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Regional electricity markets in Europe: Focus on the Energy Community

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ABSTRACT

Regional electricity markets (REM) are a natural step towards the creation of a single European electricity market. There are seven Electricity Regional Initiatives (ERI) launched by European Regulators Group for Electricity and Gas (ERGEG). This paper brings the focus to the eight REM covering the South East European (SEE) countries initiated by the European Commission. The congestion management and capacity allocation are used as an example to show that the SEE REM deals with the same priority issues as the other REMs do, and that the progress of this eight REM is great despite the short time of its existence. Given the EU membership perspective of the SEE countries and the expectation that the SEE REM shall become part of the internal electricity market, as well as the overlap between some members of the SEE REM and the other ERGEG ERI, the work of both initiatives shall be organized in a manner that uses the best practices and experience gained in each of them.

1. Introduction

The liberalization of the electricity market within the EU is a highly debated topic today. The restructuring of the previous vertically integrated companies and the establishment of interconnectors between the Member States of the EU are some of the preconditions necessary to establish Regional Electricity Markets (REMs) within the EU, which is in turn a step towards the establishment of the single European electricity market.

Due to the fact that the literature on REMs is scarce, this paper will discuss the preconditions for their establishment and the benefits from regional cooperation in electricity. Moreover, this paper will focus on the process of establishment of the different REMs in Europe. On the one hand, it will draw the attention to the seven Electricity Regional Initiatives (ERI) launched by the European Regulators Group for Electricity and Gas (ERGEG), and on the other hand it will provide details on the establishment of the eight REM in Europe – the South East Europe (SEE) REM in the framework of the Athens Process and the Energy Community.

In particular, the attention will be on underlying the differences in the establishment between both initiatives. In this regard, it should be noted that the SEE REM was initiated by the European Commission and the Stability Pact and not by the National Regulatory Authorities (NRAs) and the market players, as was the case for some REMs in Europe before the official launching of ERGEG ERI. Afterwards, the mechanisms of congestion management, as the issue of highest priority in both initiatives will be analyzed. The final part of the paper will draw some conclusions.

2. The Athens Process

In March 2002, the European Commission with the support of the Stability Pact started the so-called Athens Process by proposing the creation of a regional SEE energy market to be eventually integrated into the EU energy market. In November 2002, a Memorandum of Understanding (MoU, 2002) was signed by nine countries from the region, with the Commission and the Stability Pact acting as sponsors. This MoU set up a number of institutions: Ministerial Council, the Permanent High Level Group (PHLG), Energy Community Secretariat (ECS) and the South East Europe Electricity Regulation Forum (Athens Forum). The cooperation in electricity was further expanded to the gas sector through a second MoU in December 2003 (MoU, 2003). In 2004, after a proposal by the PHLG, the South East European Regulators Board for Electricity and Gas (ECRB) was established by the Ministerial Council (2004). These Memoranda representing the political intent did not provide for any legal commitment for the parties, the sponsors and the donors.

In the Athens MoU, 2003, it was stated that the participants will seek to replace it with a legally binding agreement. This was done on 25.10.2005, by signing the Energy Community Treaty (EnCT, 2006)

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between the EU and the countries of SEE.[1] This Treaty entered into force on 01.07.2006 after being ratified by all the signatories (European Council, 2006 p. 15). It was the first time in the history that all of these states and territories have signed a legally binding treaty (European Commission Press Release, 2005a). In addition to the Contracting Parties of the EnCT, any Member State of the EU may obtain the status of Participant, which has the right to take part in all the institutional meetings of the Energy Community. For instance, Bulgaria and Romania were Contracting Parties, but after their accession to the EU in 2007 their legal status has changed to Participants. As of April 2008, there are fourteen Participants to the Energy Community. In addition, there are four countries with a status of Observers to the Energy Community.[2]

The EnCT aims at regulating the relations between the countries signing it, in a manner that would create a common legal and regulatory framework for the energy markets and would allow trading energy across their borders. Its objective was the creation of a single energy market, including the coordination of mutual assistance in case of serious disturbance to the energy networks or external disruptions, and which may include the achievement of a common external energy trade policy.[3] The EnCT would encompass the principles and policies of the EU, taking into considerations the specificities of all parties. This objective would be achieved through ensuring that the SEE countries adopt the whole *acquis communitaire* in the areas of energy, environment, competition and renewables.

In addition to the adoption of the EU *acquis* on energy, the other obligations taken by the SEE countries with the EnCT in the sphere of electricity may be summarized as follows: a) establishing common rules for the functioning of the national electricity markets and establishing mechanisms for crisis situations – safeguard measures[4]; b) establishing the REM itself – prohibition of taxes and quantitative restrictions for import and export of electricity,[5] common rules for trade with third countries[6] and c) opening the markets: all non-household markets by 2008 and all household markets by 2015.[7]

The EnCT formalizes the institutions established by the Athens Memorandum 2002 and the Tirana Declaration. The Commission held that the institutions established by the Energy Community are analogues to those in the EU such as the Energy Council, Energy Working Group of the Council and the Madrid and Florence Fora (European Commission, 2004b). Finally, the EnCT was concluded for a period of 10 years from the date of entry into force. The Ministerial Council acting by unanimity, may decide to extend its duration.[8]

3. The importance of a REM for the SEE countries

3.1. The common problems in the SEE energy sectors

The need for regional cooperation of the SEE countries in the energy field derives from the common problems that the energy sectors of these countries are facing. The energy markets are small and the countries' economies are energy intensive. The energy prices in the SEE countries are generally below economic levels and pricing/tariff structures are inappropriate. Moreover, energy trade is prevented by poor infrastructure, as well as by the political and social legacy of the conflicts in the SEE region. On the other hand, State-owned vertically integrated companies existed in the region for several decades, whereas energy policies, legislation and standards were very much different from those in the EU. The policy and institutional framework necessary for encouraging private sector investment needed for restoring the infrastructure and for constructing new power plants in the region are often not in place.

