final decision Eligible Consumers are allowed to go back to regulated market 	subject to imbalance where there is no mutual agreement; if schedule cancelled/invalid, MP (buyer) may apply for Substitute delivery schedule <ul style="list-style-type: none"> EC may conclude annual Conditional Contract with Public Provider/Public Retailers at regulated prices. 		dispatch; Pay as bid; <ul style="list-style-type: none"> Imbalance price: 2 prices (e.g. top up is weighted average of regulated marginal cost by Public Provider (NEK) and cost of free offers MP) 		
Croatia Implemented – but new rules to be approved soon	<ul style="list-style-type: none"> MPs must be licensed to perform an energy activity: Producers, Suppliers, Eligible Customers (min. threshold to be met), Balance Group Leaders 	<ul style="list-style-type: none"> Contract of minimum one month duration; (to be changed) Bilateral contract to be submitted to MO for approval/registration 30 days in advance, along with original document for payment of security for balancing energy (to be changed) Change of bilateral weekly schedule by Tuesday 12h00, subject to MO rejection of the change Day ahead market operation planning: D-1, by 10h30 (for Tariff Supplier, D-1, by 12h30) 	<ul style="list-style-type: none"> Separate process; System Operator (SO) may organize auction for a portion of the transmission capacity SO proposes transit fees auctions to be organised by July 1st 2006 	<ul style="list-style-type: none"> Providers, Suppliers or Balance Group Leaders to sign a contract for balancing energy with the Market Operator (MO), MO to grant registration subject to SO Request of change by MP under extraordinary situations, subject to mutual agreement between concerned parties and if requested change does not introduce imbalance into the system Regulated imbalance prices 	<ul style="list-style-type: none"> Trading period: 1h, with monthly settlement period MO issues invoices for imbalances 	<ul style="list-style-type: none"> MO prepares and submits the Market Plan, SO submits instructions to change and finalize SO Plan for MO
FYR of Macedonia Under discussion	<ul style="list-style-type: none"> MPs licensed: Generators, Wholesale Public Supplier, retail Public Supplier, Traders, and Large Customers; Registration granted by Market Operator; dispute, if any, settled by Regulator (process defined in market rules) 	<ul style="list-style-type: none"> Minimum contract duration: week starting on 00h00 Monday; with Gate closure on Thursday by 10h00 week ahead idem for physical schedule nomination; but with rolling daily revision Gate Closure 	<ul style="list-style-type: none"> In principle same process, but not yet defined 	<ul style="list-style-type: none"> Regulated balancing market, which incorporates free bids/offers from qualified MPs Pay as bid Imbalance price: 1price in the direction of the system imbalance, based on average regulated bids/offers and free bids/offers 	<ul style="list-style-type: none"> Settlement period: 1 hour Invoicing: 4 consecutive weeks 	<ul style="list-style-type: none"> Process for regulated merit order prices and overall merit order list defined Process for submission free bids/offers defined Primary reserve organized locally in accordance to Grid Code, Secondary and other reserve through Ancillary Services

Final Draft Report

014551-REM-1202-47RA-I-0001-01

June 2006

2-10

Funded by:



Canadian International Development Agency

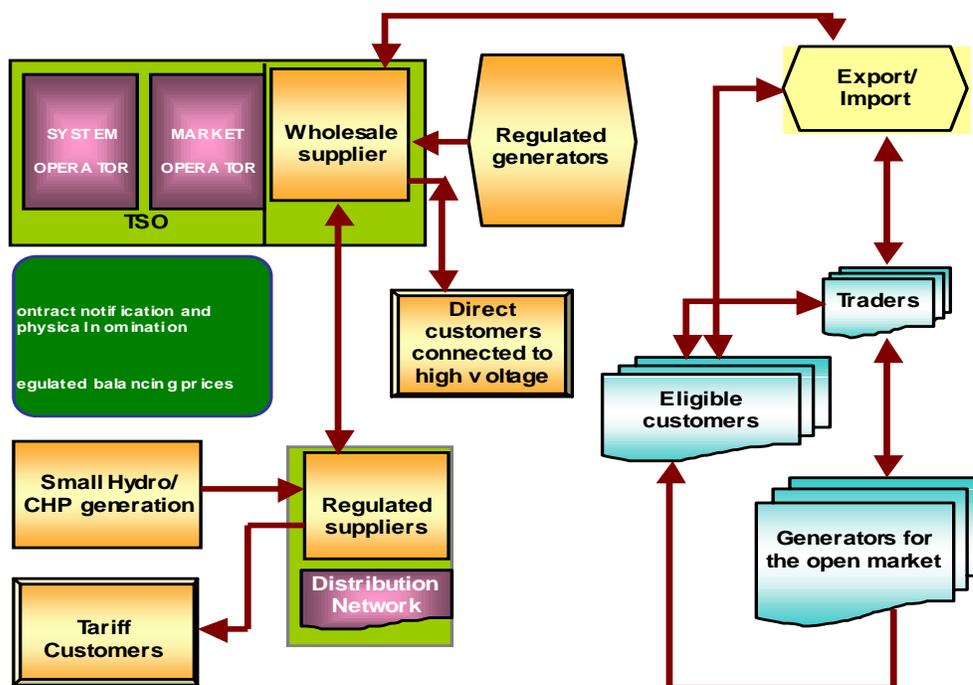
Agence canadienne de développement international

 SEETEC Consortium
 SNC-Lavalin Inc., in association with
 Manitoba Hydro

	Registration Process; Market Participants (MPs)	Contract Notification; Physical Schedule Nomination; Gate closure	Interconnection allocation: separate process (Yes or No)	Balancing regulation; Imbalances Calculation and Prices	Settlement Period; Invoicing Period; Guarantees	Other information
Montenegro	NO RULES					
Romania Implemented	<ul style="list-style-type: none"> The participants in the market should be licensed by ANRE. Participants in the DAM: producers and suppliers. The participation is voluntary, based on agreement and a registration with OPCOM. Participants in the BM: Producers. The participation is mandatory. <p>The BRP should conclude an agreement and a registration with TSO</p>	<ul style="list-style-type: none"> All concluded contracts, including the DAM trades, aggregated on each BRP, should be notified to TSO by 15h00 one day before the delivery day. OPCOM should issue a physical notification also. <p>The physical schedule for each generating unit should be submitted to Transelectrica by 15h00 one day before the delivery day.</p>	Yearly and monthly explicit auction for 50% of the ATC for each interconnector, organised by TEL but a significant amount of AAC	<p>The producers are paid/pay for the effective balancing energy delivered at offer price for upward/downward tertiary regulation. For secondary regulation, the price is the marginal price.</p> <p>The imbalances between metered values and contracted values are calculated at BRP level. The imbalance prices are calculated based on accepted offers for balancing market.</p>	<p>Weekly for DAM trades</p> <p>Monthly for balancing market trades, imbalances and deviation from the physical schedule for each generating unit.</p>	<p>There is :</p> <ul style="list-style-type: none"> a Green Certificates Market operated by OPCOM since November 2005. A Centralized Market for Bilateral Contracts awarded through public auction operated by OPCOM since December 2005.
Serbia Draft under discussion						
UNMIK Market rules being prepared	<ul style="list-style-type: none"> Public Generation Co., other GenCos, Public Supplier; Suppliers, Traders, Eligible consumers 	<ul style="list-style-type: none"> Annual contract between Public Generation Co. and Public Supplier; gate closure: 13h00 day ahead 	<ul style="list-style-type: none"> Separate allocation, of interconnection on D-2 and D-1 	<ul style="list-style-type: none"> Regulated bids/offers Regulated bids/offers (variable costs) – offer is variable costs + 2 times the difference between variable costs and simulated market price 	<ul style="list-style-type: none"> Ex-post settlement Settlement period: 1 hour 	
Turkey		<ul style="list-style-type: none"> to be completed 				

Summarizing the different market models and market rules, it appears that the most common structure adopted for the transition phase in a majority of countries is the following:

Figure 2-1 - Most common market design in SEE (contracts)



Theoretically, the wholesale supplier structure could be kept in place till 2015 in the non EU Countries since this is the date for full market opening according to the Treaty. This means the wholesale supplier could still sell to the residential market, supply eligible consumers not switching and be the supplier of last resort. Under the Treaty, there is no requirement as well to legally separate the distribution network for the supply business. In this context, it is difficult for new suppliers to enter the market.

2.2.2 Day Ahead Markets

There are 3 voluntary Power Exchanges in the region (including EU Member States): the Austrian exchange, Borzen, the Slovenian exchange, and OPCOM, the Romanian exchange. In addition to operating a day ahead market the exchanges also offer other products: e.g., continuous trading, green certificate trading, etc. Borzen and OPCOM also act as market operators, performing different tasks in relation to the balancing market and settlement of imbalances.

There are two other power exchanges in the region. In Greece every GenCo must offer their energy into the pool and thus all bilateral contracts are in fact financial contracts for differences. The Italian exchange is a combination of voluntary and mandatory bidding. The Acquirente Unico must buy all the energy needs for the regulated customers from the day ahead market. The following table presents some key statistics regarding the power exchanges.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	2-12
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

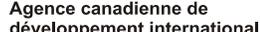
Table 2-3
Key Characteristics of Power Exchanges in SEE

	Volume traded/ % of total wholesale volume	Price	Number of participants
Austrian exchange	March 14, 2006 Daily total 4592 MWh	March 14, 2006 50 to 116 €/MWh Avg 81.25 €/MWh May 26th: Base: 49.27€/MWh Peak: 59.97€/MWh	30 members
Borzen	No trading in March 2006; January 2006: 48 MWh Dec. 2005: 3348 MWh	Average monthly price varied between 28.35€/MWh in June and 76.62€/MWh in December 2005	15 members in 2005
OPCOM	March 14th 191-567 MWh/h Daily total: 8448 MWh	March 14 50 to 277 RON/MWh avg 173.8 RON avg = 49.4€/MWh Since opening July 2005- April 30th 2006: Average price 37.15€/MWh	72 registered participants, more than 45 active on average
Greece pool	March 13-14th 4550MWh to 7590 MWh/h	March 13-14th 27-55€/MWh Avg= 52 €/MWh	8 (2 GenCos and 6 additional suppliers)
Italian PX (GME)	March 14th Daily: 594 GWh (24,020 MWh hourly avg trade) = 58% of total trade	March 14th 50 to 159 €/MWh Avg 85 €/MWh	+ than 100

A quick snapshot of the volumes and prices in the region's day ahead markets shows a wide range of prices (large differences between base and peak prices) as well as between the different day ahead markets. The Romanian and Greek prices seem to be getting closer. The Austrian prices are highly correlated with the German Px price while the Italy PX prices are the highest in Europe. A summary of the day ahead market prices is also presented in Appendix 1 along with other wholesale market and retail price indication.

