Energy Community Regulatory Board

REGULATION OF GAS TRANSMISSION FLOWS
IN THE ENERGY COMMUNITY

ASSESSMENT PAPER

February 2011
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1. EXECUTIVE SUMMARY

Regulatory experience shows that transmission charges in South East Europe are not always transparent and system users are not always aware if the fees charged for transmission are correct and justified. The spread of cross-border transmission tariffs in the region further indicates that different criteria or cost drivers are used in each single jurisdiction. As in parts of Europe “pan caking” remains an issue that deserves to be addressed on regional level.

The present report analyzes gas transmission tarification in South East Europe (SEE), outlines the current status of national and cross-border transmission tarification and identifies possible measures for improvement.

The assessment shows that compliance with the legal requirements of the Energy Community gas and competition acquis is still one of the key shortcomings in the Energy Community. This is true for first national legislation’s compliance with the acquis but also for the implementation in praxi and by spirit. Related to transmission tarification this explicitly relates to:

- regulated access to national and cross border transmission systems is not implemented in all jurisdictions
- a significant amount of capacities is – legally unjustified- withheld from the market under the objective of existing capacity reservations
- different treatment of national and cross border transmission systems
- destination clauses applied in supply contracts
- lack of congestion management and secondary market rules
- large variety of different tariff methodologies

These elements, combined with prevailing monopolistic structures with rarely more than one shipper controlling a significant part of the network capacity at low utilisation rates, clearly identifies barriers to the development of liquid market in South East Europe.

The fact of limited interconnections between the jurisdictions of the Region remains another – but most obvious – barrier to the development of cross border trade in South East Europe. All Energy Community Contracting Parties with a natural gas market have only one cross border connection from which only one connection links Contracting Parties. The Region will however only be able to attract investments, if a stable and coordinated legal and regulatory framework is provided to investors. The vision of gasifying and better interconnecting the markets most evidently requires especially regulatory tariff models to be streamlined across borders and provide for investment incentives.
2. INTRODUCTION

2.1 Background

The Energy Community extends the European Union's (EU) internal energy market to South East Europe (SEE). By signing the Treaty\(^1\) the signatory parties\(^2\) agreed to implement the *acquis communautaire* on electricity, gas, environment, competition and renewables with a view to realize the objectives of the Treaty and to create a regional gas and electricity market within South East Europe (SEE) capable of attracting investment. Given the small size of the national markets it is commonly understood that following a **harmonised regional approach** for the energy market of the Energy Community remains the key requirement for the promotion of investments in the Region.

2.2 Scope of Work

The present report aims at:

1. Examining the interaction between cross-border transmission and national transmission within the geographic scope of Title III of the Energy Community Treaty.

2. Identifying the status quo of regulated TPA to cross-border transmission pipelines in each jurisdiction and in particular with regard to possible different treatment of cross-border transmission and national transmission and its reasoning.

Based on the status review, the report *identifies distortions to cross-border trade and proposes adequate solutions* to be implemented on regional level. This analysis in particular focuses on the following questions:

- Does different treatment of cross-border transmission compared to national transmission in the regulated TPA regime exist?

- Is there a need for common tariffication rules for transport tariffs and how should the tariff be structured to increase the efficiency of usage of the pipeline?

- Which are the options to avoid or minimize the consequences of pancaking?

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\(^1\) The Energy Community has been established by the Treaty establishing Energy Community, signed in October 2005 in Athens and entering into force on 1 July 2006. Treaty establishing the Energy Community (hereinafter “The Treaty”). The Treaty was signed in October 2005 in Athens, Greece and entered into force on 1 July 2006. Details on the Energy Community and ECRB see www.energy-community.org;

\(^2\) The *Parties* to the Treaty are the European Community, on the one hand, and eight *Contracting Parties*, namely, Albania, Bosnia & Herzegovina, Croatia, former Yugoslav Republic of Macedonia, Moldova, Montenegro, Serbia, Ukraine and UNMIK. As of March 2009, 14 European Union Member States have the status of *Participants*. Georgia, Norway and Turkey take part as *Observers*. 

2.3 Methodology

For analysing the above outlined scope of work a questionnaire on Cross-Border Transmission Tarification has been sent to the regulatory authorities of Contracting Parties of the Energy Community, Observer Countries and Neighbouring Participants.

Data displayed in this report reflects the information provided by regulatory authorities and collected by the Task Force from other sources. Completed questionnaires have been received from 10 jurisdictions, namely Austria, Bosnia and Herzegovina (BiH), Bulgaria, Croatia, FYR of Macedonia, Greece, Italy, Serbia, Slovenia and UNMIK. No answers to the questionnaire have been provided by Montenegro and Albania (which currently do not have a natural gas market), as well as Romania and Hungary (some data have been retrieved from various public sources). UNMIK replied to the questionnaire, but also does not have a natural gas market yet.

As for all other cases, data for Bulgaria and Romania has been provided by the relevant regulatory authorities. Some of the data for these two countries, however, seems inconsistent and raised questions during the preparation of the present report. Unfortunately, questions on the respective data could not be clarified with the relevant regulatory authorities by finalization of this report. The use of data displayed for the Bulgarian and Romanian markets therefore requires reservation.

The present analysis represents the status quo in the investigated countries at the cut off date of December 2010. Especially the European markets displayed in this report may face changes due to the implementation of the 3rd legislative package for electricity and gas as of March 2011. For Austria the – by cut off date still practised and therefore in this report separately presented – different treatment of national and cross border transmission will cease with the implementation of the 3rd package.

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4 United Nations Interim Administration Mission in Kosovo established by Resolution 1244.
3. FINDINGS

The level of gas market development in SEE varies significantly. Contracting Parties are on average much less developed – their markets range from non-existent (Montenegro, UNMIK) via only starting (Albania, FYR of Macedonia, Bosnia and Herzegovina) to intermediate (Croatia, Serbia). On the other hand EU countries in SEE are mostly well on their way and mature (Romania, Austria, Hungary, Italy), with Slovenia, Bulgaria and Greece lagging behind.