During the existence of Yugoslavia the electricity systems of its republics were part of Yugoslavia's electric utility association, which in turn was part of the Union for the Coordination of Transmission of Electricity (UCTE). Therefore, at that time the national electricity systems were not designed to be self-sufficient, but rather part of a regional and through it, of the international system. After the break-up of Yugoslavia with the damages of the system of Bosnia and Herzegovina in a war in the '90s, the UCTE system was broken in two zones. The re-connection of the system with the first synchronous zone was successfully performed in 2004. Only Albania's electricity system which has been underdeveloped for decades and whose transmission system does not satisfy all criteria for parallel operation with UCTE is not member of this network.[9]

3.2. Benefits from establishing a REM in the SEE

The general preconditions and the benefits of establishing a REM have been discussed in a couple of articles so far Pierce et al. (2007) and Vandenborre (2008), as well as by the European Commission (2004a,b) and ERGEG (2006). In relation to the SEE, the World Bank after discussing the problems addressed above identified some benefits of a regional cooperation in SEE in the energy field (World Bank, 2000). Firstly, reliable, low-cost and environment-friendly sources of energy would be available and would allow for sustainable economic development of the region. With regard to the supply of electricity, the regional approach would be beneficial for better utilization of the existing capacities, but would also attract FDIs. Cross-border trade would be facilitated, which would in turn influence lowering the transaction costs. A regional approach would help strengthening the institutional arrangements and would assist the SEE countries in adopting the EU standards for infrastructure development and regulation, having in mind the expected integration in the internal energy market.

In addition, there are technical and economic reasons for unification of national electricity systems in a regional one. For example, the fuel diversification is impossible in small systems. Moreover, an electricity system requires reserve power, the need for which declines with the size of the system. Finally, as the networks were destroyed during the regional wars in the 1990s it was more efficient to invest from the beginning in the construction of a connected regional grid instead of rebuilding the national grids and later trying to interconnect them (Becker and Jurkeit, 2001).

Due to the fact that only Bulgaria and Bosnia and Herzegovina are net exporters of electricity, there has always been some cross-border trade in the region. In 2004, volume traded between the SEE countries was 9%.[10] However, the whole region as such, is a net

[1] The countries of the SEE are: the Republic of Albania, Bosnia and Herzegovina, the Republic of Croatia, the Republic of Macedonia, the Republic of Montenegro and the Republic of Serbia, as adhering parties, and, Kosovo through the United Nations Interim Administration Mission in Kosovo (UNMIK), pursuant to the United Nations Security Council 1244. From 01.05.2010 Moldova became a full member of the Energy Community.

[2] Georgia, Norway, Turkey and Ukraine are granted with status of Observers.

[3] Article 2 EnCT, supra.

[4] Article 36–39 EnCT, supra.

[5] Article 41 EnCT, supra.

[6] Article 43 EnCT, supra.

[7] Annex I EnCT, supra: Timetable for the Implementation of the EC Directives 2003/54 and 2003/55, and the EC Regulation 1228/2003, of 26.06.2003.

[8] Article 97 EnCT, supra.

[9] From 01.07.2009 the European Network of Transmission System Operators for Electricity (ENTSO-E) took over all operational tasks of the 6 existing TSO associations in Europe, including UCTE. For more information, see: https://www.entsoe.eu/(last visited, September, 2010).

[10] Kennedy and Besant-Jones, 2004. (hereinafter, World Bank, 2004).

importer (Hooper and Medvedev, 2008). Therefore, the cross-border trade of electricity within the SEE is very relevant and should be enhanced within the REM.

The generation structure is different in the different countries. Most of the countries rely on coal (Macedonia produces 78% of its total electricity production from coal, and then is Serbia with 66% and Greece with 61%). Albania with 98% of its electricity production relies on hydro power, which is the biggest percentage in the region, after which Croatia follows with 53% and Bosnia and Herzegovina with 47%.[11] In line with the discussion on the benefits from regional integration, this data shows that there is a possibility for substitution between thermal and hydro power in peak and off-peak periods in SEE. In addition, advantage could be taken from the differences in the fuels' price, and electricity should be produced in countries with lower fuel price that could be consumed in another country of the region. Therefore, the fact that the electricity generation systems in SEE are complementary shows that the establishment of REM in the SEE would be very beneficial.