Even if OPCOM has managed to capture a respectable 7% of the total wholesale market volume, the day-ahead markets in the region have not yet reached a degree of coordination and efficiency to fully exploit trading potentials. Most trading between countries is based on base load products. Thus, electricity is generally traded in constant amounts (band) for a day, if not weeks, or months. There is no regional over the counter (OTC) market with some kind of standardized products like in Western Europe – e.g., peak load for one-two months, quarter, one year ahead, etc.

Given the potential counter party risk in the region, trading seems nevertheless to be happening in larger volume than in Western Europe – e.g., 100 MW blocks (this might be because of tendering procedures)

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	2-13
Funded by:  Canadian International Development Agency  Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

instead of the standard 5 to 25 MW blocks in Western Europe¹⁰. Trading of standardized OTC products or trading on a day ahead market would alleviate the perceived counter party risk by allowing more netting of contracts.

Tailored contracts between producers and suppliers (or directly with eligible consumers) seem to exist only in Bulgaria and Romania. In Romania, there is also a Centralized Market for Bilateral Contracts administrated by OPCOM since December 2005, in order to facilitate the contracts trade in a transparent way, especially for state-owned companies.

2.2.3 Cross Border Trade

Access to networks and regulatory/administrative requirements in the SEE region often involves complicated procedures. This may well be the reason why most cross border trade is carried out by traders (EFET estimate is at least 90%) acting as intermediaries between countries with deficit and exporting countries such as Romania, Bulgaria and Bosnia and Herzegovina (mainly EPRS). This means that NEK-Wholesale supplier for example, is selling to traders who resell the energy to Greece, Albania or FYR of Macedonia. The same is the case for EPRS.

While total regional production was at 168 TWh (non EU Countries) in 2004, cross border trading (commercial contracts) has been estimated by EFET at 45.8 TWh (out of 264 TWh including some EU Countries), representing 17% of production.

As mentioned above, the contracts remain traditional with tendering procedures for imports (and sometimes for exports as well – e.g., Bosnia and Herzegovina) and delivery of electricity in band for a number of months. For example, Albania has unsuccessfully¹¹ launched a tender in January 2006 for the import of 1,436 GWh over 9 months in 2006. It received different proposals from traders:

- EFT: 50 MW in band at 42€/MWh
- Ezpada: 40MW at 48.4€/MWh
- EGL: 17 MW at 43.47€/MWh

FYR of Macedonia (MEPSO-Wholesale supplier) just launched a tender for the import of 2,696 GWh of electricity in 2006-2007¹². Again, recently EPRS from Bosnia and Herzegovina launched a tender for export of 1,280GWh, which were sold in 5 lots to different traders. In addition to integrated utilities and wholesale suppliers, some large industrial consumers are also importing directly from traders (e.g., aluminum smelter and other large industries in Montenegro).

As mentioned above, in most countries, there are still no market rules in place, thus no rules for imbalances calculations and settlement. Settlement of deviations from contracted quantities seems thus to

¹⁰ See for example the results of trading survey in Holland in Dte, Development of Liquidity of the Dutch Electricity Market, 2003-2004, The Hague, March 2004. This survey showed that generally long term products were traded in blocks of 5MW while short term ones (day ahead market) were traded in blocks of 25MW.

¹¹ Procurement laws in Albania were complex and required potential suppliers to provide large guarantees. A new law is expected to be approved by the Albanian Parliament.

¹² See Platts, Energy in Eastern Europe, Issue 83, February 17th, 2006

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	2-14
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

follow informal procedures within countries and deviations from scheduled exchanges across interconnections are exchanged in kind between TSOs.

Eventually, once all countries have adopted market rules and some degree of harmonization is achieved in the region (including a single cross border capacities auction office), the role of traders is likely to change and the role of suppliers will improve. Import and exports will have to be notified formally to the TSOs the same way as national bilateral contracts. Suppliers (or BRPs) will be liable for imbalances between the metered quantities and the contract notifications. Deviations on the interconnections will be settled between TSOs. A TSO paying another TSO will recuperate this payment via the national imbalance charges. This will also lead to more bilateral contracts across borders between generators and suppliers.

Currently, prices coming out of public tender procedures are sometimes published. In the future, bilateral contracting across borders will gradually replace the current arrangements. More liquid day ahead markets should give some price signals combined with the development of standardized OTC products. Even if prices on the OTC market are usually confidential, OTC price indexes can be developed similarly to Western Europe¹³.

In the future, the current trading, which could be qualified as arbitrage¹⁴, will be combined with other types of trading activities, like hedging, speculation and structured products trading. Hedging simply means making a transaction to reduce a risk position or secure a profit. Most trade in mature markets would be hedging trades. For example, the objective of an hydro-based generation company is to make a certain level of profits year after year independently of its inflows situation. The company would accept lower than potential revenues in a dry year and will earn more than expected in wet years (since prices would be logically lower). Speculation is about transactions, which anticipate a price change in the future and normally represent only 5 to 20% of the total trade of a participant. Finally, there are structured products (non standard), which are custom built for specific needs. These contracts are usually managed by an origination team. An example of a structured product is to sell electricity to a supplier with prices taking into account currency (€) or commodity index (gas price).

¹³ For example, Platts provide price information on standardized OTC products

¹⁴ Arbitrage means essentially taking two positions simultaneously that compensate each other and make a profit without risk. For example, if a trader has a transmission right, he is buying on one side and selling on the other side at higher price. Another form of arbitrage is buying and selling the same product from two different counterparts simultaneously. For example, a participant is buying a May 2006 Peak product from trader A at 36 €/MWh and sells it to Trader B at 37 €/MWh.

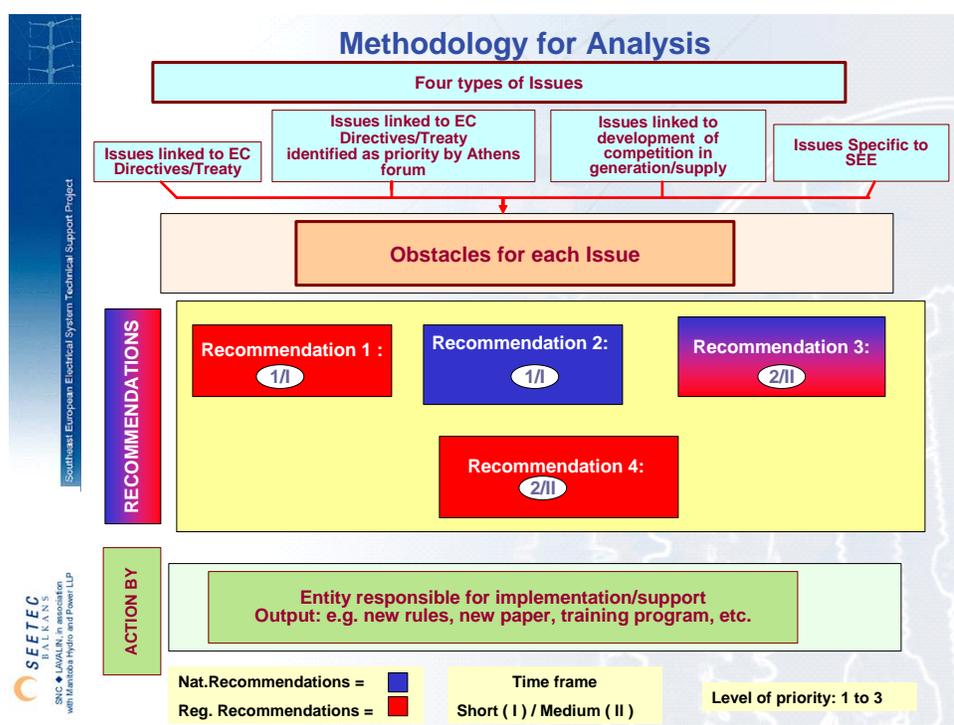
Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	2-15
Funded by:  Canadian International Development Agency		Agence canadienne de développement international	SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

3 KEY ENABLING FACTORS AND OBSTACLES TO TRADE

In order to identify potential obstacles to electricity trading in the region, the approach taken has been to carry out interviews with a wide range of stakeholders and market participants across the region, including in the EU countries, which are trading with Southeast Europe. In parallel to these interviews, key documents such as market rules, grid codes, other relevant secondary legislation, tariffs, etc. have been reviewed.

Figure 3-1 presents the overall methodology to assess the obstacles to trade and to propose recommendations.

Figure 3-1
Obstacles to trade-Methodology for Analysis



The different issues/obstacles have been divided into four types:

1. Issues linked to implementation of EC Directives/Treaty and already identified as priority by the Athens Forum. These issues are:
 - a. **Cross border allocation procedure;**
 - b. **ITC**

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-1
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

2. Other issues linked to EC Directives/Treaty
 - a. Access to national networks and role of TSOs
3. Issues linked to development of competition in generation and supply;
 - a. Market concentration and vertical foreclosure
 - b. Operability of market rules at national level
4. Issues specific to Southeast Europe reforms
 - a. Tariff issues
 - b. Harmonization/compatibility issues
 - c. Licensing

There are thus a total of 8 different key issues (obstacles) that were identified as important by the various stakeholders. For each issue, there is an explanation as to why this is important, a consideration of its current condition in the region, and a discussion of the changes or actions needed with regard to the current state in order to improve trade conditions. Recommendations are then provided for each issue at both the national and regional level when necessary. The recommendations are ranked from 1 to 3, from the critical (1) to the very important (2) and important (3). Finally, there is a discussion and recommendations regarding who should be the responsible entity for implementation, what is required in terms of output and the time frame: short versus longer term. There are some recommendations at the national and some at the regional level.

3.1 Issues linked to EC Directives/Treaty identified as priority by the Athens Forum

When the Athens Forum was established, the Southeast Europe Task Force of ETSO (SETSO) created two sub groups to address what was deemed at the moment as the most important issues for the establishment of a functioning regional electricity market in Southeast Europe: the implementation of an ITC mechanism and the development of market based mechanisms for cross border capacity allocation. The following two sections discuss both issues in terms of their current condition in the region/countries, the corresponding obstacles to trade, and the recommendations for overcoming them.