The assessment hereinafter analyses the gas transmission tarification rules applied in SEE and discusses linked arguments of network access, products and system differences.

3.1 Network Access

An assessment of the status quo of regulated Third Party Access (TPA) to cross-border transmission pipelines in each jurisdiction shows that all countries stipulate regulated third party access –

- To national transmission pipelines except for Bosnia and Herzegovina lacking the relevant legal framework.
- To cross border transmission pipelines except for Bosnia and Herzegovina, Bulgaria, Serbia and Romania.

Except for Bosnia and Herzegovina and Serbia, where a proper legal framework is missing, the lack of regulated access to cross border transmission pipelines in the two other mentioned jurisdictions is not reasoned by missing legislative requirements but argued with the fact that cross border transmission capacities are 100% booked under existing contracts. Hungary, even more specifically refers to sanctity of contracts concluded before 2004. However, it has to be stressed that legally this argumentation is not sound. While it is correct that Article 32 paragraph 1 Directive 2003/55/EC ("Gas Directive") foresees that existing transport contracts shall remain valid beyond 1 July 2004, the same provision clearly limits this to contracts concluded pursuant to Article 3 paragraph 1 Directive 91/296. The later provision more precisely limits the sanctity of existing contracts to contracts:

- concluded between the companies listed in the Annex of Directive 91/296;
related to flows transported via a route with the grid of origin or final destination situated in the European Union\(^{16}\) and crossing at least one intra-European frontier\(^{17}\) and

notified to the European Commission.

Having in mind that neither Directive 91/296 was applicable in the Energy Community jurisdictions nor one of the Energy Community’s Network Operators is listed in the Annex of Directive 91/296, the legal conclusion is that none of the existing cross border transmission contracts is protected but the full capacity needs to be offered to the market. Even if respecting the capacity rights under the existing contracts – and this is already more than what would be legally required – the contract conditions and tariffs turn into a regulated system. A pragmatic approach would require to at least apply the UIOLI and UIOSI principles to contracted but unused capacities provided that the existing contract does not explicitly contain a prohibition for the capacity holder to re-assign unused capacity to the market\(^{18}\). However, even if a capacity holder who refuses re-allocation of his unused contracted capacities could claim compliance with the Article 5 (4) Regulation (EC) 1775/2005, the relevant contract clause will have to be scrutinized under Article 102 TFEU\(^{19}\) (ex Article 82 EC):

DG Competition in the RWE\(^{20}\) and Distrigaz Cases\(^{21}\) set the blueprint for the legal assessment of long term capacity booking contracts and long term gas supply contracts respectively. Following this cases it can be concluded that although the conclusion of long term contracts can be both in line with the Regulation (EC) 1775/2005 and Article 18 (3) Directive 2003/55/EC when it comes to markets which are open to competition these contracts must be in line with the competition acquis and subject to competition policy requirements. Considering the very nature of contracts reserving 100% of network capacity it is very unlikely that they will stand a competition law analysis\(^{22}\).

As regards priority allocation of capacity on the basis of long term contracts the ruling of the European Court of Justice (ECJ), case C17/03\(^{23}\), identifies the automatic grant of priority capacity rights reasoned by the existence of a long term supply contract as incompatible with the requirements of Directive 2003/55/EC. The ECJ in the relevant case further ruled that consequently, the supply company in question will have to acquire the capacity needed on the basis of a non-discriminatory market based mechanism.

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\(^{16}\) The original wording of Directive 91/296 still refers to “the Community”.

\(^{17}\) Article 1 para 1 lit (a), (b) 91/296.

\(^{18}\) This seems to be most relevant when taking into consideration the low level of capacity utilisation rates (for details see chapter 3.1).


\(^{20}\) Case COMP/39.402 - RWE gas foreclosure


\(^{22}\) When assessing the likely positive and negative effects on competition in individual cases, the Commission focuses on five elements: (i) the market position of the supplier, (ii) the share of the customer’s demand tied under the contract, (iii) the duration of the contracts, (iv) the overall share of the market covered by contracts containing such ties, and (v) efficiencies.

\(^{23}\) Case C-17/03 VEMW, APX en Eneco N.v. v. DTE ECR I-4983
– Existing capacity reservations based on long term contracts are further unlikely to be legally protectable on the basis of Public Service Obligations (PSO)\(^ {24}\) and with a view to achieving security of supply. Also PSO measures have to be subject to a strict proportionality test that would – in the specific case – require a demonstration of a clear link between the re-offering of capacities contracted under existing long term contracts and the threat for security of supply.

The relevant entry/exit points to/from the transmission network are only approved by the regulators\(^ {25}\) of EU Member States but not the Contracting Parties´ regulators.

The interaction of cross-border transmission and national transmission in the Energy Community countries does not provide a unique picture: only the Austrian, Bulgarian, Hungarian, Romanian, Slovenian and Serbian markets are characterized by gas flows which are to an extent being transited through the country ("transit countries"). The most evident result shows that majority of "transit countries" treat national transmission flows differently from cross border transmission, applying different tariff models, access and market rules (CAM, CMP, balancing rules, secondary market).

It has to be underlined that such different treatment is not in line with Directive 2003/55/EC, by which different treatment of transit and transmission has been abolished. Since 2004\(^ {26}\) (for EU countries) and 2007\(^ {27}\) (for the Contracting Parties) the concept of transit has ceased to exist and all transmission of natural gas is now subject to the same regulatory rules (market model and tariffs) to be determined by the independent regulatory authority. For the European level the European Commission has opened infringement procedures against those Member States that either does not regulate access for cross border ("transit") flows\(^ {28}\) or keep different treatment of transit and transmission flows\(^ {29}\).

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\(^{24}\) Articles 3 Directives 2003/54/EC and 2003/55/EC.


\(^{26}\) Directive 2003/55/EC abolished the difference between national transmission and "transit". Consequently, transit (cross border transmission) and national transmission flows have to be treated the same way and within the same regulatory model.

\(^{27}\) One year after entering into force of the Treaty Establishing the Energy Community.


