



Energy Community Regulatory Board

**GAS MARKET MODELS IN THE ENERGY
COMMUNITY**

And their Compliance with Regulation (EC) 1775/2005

February 2011



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1 EXECUTIVE SUMMARY

The present report provides an overview of the national **gas market models in the Energy Community and assesses the compliance of their core pillars with the requirements of Regulation (EC) 1775/2005.**

Non-compliance with the provisions of Regulation (EC) 1775/2005 does not only legally involve a breach of the Energy Community Treaty but more practically is also likely to seriously impede the development of a functioning gas market and security of supply. Even where the legal obligations of Regulation (EC) 1775/2005 are met, still incompatibility of various national approaches involves a barrier to regional market integration. It is well known that especially the detailed implementation of the legal requirements through the regulatory market rules has to pay special attention to avoiding mismatching with neighbouring systems.

Analysis is undertaken with three-fold scope:

- Identify the legal shortcomings related to non-compliance of the existing regulatory models with the *acquis*;
- Provide an overview about the existing regulatory models and – by comparing their details - identify possible barriers to cross border trade resulting from different regulatory approaches;
- Develop better understanding of the individual regulatory frameworks with a view to facilitate their harmonisation.

The present report does **not provide a full compliance assessment** of the complete set of requirements of Regulation (EC) 1775/2005 but focuses on the core elements defining the regulatory gas market models. Going beyond Regulation (EC) 1775/2005 the present report on the other hand assesses a number of additional aspects related to the market framework – e.g. market participants – necessary for a comprehensive understanding of the gas market models.

Finally, the present report presents **recommendations on how to overcome the identified shortcomings.**

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 Treaty¹ the signatory parties² agreed to implement the *acquis communautaire* on electricity, gas, environment, competition and renewables³ with a view to realize the objectives of the Treaty and to create a regional gas and electricity market within South East Europe.

By Decision⁴ of the Energy Community Ministerial Council Regulation (EC) 1775/2005⁵ has been made part of the Energy Community *acquis* in December 2007.

The purpose of Regulation (EC) 1775/2005 is to set non-discriminatory rules for access to natural gas transmission systems taking into consideration the specificities of national and regional markets with a view to ensuring the proper functioning of the EU internal gas market.

Non-compliance with the provisions of Regulation (EC) 1775/2005 does not only legally involve a breach of the Energy Community Treaty but more practically is also likely to seriously impede the development of a functioning gas market and security of supply. It has to be re-called that energy market liberalization should not be seen as a standalone goal but the development of a stable regulatory framework, cost-reflective network tariffs and market based energy prices remains a key driver for economic development, social welfare and consumer protection.

Even where the legal obligations of Regulation (EC) 1775/2005 are met, still incompatibility of various national approaches involves a barrier to regional market integration. One should not forget that the very scope of Regulation (EC) 1775/2005 as part of the internal energy market legislation is to establish a *regional* market and barrier free cross border trade⁶. It is well known that especially the detailed implementation of the legal requirements through the regulatory market rules has to pay special attention to avoiding mismatching with neighbouring systems.

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"). 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**.

³ For details of the relevant *acquis* see:

http://www.energycommunity.org/portal/page/portal/ENC_HOME/ENERGY_COMMUNITY/Legal/Treaty.

⁴ Decision No. 2007/6/MC-EnC of 18 December 2007 on the implementation of Directive 2005/89/EC, Directive 2004/67/EC and Regulation (EC) 1775/2005, <http://www.energy-community.org/pls/portal/docs/296187.PDF>

⁵ Regulation (EC) No 1775/2005 of the European Parliament and of the Council of 28 September 2005 on conditions for access to the natural gas transmission networks; OJ L 289 of 3.11.2005, p 1 et seqq.

⁶ See as well Article 1 Regulation (EC) 1775/2003.

Consequently a harmonized way of implementing the gas *acquis* remains a key challenge for regulators. Streamlining of regulatory measures and providing a stable regulatory market framework is a key promoter for a number of core objectives of the Treaty – such as market integration, facilitation of investments, competition and security of supply. In the Energy Community such streamlining is focused under the umbrella of the **Energy Community Regulatory Board (ECRB)**⁷. The key objective of the cooperation of energy regulators within the ECRB is to support the harmonized development of regulatory rules in the Energy Community. The ECRB also takes the role of a coordination body between the national regulators with a view to exchanging knowledge and developing common best practice solutions for implementing the Treaty in a harmonized way.

2.2 SCOPE

Monitoring the Contracting Parties' (CP) compliance with the *acquis* by definition of Article 67 (b) Energy Community Treaty is a key activity of the Energy Community Secretariat. However, monitoring of market and stakeholder performance is also a core responsibility of the regulators defined by the Gas and Electricity Directives⁸. Monitoring activities are best undertaken when delivering comparable results. Therefore the ECRB – similar to the practise on European level⁹ – decided on a coordinated status review approach for all Contracting Parties.