Finally, the economic impact of the creation of the Energy Community would be to create larger and predictable market which should be attractive for investors, but its political significance should not be underestimated. It is moreover, a part of the emerging regional economic strategy, giving it a "true credibility" (Busek, 2006). That is why the European Commission Press Release (2004a,b) and the former Coordinator of the Stability Pact, Busek (Busek, 2004), held that the Energy Community was consciously modeled on the European Coal and Steel Community that in the 1950s was the genesis for the European Community.[12]

3.3. The Eight REM in Europe – the SEE REM

It should be stressed that defining the geographic scope of the REM is a very important issue because it is the first step towards the creation of the market itself. On the other hand, defining the borders of a REM is not an easy task. It depends on the national and cross-border transmission capacity, congestions in the interconnections and experienced peak demand (Deitz et al., 2008). Furthermore, there might be an overlap between the markets and one national electricity market may tend to fall in different regional structures. This is not uncommon for the Balkans since these countries belong to different regional political and economic initiatives in other fields as well. The Congestion Management Guidelines from 2003, which define the other regional initiatives in Europe, did not define the SEE region. This was done later by a decision of the Ministerial Council from 27.06.2007 as covering the territories of the Contracting Parties of the EnCT, as well as Republic of Bulgaria, Hungary, Romania, Slovenia, the Hellenic Republic and the territory of Italy with regards to the interconnections with the territories of the Contracting Parties.

Measuring the benefits and challenges of establishing a SEE REM, it was held that all the difficult but necessary reforms would not be possible without the clear membership perspective of all the countries from the SEE region (Busek, 2004; Hombach, 2004). The perspective of accession to the EU explained above, and not the European financial funding as well as the funding by other donors, has been the key driving force for undertaking these difficult reforms. The former Stability Pact Coordinator argues that even though the donor support is necessary, it has proven not to be sufficient in moving the reform process along.[13] The European Commission has acknowledged that, and in March 2008 has adopted a Communication concerning the steps of the SEE countries towards the EU membership (European Commission, 2008). One of the enhanced priorities in the 2008 Communication was the regional cooperation, covering the Energy Community (European Commission Press Release, 2008b; European Commission, 2009), which has been said that is an "issue specific extension of the pre-accession status".[14] This was another expression of the strong commitment to the European perspective of these countries (European Commission Press Release, 2008a), including the establishment of a REM.

4. Regional Electricity initiatives in Europe: ERGEG ERI

The literature covering the regional electricity markets is scarce.[15] In spring 2006, ERGEG with support of the European Commission, launched two Regional Initiatives: Electricity Regional Initiative and Gas Regional Initiative.[16] The seven ERI differed from those ones firstly mentioned by the Commission in 2004, and overlapped between each other. They coincided with the mini-fora countries.[17]

Each of these ERI could deal with the regional problems and could develop their own way for integrating the markets. However, a cautious approach needs to be taken in order to ensure that the overall goal of the single market is not compromised by too many or too different regional initiatives. It should be taken in consideration that there is a risk that several strong regions develop which will be difficult to integrate with other regions later on. Therefore, harmonization and coordination of the regional integration process is necessary and that task of coordinating is taken by ERGEG.[18]

The voluntary character of the ERI is an important issue. There is a lack of legal basis to deal with the specificities of the regional integration.[19] Therefore, if the ERI are to be successful, the commitment of stakeholders to participate and to take responsibility for implementing the agreed solutions is crucial (Sabolic, 2008). Moreover, the political willingness is very important. Even though the ERI are designed as a Bottom-up approach, there are certain issues that must be addressed from a Top-down perspective. Moreover, a recent

[11] Hooper and Medvedev (2008) supra.

[12] The Treaty of Paris establishing the European Coal and Steel Community, Paris was signed on 18.04.1951, entered into force 25.07.1952 and expired 50 years later on 23.07.2002. It was the first Community organization after the Second World War between France, Germany, Italy, Belgium, Luxembourg and the Netherlands. Besides economic, it was also a political decision, because the idea was to put the French and German coal and steel production together in order to strengthen solidarity, prohibit the war and open the way to European integration. Similarly, the Energy Community is seen as a milestone in reconciliation after the wars of the 1990s because the reconstructing the economy and ensuring the peace in SEE region is necessary as was the case in Western Europe after the Second World War.

[13] Busek (2004) supra.

[14] Deitz et al. (2008) supra at 7.

[15] For an overview of the three REMs created before the launch of the ERI by ERGEG, Nord Pool, Central West and Iberian REM, see: Meeus and Belmans (2008). For an overview of all the ERI in Europe see the recent report about the wholesale electricity market opening in SEE: Poyry and Nord Pool (2010). Trinh and Meeus wrote an article that discusses the ERI in the context of the Florence Forum: Trinh and Meeus (2009). Finally, the most comprehensive overview was provided by a recent study commissioned by the European Commission: Everis and Mercados Energy Markets International (2009) (hereinafter, ERI Peer Review, 2009 supra).

[16] This article voluntarily limits itself to the electricity markets and therefore the gas regional initiatives will not be discussed here.

[17] Seven ERI proposed by ERGEG are: Baltic States (Estonia, Latvia, Lithuania); Central East (Austria, Czech Republic, Germany, Hungary, Poland, Slovakia, Slovenia); Central South (Austria, France, Germany, Greece, Italy, Slovenia); Central West (Belgium, France, Germany, Luxembourg, Netherlands); Northern Europe (Denmark, Finland, Germany, Norway, Poland, Sweden); South West (France, Portugal, Spain) and UK and Ireland (France, Republic of Ireland, UK).