3.1.1 Cross Border Capacity Allocation Procedure

In order to ensure effective access to transmission systems for the purpose of cross-border transactions, regulation EC **1228/2003** has established principles for congestion management¹⁵. These principles are now well known and should be followed. In summary, these principles are:

- Non-discriminatory market-based solutions (and non-transaction based) which give efficient economic signals to market participants and TSOs;

¹⁵ The regulation also establishes a compensation mechanism for cross-border flows.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-2
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

- Curtailment of transactions shall only be applied in emergency situations after re-dispatching and counter-trade measures (whenever possible.) Except for cases of “force-majeure”, market participants should be compensated for the curtailment;
- While complying with standards of secure network operations maximum capacity for cross-border flows shall be made available to market participants;
- Unused allocated capacity should be made available to the market;
- Netting flows in opposite directions over congested lines when technically possible;
- Revenues of allocation of interconnection capacity shall be used for either: “firming-up” the availability of currently allocated capacity; network investments for increasing -or at least not diminishing interconnection capacity; or for reduction of local transmission tariffs;

The latest “Draft congestion management guidelines for the Electricity cross-border Committee meeting 25 January 2006” further elaborates on the above principles (these guidelines once approved become part of the regulation in the EU and might become part of the Acquis in the Energy Community as described in Article 25 of the Treaty). The most relevant are:

- Capacity is to be allocated only by explicit (capacity) or implicit (capacity and energy) auctions;
- Depending on competition conditions, long and short-term auctions may need to be implemented (e.g., annual, monthly, weekly, daily and intra-daily). In each time-frame, prescribed fractions of the total available capacity, plus unallocated capacity in the previous time-frames, plus unused capacity shall be made available to market participants;
- Regulation Authorities may impose limits on an individual company on account of market dominance;
- Market participants failing to use their corresponding allocated capacity or resell it or return it, shall lose the rights to that capacity and pay a penalty. TSOs not fulfilling their obligation shall compensate the market participants up to the value of the capacity right;
- Common allocation procedures by the TSOs involved in the allocation of an interconnection;
- Common coordinated congestion management methods must be implemented when commercial exchanges between pair of countries significantly affect physical flow conditions in any third country. Several regions, including Central Eastern Europe, will need to implement such methods by January 2007.

Developments in Western Europe and SEE

In Western Europe, market based measures for congestion management have been gathering pace and coordinated auction procedures have emerged, notably in Central/Eastern Europe. France is also discussing coordinated auctions with most of its neighbors and since January 2006, RTE is organizing explicit auctions on all borders and has forbidden the use of already allocated capacity (AAC). The results, according to the French regulator (CRE), have been a “true card redistribution, with new actors

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-3
Funded by:  Canadian International Development Agency		Agence canadienne de développement international	SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

gaining significant market shares on certain interconnections”. CRE also reported that smaller actors and even purely financial actors are now active on the interconnections.¹⁶

All Southeast Europe stakeholders agree that cross border capacity allocation is a key for increasing regional trade. Some of the countries in the region have initiated yearly and monthly auctions in recent months, this being the first step towards a more transparent and market-based allocation of interconnections rights.

A SETSO working group is currently working on a dry-run for a coordinated flow based monthly auction procedure. While the proposed Southeast Europe approach, being flow based, is more efficient than the current West European practices, the question about the timetable for its implementation should be raised. There might be a need for a more incremental approach, for example by initially benefiting from the netting of transactions by having the two TSOs in each border carrying out joint auctions.

Most SEE TSOs have reached agreements with their neighbors to share the capacity 50-50 or to carry out joint auctions (e.g. Croatia-Hungary border starting in July 2006; and Hungary-Austria border yearly and monthly, by the Austrian auction office). Greece still has no agreement with Albania, FYR of Macedonia, and Bulgaria¹⁷.

In terms of allocation methods, only Romania has fully implemented market-based methods, while Croatia and Hungary will initiate in July 2006 yearly/monthly auctions for capacity on their common border.

EMS in Serbia has implemented a hybrid methodology where there is pro-rata allocation and payments only on congested borders (price is determined by EMS as a function of auction prices in other borders - i.e. Romania, normally between 0.5 and 2.5 €/MWh.) If a participant uses an interconnector less than 62% of their reserved capacity, they are not allowed to request an allocation on the following month for that border and direction.

Until recently, the Romanian TSO had been allocating capacities to some traders directly under the AAC mechanism, however, according to OPCOM this practice will be discontinued starting in June 2006 and all the total transmission capacity (minus the TRM) will be auctioned. In Bulgaria, there is still a legal monopoly for export-import while Albania, Bosnia and Herzegovina, Montenegro and FYR of Macedonia still have pro-rata allocation but are working on the development of auction rules. In UNMIK, draft rules envisioned auctions. However, according to the Temporary Technical Arrangement between UNMIK and the Ministry of Energy and Mining of Serbia, the Serbian TSO has undertaken the role of system coordinator for the interconnections of the whole system with neighbouring systems. The signature by the TSO of the above mentioned EMS rules for allocation of available transfer capacities on interconnections for the period from January 1st – June 30th, 2006, is still pending.

A complementary issue which will have to be solved in parallel to the development of market based methods is what to do in countries where there is still tendering for import-exports.

¹⁶ See CRE, Une nouvelle gestion des interconnections, February 21th, 2006

¹⁷ Due to the strong correlation between flows, the NTC for Greece is currently calculated simultaneously on the FYROM-Greece, Albania-Greece, and Bulgaria-Greece borders. However, there are requests from the neighbours to individualize the NTC for each border and allow for a 50/50 allocation.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-4
Funded by:  Canadian International Development Agency		Agence canadienne de développement international	SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

3.1.1.1 Obstacles related to cross-border capacity allocation issue and recommendations

The obstacles linked to the current mechanisms (market-based or not) can be summarized in terms of:

- Absence of market-based mechanisms / tendering requirements
- Low NTC values and presence of already allocated capacity (AAC)
- Unclear destination of auction funds
- Firmness of transmission rights

3.1.1.2 Absence of Market Based Mechanisms / Tendering Requirements

Most of the SEE countries are still using non-market based methods such as *first come first serve* and *pro rata*. As mentioned above, Albania, Bosnia and Herzegovina, FYR of Macedonia and Montenegro are still working on the implementation of new rules.

Croatia has just completed the development of auctions rules, which should be posted soon on the TSO web site. Auctions should start in July 2006 for all borders.

In UNMIK, the intention is to implement auctions, but the above mentioned pending temporary agreement with EMS imposes EMS rules on all interconnections, thus, the Kosovo TSO may only have contracts, based on the monthly published ATC determined by EMS.

In Bulgaria, the Bulgarian Energy law mentions that NEK will have an export-import monopoly till the day of accession to the EU. This monopoly is thus likely to last one or two more years. When this monopoly is removed, there is likely going to be many strategic changes in trading both inside and outside Bulgaria since NEK is one of the dominant exporter in the region. A possible future market-based mechanism (e.g., auctions of generation capacity) would allow more players to get access to the Bulgarian generation and the privatized suppliers in Bulgaria would be able to import. Currently, a pro-rata mechanism has been implemented to allow for transit but the rules are not transparent.

In Slovenia, on the borders with Italy (export) and Austria (import) the pro-rata allocation method for the Slovenian part of the capacities (50%) is used. The capacities are allocated pro-rata on yearly basis as the postponement of the full implementation of EU Regulation No1228/2003 in the Republic of Slovenia was approved until June 30, 2007 (special EU derogation). On other directions and on the border with Croatia, explicit auctions are performed on daily basis.

In Greece, most of the interconnection capacities up to now were allocated to PPC as AAC. For 2006, out of the total of 600 MW available on the Northern Interconnection, 200 MW were allocated to other market participants through an auction. Starting with 2007, the total of the interconnection capacity will be allocated through auctions.

While not directly related to interconnection rights allocation, the requirements to have tendering procedures for exports and imports make the cross border trading less flexible. If these procedures are to continue, a specific process to link them to the interconnection auction processes will have to be developed. This means, for example, that some AAC should be reserved for the winners of the tenders. If

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-5
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

AAC is to be gradually abolished (see below), this means that tendering should also be gradually abolished.

3.1.1.3 Low Available Transmission Capacity Values (ATC) and Already Allocated Capacity (AAC)

Prior to the reconnection of the two UCTE synchronous zones, there were no congestions in UCTE zone 2 and (according to EFET) all traders' schedules were executed. The congestions were restricted to northern Greece, the Hungarian and Slovenian borders with Austria and the Slovenia-Italy border. The ATC values reported in the former 2nd zone after reconnection has significantly decreased, mainly due – as explained by SETSO - to new trade patterns. However, according to EFET, most TSOs are failing to improve or to refine significantly their NTC estimated in spite of the availability of better flow monitoring data and flow modeling techniques.

In addition to the low ATC values, there are significant amounts of Already Allocated Capacity (AAC) on many borders. This AAC is due to at least one of four reasons:

- Old cross-border contracts (e.g., during the ex-Yugoslavia time, many large plants and the corresponding HV networks were often built in one republic aiming to serve loads in another republic);
- Old cross border contracts via traders, for example from Romania to Greece;
- Capacity required to serve the needs of tariff customers (e.g., through imports in Serbia, FYR of Macedonia, Montenegro, Croatia), meaning that some capacity is reserved for the needs of the wholesale supplier to serve the regulated market;
- New allocation of ACC to some traders for unknown reasons;

The following table shows a sample of the amounts of ATCs in the region for particular months.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-6
Funded by:  Canadian International Development Agency		Agence canadienne de développement international	SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

Table 3-1 -Sample of Available Transmission Capacity in the SEE region

Country/ Border	Direction	TTC	TRM	50% NTC allocated by TSO	AAC	ATC
Values for Bosnia and Herzegovina, February 2006						
Croatia	BA-HR	850	150	350	300	50
	HR-BA	800	150	325	300	25
Serbia	BA-SR	250	50	100	100	0
	SR-BA	150	50	50	50	0
Montenegro	BA-CG	650	100	275	200	75
	CG-BA	450	100	175	150	25
Values for Romania, March 2006						
Bulgaria	RO-BG	250	100	75	50	25
	BG-RO	250	100	75	30	45
Serbia-CG	RO-SRCG	800	100	350	305	45
	SRCG-RO	150	100	25	0	25
Hungary	RO-HU	500	100	200	50	150
	HU-RO	150	100	25	0	25
Values for Serbia, April 2006						
Hungary	SR-HU	500	100	200	0	200
	HU-SR	500	100	200	0	200
Romania	SR-RO	150	100	25	0	25
	RO-SR	800	100	350	175	175
Bulgaria	SR-BG	150	100	25	0	25
	BG-SR	750	100	325	0	325
Macedonia	SR-MK	480	100	190	235*	0
	MK-SR	400	100	150	0	150
Albania	SR-AL	260	50	105	0	105
	AL-SR	260	50	105	0	105
Montenegro	SR-CG	520	100	210	210	0*
	CG-SR	450	150	150	0	150
BiH	SR-BA	170	50	60	25	35
	BA-SR	250	50	100	25	75
Croatia	SR-HR	600	100	250	0	250
	HR-SR	600	100	250	0	250

*To be confirmed with EMS

TSOs have started publishing yearly/seasonal NTC values and in the case of Romania, Serbia and in the Croatian-Hungarian border, to organize yearly and monthly auctions. The quantities available for both yearly and monthly auctions have been generally very low. Given the low values, the prices paid for capacity at certain borders have been high.