Table 1: Network Access

<table>
<thead>
<tr>
<th>Country</th>
<th>Regulated TPA to transmission/CB transmission</th>
<th>Relevant entry/exit point approved by regulator for transmission/CB transmission</th>
<th>Different treatment for national and CB transmission flows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>YES / YES</td>
<td>YES / YES</td>
<td>YES (different tariff and market rules)</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>YES / NO</td>
<td>YES / NO</td>
<td>YES</td>
</tr>
<tr>
<td>Greece</td>
<td>YES/YES</td>
<td>YES/YES31</td>
<td>NO32</td>
</tr>
<tr>
<td>Hungary</td>
<td>YES/NO33</td>
<td>NA</td>
<td>YES34 (rTPA and nTPA on CB)</td>
</tr>
<tr>
<td>Italy</td>
<td>YES / YES</td>
<td>YES / YES</td>
<td>NO</td>
</tr>
<tr>
<td>Slovenia</td>
<td>YES / YES</td>
<td>YES / YES</td>
<td>YES (different tariff and market rules)</td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>NO (no legal framework)</td>
<td>NAP35</td>
<td>NAP</td>
</tr>
<tr>
<td>Croatia</td>
<td>YES / YES</td>
<td>YES/YES36</td>
<td>NO</td>
</tr>
<tr>
<td>Romania</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td>YES</td>
</tr>
<tr>
<td>Serbia</td>
<td>YES / NO</td>
<td>NO / NO</td>
<td>YES (different access rules, tariff and market rules)</td>
</tr>
<tr>
<td>FYR of Macedonia</td>
<td>YES / YES</td>
<td>YES / NO</td>
<td>NAP</td>
</tr>
<tr>
<td>UNMIK37</td>
<td>YES / YES</td>
<td>NAP</td>
<td>NAP</td>
</tr>
</tbody>
</table>

30 Where cross border flows are regulated.
31 Formally, all entry and exit points to/from the Greek National Gas Transmission Grid (NGTS) are included in the Network Code. This Code is approved by the Minister, following the consenting opinion of the Regulator, i.e. the Minister can either accept or reject the proposal of RAE.
32 No different provisions for domestic and cross border transmission flows exist in Greece. However, cross border transmission flows have not been operated for the time being.
33 Transit is a part of the entry-exit system, except for contracts which entered into force before market opening (2004), which are not regulated. KEMA, Study on Methodologies for Gas Transmission Network Tariffs and Gas Balancing Fees in Europe, 2010 (p.53).
34 Transit is a part of the entry-exit system, except for contracts which entered into force before market opening (2004), which are not regulated. KEMA, Study on Methodologies for Gas Transmission Network Tariffs and Gas Balancing Fees in Europe, 2010 (p. 53).
35 Abbreviation “NAP” is used for “not applicable”
36 The market rules proposed by regulator and approved by the Ministry define all entry/exit points as relevant
37 No gas market at present
3.2 Capacity Situation: (Long Term) Bookings – Utilisation – Share of Users

While the previous chapter 3.1 gives a picture of the general (legal) possibility for third parties accessing the gas transmission networks as such, the following considerations draw attention on the actual access possibilities. For getting a comprehensive view on the practical network accessibility, a closer look needs to be given on the capacity situation, level of capacity booking and actual usage rate. A second focus is given to the share of the users in the system, providing a picture of the market liquidity and thereby also preparing indicators for the efficiency assessment of existing capacity allocation mechanisms (CAM) and congestion management procedures (CMP) in the next chapter 3.3: a high level of capacity being contractually reserved by a small number of users certainly is a strong plea for appropriate regulation.

The share of cross border transmission capacity in whole transmission system varies from very high to rather moderate percentages: while in Austria (80%) and Bulgaria (69%) the majority of flows are transported cross border, the percentages for Slovenia (42.8%), Hungary 38 (app. 13.4%) and Serbia (12%) are lower. For better understanding of the reported figures and graph 1 it has to be noted that display of the capacity share used for (a) national transmission and (b) cross border transmission is only possible were these systems are treated differently (“pipe in pipe”). In systems where no distinction is made between national and cross border transmission such differentiation is not provided because the relevant flows do not differ as regards their market rules, tariff or operation related aspects. The results proof this understanding, showing that only regulators from countries with different treatment of national and cross border transmission reported relevant data. Therefore, where in graph 1 a percentage of 0% is displayed, this indicates that specific rates for cross border transmission can not be provided given that no specific treatment of cross border capacities exists.

In most countries long term import contracts exist. Data related to long term 39 capacity reservation contracts is only rarely available – Hungary reports a minimum of 50% of the cross border transmission capacity booked on long term basis 40, Austria over 95% and capacity reservations even add up to 100% in Bulgaria, Slovenia and Serbia.

38 FGSZ presentation on the 4th Gas Forum (includes transit capacity to Serbia and Romania), 10-11.09.2009.
39 For the purpose of this report and in line with Article 2 para 14 Regulation (EC) 1775/2005 “long term contracts” are understood as services exceeding the duration of one year.
**Utilization rates of contracted capacities** reach almost 100% in Bulgaria and 83% in Slovenia for cross border transmission capacity. In Austria and Italy the utilization rates of contracted capacity for overall transmission system reach 63% and 70% respectively. For all other cases reported the utilization rate adds up to low levels of around or below 50%. Data for cross border transmission Bulgaria has to be judged critically since access to the relevant systems is not regulated and therefore neither regulatory insight rights nor minimum transparency requirements of Regulation (EC) 1775/2003 can be applied for verification of this figure.

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41 For better understanding of the reported figures and Graph 1 it has to be noted that display of the capacity share used for (a) national transmission and (b) cross border transmission is only possible were these systems are treated differently ("pipe in pipe"). The results proof this understanding, showing that only regulators from countries with different treatment of national and cross border transmission reported relevant data. Therefore, where graph mentions a percentage of 0% this indicates that specific rates for cross border transmission can not be provided given that no specific treatment of cross border capacities exists. The values for Greece are valid until IGI or other interconnectors start operation.