[18] The risk of compromising the final goal – development of a single European electricity market by developing seven different REMs is addressed in all papers dealing with REMs.

[19] Only with the third Electricity Directive an article on promotion of regional cooperation was included. It provides that the "TSOs should have one or more integrated system(s) at regional level covering two or more Member States for capacity allocation…". See, Article 6(3) Directive 2009/72/EC (2009).

study ordered by the Commission to discuss the development of the ERI, has drawn the attention to the strengths as well as the weaknesses of the ERI. Similarly to ERGEG, it has noted that the enhancement of regional cooperation, allowing the regions to move with different speed accepting that "one size fits all" approach cannot work, as well as the possibility for pilot testing, benchmarking and spread of best practice, were identified as the strengths of the ERI. On the other hand, the governance issues, such as lack of clear leadership, the small role of the national governments as well as the diverse regulatory powers and the ability to exercise these powers, together with some administrative factors, were identified as the main weaknesses of ERI. The reason for this was that the strong Government involvement from the beginning of the process was present in the most successfully integrated REMs, such as Nordel, MIBEL and SEM. Even though the changes with the third legislative package,[20] such as the creation of ACER and its role to promote the regional integration, the strengthening of the NRAs powers and the obligation for developing the EU network codes is expected to mitigate some of these weaknesses, they will not be able to remove all existing problems. For instance, the role of the national Governments remains unchanged in the new EU energy legislation.

It should be underlined that the division of the stakeholders and the voluntary cooperation between the regulators and operators in the seven ERI launched by ERGEG differ from the clearly established formal institutions of the Energy Community. Therefore, due to the fact that political cooperation is essential for successful regional integration of the electricity markets, there was a proposal for establishment of a Ministerial Council and meetings at highest political level.[21] In the same line, an important issue is that the ERI were launched against the background of other political initiatives and within the existing legal and regulatory framework. In particular, the other political initiatives at the regional level cover the Pentalateral Energy Forum,[22] the commitment of the Governments of Portugal and Spain to creating a single wholesale electricity market across Iberia, as well as the regulators and governments of the Republic of Ireland and Northern Ireland in order to create a Single Electricity Market across Ireland. The strong political will between the countries is thus an important requirement for successful integration.

5. Cross-border issues: congestion management

Following the abolition of the national barriers to the free movement of goods and services, the EU is trying to eliminate the remaining obstacles to the free flow of an essential commodity such as electricity.[23] The restructuring of the previous vertical integrated companies and the establishment of interconnectors between the EU Members States are some of the preconditions necessary to establish REMs within the EU. However, detailed overview of the liberalization reforms is out of the scope of this paper.[24] Only one of the most important issues - the congestion management (CM), in the work of the ERGEG ERI and SEE REM will be addressed. Before going into details of the different regional integrations, a short overview of the legal framework for CM will be provided.

5.1. The congestion management mechanisms – legal framework

It should be taken in mind that the Electricity Directive from 2003 did not include provisions on cross-border trade of electricity, but instead it was decided that this issue should be dealt with directly applicable instrument which needs no implementation, and a Regulation 1228/2003/EC was adopted to set the basic rule for cross-border exchanges in electricity.[25] The later was supplemented by Guidelines on congestion management (CMG) and by Trans-European Energy (TEN-E) Guidelines.

The Regulation 1228/2003 aims at setting fair rules for cross-border exchanges in electricity within the internal EU electricity market and according to this legislation there shall be a compensation mechanism for cross-border transit flows of electricity, harmonized principles for network access charges and rules for allocation of available capacities of interconnections between national transmission systems. Due to consistency and space limitations, the cross-border issues such as ITC Mechanism, access charges, harmonizing the licenses for the market participants taking into consideration the transparency requirements will not be dealt in this paper. Only the capacity allocation and congestion management, as an issue with highest priority in all the ERGEG ERI as well as the SEE REM, will be briefly introduced in the following paragraph.

The creation of a single market requires the development and availability, of interconnection capacity and its most efficient use. Therefore, as cross-border trading increases, there is an increasing need to allocate the available cross-border capacity in an efficient manner and to develop congestion management methods. It is necessary to solve the congestions that occur before the system' security is jeopardized and to ensure non-discriminatory and competitive, transparent electricity market. While Regulation 1228/2003 covers only the general principles of congestion management, the CMG attached as an Annex to this Regulation, regulate the mechanisms for congestion management, calculation of interconnection capacity, timetable for market operations, transparency and use of congestion income. The congestion management methods should be such as not to discriminate the market participants, and regulators should not allow that the long-term capacity reservations to amount to exercise of market power. In addition, it should not be allowed for a single buyer to control large amount of the auctioned capacity and unused capacity should be made available for all buyers. According to CMG only market based methods are allowed i.e. explicit and implicit auctions, and not the non-market based approaches like pro-rata allocation management. Both methods may coexist on the same interconnection. For intra-day trade continuous trading is also allowed and may be used. Furthermore common allocation of the full capacity rather than a capacity split of 50%–50% should preferably be pursued.