The European Court of Justice has recently forbidden the system of reservations on interconnections for older contracts. In principle, the issuing of new AAC should be abolished in SEE and old contracts with AAC should be phased out. This should also be linked to a revision of tendering procedures for the wholesale supplier. At least, the holders of AAC justified by old long-term contracts should pay a congestion fee linked to the results of the auction in case of congestion of the interconnector. However, it is unclear what could be done in the case of small SEE countries with large importing requirements by the wholesale supplier to serve the needs of captive customers.

3.1.1.4 Unclear Destination of Auction Funds

Given the unfinished unbundling process and, in certain cases, the low final tariff (and thus the difficulty in implementing a separate transmission tariff), there is the potential perverse incentive for TSOs to try to raise revenue through the auctions and to keep this revenue.

TSOs and Regulatory Authorities should start working together in order to be compliant in this respect with the EC regulation **1228/2003** (revenues of allocation of interconnection capacity shall be used for either: “firming-up” the availability of currently allocated capacity; network investments for increasing - or at least not diminishing interconnection capacity; or for reduction of local transmission tariffs).

No SEE regulator has yet issued such specific regulations.

3.1.1.5 Firmness of the Transmission Right and UIOLI Principle

The firmness of transmission rights for TSOs is provided by the EC regulation **1228/2003**. TSOs must take all possible measures (without jeopardizing the security of the system) to accommodate the transactions that have been allocated, and in case of “force-majeure” situations, participants must be compensated for the curtailment.

Holders of transmission rights also have the obligation to notify as soon as practicable to the TSO of capacities they are not planning to use. The holder may resell this capacity (and notify the TSO) or return it to the TSO for allocation in subsequent auctions. This is the Use-it or Lose-it principle (UIOLI).

The system of explicit yearly/monthly auctions being currently implemented in some countries in the region will require that the transmission capacity market be cleared before the energy markets. What will be required in the future is also a system of daily auctions. Some stakeholders have mentioned that these are crucial.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-8
 Canadian International Development Agency		Agence canadienne de développement international	SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

Participants should have their firm transmission rights in the morning of the day ahead (e.g. 8:00-10h00 am on D-1) in order to participate in day ahead markets and send their physical nomination/contract notification to TSOs hopefully in the afternoon ahead.¹⁸

There could be different ways to implement the UIOLI principle. For example in Serbia, if a participant doesn't use at least 62% of its monthly allocated capacity, they will not be allowed to participate in the next month's auction. EMS compensates the participant with the congestion payment in case the ATC is reduced.

In Romania the UIOLI principle applies for the yearly and monthly auctions. If a participant holding an interconnection right considers not using it, then they could either return it to the TSO, or sell it in a secondary market.

In the other countries where there are no market-based mechanisms, there are some pro-rata methods with no UIOLI principles. The capacities are usually allocated to wholesale suppliers or traders. The mechanisms are vague in general, and there have been problems in relation to the level of firmness, potential compensation and in the definition of force majeure. In one instance, a trader could not deliver to an industrial consumer across a border due to changes in ATC value (not compensated). The trader claimed force majeure and the industrial consumer had to buy a new bilateral contract during the day ahead at very high prices. This eligible consumer is now inserting compensation clause in its new contracts. It seems that this is the way trade is carrying out, each contract having some force majeure clause and no parties being truly responsible in case of non-delivery since in many countries, there are no imbalance payments (see section 3.4.2).

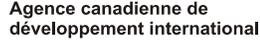
3.1.1.6 Recommendations

The following are the recommendations for all the obstacles related to limited interconnection capacities;

R e c o m m e n d a t i o n s

- Application of all congestion management guidelines;
- TSO to develop rapidly some market based mechanisms, such as explicit auctions. In the short term, at least the benefits from the netting of transactions can be realized by encouraging the two TSOs in each border to carry out joint auctions;
- In principle, the issuing of new AAC should be abolished in SEE and old contracts with AAC should be phased out;
- Current holders of AAC justified by old long-term contracts should pay a congestion fee if there is any (eg. Average auction price);
- Abolition of the import/export monopoly, where it still remains.
- Development of specific national regulations related to destination of auction revenues.
- Coordinated flow based auction process across whole region in medium term

¹⁸ In section 3.4.2, we discuss the concept of gate closure and the problem that current market rules require in some cases, weekly gate closure.

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	3-9
Funded by:  Canadian International Development Agency  Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

3.1.2 Inter TSO Compensation (ITC)

The implementation of a regional ITC mechanism has been one of the top priorities of CEER and ETSO/SETSO over the last few years. SETSO has been working very hard for the implementation, but the scheme has encountered a few problems that are inherent to the adopted methodology (e.g., whether lower voltage networks with significant cross-border flows should be included; effect of edge countries; impact of significant changes in the topology of the network or change of flow patterns in the settlement amounts). It is clear that the mechanism was intended to be temporarily and is better than no scheme at all. The reconnection of the 2 UCTE zones has made obvious the need to merge the 2 CBT funds (ETSO and SETSO) into one. Moreover, the current situation of loop flows is such that the countries of Southeast Europe are hosting large flows from ETSO countries without receiving sufficient compensation. SETSO ITC members have made several petitions to ETSO in this respect. At the time of this writing ETSO had not decided on the new methodology to be applied for 2007. Meanwhile CEER/ERGEG have been unable to agree on guidelines regarding the issue. All this seems to make more likely the deferral of a decision by ETSO to merge the two ITC funds for 2007.

One underlying problem with the revenues or expenditures created by the ITC mechanism is the fact that the TSOs have incentives to maximize their net revenues (or to lower their disbursements to the fund) since TSOs are still not totally independent. In the absence of transmission tariff methodologies and clear rules regarding how to charge and credit the network users, the incentives for TSOs to try to maximize their revenues will be present.

In order to overcome the obstacles, the following actions are recommended:

Recommendations

- The EC must, therefore, request urgent action from ETSO in working out a solution on the issues raised by SETSO.
- If the two funds are not merged for 2007, the injection fee should increase in order to keep the SEE mechanism alive for another year.
- The regulators must issue specific directives regarding the methodology to be followed by TSOs for invoicing or crediting market participants in relation with net revenues from the ITC mechanism, otherwise the purpose of the ITC mechanism is defeated.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-10
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

3.2 Other Issues linked to EC Directives/Treaty

In addition to the 2 issues already identified by the Athens Forum and supervised by the SETSO sub groups discussed above, a key issue for development of markets in Southeast Europe and the reduction of obstacles to trade, is the development of the TSOs role. While legal unbundling is under development, TSOs have to go one step further and develop their new business processes to support market development.

3.2.1 Access to National Networks and the Role of TSOs

A key principle in Directive 2003/54/EC is the implementation of independent TSO (and DSO) enabling fair and transparent network access by all parties. Once TSOs become unbundled, they have to develop new business processes to support market participants and long-term investments.

The process of unbundling of former utilities has been initiated in the last 3-5 years. However, only one TSO from the SEE region (TEL from Romania) has been admitted to ETSO.

Except for Montenegro, all countries/entities in the region have legally created their TSOs. In Bosnia and Herzegovina, there is an Independent System Operator (ISO) and a Transmission company (Transco) already unbundled from the generation-supply companies. NEK in Bulgaria has been designated, as the TSO but there is still no legal separation from its hydro generation business and the wholesale supply business..

In general, the TSOs do not have yet all functions/financing to carry out their role properly. To effectively act as a TSO and support the market, the TSOs must comply with a series of criteria identified by the European Commission/Directives: e.g., a separate corporate presentation, a code of conduct, unbundled regulatory accounts, separate Board of directors with no Director from the associate companies, etc. This represents a minimum. Furthermore, for the market to work effectively and for participants to have access not only to interconnections but also to national network, there are a series of prerequisites:

- Cost reflective transmission tariff – the publication of the unbundled regulatory accounts and of the transmission pricing methodology helps in this regard;
- Market rules administered by the market department of the TSO and grid code
- Network access model contract
- Market based mechanism for alleviation of internal network congestions
- Transparency in terms of information provision provided in the market rules

The countries that have legally implemented TSO still have to work to implement these prerequisites. As long as these requirements are not fulfilled, there will be limited wholesale national and cross border trade opportunities as well as possibilities for eligible consumers to switch suppliers. The TSOs are the cornerstone of the reforms and thus their incomplete implementation is one of the key obstacles to efficient national and regional trade.

To support trade, the TSOs have also an obligation to provide data to market participants. In terms of data provision, the TSOs should at least publish forecasts of generating plants availability and transmission

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-11
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

capacity as well as ex post data about generation and transmission flows. EFET, Eurelectric and ERGEG have been developing guidelines in relation to the type and frequency of information that TSOs need to publish. Southeast Europe will have no choice but to follow what will eventually become obligatory under ERGEG. Currently, there is very limited information published on TSOs websites.

Recommendations for more efficient access to national network and better functioning TSOs are:

R e c o m m e n d a t i o n s

- Despite their establishment as independent entities, TSOs lack the business processes which are critical in providing system access to the participants, such as scheduling and system planning. Through the requirements of the Grid Codes, TSOs must be required to develop and implement such processes in an essential way;
- TSOs must be required to provide key market information to participants.

3.3 Issues linked to development of competition in generation and supply

The ultimate goal of the reform process in Southeast Europe shall be the development of competition in both generation and supply. While the current European electricity market suffers from a certain lack of competition in both generation and supply, some measures have been taken: generation divestiture, virtual auctions, and a discussion about an eventual legal separation of generation and supply businesses (as well as legal separation between distribution network and supply businesses).

In Southeast Europe, the small size of many markets is often mentioned as an issue preventing the development of competition at the national level, at least in generation. Furthermore, many countries of the region have adopted a single buyer structure for the regulated market (wholesale supplier) and for eligible consumers not switching. The issue of market concentration/vertical foreclosure and the development of market rules at the national level will be discussed in this section based on these initial premises.