42 In some cases reasoned by seasonal demand swings and lack of storage capacities.

43 See Chapter 3.1
For the purpose of the present report utilization rates are calculated as annual quantity/contracted daily capacity x 365. For further clarification of the results displayed general awareness has to be drawn to the fact that the technical capacity at an entry or exit point from two interconnected systems may be different depending on the side from which one is looking at it. The Bulgarian gas transmission system, for example, can deliver a maximal capacity of roughly 3bcm to the interconnected Greek gas transmission network while the Greek system could take about 5.5 bcm. Awareness of this technical fact is relevant for understanding the reported rates of capacity utilization: where the utilisation level is reported as almost 100% from the Bulgarian side, it would theoretically add up to only 60% from the Greek side. However, the de facto - different from the technical - maximum capacity of the interconnection point and the interconnected systems evidently have to refer to their common capacity level. For the example of the Bulgarian/Greek interconnection point the Bulgarian level would be used as reference for technically maximally possible cross border flows.

Graph 2: Utilisation Rates Contracted Capacities

The maximum firm capacity that the transmission system operator can offer to the network users taking into account of system integrity and the operational requirements of the transmission network.

Graph 2 shows the utilization rates for contracted capacities in different transmission systems and countries. The data is presented in the form of a bar chart with color-coded bars for each country, indicating the utilization rates for national and cross-border transmission systems. The chart also includes a legend with symbols for each country: Austria, Bulgaria, Italy, Croatia, BiH, Slovenia, FYR of Macedonia, and Serbia.

44 The maximum firm capacity that the transmission system operator can offer to the network users taking into account system integrity and the operational requirements of the transmission network.
45 Or deliver to Bulgaria in case of a reverse flow.
46 See as well capacity map ENTSO-G [http://www.entsog.eu/download/maps_data/ENTSOG_CAP_June2010.pdf]. However, it has to be noted that capacity utilization rates calculation is not dealing with technical capacity but with capacity (the maximum flow, expressed in normal cubic meters per time unit or in energy unit per time unit, to which the network user is entitled in accordance with the provisions of the transportation contract) on an interconnection point, which can not differ.
47 For better understanding of the reported figures and Graph 2 it has to be noted that display of the utilization rates used for (a) national transmission and (b) cross border transmission is only possible were these systems are treated differently ("pipe in pipe"). However, for the specific case of pipeline utilization rates no distinction between national and cross border flows is made in Austria. For Slovenia and Serbia utilization rates are calculated with respect to national and cross- border capacity, on the one side, and to the whole transmission system, on the other.
While the number of shippers\textsuperscript{48} is in some cases considerably high, the predominantly very high share\textsuperscript{49} of the biggest users leads to the conclusion that “national champions” still take dominant positions.

- From the prevailing group of significantly concentrated markets Austria reported 22 shippers in the overall transmission system, from which the biggest has a share of 90%. One user is active in the Bulgarian cross border system, 386 in national transmission, from which biggest has a share of 70%. Similarly only one shipper is active in the Slovenian cross border system and four in national transmission, from which biggest holds a share of 88%. Also highly concentrated, Serbia has one shipper active in cross border transmission and two in national transmission, from which the biggest has a 95% share. Similarly BiH and FYR of Macedonia informed about one shipper with a share of 100%.

- Croatia has about 39 shippers active in the overall transmission system, but they book only exit capacities. On the other side, only one shipper books entire entry capacity into Croatian transmission system (100% share of biggest shipper on the Graph 3 is related only to entry capacity).

- Italy with 69 shippers and a 55% share of the biggest shipper is the market with the lowest level of concentration.

\textsuperscript{48} “Shipper” (and “user”) would mean an entity who has signed a transportation contract with the TSO. The term is not equal to “end user (customers)”

\textsuperscript{49} Having in mind that neither decoupled entry exit systems nor pure trading activities without supply to customers exist in the Region, the percentage of a single shipper over the capacity of the system is calculated on a “point-by-point” basis but not separately per entry/exit point.

\textsuperscript{35} Additionally, four gas distributors are responsible for the distribution and retail sale of gas, there are three companies dealing with transmission and one company is the sole wholesale supplier.
Table 2: Transmission Capacity Structure

<table>
<thead>
<tr>
<th>Country</th>
<th># of shippers in national transmission system / CB transmission system/no differentiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>22 in national transmission system/ not known for cross-border</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>386 in national transmission system /1 in cross-border</td>
</tr>
<tr>
<td>Greece</td>
<td>2</td>
</tr>
<tr>
<td>Hungary&lt;sup&gt;50&lt;/sup&gt;</td>
<td>NA</td>
</tr>
<tr>
<td>Italy</td>
<td>69</td>
</tr>
<tr>
<td>Slovenia</td>
<td>4 in national transmission system/ 1 in cross-border</td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>1</td>
</tr>
<tr>
<td>Croatia</td>
<td>1 shipper books entry capacity and 39 shippers book exit capacity</td>
</tr>
<tr>
<td>Serbia</td>
<td>2 in national transmission system&lt;sup&gt;51&lt;/sup&gt;/1 in cross-border</td>
</tr>
<tr>
<td>FYR of Macedonia</td>
<td>1</td>
</tr>
</tbody>
</table>

<sup>50</sup> Hungarian Energy Office, National report 2009.
<sup>51</sup> One shipper for tariff customers and one for eligible customers.
Graph 3: Share of Biggest Shippers

Major Shippers

- share of biggest network user in CB system [%]
- share of biggest network user in national transmission system [%]
- share of biggest network user in whole transmission system (CB and national transmission flows together) [%]
3.3 Flexibility of Contracted Capacity

The following chapter provides some brief excursus on aspects of capacity allocation and congestion management. Focus is given to these regulatory elements in relation to the assessment of the level of contracted capacities, their utilization rate and the number and market share of active system users. The assessment is relevant as aspect of capacity availability.