The new CMG were adopted in November 2006. Nevertheless, the new CMG were broad enough as well to allow diverging paths between the different regions. Finally, these CMG as well as the

[20] The third energy package was adopted September 2009 and will come into force in 18 months. Two new liberalization Directives were adopted, one for electricity (see Sabolic, 2008) and another one for gas, as well as three Regulations: one for cross-border exchanges in electricity, another one for access to gas networks and a third one for establishing Agency for cooperation of energy regulators (ACER).

[21] ERI Peer Review, 2009 supra.

[22] The governments of Belgium, France, Germany, Luxembourg and the Netherlands have initiated the Pentalateral Energy Forum.

[23] However, the establishment of a competitive internal energy market remains still a work in progress. (European Commission, 2007).

[24] For a study of the limits of the current European regulatory framework in relation to the achievement of an efficient European electricity market and an assessment of the electricity liberalization reforms in the Energy Community, see: Hunt and Karova (2010).

[25] According to Article 288 Treaty of the Functioning of the European Union, the EU institutions shall adopt regulations, directives, decisions, recommendations and opinions. A regulation shall have general application and shall be binding in its entirety and directly applicable in all Member States, whereas a directive shall be binding, as to the result to be achieved, but it needs to be implemented in the Member States leaving to the national authorities the choice of form and methods.

Regulation 1228/2003 was subsequently superseded in July 2009 by Regulation 719/2009, containing new CMG as an Annex.

5.2. ERI approach towards common congestion management

The issues in relation to congestion management that the different ERI have worked on were related to capacity calculations and capacity allocations. The later cover: long-term capacity allocation, Day-Ahead capacity allocation and Intra-Day capacity allocation. With regard to the capacity calculation, EURELECTRIC has taken the view that the flow-based method is the most suitable one for day-ahead implicit allocation of commercial capacity rights, whereas it appears less suited for month-and year-ahead allocation (EURELECTRIC, 2007). It appears that also the NRAs and the participants have reached a consensus that this method is the most efficient and consistent with Regulation 714/2009.[26] However, technical complexities involved in developing flow-based calculations are usually identified as reasons for the slow progress.

In relation to the allocation of interconnection capacity, annual and monthly allocation has been a priority work area for many of the Regions. A number of different approaches to the allocation of long-term capacity are being adopted by the Regions, ranging from primary reliance on an efficient Day-Ahead Market and financial hedging instruments to the development of Regional Auction Offices. The later were successfully established in two REMs only. In the CW Region a joint office of the 7 grid owners has been set up and since 2009 has been responsible for longer-term capacity auctions in the Region, whereas the CE Region is currently consulting on the Auction Rules, where it envisages introducing a flow-based auction during 2010. Besides the long-term, significant progress has been achieved in allocating capacity on a Day-Ahead basis independently of the ERI process and many developments predate such process.[27] Market coupling is an area where progress has been made, but only in specific geographical areas, the N, CW and SW Regions. The difficulties in the other regions were related to identifying the appropriate reference transmission model to regulatory and governance issues. Finally, the systems of intra-day capacity allocation are most advanced within existing power markets (for example, Nord pool and MIBEL).[28]

Due to the fact that the long-term objective for having ore harmonized congestion management procedures would happen in phases, each year, ERGEG publishes a report with the achievements and the progress in each electricity regional initiative and it also addresses the remaining open questions and the prospects to follow. There have been three such reports so far, for ERGEG (2007), ERGEG (2008) and ERGEG (2009). These reports have identified that the key development in the ERIs was the growing consensus across Europe towards target congestion management mechanisms, the implementation of which will allow electricity interconnectors across Europe to be used more efficiently. This Report has also underlined that the ERI has led to an EU-wide consensus that a CAO at regional level is the congestion management model for allocating medium- and long-term capacity on electricity interconnectors. This is of particular importance because CAO, as it will be shown below, is in the process of establishment for the SEE REM as well.

It should be noted that the first Progress report of 2007 did not address the SEE REM as an existing initiative for establishing a REM, even though the EnCT has been signed and has entered into force at that time. The second Progress report of 2008 has done this for the first time, whereas the third Progress report of 2009 contains an Annex covering the development of the Energy Community. It stresses the fact that the Energy Community region is not one of the seven ERI launched by ERGEG and that ERGEG does not have any responsibility for that region. Nevertheless, in the interest of sharing best practice experiences gained within Europe, representatives of the Energy Community are invited to attend the meetings of the ERGEG ERI Task Force. Given the overlaps between the members of SEE REM and the CE and CS ERI streamlining the regulatory approaches with the best practice experience gained in Europe is necessary.

5.3. The common congestion management in the 8th REM

From the establishment of the Energy Community to date, there has been significant improvements of the capacity allocation procedures in the SEE region, as noted by SETSO (2007). Most of the pro-rata and priority list procedures that were used by the SEE countries are now changed with explicit auctions. However, with regard to transparency, data regarding auction procedures and results, as well as data on commercial and physical flows are not always publicly available. In addition to the low values of Available Transmission Capacity (ATC) there is also Already Allocated Capacity (AAC) on some borders because of old cross-border contracts from the time of Yugoslavia, and also as noted by SEETEC (2006) and recently by the study on the SEE CAO because of withholding capacity for the supply for tariff customers. It should be noted that in the EU, reservations on interconnections for old contracts is forbidden having in mind their negative effect on competition and prevention of new entrants in the market.