3.3.1 Market Concentration and Vertical Foreclosure

The Draft Preliminary Report on the Energy Sector Inquiry of the EC - DG Competition provides an assessment of the effects from concentration in national wholesale markets, where “concentration” is defined to include either ownership of generation assets, or the terms of trade for a product or in a market. While a certain degree of concentration and some mergers have been allowed in Western Europe in light of a degree of regional competition, the inquiry observes that wholesale markets have remained national in scope, offering market power to highly concentrated generation companies.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-12
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

Moreover, it provides an assessment of the traditional integration of electricity companies in generation, network and retail activities. The report confirms that both generation-retail and network-supply integration, despite any economic benefits; also bring “adverse effects for the liberalization process”. Similarly, exclusive long-term contracts prevent independent suppliers from having access to generation and independent generators from accessing directly the wholesale market.

A minimum level of unbundling of national companies, new entrants at the supply level, and a significant number of eligible customers with access to the network must be achieved for proper market functioning. The critical issues are thus unbundling and the degree of national market monopolization (i.e. competition in generation and supply), with relation to both: (i) relative size of national markets, especially with regard to the number and size of eligible customers; and (ii) structure (e.g., number and size) of domestic generation.

The dominant market model in the region has been to keep generation and supply integrated into a single company (acting as the public supply) and/or to create a wholesale supply functions (e.g. single buyer for the regulated market and for eligible consumers not switching). Given the requirements in terms of market opening in the coming years, the question is whether these current market models are sustainable? The initial results have been the difficulty for new participants to enter the market and the detrimental effect for the creation of some form of wholesale national competitive markets. Furthermore, the former utilities are not developing trading or real supplier businesses to do cross border trade and are thus, relying on traders as intermediaries. Trading thus remains somehow opaque with mostly contractual relations between trader and former utilities.

Only Romania has implemented a market design with possibilities for the development of a competitive and liquid wholesale market with at least 3 efficient generating companies. In Bulgaria, there are many generation companies (more than 6) and in theory, at least 3 large suppliers. In addition, there are already 12 licensed traders. It is the current regulatory framework, which prevent the development of a Bulgarian wholesale market. The situation is partly similar in Bosnia and Herzegovina where there could be 3 integrated generation/supply companies competing against each other. The political situation, in addition to the regulatory framework, prevents this from happening. In FYR of Macedonia, there could be competition eventually between the ELEM and a future privatized gas-fired Negotino plant. In the other countries, there is basically a single generation-supply company (even if there are legally separated generation and supply companies in Serbia, but under EPS).

In a sense, the Southeast Europe generation market is even more concentrated and the small size of many countries is an excuse for NOT pushing for national competition. If there is no break up of generation assets or some kind of regional arrangements¹⁹, it might be envisioned that most countries will follow France, Ireland, Belgium, Hungary and more recently, the Czech Republic with the implementation of virtual auctions for capacity releases to at least favor the development of the supply function. This means that the generation companies would be forced to sell through auctions some peak and off-peak capacity, preferably to new suppliers entrants who would be bid and buy this capacity and resell it to eligible consumers. This could be forced by national competition authorities or indirectly via the European Commission. While it has never be carried out, such virtual auctions could potentially be developed in a

¹⁹ It might be possible to have an integrated regional market where competition authorities (national and EC) would accept national champions; however, different conditions related to access would have to be fulfilled.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-13
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

regional fashion, meaning the suppliers based in other countries could bid for capacities released by different generators in different countries.

Finally, it has to be mentioned that given the Articles of the Treaty, the wholesale supply model could be in place up to 2015. In other regions of Europe, ERGEG is defining regional priorities and inviting stakeholders to participate. In SEE, there is currently a void given that regulators are not full members of CEER and that the Regional Regulatory Board (RRB) is not yet in place. In this context, it is difficult to set priorities especially in the absence of some kind of Guidelines for market opening and/or a revised standard market design (SMD). Some stakeholders have mentioned that it could be time to develop a revised SMD.

In summary, the following are recommended:

R e c o m m e n d a t i o n s

- The EC should state its preference regarding the approach to the initial market opening and the gradual development of a competitive market in generation and supply.
- A special group of regulators and market operators should be created on a temporary basis, in order to identify the priorities and prepare guidelines for gradual market opening, focusing especially on:
 - Effective measures to kick start competition (initial contracts, virtual capacity auctions, favourable top up prices, etc.)
 - Methods to promote the supply function in the presence of Wholesale Suppliers (= single buyers) for the regulated market.

3.3.2 Operability of Market Rules at National Level

After having decided on their market structure and market model (bilateral contracts-balancing), the countries of the region are currently developing their national market rules. As the next section will point out, most of the rules are still under development while some have been approved. The next section will discuss why market rules are important and the obstacles in some of the current rules.

3.3.2.1 Importance of market rules and key concepts

The existence of a coherent set of market rules, in line with the market model selected in each country is the basic means by which trading is enabled. It leads to transparency and ensure a level playing field for all players.

There are elements in the market rules, which are critical to facilitating or blocking trade (e.g., determination of the size of the settlement period, distance of the gate closure for nominations from the dispatching hour, procurement of ancillary services, etc.). The most important aspect about market rules is

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	3-14
Funded by:  Canadian International Development Agency		Agence canadienne de développement international	
		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

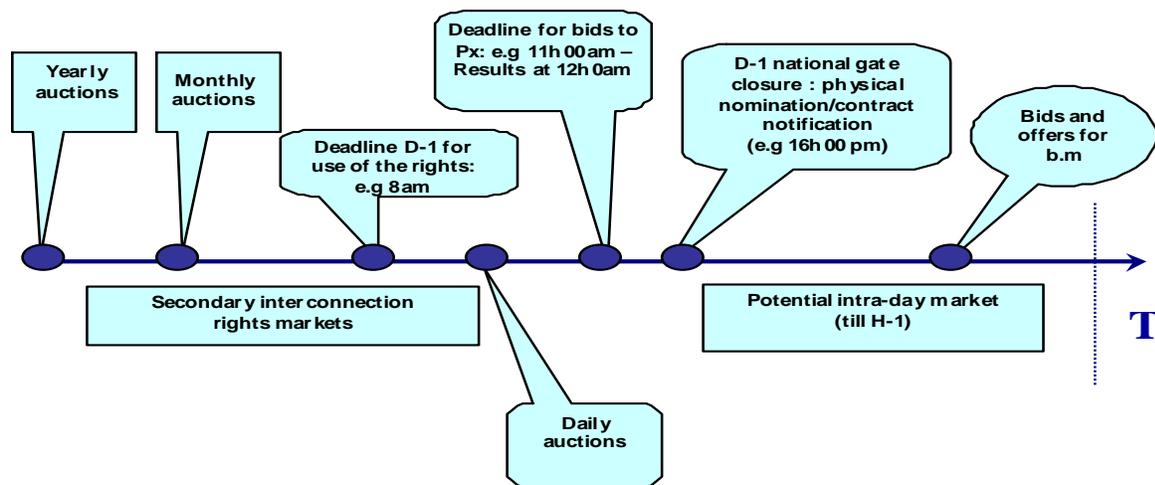
that, by establishing the rules of the game, they give some assurance of transparency to investors and market participants as well as a level playing field.

In a bilateral contracts/balancing market model, market rules shall, as a minimum, deal with:

- Registration procedures for participants
- Scheduling process for physical nomination/contract notification for internal bilateral contracts (imports-exports could be subject to a separate process or be treated as generation and load)
- Gate closure
- Bids and offers rules (if balancing market) or rules for regulated imbalance prices
- Imbalance prices quantities and price calculation if market based balancing
- Commercial aspects of ancillary services
- Guarantees to cover imbalances
- Dispute resolution
- Information to be collected and disseminated by TSOs
- Auction rules for interconnection capacity rights (separated ordinance or included in the rules)

Figure 3-2 following summarizes a typical process from year ahead to real time.

Figure 3-2
Example of a Nomination/notification process



Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-15
Funded by:  Canadian International Development Agency		Agence canadienne de développement international	SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

Central to the market rules is the Balance Responsible Party (BRP), which has been adopted by most EU Member States outside the SEE. Romania is the only country in the SEE region that has adopted the BRP system so far. Under this concept, participants including traders must join a balancing circle where the leader is the one responsible for the imbalances of the whole group. The imbalances can be netted for the group as a whole (the imbalance model) or the participants are “penalized” separately for the deviation of each generation unit. BRPs are obliged to sign a balancing agreement with the TSOs, which will complement the market rules.

3.3.2.2 Issue of Counter-Party Risk (Bilateral Contracts) and Guarantees to Cover Imbalance Settlement

The issue of counter-party risk associated with bilateral contracting has been raised by stakeholders and by the Athens Forum. EBRD mentioned the possibility of developing a regional clearing house. The on-going Nord Pool Consulting study will discuss this issue in their forthcoming report. This issue is not a market rules issue. When a generator sells to suppliers or when suppliers sell to eligible consumers, they both take a credit risk and must analyze the risks carefully. Companies will have to develop this expertise internally. Currently, in the region, it seems that some traders are sometimes asking for cash advance when selling to some utilities. There are also some barter deals (energy for energy) that are being done. Finally, sometimes, the risk is reversed - e.g., a buyer (KESH) is asking guarantees from the seller (a trader).

There are different ways to ease the credit risk on a regional basis. The first method is for companies to ask for provision of security based on the extent of their open position (e.g., bank guarantee which are now widely available throughout the regional banking system) and the use of limits to confine one company’s exposure to individual other parties. One possible solution could be the development of standardized OTC products that can be netted among participants thus lowering the credit risk.

The idea of a central clearinghouse for bilateral physical contracts should still be assessed. Nord Pool does not clear bilateral physicals in Scandinavia – only financial products, but ENDEX in Holland is clearing physical products. Given the importance of the issue, further discussions should be carried out.

While market rules do not deal with credit risks related to bilateral contracts, they should define what types of guarantees participants must post with TSOs to cover their eventual imbalances. There are different ways to calculate the potential cash exposure. The settlement period and mostly the invoicing cycle is crucial in this regard. The shorter the cycle, the more frequent participants are paying their bills and the less exposure the TSOs have, thus a need for reduced guarantees. It should not, for example, take 10 days to send an invoice.

Finally, there is the issue of clearing day ahead market transactions. Usually, the Power exchange is the central counterparty for all organized day ahead market transactions. In the case of Romania, OPCOM does not currently act as the counter-party to transactions and must thus operate a complicated system of pro-rata bilateral netting, which is working semi-well for the time being²⁰. OPCOM shall become the counter-party to DAM transactions in the near future.