Gas Regulation (EC) 1775/2003\(^{52}\) provides a broad set of required congestion management – including secondary market trading – tools to be implemented. The Commission staff working document on capacity allocation and congestion management\(^{53}\) more in detail defines a three tiered system: “First, there is the general requirement for capacity contracted to be freely tradable on the secondary market. TSOs are obliged to facilitate secondary capacity markets with and without title transfer of (part of) capacity, in accordance with Article 5(3)b and Article 8 of the Regulation (trading of capacity rights). The TSOs must facilitate trading of secondary capacity for example through, in accordance with local competent authorities, organizing a trading platform for non-discriminatory and transparent trading activities in the secondary market. […] Additionally, where contractual congestion exists the unused capacity must be made available to the primary market at least on an interruptible and day-ahead basis. […] Finally, the annex to the Regulation requires TSOs to endeavour legally to recover contracted capacity that goes unused by the original shipper by offering it in the primary capacity market as firm capacity (firm use-it-or-lose-it).”

Short term congestion management mechanisms – either UIOLI (use it or loose it), UIOSI (use it or sell it/secondary market trading) or both – are only applied in those jurisdictions of SEE that are at the same time Member States of the European Union (Austria, Bulgaria, Greece, Hungary, Romania, Italy and Slovenia). The Energy Community Contracting Parties unanimously do not apply short term congestion management procedure, with the exception of Croatia, where rules are in place but so far lack practical implementation. Especially in those markets where a very low number of system users with a high market share is active but utilization rates of contracted capacities is at the same time rather low – such as e.g. Serbia – a lack of congestion management procedures has to be seen critical. Very much in line with this consideration, the Serbian regulator recommended the introduction of short term congestion management mechanisms for its jurisdiction.


As stated earlier, “facilitating secondary market trading” as stipulated by Article 8 Regulation (EC) 1775/2005 requires that TSOs actively promote release of unused contracted capacities on the secondary market. The Commission staff working document on capacity allocation and congestion management clearly notes that such facilitation needs to involve more than the pure lack of forbidding secondary market trading. From the data received only Austria reports that TSOs facilitate secondary trading via an online trading platform. The same is announced for Croatia for the future.

Table 3: Congestion Management and Secondary Market

<table>
<thead>
<tr>
<th>Country</th>
<th>Capacity trading on secondary market/ UIO/ULI</th>
<th>TSO facilitate secondary market trading</th>
<th>Recommendation for increasing the efficiency of usage of the pipeline</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>YES/YES</td>
<td>With online trading platform</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Bulgaria</td>
<td>YES in theory both, NONE in practice</td>
<td>NA</td>
<td>transition from post stamp into entry exit</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>YES/YES</td>
<td>Yes, by publishing availabilities and (within 6 months) establish an online platform</td>
<td>“Capacity follows the customer” rule, existence of secondary market also for gas quantities, cap on the share of capacity (especially on entry points) a shipper can reserve</td>
<td></td>
</tr>
<tr>
<td>Hungary 55</td>
<td>YES/YES</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>YES/NO</td>
<td>2ndary trading is allowed by law</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Slovenia</td>
<td>YES /YES</td>
<td>With online supply / demand information</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>2ndary trading is not addressed by law</td>
<td>2ndary trading is not addressed by law</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Croatia</td>
<td>YES, in market rules, IN PRAXI still to be put in operation</td>
<td>With on line trading platform (under preparation)</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Serbia</td>
<td>2ndary trading is not addressed by law</td>
<td>2ndary trading is not addressed by law</td>
<td>2ndary market development</td>
<td></td>
</tr>
<tr>
<td>FYR of Macedonia</td>
<td>2ndary trading is not addressed by law</td>
<td>2ndary trading is not addressed by law</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

54 Suggestions by regulators.
3.4 Regulated Network Tariffs - Tariff Models

All countries, except for Italy, Romania and Hungary, apply post stamp tariffs for national transmission. As regards price allocation between capacity and commodity, the capacity charge adds up to 100% in Slovenia and Croatia, 90% in Greece, 85% in Italy, 70% in Austria, 30% in Serbia, and 13% in FYR of Macedonia. In Bosnia and Herzegovina, transmission tariffs are not regulated at the state level – only at the entity level.

Concerning cross border transmission flows all “transit countries” apply some kind of distance related tariff. Related differentiation between national and cross border transmission mirrors what has been earlier presented with respect to different treatment national and cross border transmission (chapter 3.1). The fact that such differentiation is not in line with the Gas Directive 2003/55/EC has to be underlined once more\(^{56}\).

The capacity part in price allocation is set at 100% in Austria and Slovenia, 90% in Bulgaria and 0% in Serbia. No data has been received from Austria, but according to the publically available capacity calculator for cross border transmission flows capacity charge is dominant.

The tariff for national transmission includes cost for fuel gas in all reporting countries. Shrinkage costs are covered in the tariffs of Italy, Slovenia, Croatia and Serbia.

Greece does not differentiate between national and cross border transmission and plans to adopt an entry-exit tariff system from 2011 onwards, accompanied by provisions regarding backhaul flows.

Table 4: Tariff Models

<table>
<thead>
<tr>
<th>Country</th>
<th>Tariff model applied national/cross border transmission</th>
<th>Price allocation between capacity and commodity national/cross border transmission</th>
<th>Tariff includes cost of national/cross border transmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Post stamp / distance related</td>
<td>70%-30% / -</td>
<td>fuel gas / -</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>Post stamp / distance related</td>
<td>- / 90% - 10%</td>
<td>fuel gas / -</td>
</tr>
<tr>
<td>Greece</td>
<td>Postage stamp for both</td>
<td>90%-10%</td>
<td>Fuel gas, shrinkage, quality conservation, line pack, temporary storage for LNG</td>
</tr>
<tr>
<td>Hungary</td>
<td>Entry-exit/ nTPA and entry-exit</td>
<td>85-90%- 15-10% / 65%-35%</td>
<td>N/A</td>
</tr>
<tr>
<td>Italy</td>
<td>De-coupled entry-exit</td>
<td>85% - 15%</td>
<td>Fuel gas, shrinkage, wheeling, quality conservation, operational balancing(^{57})</td>
</tr>
<tr>
<td>Romania</td>
<td>Entry- exit</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Post stamp / distance related</td>
<td>100%-0% for both</td>
<td>Fuel gas, Shrinkage, Wheeling</td>
</tr>
<tr>
<td>Country</td>
<td>Tariff model applied</td>
<td>Price allocation between</td>
<td>Tariff includes cost of</td>
</tr>
</tbody>
</table>

\(^{56}\) See chapter 3.1.