The level of cross-border electricity trade remains a benchmark for market integration. As noted by the ECRB, insufficient transmission interconnection capacity, lack of transparency and great number of borders in combination with different transmission capacity auction mechanisms are the main reasons for limited cross-border trading.

In the last couple of years, load flow-based allocation methods were assessed by the TSOs from the SEE. Within the Athens Process framework, a project of implementation of a system of Co-ordinated Explicit Flow-based Auctions for transmission capacity allocation has been launched. A supra-national approach by which all bids for energy and the related cross-border capacity shall be managed by a centralized entity that takes care of the actual allocation – CAO. The commercial transactions will not be limited to the interconnections where they are reported, but they are converted into physical power flows by using a simplified representation of the network.

As a starting point of the project, a Dry-Run for Coordinated Auctioning in SEE is being tested with the ultimate aim of establishing a CAO by 2010. The Dry-run project was initiated with 8 TSOs from SEE. Launched in 2006, the project consists of three distinct phases. In the *first phase* (2006–2007), a web based auction portal Dry-run Coordinated Auction Tool was developed.[29] Eight TSOs from the region acted as traders in a simulation of monthly flow-based coordinated auctions and each of the eight TSOs took over the role of a CAO for period of one month. In the *second phase* (2007–2008), the simulation was extended to include the participation of traders and additional functions were integrated into the model. In the final, *third phase* of the Dry-run (2008–2009) the ECS initiated a consultancy project in order to assess and further develop the proposed flow-based capacity allocation approach. The study from this project focuses on flow-based coordinated explicit

[26] ERI Peer Review, 2009 supra at 29.
[27] ERI Peer Review, 2009 supra at 34.
[28] ERI Peer Review, 2009 supra at 37.

[29] This is tool that simulates load flow-based coordinated auctions, which in response results in transmission rights in electricity networks.

auctions, because for the moment that is the target solution for congestion management in SEE APCS (2009). In future, when the markets are more mature, the implicit auctions would be considered. It analyses the Maximum Flow Approach technical parameter calculation concept, the revenue distribution and organizational issues.

In the same manner as the Dry-run, the CAO project aims at harmonization of congestion management methods and optimization of cross-border capacity allocation. The fundamental difference with the Dry-run is the shift from a fictive model to a real situation. Therefore, besides the software there will be an office and multi-national staff that will manage auctions and load flows for the entire SEE region, which is estimated to be operational in 2011.

The TSOs of the region have signed a MoU on this issue, which was seen as a decisive line of action, as it formalizes the stakeholders' commitment towards the project. On the occasion of the 5th Ministerial Council (11.12.2008), the MoU on the establishment of CAO in South East Europe was opened for signature and it was signed by the majority of the TSOs in a short period of time. Moreover, an Action Plan has been drafted to define the steps to establish the CAO. The plan defines the necessary steps towards the establishment of the office and outlines an indicative time plan. The Action Plan was presented at the 11th Athens Forum and approved at the 4th Implementation Group meeting in May 2008. There are four groups of tasks of CAO identified in the Action Plan: technical, commercial, organizational and legal.

In addition, a study on the legal requirements for participation of the TSOs in a SEE CAO has been prepared (Kelemenis and Co., 2009). The scope was screening the legal orders of the national jurisdictions covered in the eight REM identifying the legal, regulatory and administrative requirements in the existing national primary and secondary legislation within the local jurisdictions, in order for the local TSOs to be able to participate in the establishment and operation of the CAO. The study provides the form and structure of the CAO, the capacity allocation model to be initiated, the nature and type of services the CAO will provide and the legal relationship the SEE CAO will have with the market participants and the TSOs. The SEE CAO will not have competence on issues related to security of supply, which shall remain within the exclusive powers of the national governments and TSOs. Moreover, it will not own transmission assets, will not manage national transmission systems or cross-border interconnections and it will not provide access to the network. All these matters will remain within the competencies of the national authorities.

To sum up, significant progress in establishing the SEE CAO has been made in 2008 and 2009 by: *firstly*, the signature of a MoU on setting up the SEE CAO by the involved TSOs; *secondly*, the Ministerial Council has expressed its political support for the SEE CAO operating in Montenegro; *thirdly*, Business Plan and an Action Plan were developed on the milestones; *fourthly*, Steering Committee under the chairmanship of the Montenegrin TSO responsible for guiding the work of a Project Team dedicated to establishing the SEE CAO was set; *fifthly*, a recommendation on a harmonized trade licensing approach across the Region was provided; and *finally*, regulatory assessments on how to overcome non-compliance with the capacity allocation and congestion management requirements of the energy *acquis* was initiated.

It has been noted the lack of political strategy as a main source of problems in implementing CAO.[30] The CAO has gained lots of support by the European Commission, the Energy Community institutions and the SEE countries. However, it was realized that this support was usually of declarative nature and the politicians stepped out of the process leaving the TSOs and the Energy Community institutions to finish the reforms. Nevertheless, as emphasized above, since it is very much politically sensitive to give away control on strategic assets, such as cross-border capacities, political strategies are necessary and the decision-makers shall be aware of the costs and benefits of establishing CAO. That was acknowledged in SEE and recently the support for choosing CAO as an approach for regionally coordinated congestion management was given by: the TSOs/ISO of the 8th REM through the MoU, as well as at highest political level by the Ministerial Council through the Decision in 2008.