²⁰ Counterparty risk is increased. If one party fails to pay another, this will create a cascade affecting all parties. The whole system is endangered.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-16
Funded by:  Canadian International Development Agency		Agence canadienne de développement international	SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

A similar system is envisioned in the proposed market rules in BiH for imbalance settlement since the Bosnian ISO is not legally allowed to take any credit risk. Such bilateral netting system might work in the short term when mostly public companies are trading among themselves (the government itself is guarantor of payments), but will increase the counterpart risk of all participants as well as their financial exposure as the market opens and the number of eligible customers, independent suppliers and IPPs increase (cascading effect mentioned in the footnote). Normally, in Western Europe, the market department of the TSO (or a sub-contractor like a clearing house) identify the necessary guarantees requirements and administer the system. For Southeast Europe, a solution should be envisioned that transfers the credit risk to an external institution (e.g. bank or financial institution) that verifies credit for market participants and requires them to post sufficiently liquid guarantees.

3.3.2.3 Specific obstacles related to status of Market Rules in Southeast Europe

Three of the 8 SEE control areas have already implemented market rules: Croatia, Bulgaria, and Romania in addition to the EC Countries trading with SEE: Hungary, Slovenia, Austria, Italy and Greece. In the case of Romania, the day ahead market rules are integrated with the bilateral contracts and balancing rules.

The ISO in BiH and the Macedonian TSO are in the process of final discussions with stakeholders and submission for approval to their regulators. Albania, Serbia, Montenegro and UNMIK are also in the process of developing the rules. Table 2.3 summarizes the key issues in the market rules of the different control areas (implemented or in draft form). There seems to be a large diversity of approaches to the development of market rules with no harmonization between countries.

In terms of constraints to trade in market rules, one element that is emerging is the early gate closure for sending physical nomination/contract notification: one week in the case of Croatia, Bulgaria, FYR of Macedonia. It is not possible to have a day ahead market or to participate in such a market in another country if the national gate closure is one week ahead. Some rules impose as well different constraints on bilateral contracting from the duration of the contract (e.g., one week starting at 00h on Saturday in Bulgaria to limits on import or export, requirements to tender or sell at regulated prices, etc.). Another peculiar issue for efficient trading is the fact that some participants are not bind by the rules, meaning they do not have to pay their imbalances in case of deviations, or they are paying via a more opaque system.

In Bosnia and Herzegovina, the current legislation provides for regulated prices for internal trade among the two EPs in the Federation. However, EPRS (in Republica Sprska) can sell to the 2 EPs in the Federation at market prices. Tendering procedures apply for sales and purchases. After satisfying the needs of local tariff customers, the EPs are allowed to export their surpluses at market rates (mostly done through traders).

Only Romania has implemented a real balancing market given signals to the day ahead as well as to the bilateral contracts market. Contrary to some views, the price signal goes from the balancing to the day ahead and other bilateral contracts and not the other way around. Balancing market prices cannot serve as price indexes but they will affect the bilateral trading of participants especially if the price is known ex-ante. High top up prices will lead participants to contract more. The regulated imbalances prices (top up) in some of the countries is rather high. Day ahead prices can become reference prices when there is enough liquidity and participants. It has to be noted however that only Nord Pool has managed to develop

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-17
Funded by:  Canadian International Development Agency		Agence canadienne de développement international	SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

financial products linked to the day ahead physical market price. The French and German Power Exchanges are both offering future products but these products remain physical ones.

Given the lack of progress in the implementation of market rules and the different obstacles included in draft or rules already implemented, the following is recommended:

Recommendations

- The EC, Regulators, MO should confirm the importance of implementation of market rules for transparency reasons;
- Guidelines for the development of market rules must be drafted, defining the minimum necessary provisions in the national market rules, e.g.:
 - Market rules binding for all participants (i.e. including traders/suppliers and wholesale suppliers);
 - Gate closure should be afternoon ahead as a minimum;
 - There should be minimal constraints to bilateral contracting;
 - The market rules should describe the details of ex ante and ex post information to be made available to market participants according to Eurelectric/ERGEG/EFET guidelines;
 - Transitional rules for energy import-export tendering as required by national procurement laws should be improved and linked to market rules;

3.4 Issues specific to Southeast Europe reforms

3.4.1 Tariff issues

Deviations from cost-reflective national tariffs distort signals to Eligible Customers who may otherwise be exploring possibilities of switching their supply to other sources. Retail and wholesale tariffs still remain a highly sensitive political issue, not only for the household customers but also for the industrial consumers. In many countries, regulated industrial tariffs are less than 3 € cents /kWh while the generation price *only* is more than 3.5-4 €cents/kWh. Trading is inefficient and comparative competitive advantages between market participants are diminished when tariffs do not reflect true costs.

In most countries of the region, the level of final retail tariff is thus still too low and does not reflect costs. With the unbundling process, this issue will become even more crucial when separate tariff setting process will have to be implemented for generation, transmission, supply and distribution. Without having carried out a deep analysis, it seems that some categories of consumers (e.g., commercial) are subsidizing others in many countries. This leads to distortions and the lack of incentives for eligible consumers to go on the open market. For example:

- KAP in Montenegro pays approximately 20 €/MWh from EPCG but must pay closer to 40 €/MWh from traders;
- FYR of Macedonia: the largest industrial customer pay a regulated tariff of approximately 22 €/MWh

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-18
Funded by:  Canadian International Development Agency		Agence canadienne de développement international	SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

This also raises the issue about the possibility of moving from the regulated to the open market and back to the regulated tariff²¹ and how frequently.

Another impact on trade is the counter party risk involved in transactions where a wholesale supplier, who can resell only at 20-30 €/MWh, is buying on the open market at 35-50 €/MWh from traders (partly the case in Serbia, FYR of Macedonia and Albania). The regulators should initiate a regional discussion on future ways to regulate the suppliers' purchases when these suppliers will be free to purchase freely including for the regulated residential market. The regulators should also assess the impacts of the future abolition of regulated industrial and large commercial tariffs.

Annex 1 presents both wholesale and retail prices.

There is already work being carried out to rationalize tariff structure and protect vulnerable consumers. In addition to these current efforts, the following actions are commended:

Recommendations

- Tariffs have to be rationalised, in order to reflect true costs (and mechanisms may have to be devised, so as to protect vulnerable consumers, without distorting the market)
- Rationalisation of tariffs should be done in accordance with country specific plans, considering specific conditions in each country.
- Support must be provided to regulators for developing future ways to regulate suppliers' purchases.

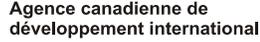
3.4.2 Harmonization/compatibility issues

CEER tried a few years ago to push for a single market design for the whole SEE region. There was no follow up to the discussion paper. In the mean time, each country has initiated the implementation of its own market model and the development of their national market rules. Each country is tending towards the gradual implementation of a bilateral contract & balancing market model with (often) the presence of a wholesale supplier and regulated imbalance prices in the transition period. Only Greece has a different market model (mandatory pool and now explicit capacity payment).

The challenge for the near future is for the SEE to avoid the general European situation described in a recent EFET paper²², as composed of different market structures and rules, radically different timetables for the "trading day", different and frequently onerous balancing arrangements, and a plethora of IT

²¹ The EC Directive requires that no such tariff exists for industrial and large commercial consumers in the future.

²² EFET, Harmonizing the Operation of European Wholesale Electricity Markets, October 2005

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	3-19
Funded by:  Canadian International Development Agency  Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

platforms for trading and scheduling. These variations raise barriers to the entry of new market participants and significantly reduce market efficiency, by restricting the opportunity for market forces to determine an economic pattern of generation and load. By constraining the market’s ability to move power across the system to balance supply and demand, the variations also undermine security of supply in the internal electricity market.

In the short term, the absence of a regional revised standard market design (SMD), or at least guidelines/priorities specific for the region (as the ones to be developed by ERGEG in other European regional markets), is leading to a series of different initiatives²³ and each country developing its own rules without harmonization.

For the medium term, some harmonization & compatibility alone in the market structure and the timetable for the trading day could generate significant improvements to competition and efficiency. While developing their rules, countries should pay attention to the gate closure for the Day-ahead interconnection capacity auctions if any, day ahead market clearing (e.g., Noon of day ahead) and physical nomination & contract notification gates closure (e.g., 15h00 in the afternoon ahead). Having different gate closure effectively impose a trading “cascade” where market participants have to close out any residual positions in markets, which close later. While this can be seen as concentrating liquidity in the later closing markets, it also gives local generators with flexible plant within the last market an inherent commercial advantage in the wider market. In less liquid markets like SEE, having different gate closure might simply mean not being able to trade at all in the other market.

While compatibility of rules is important in Western Europe as part of the creation of regional markets and their eventual integration, it could be considered as crucial for Southeast Europe since there are many smaller size markets and a high number of countries/TSOs. Many issues should be solved taking a regional approach.

23 At a Donors’ meeting in 2006, E-Control presented the concept of an International market operator, handling the coordinated flow based auction process for interconnection capacity rights allocation, but also potentially handling cross border balancing (!), and potentially being turned into an independent system operator (ISO). This idea (partially or in totality) was also presented by DG TREN to a recent High-Level Group Meeting.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-20
Funded by:  Canadian International Development Agency		Agence canadienne de développement international	SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

Given this context, the following is recommended:

Recommendations

- The role of the various institutions potentially needed for the SEE regional market (i.e. Regional Regulatory Board, Auction Office, regional balancing, etc.) as well as the role and complementarities of Power Exchanges, must be discussed among the Regulators and Market Operators.
- A Discussion paper on the potential regional institutions should be prepared;
- The guidelines for development of market rules should define the minimum level of compatibility between the different national market rules.

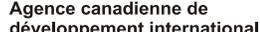
3.4.3 Licensing regime

Licensing has been identified by traders as one of the key concern. The more common complaints are:

- Non-harmonized licensing regimes in Southeast European countries. The requirements to the potential traders differ from country to country;
- Complicated and long lasting procedure for application and issuing of licenses in some countries;
- Relatively high initial and annual fees to obtaining and keeping of licenses;
- Lack of information in some countries about the current or planned requirements and licensing regime in respect to the wholesale and retail trade;

It is important to define a terminology of intermediaries that has the same meaning in each country's legislation. Currently, there is a lack of consistency in the definition of traders and suppliers (and other terms are also use such as wholesaler, broker, retailer). There is also a tendency for some references to 'trader' to imply a pejorative meaning (in a similar way to the references in financial markets to investors and speculators).

For example, in Bulgaria, the concept of supplier does not exist. There is only a trading license. Traders have started to intermediate contracts between GenCos and eligible consumers. However, traders cannot form BRPs or be responsible for the imbalances of the eligible consumers who thus must be direct market participants. However, there is no need however for a trader who wants to transit energy to get licensed in Bulgaria. Some countries might be requiring traders to register locally even to transit electricity.