\(^{57}\) Operational balancing is TSOs intra-day balancing.
All countries that sent data apply **linear depreciation** for grid assets. Bosnia and Herzegovina did not send data since a tariff system has not been implemented yet. The same is true for UNMIK reasoned by a lack of network.

The number of **depreciation years** for grid assets in national transmission varies from 25 years in Bulgaria, 33 years Serbia, 40 years in Hungary, Slovenia, Austria and FYR of Macedonia and 50 years in Italy. For cross border transmission information has only been provided by Austria with a level of less than 50 years. In Greece, a 40 years depreciation period has been encountered, but with an 11 year levelisation of annual tariffs.\(^{58}\)

As regards **efficiency factors**, such elements are only reported for price cap tariff systems: X –factor values are 1.8% for Hungary\(^{59}\), 1.95% for Austria, 2% for Italy and 0% for Slovenia and Greece.

Real, pre tax **WACC** for national transmission is roughly grouped in the range of 5-7.5% with 5% in Bulgaria, 6.05% in Slovenia, 6.4% in Italy, 6.9% in Hungary\(^{60}\), 6.97% in Austria 7% in Greece, 7.5% in Serbia and 7.88% in Romania. In FYR of Macedonia this figure is higher and amounts to 9.46%. Data for cross border transmission has only been reported for Bulgaria with 5% and Austria adding up to 11.07%.

The **gearing ratio**\(^{61}\) for national transmission adds up to 98% in FYR of Macedonia, 60% in Austria, Slovenia and Serbia, 44.45% in Italy and 35% in Greece. Data for cross border transmission has only been reported for Austria with a percentage of 60%.

The **risk free rate**\(^{62}\) for national transmission adds up to 0.5-1 % for Bulgaria, 4% for Serbia, 4.21 % for Austria, 4.4% for Italy and 7.17% in FYR of Macedonia. Data for cross border transmission has only been reported for Bulgaria with a level of 0.5-1 %.

The **return on equity** for national transmission reaches 5 % in Bulgaria, 6.7% in Italy, 7.18% in Slovenia, 8.56% in FYR of Macedonia, in 10% in Serbia and 10.22 % in Austria. No information for cross border transmission has been provided.

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\(^{58}\) In general, the whole tariff methodology in Greece is under revision  
\(^{59}\) KEMA, Study on Methodologies for Gas Transmission Network Tariffs and Gas Balancing Fees in Europe, 2009 (p.55).  
\(^{60}\) KEMA, Study on Methodologies for Gas Transmission Network Tariffs and Gas Balancing Fees in Europe, 2009 (p.55)  
\(^{61}\) Calculated as: debt / (debt + equity).  
\(^{62}\) Risk free rate can be defined as rate of return from risk-free investment. Of course, this is only theoretical category, since risk-free investments do not exist but the virtual risk-free rate is usually approximated by a return on governmental bonds or similar.
The return on debt for national transmission adds up to 0 % for Bulgaria, 4% for Slovenia, 4.81% for Austria, 4.85% for Italy, 5.1% for Serbia and 5.73% for FYR of Macedonia. No information for cross border transmission has been provided.

Table 5: Tariff Model Details

<table>
<thead>
<tr>
<th>Country</th>
<th>Depreciation of grid assets years</th>
<th>(X) factor</th>
<th>WACC (real, pre-tax)</th>
<th>Gearing debt/(debt+equity)</th>
<th>Risk free rate</th>
<th>Return on equity</th>
<th>Return on Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>40/50</td>
<td>1.95/-</td>
<td>6.97/11.07</td>
<td>60/60</td>
<td>4.21/-</td>
<td>10.22/-</td>
<td>4.81/-</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>25</td>
<td>F (O, C) / -</td>
<td>5 / 5</td>
<td>0</td>
<td>0.5-1</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Greece</td>
<td>40</td>
<td>0</td>
<td>7</td>
<td>35</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Hungary</td>
<td>NA</td>
<td>1.8</td>
<td>6.9</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Romania</td>
<td>40</td>
<td>NA</td>
<td>7.88</td>
<td>NA</td>
<td>65</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Italy</td>
<td>50</td>
<td>2</td>
<td>6.4</td>
<td>44.45</td>
<td>4.4</td>
<td>6.7</td>
<td>4.85</td>
</tr>
<tr>
<td>Slovenia</td>
<td>40 / NA</td>
<td>0 / NA</td>
<td>6.05 / NA</td>
<td>60 / NA</td>
<td>NA/NA</td>
<td>7.18/NA</td>
<td>4/NA</td>
</tr>
<tr>
<td>Bosnia and Hercegovina</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Croatia</td>
<td>20</td>
<td>not used</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Serbia</td>
<td>33 / NA</td>
<td>not used</td>
<td>7.5</td>
<td>60 / NA</td>
<td>4/NA</td>
<td>10/NA</td>
<td>5.1/NA</td>
</tr>
<tr>
<td>FYR of Macedonia</td>
<td>40</td>
<td>0</td>
<td>9.46</td>
<td>98</td>
<td>7.17</td>
<td>8.56</td>
<td>5.73</td>
</tr>
</tbody>
</table>

Austria, Bulgaria, Slovenia, Greece and Italy have tariffs for interruptible and short- term services for entry points to national transmission. All other countries did either not provide answers or not offer these services. Austria, Greece and Italy have tariffs for interruptible and short- term capacities for cross border transmission at entry points. No answers have been provided for non-physical back-flow.

An entry exit model is only applied in Hungary, Romania and Italy. In Italy the TSO also guarantees network users exit capacity which is minimum equal to entry capacity for a minimum period of one month.