In addition to the establishment of CAO, according to a recent study financed by the World Bank related to wholesale market opening in the SEE, a well functioning DAM shall be established. The CAO shall be responsible for determining the available cross-border capacities for trade by explicit auctions and providing the Regional PX[31] with daily capacities for the implicit auction. In this way the two concepts are seen to coexist and to mutually support each other.[32]

6. Conclusions

The Contracting Parties of the Energy Community, the countries from SEE, are all countries in transition to market economy. Due to the common past, cultural and historical heritage they share common political, economic and social problems. Since the regional problems require regional solutions there are many regional initiatives launched for these countries by the European Commission and other international donors. The establishment of the Energy Community is an example for a regional initiative launched by the EU and the Stability Pact. This is the main difference between the other seven ERI launched in other parts of Europe. Even though the later were officially launched by ERGEG in 2006, they covered some of the regional integrations existing before by the market players and by NRAs' cooperation in different parts of Europe, whereas the idea for the SEE REM was born solely by external actors.

As explained in the preceding paragraphs, the benefits from regional cooperation in energy are great. Therefore, also the third legislative energy package in the EU has underlined the importance of establishing REMs as transitional steps towards a truly integrated internal energy market. So far, the economic and political regional initiatives covering the SEE countries in other fields have been characterized with a limited success and were mostly accepted in the framework of the perspective for Euro-Atlantic integration of the SEE countries. Nevertheless, the development of the SEE REM in the framework of the Energy Community has been impressive in the short period of its existence. Despite the many remaining open issues before its effective functioning and integration with the other REMs in Europe, many steps and great reforms have been undertaken in the electricity markets of the SEE countries at national but also at cross-border level (Karova, 2009).

This paper has used the example of congestion management issues as one of the issues representing the highest priority for the ERGEG ERI as well as for the SEE REM. As the assessment of the progress in the eight REM has shown, this region is on the way to establish CAO which will be in charged with regional capacity allocation. This is in line not only with the Regulation 714/2009, but also with the developments in the most developed REMs in Europe. Moreover, developments in this field in the Energy Community are

[30] Sabolic (2008) supra.

[31] The Regional PX is not seen as a regional power exchange, but as a regional price setter for the DAM which shall perform the DAM auction based on implicit auction menthod.

[32] Poyry and Nord Pool (2010) supra.

even more advanced than the developments in some of the ERGEG ERI. As it could be incurred from the existing successful REMs in other parts of Europe, the political will and dedication of the market players is essential for an effective integration of the national electricity markets. In this line, the assessment of the congestion management issues for the 8th REM has shown that political and the will of the participants is not lacking in this region either.

Improved transparency and availability of data, in particular related to the available transmission capacity for cross-border trade, is certainly necessary if the establishment of the eight REM in Europe is to be a successful story. Moreover, phasing out the AAC for support of tariff customers and giving all the available transmission capacity for trading at the wholesale electricity market would add to establishing a liquid market place. In addition, taking into consideration the small size and the high concentration of the national electricity markets, introducing competition in the generation markets in each Contracting Party is not a sustainable solution. However, in a regional context the national dominant generation incumbents are not so large and there is space for introducing competition at a regional generation market. Finally, the regional market would certainly allow reduction of costs and better utilization of the complementary generation mix in the region.

Taking into consideration the reforms already done and the recommendations outlined above, there are good reasons for which the positive expectations for a success of the regional initiative between the SEE countries in the energy field, in the framework of the Energy Community, could be confirmed.

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References

APCS Power Clearing and Settlement AG and CONSENTEC (Consulting für Energiewirtschaft und -technik GmbH). Study on the final development and establishment of a Coordinated Congestion Management in the SEE Region (SOFiDE CCM SEE), commissioned by the ECS, 12.12.2009.

Becker, J., Jurkeit, J., 2001. The Balkans stability pact and the interests of the west. South East Europe Review for Labour and Social Affairs (01), 145–160.

Busek, E., 2004. The Stability Pact: Adapting to a Changing Environment in South Eastern Europe – Successes and Remaining Challenges, vol. 4. SÜDOSTEUROPA Mitteilungen.

Busek, E., 2006. The Energy Community Treaty: Securing the Energy Supply in Southeast Europe and in the EU, vol. 05–06. SÜDOSTEUROPA Mitteilungen. pp. 16–21.

Deitz, et al., 2008. The Energy Community of South East Europe: Challenges of, and Obstacles to Europeanization CCP Working Paper 08–4.

Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 Concerning Common Rules for the Internal Market in Electricity and Repealing Directive 2003/54/EC, OJ 2003/L 211/55, 14.08.2009

EURELECTRIC, Position Paper Flow-Based Allocation of Transmission Capacity, May 2007

European Commission, 01.03.2004a. DG TREN, Strategy Paper: Medium – Term Vision for the Internal Electricity Market Brussels.

European Commission, 3–4.06.2004b. DG TREN: discussion and consultation note, the regional energy market in South East Europe and its integration into the European community's internal energy market. The Athens Forum.