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	3-21
Funded by:  Canadian International Development Agency  Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

In Romania, the concept of traders does not exist; the regulator issues a supply license. According to ANRE, there is very little conditions attached if there is no supply to final consumers since most conditions for suppliers are set in the General conditions for supply. However, requiring a trader to get a license means some fees, in addition sometimes of a percentage of annual revenues.

The Electricity Directive 54/03 does not define either trader or supplier, though the meaning of supplier is implied by the definitions of supply and customer. The Directive uses the term supplier to cover both supply to final customers and supply to other suppliers (e.g. wholesale customers). There is no use of the term trader in the Directive.

There are two choices for the distinction between supplier and trader:

- A ‘supplier’ supplies to an end consumer, whereas a ‘trader’ buys from a generator or other supplier and sells to a supplier. In this case, both supplier and trade might need to be licensed and/or a party to the market rules, as a trader as well as a supplier could be responsible for imbalances. The distinction will depend on whether the point of supply (for a trader) is at a different meter from the point of purchase.
- A ‘trader’ buys and sells financial electricity products, whereas a supplier buys and sells physical products. In this case, a supplier must be licensed and is a balance responsible party subject to the balancing rules. A trader is not party to the balancing rules and does not necessarily need to be licensed by the energy regulator (though may come under the responsibility of the financial services regulator).

The latter distinction is preferable as it leads to a clear distinction:

- Supplier is licensed and responsible for (physical) imbalances
- Trader is not responsible for physical imbalances and need not necessarily be licensed (by the energy regulator).

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	3-22
Funded by:  Canadian International Development Agency		Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro

A further search should be made among the regulations and rules of the countries to determine more clearly what rights and obligations are defined in the licenses of suppliers and, where applicable, traders. This information can be used to refine the definitions and provide clear recommendations on whether:

- a) the term ‘trader’ should be used
- b) whether traders must, or must not, be licensed
- c) whether traders can, in certain circumstances, be a party to the market rules and balancing.

In summary, given the important role of traders but considering the lack of developed market rules, the following is recommended:

Recommendations

- It is necessary for the regulators to harmonize the concept of traders and suppliers across each national legislation and rules, with a view to facilitate trading, as well as the administration and operation of the market.

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	3-23
Funded by:  Canadian International Development Agency Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

4 OUTLINE OF ACTION PLAN

Following the analysis of the different issues, SEETEC has developed different recommendations to be carried out in the coming years (2006-2008) with different levels of priorities. Table 4-1 presents a summary of all the obstacles, with the corresponding recommendations for their removal at both national and regional level, some relevant best practices, the level of priority for each recommended action, the entity proposed to undertake responsibility for the implementation of the recommended action, and the required output. A tentative time frame is also suggested.

Among the key recommendations are the development of two Guidelines documents and a Discussion Paper by an *ad hoc* special group of Regulators and Market Operators, as follows:

- ✓ Guidelines for market opening;
- ✓ Guidelines for market rules development (including a section of minimum compatibility of national rules);
- ✓ Discussion Paper on potential regional institutions for the SEE regional market

It is also recommended that countries move rapidly towards market-based mechanisms to allocate cross border capacities before moving towards a coordinated flow based approach. Regarding the ITC mechanism, it is recommended that the injection fee from perimeter countries should be increased in order to keep the SEE mechanism alive for one more year, if there can be no merger of the two funds before January 2007.

Table 4-2 presents potential modules of a training program for regulators to help them dealing with the gradual development of competitive markets.

Finally, Figure 4-3 presents a summary of the recommendations with their time frame.

Final Draft Report		014551-REM-1202-47RA-I-0001-01	June 2006	4-1
Funded by:  Canadian International Development Agency		Agence canadienne de développement international	SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

Table 4-1-Outline of Action Plan

Issues	Conditions enabling trade/Obstacles	Description of Recommendations at national and regional level/ Country/regional best practices	Level of priority (1-3)	Responsible for implementation/support required	Time frame
Issues linked to EC Directives/Treaty identified as priority by Athens Forum					
Cross Border Allocation procedure	Limited availability of interconnections capacity for most market participants	National level		Regulators/ TSOs:	
		<ul style="list-style-type: none"> ✓ Complete application of all Congestion management guidelines ✓ In short term: development of market based-mechanisms: <ul style="list-style-type: none"> ❑ To require all participants to bid for capacity (no new AAC) ❑ Current holders of AAC to pay the average auction price; ❑ Abolition of import-export monopoly ✓ Application of the guidelines regarding utilization of funds collected by TSOs via the auctions 	2	Need to develop national auction rules/adapt national rules to regional coordinated allocation	Before January 1 st 2008
		Best practices	1	Regulators/TSOs:	Before January 1 st 2007
		<ul style="list-style-type: none"> ✓ France just abolished all AAC on its borders; ✓ Regional agreement in the Nordic countries on sharing congestion rents to rehabilitate/ built new interconnections 	3	Regulators/TSOs	Before January 1 st 2008
No best practice yet in SEE;			RRB/ Secretariat to supervise/ report		
Regional level			Regulators/TSOs	Before January 2008	
<ul style="list-style-type: none"> ✓ Short term: joint auctions across borders; ✓ Medium term: Flow based coordinated auction across the region 	2	2	Harmonization of each side rules TSOs/Regulators	Before January 2008	
			Need to develop regional rules, create TSO auction office and adapt national rules to support the regional ones		

Issues	Conditions enabling trade/Obstacles	Description of Recommendations at national and regional level/ Country/regional best practices	Level of priority (1-3)	Responsible for implementation/support required	Time frame
ITC	Lack of fair methodology for SEE countries TSOs have conflict of interests with regards to handling of the ITC funds	<p>Regional level</p> <ul style="list-style-type: none"> ✓ ETSO to proceed with merger of two funds ✓ If no merging in 2007, to increase injection fee to keep SEE mechanism alive for one more year <p>National level</p> <ul style="list-style-type: none"> ✓ All regulators to issue specific directives regarding the methodology for TSO to invoice or credit market participants in relation with the ITC; <p>Best Practices</p> <p>French Regulator ordinance on the issue No such ordinance yet in SEE</p>	1 1 3	<p>ETSO decision/ implementation by TSOs</p> <p>Regulators/TSOs Need specific rules in transmission tariff methodology for market participants to contribute to funds- TSO is neutral</p>	Before January 2007 Before January 2008

Issues	Conditions enabling trade/Obstacles	Description of Recommendations at national and regional level/ Country/regional best practices	Level of priority (1-3)	Responsible for implementation/support required	Time frame
	<p>–small size of countries often used as excuse for non unbundling</p> <p>Presence of Wholesale Suppliers limiting trading (less players –no suppliers)</p>	<p>✓ To develop Guidelines for market opening (gradual development of competition in generation/supply) and specifically address the following issues:</p> <ul style="list-style-type: none"> ❑ How shall the national markets be open initially including discussion of different measures to kick start competition – virtual auctions, initial contracts, favourable top up prices? ❑ Market structure: how to promote the supply function with the presence of many wholesale suppliers (e.g single buyers for the regulated market); <p>Best Practices: Except for a few countries, the wholesale supplier has disappeared from Western European markets; Suppliers contract freely with GenCos; Virtual auctions have been used to kick start supply competition in Ireland, France, Belgium, Czech Republic and Hungary;</p> <p>Regional level</p> <ul style="list-style-type: none"> ✓ See section Issues specific to SEE ✓ Development of a specific training program for regulators with FSG/ERRA to address key competition issues in generation <p>Best Practices: Nord Pool/NORDEL Emerging regional arrangements France-Benelux Partly applicable: the role of the RRB in Central America</p>	<p>1</p> <p>2</p>	<p>Special Ad hoc Group of CEER/Market operators</p> <p>Guidelines for market opening</p> <p>RRB/Secretariat to have a supervision role</p> <p>Regulators/ FSR&ERRA</p> <p>Specific training modules to help decision making (see examples of potential modules in section 4.2)</p>	<p>Before March 2007</p> <p>Development of modules at high level (before October 2006)</p> <p>Actual program (November 2006-March 2007)</p>

Issues	Conditions enabling trade/Obstacles	Description of Recommendations at national and regional level/ Country/regional best practices	Level of priority (1-3)	Responsible for implementation/support required	Time frame
Operability of Market rules at national level	<p>Many market rules still under discussions in many countries;</p> <p>Many constraints to free trade included in rules;</p> <p>Some participants are not bound by the rules;</p> <p>Many rules do not promote competition</p>	<p>National level</p> <ul style="list-style-type: none"> ✓ EC/Regulators/MO should confirm the importance of implementation of market rules for transparency reasons ✓ Development of Guidelines for Market rules development: to define the minimum necessary to be included in the national market rules, for eg.: <ul style="list-style-type: none"> ❑ All participants including traders/suppliers and wholesale suppliers should be bound to the market rules; ❑ Gate closure should be afternoon ahead as a minimum; ❑ There should be minimal constraints to bilateral contracting; ❑ TSOs to provide more information ex ante and ex post to market participants as discussed above– the details should be in the market rules and follow Eurelectric/ERGEG/EFET guidelines; ❑ Transitional rules for energy import-export tendering as required by national procurement laws should be improved and linked to market rules; <p>Best Practices Romanian market rules (except that rules for day ahead shall be separated from balancing rules)</p> <p>Regional</p> <ul style="list-style-type: none"> ✓ See Issues Specific to SEE 	<p>1</p> <p>1</p>	<p>EC/Regulators/MO</p> <p>Presentation at Athens/Mini Forum;</p> <p>Ad hoc Special Group of CEER/Market operators Guidelines for market rules development</p>	<p>Before November 2006</p> <p>Before March 2007</p>

Issues	Conditions enabling trade/Obstacles	Description of Recommendations at national and regional level/ Country/regional best practices	Level of priority (1-3)	Responsible for implementation/support required	Time frame
Issues specific to Southeast Europe reforms					
Tariff issues	Retail tariffs are often lower than wholesale regional prices;	<p>National level</p> <ul style="list-style-type: none"> ✓ Need for country specific Action plan in this regard; ✓ Support current efforts to rationalize tariffs and specific mechanisms to protect vulnerable consumers. ✓ Support to regulators for new regulatory framework in context of gradual market opening/ new ways to regulate suppliers purchases (see proposed training modules under FSR/ERRA in Table 4-2) <p>Best Practices:</p> <p>Bulgarian Regulator has gradually increased retail tariff, made them cost-reflective and Ministry implemented rules for protection of vulnerable consumers;</p> <p>Romania/Croatia/BIH have been also rationalizing tariffs</p>	1 1 2	Regulators/ ERGEG New tariff methodology/ regulation and implementation	Before market opening in January 2008