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63 For better understanding of the reported figures in Table 5 it has to be noted that separate figures are displayed for (a) national transmission and (b) cross border transmission only were these systems are treated differently (“pipe in pipe”).


65 Romanian bonds.

66 For the purpose of this report and in line with Article 2 para 12 and 13 Regulation (EC) 1775/2005 “interruptible services” are understood as services offered by the TSO in relation to interruptible capacity whereas “interruptible capacity” means gas transmission capacity that can be interrupted by the TSO according to the conditions stipulated in the transportation contract.

67 For the purpose of this report and in line with Article 2 para 15 Regulation (EC) 1775/2005 “short term services” are understood as services with a duration of less than one year.

68 As required by Chapter 1, Point 1 Annex to Regulation (EC) 1775/2005.

Cross border transmission shippers are entitled to book entry capacity for a one day period in Austria, Greece, Slovenia and Croatia. In Bulgaria and Serbia daily services as theoretical possibilities exist but are not put into practice because of one single “transit” shipper. In Italy cross border transmission shipper can not book entry capacity for a period of less than one year.

3.5 Barriers to Trade

Generally, in most of the countries the regulators are not informed about the (non)existence of destination clauses in supply contracts. In Serbia and Bulgaria such destination clauses exist, while only in Italy it is not applied. Destination clause is also applied in Greece, at least for the existing Russian supply contract. It has to be underlined that the application of destination clauses has been identified as a clear restriction of competition and breach of Article 101 ECT. The European Commission has issued a number of cases leading to the abolishment of destination clauses by Gazprom in a number of cases. At least for the European Member States destination clauses are void.

So called “English clauses” are not applied in supply contracts or, as for destination clauses, their implementation is not known.

Custom duties are implemented in Austria and Italy, excise duties in Bulgaria and import taxes in Bosnia and Herzegovina. Slovenia, Croatia and Serbia informed that custom duties or other taxes are not applied. Greece reported that VAT is only applied on consumed volumes.

When asked to identify other possible limitation for network access, the Austrian regulator stated that the contractual congestion represents the main obstacle. The Slovenian regulator recognized existing long-term contracts as limitation to network access and the Serbian regulator noted that non-existence of defined procedures for capacity allocation and congestion management impedes the network access. The Greek regulator identified the lacking application of TPA rules in the upstream networks through which gas is imported to Greece as the main obstacle and assessed this as the main reason that cross border flows through Greece cannot take place, despite the large part of existing spare capacity in the Greek system. As stated in the relevant answer of the regulator, there are no limitations for network access in Croatia. Only the Austrian regulator answered to the question related to identifying other possible barriers to trade, namely the “first come first served” allocation mechanism applied.

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70 As required by Chapter 1, Point 1 Annex to Regulation (EC) 1775/2005.
71 Except for the system of Trans Austrian Gaspipeline (TAG).
72 With the exception of the LNG Terminal where minimum booking is for one month, for practical purposes.
75 Contractual agreement between a supplier and its customer, allowing the latter to purchase a good from other suppliers on more favourable terms, unless the "exclusive" supplier accepts to supply the good on the same advantageous conditions. Gives a priority right to the existing supplier to be informed about more advantageous conditions offered by competitors and a priority right to offer at the same price level.
76 These duties are only relevant for statistical reasons. Custom inside the EU need to be paid in Slovakia.
Table 6: Barriers to cross border trade

<table>
<thead>
<tr>
<th>Country</th>
<th>Destination / English clauses applied in supply contracts</th>
<th>Other limitation for network access</th>
<th>Custom duties / other taxes</th>
<th>Other barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Not known / Not known</td>
<td>Contractual congestion</td>
<td>Customs duties</td>
<td>CAM is FCFS. Guidelines foresee auctions and pro rata in some cases</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>YES / NO</td>
<td>NO</td>
<td>Excises duties</td>
<td>NA</td>
</tr>
<tr>
<td>Greece</td>
<td>YES (in some contracts)/No</td>
<td>NO</td>
<td>NO/VAT</td>
<td>TPA to upstream networks</td>
</tr>
<tr>
<td>Hungary</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Italy</td>
<td>NO / NO</td>
<td>NA</td>
<td>Customs duties</td>
<td>NA</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Not known / Not known</td>
<td>Existing long term contracts</td>
<td>NO</td>
<td>NA</td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>Not known / Not known</td>
<td>NA</td>
<td>Import taxes</td>
<td>NA</td>
</tr>
<tr>
<td>Croatia</td>
<td>Not known / Not known</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Serbia</td>
<td>YES / NO</td>
<td>CAM and CMP is not defined</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>FYR of Macedonia</td>
<td>NAP</td>
<td>NO</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
4. CONCLUSIONS – RECOMMENDATIONS

4.1 General

The analysis of this report shows that compliance with the legal requirements of Directive 2003/55/EC and Regulation (EC) 1775/2005 is still one of the key shortcomings in the Energy Community. This is true for first national legislation’s compliance with the acquis but also for the implementation in praxi and by spirit.

The fact of limited interconnections between the jurisdictions of the Region remains another – but most obvious – barrier to the development of cross border trade in South East Europe. All Energy Community Contracting Parties with a natural gas market have only one cross border connection from which only one connection links Contracting Parties. Other barriers to trade arise from contractual restrictions to cross border trade: so called “destination clauses” are reported to be applied in Bulgaria and Serbia. This picture, however, does not necessarily have to be complete since the majority of regulators indicated not to have knowledge about supply contracts. It has to be underlined that the application of destination clauses has been identified as a clear restriction of competition and breach of Article 81 ECT. The European Commission has issued a number of cases leading to the abolishment of destination clauses by Gazprom in a number of cases. At least for the European Member States destination clauses are void.

► RECOMMENDATION: lack of compliance with the acquis needs to be abolished. The ECRB invites the Energy Community Secretariat to make use of its formal powers for enforcing the implementation of the Energy Community acquis and abolishing anti-competitive barriers to trade.