European Commission, 10.01.2007. DG Competition, Report on Energy Sector Inquiry SEC (2006) 1724 final.

European Commission, Press Release, 25.10.2005a. The EU and South East Europe Sign A Historic Treaty to Boost Energy Integration, Brussels IP/05/1346.

European Commission, Press Release, 25.10.2005b. An Integrated Market for Electricity and Gas across 34 European Countries MEMO/05/397.

European Commission, 05.03.2008. Communication from the Commission to the European Parliament and the Council, Western Balkans. Enhancing the European Perspective, Brussels. COM, 127final.

European Commission, Press Release, 05.03.2008a. Western Balkans: Enhancing the European Perspective, Brussels IP/08/378.

European Commission, Press Release, 05.03.2008b. Regional Cooperation: An Overview of Main Activities, Brussels MEMO/08/143.

European Commission, 03.02.2009. Commission Staff Working Paper: EU Regionally Relevant Activities in the Western Balkans 2008/09. SEC(2009)128 final, Brussels.

European Council, 20.7.2006. Council Decision of 29 May 2006 on the conclusion by the European Community of the Energy Community Treaty, (EC) No (2006) 500. OJ L 198.

ERGEG, 08.02.2006. The Creation of Regional Electricity Markets, An ERGEG Conclusions Paper Ref: E05-ERF-03–06a.

ERGEG, Regional Initiatives Annual Report: Progress and Prospects, March 2007.

ERGEG, Regional Initiative Annual Report 2008. The Regional Initiatives – Europe's Key to Energy Market Integration, 26.02.2008.

ERGEG, Regional Initiatives Annual Report: Safeguarding the Move to a Single EU Energy Market, November 2009

Everis and Mercados Energy Markets International, From Regional Markets to a Single European Market, Draft Final Report, (not published), 17.12.2009.

Hombach, B., 2004. The Stability Pact – Lessons for the Future, vol. 4. SÜDOSTEUROPA Mitteilungen.

Hooper, E., Medvedev, A., January 2008. Electrifying Integration: Electricity Production and the South East Europe Regional Energy Market CCP Working Paper 08-6.

Hunt, M., Karova, R., 2010. The energy acquis under the energy community treaty and the integration of South East European electricity markets: an uneasy relationship? In: Delvaux, B., Hunt, M., Talus, K. (Eds.), "EU Law and Policy Issues", ELRF Collection, second ed. Euroconfidentiel, Brussels.

Karova, R., 2009. Energy Community for South East Europe: Rationale Behind and Implementation to Date, vol. 12. RSCAS. EUI Working Paper.

Kelemenis & Co. Law Firm, 07.07.2009. Study on the Identification of Legal Requirements and Issues Related to the Establishment and Operation of and the Participation an a Coordinated Auction Office in South Eastern Europe; Part 1: Possible Obstacles to Participation of TSO and Traders in the Planned Coordinated Auction Office in South Eastern Europe. Energy Community Secretariat.

Kennedy, D., Besant-Jones, J., 2004. World Bank Framework for Development of Regional Energy Trade in South East Europe. World Bank, Energy and Mining Sector Board. Discussion Paper, Paper No. 12.

Meeus, L., Belmans, R. Electricity Market Integration in Europe, 16th PSCC, Glasgow Scotland, July 14–18, 2008.

Memorandum of Understanding on the Regional Electricity Market in South East Europe and its Integration into the European Union Internal Electricity Market, signed in Athens on 15/11/02. bis D(2002) C2/BD/CA

Memorandum of Understanding on the Regional Energy Market in South East Europe and its Integration into the European Union Internal Energy Market singed in Athens on 8/12/2003 15548/03/bis

Ministerial Council Decision on Establishing the South East European Board for Electricity and Gas, Tirana Declaration, 01.06.2004

Pierce, R., et al., 2007. Regional electricity market integration: a comparative perspective. Competition and Regulation in Network Industries 8 (2).

Poyry and Nord Pool, South East Europe Wholesale Market Opening, Final Report, July, 2010.

Sabolic, D., 2008. Issues in Electricity Market Reform in Croatia and the SEE Region. Institute of Electrical and Electronics Engineers.

SETSO, Overview of transmission capacity Allocation methods in SEE (Status July 2007) & Report on the Coordinated Auctions dry-run simulation, Document for 11th Athens Forum, November 15th, 2007

SEETEC Balkans: Study of the Obstacles to Trade and Compatibility of Market Rules, Southeastern Europe Electrical System Technical Support Project, Regional Activity REM-1202: Final Draft Report 014551-REM-1202-47RA-I-0001-01, June 2006, presented at the 9th Athens Forum, 23–25 October 2006, Athens.

Treaty establishing the Energy Community for South East Europe, signed on 25.10.2005, OJ 2006 L 198/18.

Trinh, Q.C., Meeus, L. From Florence forum to Florence process: a look back. In: 6th International Conference on The European Electricity Market EEM09, Leuven, May 27–29, 2009.

Vandenborre, C., 2008. Regional integration of electricity markets: conceptual and practical considerations. In: Roggenkamp, M., Hammer, U. (Eds.), European Energy Law Report V. Intersentia.

World Bank. The Road To Stability And Prosperity In South Eastern Europe: A Regional Strategy Paper, March 1, 2000.

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