Issues	Conditions enabling trade/Obstacles	Description of Recommendations at national and regional level/ Country/regional best practices	Level of priority (1-3)	Responsible for implementation/support required	Time frame
Harmonization/ compatibility issues (e.g compatibility of market rules)	Despite the large number of countries, and the size of the whole system, the approach taken so far towards the development for the market was not regional	<p>National level</p> <ul style="list-style-type: none"> ✓ The Guidelines for market rules development should have a section defining the minimum level of compatibility between the different national market rules 	2	<p>Ad hoc Special Group CEER/Market operators</p> <p>Compatibility of national market rules included in Guidelines for market rules development</p>	Before March 2007
	<p>Absence of a common approach to regional market design (what should be put in common?)</p> <p>Development of national market rules without regional consultation</p> <p>Absence of compatibility between countries rules</p>	<p>Regional level</p> <ul style="list-style-type: none"> ✓ Development of a Discussion Paper on potential SEE regional institutions (advantages/disadvantages of different options) on the Regional institutions needed for the SEE regional market and their roles: <ul style="list-style-type: none"> <input type="checkbox"/> Regional regulatory board? <input type="checkbox"/> Auction office <input type="checkbox"/> Regional balancing <input type="checkbox"/> Role/complementarities of Power exchanges 	2	<p>Ad Hoc Special Group CEER/Market Operators Discussion Paper on potential SEE regional institutions</p>	Before October 2007
Licensing issues	Wide divergence in regulation of licensing for traders and suppliers (confusion in terms)	<ul style="list-style-type: none"> ✓ As a prerequisite, there is a need to harmonize the concept of traders and suppliers across each national legislation and rules; 	3	Regulators through CEER/ERGEG to work on harmonization requirements	Before January 2008

Table 4-2 -Potential Training Modules for Regulators

To be developed with FSR/ERRA

Module I: How to move gradually to a competitive market in generation/supply?

- ✓ Initial market opening: different ways to start - Wholesale supplier, initial contracts, quotas, 100% wholesale opening;
- ✓ Wholesale supplier versus public supplier –regulatory impact;
 - Case studies: eg. Ireland, Bulgaria, Hungary, etc.
- ✓ How to create competition?
 - Virtual auctions/unbundling
 - Should national champions be allowed?
 - Criteria for effective regional competition in generation/supply
 - Traders versus suppliers

Module 2: The new Role of the TSO

- ✓ Key functions
- ✓ Grid code importance
- ✓ Key aspects of grid code:
 - Scheduling/dispatching
 - Transmission planning/flows of information from DisCos
 - Information to participants
 - Contractual framework for open access

Involve EDF –regional grid code

Module 3: Tariff issues

- ✓ Generation
- ✓ Wholesale Supply/public supply;
- ✓ Transmission/ PSO charge
- ✓ Distribution

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	4-9
Funded by:  Canadian International Development Agency		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	
Agence canadienne de développement international			



- ✓ Final tariffs/social tariffs

Module 4: Market rules and balancing concepts

- ✓ Content of market rules (bilateral contracts/balancing model)
- ✓ Ancillary services/Regulated imbalance prices versus balancing market
- ✓ Imbalance prices calculation methods
- ✓ Case studies: England, France, Scandinavia, Italy, Romania, Slovenia

Module 5: Regional Perspective

- ✓ Emerging regional arrangements: Nord-Pool, France-Benelux
- ✓ Compatibility of market rules
- ✓ Regional Balancing issues
- ✓ Regional network planning

Final Draft Report	014551-REM-1202-47RA-I-0001-01	June 2006	4-10
Funded by:  Canadian International Development Agency Agence canadienne de développement international		SEETEC Consortium SNC-Lavalin Inc., in association with Manitoba Hydro	

Figure 4-1 - Summary of Recommendations and Time Frame

	2nd semester 2006	2007
Cross-Border Allocation Procedure	Regulators/TSOs: Develop market-based mechanism (joint auctions in each border, no new AAC, current AAC holders to pay auction price; abolition of import/export monopoly)	Regulators/TSOs: Complete application of Congestion Management Guidelines and Flow-based Coordinated Auctions; Creation of Auction Office and regional rules
	Regulators/TSOs: Develop rules in Tariff Methodology for utilization of auction revenues	
	RRB/ECS: Supervise / Report	
ITC	ETSO: Merging of two funds (if not possible, increase injection fee from ETSO countries into SEE)	Regulators/TSOs: Develop rules in Tariff Methodologies for contribution of market participants to the ITC payments/credits (TSO must be neutral to fund)
Access to National Networks and the role of TSOs	TSOs: Implement new market-related processes (scheduling of bilateral contracts, grid planing, etc.); Publishing information for market participants	
	RRB/ECS: Supervise / Report	
Market Concentration and Vertical Foreclosure	EC: State preference regarding alternatives for market opening and role of wholesale supplier	Ad-hoc group regulators/Mkt Operators: Develop guidelines for market opening (development of competition in generation/supply) - March 2007
	Regulators & FSR/ERRA: Develop training program for Regulators - November 2006 thru March 2007	
	RRB/ECS: Supervise / Report	
Operability of Market Rules at national level	EC/Regulators/MOs: Confirm importance of implementation of Market Rules for transparency reasons - November 2006	Ad-hoc group Regulators/Mkt Operators: Develop guidelines for Market Rules development (minimum national requirements) - March 2007
Tariff Issues	Regulators/ERGEG: Action plan for tariff rationalization; regulation of suppliers' purchases	
Harmonization/Compatibility Issues	Ad-hoc group Regulators/Mkt Operators: Define minimum level of compatibility between national markets - March 2007	Ad-hoc group Regulators/Mkt Operators: Develop Discussion Paper on Regional institutions - October 2007
Licensing Issues	Regulators: Work on Harmonization requirements	
	Action by	
	Ad-hoc group Regulators/Mkt Operators	
	EC	
	ECS	
	Regulators/TSOs	
	Regulators & FSR/ERRA	
	ETSO	
	TSOs	
	Other	

APPENDIX 1 WHOLESALE AND RETAIL PRICE COMPARISON

In a region without network constraints, the wholesale price of electricity should be the same. There are some constraints in the region but the price difference between countries is rather large. The following table shows a snapshot of the wholesale market price across the region.

Table A-1 – Wholesale Market Price

	Price	Sources
Austria PX	March 15 2006: Base : 79 €/MWh Peak: 94 €/MWh	www.exaa.at
Borzen	No trading in March 2006 2005: Monthly price varied between 28.35€/MWh in June and 76.62€/MWh in December	www.borzen.si
Greece pool	March 13 (ex-ante for March 14) 2006 27-55 €/ MWh	www.desmie.gr
Romanian day ahead	March 13 2006 Daily average: 49.4€/MWh June	www.opcom.ro
Bulgaria bulk supply tariff ²⁴	2005: Approximately 28.5 €/MWh	www.dker.bg
FYR of Macedonia wholesale supply (include generation-import and transmission tariff)	2006: 1.6063 denars/kWh (26.8 €/MWh) approved by Regulator	www.erc.org.mk
Recent tender – Montenegro	2006: KAP pays 20.44€/MWh for its share of regulated energy Paid 40 €/MWh on the open market (692 GWh out of a total of 1896)	Platt's
Recent tender – Albania	2006: Bids received: <ul style="list-style-type: none"> • EFT: 50 MW in band at 42 €/MWh • Ezpada: 40MW at 48.4 €/MWh • EGL: 17 MW at 43.47 	Platt's
Recent Tender- Bosnia and Herzegovina	2006 EPHZHB selling at average of 31.44 €/MWh	Interview Regulator
Recent virtual capacity auction - MVM Hungary	2006: Peak : 47.35 € MWh Offpeak: 24.23 € MWh	Platt's

²⁴ This is the price at which NEK is selling to discos (it is an average of NEK purchased price including transmission)

**Retail High voltage and residential tariffs (2005)**

	currency	HV	LV	Nota
Albania (KWh)	LEKE	8.3	6.62	source:website
	Euro cents	6.7	5.4	
BIH (Federation) -capacity charge (KW)	BAM	1134 to 2268	36 to 450	source:website
	Euro	550 to 1150	18 to 225	
BIH (Federation) -energy charge (KWh)	BAM	2,17to 9,68	5 to 15	
	Euro cents	1.2-4.8	2.5 to 7.5	
BiH (RS) -capacity charge	BAM	800	300	source:website
	Euro	400	150	
BIH (RS) -energy charge (KWh)	BAM	2.7 to 6,2	4,30 to 10	
	Euro cents	1.3 to 3.1	2.15 to 5	
there is also a charge for reactive power				
Bulgaria	Euro cents	7.32	9.76	these are average-source is ERRA
Croatia	Euro cents	11.15	13.64	these are average-source is ERRA
FYR of Macedonia	Euro cents	7.14	6.71	these are average-source is ERRA
Montenegro	Euro cents	not available	7.13	these are average-source is ERRA
Romania	Euro cents	12.20	13.32	these are average-source is ERRA
Serbia	Euro cents	not available	not available	
UNMIK -capacity (KW)	Euro cents	8,95 to 1278	115-144	source:website
UNMIK -energy (KWh)	Euro cents	1,09 to 3,52	1,92 to 7,67	



APPENDIX 2 BIBLIOGRAPHY

SOURCES

CEER SEM WG- Working Paper –Key interactions and potential trade distortions between electricity markets, 2004

CEER, Regulatory benchmarking report for SEE, 2005

CRE, Une nouvelle gestion des interconnexions, February 21th, 2006

Dte, Development of liquidity of the Dutch electricity market, 2003-2004, the Hague, March 2004

EFET, Harmonizing the operation of European wholesale electricity markets, October 2005;

EFET, Transparency of information about the availability and use of infrastructure and the promotion of competition in European wholesale power markets, updated position, May 2006

European Commission, Communication on Progress in creating the internal gas and electricity market, January 2006

European Commission, DG competition, ENERGY SECTOR INQUIRY - ISSUES PAPER, November 15, 2005

ERGEG, The creation of Regional electricity markets, February 2006

ERGEG, Different Guidelines and Best Practices

Harza, Generation investment study for the World Bank, 2004

Platt's, various issues

SETSO TF, Network Access, Congestion Management and Power Flows Sub working Group, Overview of currently applied methods for cross-border transmission capacity allocation in South-east Europe, SITUATION OCTOBER 2005;

Countries energy/electricity laws, secondary legislation (when available in English), market rules, etc.