More in general and as regards cooperation across borders coordination between regulators has to be maintained on a high level and – where missing – increased. Regulatory coordination seems especially relevant between Hungary and Serbia/Bosnia and Herzegovina/Croatia given the position of Hungary as “transit country” for flows to Serbia/Bosnia and Herzegovina/Croatia. Greece can develop a similar role for Albania, FYR of Macedonia and UNMIK. Especially for these links, the importance of harmonised and streamlined regulatory tariffation systems for gas seems more than evident.

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77 Bosnia and Herzegovina, Croatia, Serbia and FYR of Macedonia.
78 Bosnia and Herzegovina – Serbia.
79 Only Italy clearly noted that destination clauses are not applied. The same can at least be taken as given for the Austrian OMV transmission systems based on the case settlement concluded in 2005 (http://www.icis.com/heren/articles/2005/02/17/9279160/gazprom-agrees-to-drop-destination-clause-in-supply-contracts-with-omv.html).
82 As of operation of the currently constructed interconnector between Hungary and Croatia.
4.2 Network Access Regulation – Lack of Compliance with Acquis

Already the minimum principle of open third party access to pipelines is not fully complied with in the investigated markets:

- Access to national transmission pipelines is not at all regulated in Bosnia and Herzegovina lacking the relevant legal framework.
- Access to cross border transmission pipelines is not regulated in Bosnia and Herzegovina, Bulgaria, Serbia and Romania. While in Bosnia and Herzegovina and Serbia missing regulation is based on a lack of legal provisions, the negotiated access system used for cross border flows in Bulgaria and Romania is reasoned by relevant cross border capacities being 100% booked on long term basis.

► RECOMMENDATION: negotiated access to national and/or cross border transmission clearly means non-compliance with the requirements of Directive. Related missing legal provisions have to be implemented. To the extent lack of regulated access is argued based on existing contracts reserving 100% of the (cross border) capacity it has to be underlined that sanctity of existing contracts can not be assumed for the Energy Community and the relevant capacities need to be regulated and – at minimum – made subject to UIOLI and UIOSI principles.

To the extent regulated, national and cross border transmission are treated differently in majority of markets that are characterized by gas flows which are transited (“transit countries”) - Austria, Bulgaria, Slovenia, Hungary and Serbia. Different treatment thereby typically involves different access rules and/or tariff regimes.

► RECOMMENDATION: It is re-called that such differentiating approach is not in line with the requirements of Directive 2003/55/EC. Mirroring the related activities on European level\(^ {83}\) related lack of compliance with the acquis needs to be abolished also within the Energy Community. The ECRB invites the Energy Community Secretariat to make use of its formal powers for enforcing the implementation of the Energy Community acquis.

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4.3 Network Utilisation and Congestion Management

Cross border transmission capacities are to a prevailing extent booked on long term basis and in the majority of cases by only one shipper. The only country with more than one shipper active in cross – border transmission is Austria where, however, the dominant shipper controls 90% of the overall transmission capacity. Except for Austria and Italy utilization rates of contracted capacities are at surprisingly low levels of around or below 50%.

At the same time congestion management mechanisms such as UIOLI or secondary market trading are - except for Croatia and the Participant Countries – not in place. Especially in those markets where a very low number of system users with a high market share is active but utilization rates of contracted capacities is at the same time rather low – such as e.g. Serbia – a lack of congestion management procedures has to be seen critical.

► RECOMMENDATION: the introduction of congestion management mechanisms and capacity allocation procedures is a clear requirement of Regulation (EC) 1775/2005. In addition to the legal fact of incompliance with the Energy Community acquis, also awareness of the practical booking and utilisation status evidently shows demand for related regulatory rules. Where missing, CAM&CMP have to be implemented and enforced by the regulatory authorities.

More in particular the concept of shippers’ obligation to re-offer non used capacities on the market (use it or sell it, UIOSI) or TSOs otherwise re-selling unused and not re-offered contracted capacities on daily and monthly level on interruptible basis (interruptible use it or lose it; UIOLI) should be introduced. In addition, the introduction of a firm UIOLI concept is recommended.

Where legal provisions addressing related regulatory powers are not in place, they have to be included in legislation.

4.4 Differences of Tariff Models

Analysis shows that

- all reported countries, except Italy, Hungary and Romania (entry-exit), have implemented a post stamp tariff model for national transmission.

- Slovenia, Romania and Greece are the only countries where the same price allocation between capacity and commodity is applied for national and cross border transmission.

- The capacity factor in transmission costs varies from 100% to assumable 0%.

84 Part of the market rules. Still to be put in operation.
85 All Contracting Parties but Croatia.
86 All Contracting Parties but Croatia.
87 Non-compliance with the Energy Community acquis resulting from different (tariff) treatment of national and cross border transmission has been already mentioned earlier.
88 For countries that did not provide answers.
- Depreciation of grid assets varies from 25 to 50 years.
- An efficiency factor X is implemented only in Austria, Hungary and Italy.

From the data analyzed it is obvious that better harmonisation of regulatory tariff systems is needed in order to avoid or minimize the consequences of “pan-caking”.

**RECOMMENDATION:** The ECRB should – as id term perspective - develop common regional tarification principles to be afterwards implemented by all regulators[89]. Where legal provisions addressing related regulatory powers are not in place[90], they will have to be included in legislation. With a view to ensuring coherence and convergence between Regions, ongoing discussions on European level with respect to the development of (framework) guidelines for gas tariffication will have to be reflected in developing common ECRB gas tariff principles as far as coordination is time wise feasible[91].

With a view to even further integrate and harmonise gas tariffication throughout the Region, thinking could - in a mid-/long-term perspective - be developed on the possibilities of introducing a **regional capacity allocation concept** where a regional body would be made responsible for allocating gas capacities on regional level (“one stop shop” and regional gas lake concept)[92].

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[89] If aiming for legally binding common rules, the ECRB would need to be empowered to take a related decision.
[90] To be assessed within the process of guidelines development.
[91] Final gas tariffication framework guidelines are not expected to be in place before early 2011.