The present report provides an overview on the national **gas market models in the Energy Community and assesses the compliance of their core pillars with the requirements of Regulation (EC) 1775/2005**. This analysis is undertaken with three-fold scope:

- Identify the legal shortcomings related to non-compliance of the existing regulatory models with the *acquis*;
- Provide an overview about the existing regulatory models and – by comparing their details - identify possible barriers to cross border trade resulting from different regulatory approaches;
- Develop better understanding of the individual regulatory frameworks with a view to facilitate their harmonisation.

The present report does **not provide a full compliance assessment** of the complete set of requirements of Regulation (EC) 1775/2005 but focuses on the core elements defining the regulatory gas market models. Going beyond Regulation (EC) 1775/2005 the present report on the other hand assesses a number of additional aspects related to the market framework – e.g. market participants – necessary for a comprehensive understanding of the gas market models.

The analysis provided refers to the **cut off date** of the report's approval by the ECRB Plenary on 16 December 2010. In particular for the European Member States identified shortcomings are expected to

⁷ The ECRB operates based on Article 58 of the Energy Community Treaty. As an institution of the Energy Community the ECRB advises the Energy Community Ministerial Council and Permanent High Level Group on details of statutory, technical and regulatory rules and should make recommendations in the case of cross-border disputes between regulators. For details see www.ecrb.eu.

⁸ Article 25.1 Gas Directive 2003/55/EC and Article 23.1 Electricity Directive 2003/54/EC.

⁹ On European level the European Regulators Group for Electricity and Gas (EREG) frequently prepares compliance reports for the gas and electricity sector.

change with the implementation of the so-called 3rd European legislative package on internal gas and electricity market opening¹⁰.

Follow-up by national regulators to these review activities in terms of identifying possible solutions on national and/ or regional level is an important step towards enhancing the investment climate, competitive environment and security of supply. Against the present report also contains **recommendations on how to overcome the identified shortcomings**.

2.3 METHODOLOGY

The present assessment paper is based on **information and data provided by the national regulators** and has been collected via the ECRB Gas Working Group. The report in addition makes use of information available from the Reports on the Implementation of the Energy Community Acquis prepared by the Energy Community Secretariat¹¹ and other ECRB papers¹².

The analysis of the present report is limited to those jurisdictions for which input has been provided by the competent regulatory authorities, namely:

- Albania, Croatia, FYR of Macedonia, Serbia, UNMIK;
- Austria, Greece, Italy, Romania and Slovenia.

Information displayed for Albania and UNMIK exclusively refers to the legal status in these two jurisdictions. Lacking a gas market so far, a practical analysis of the existing legislation on gas can not be undertaken.

¹⁰ http://ec.europa.eu/energy/gas_electricity/third_legislative_package_en.htm. For the Energy Community Contracting Parties the Energy Community Council on 24 September 2010 agreed on the recommended implementation of the 3rd package - <http://www.energy-community.org/pls/portal/docs/724177.PDF>, item 10.

¹¹ http://www.energy-community.org/portal/page/portal/ENC_HOME/AREAS_OF_WORK/Implementation/Report_2010.

¹² E.g. - ECRB, Report on the Regulation of Gas Cross Border Flows in the Energy Community, 2010; www.ecrb.eu.

3 FINDINGS

Gas **market development stages in SEE vary significantly**. Contracting Parties are on average much less developed – their markets range from non-existent (Montenegro, UNMIK) to only starting (Albania, FYR of Macedonia, Bosnia and Herzegovina) or intermediate (Croatia, Serbia). The EU countries in SEE are mostly well on their way and mature (Romania, Austria, Hungary, Italy), with Slovenia, Bulgaria and Greece partly lagging behind¹³.

3.1 MARKET PLAYERS

Going beyond an assessment of compliance with the requirements of Regulation (EC) 1775/2005 it is relevant to know who are the stakeholders and users of a system in order to develop a sound understanding of the individual gas market framework.

Definitions of **network/system users** vary among gas legislations of CPs and neighboring EU countries:

- In four markets - Albania, Croatia, Slovenia and UNMIK - network/system users are defined as natural or legal person supplying gas to or being supplied by the gas system. Croatian legislation knows a separate definition of transmission system users¹⁴ and distribution system users¹⁵.
- In Serbia and FYR of Macedonia network/system users are defined as entities physically and/or contractually using the system¹⁶.
- The Greek and Romanian network code defines network user as any contracting party to the TSO, such as gas suppliers, customers, storage operators or gas producers. In the case of Greece registration with the NNGS Users Registry is precondition for becoming system user.
- In Austria, network users are defined as natural gas undertaking or owner of transport rights.

A general definition for the term “**market participants**” does not exist in most of the CPs and neighboring EU countries. In principle almost all entities mentioned in relevant legislation may be considered as participants to the market. Some respondents understood only transmission related entities as market participants, others referred to all possible gas market players. In Greece all eligible customers are defined as “market participants”.

In most of the investigated jurisdictions a body/entity fulfilling the tasks of a **Transmission System Operator** exists. Only in Albania and UNMIK, having no gas market so far, a TSO has not been established yet but some tasks are envisaged in the gas laws

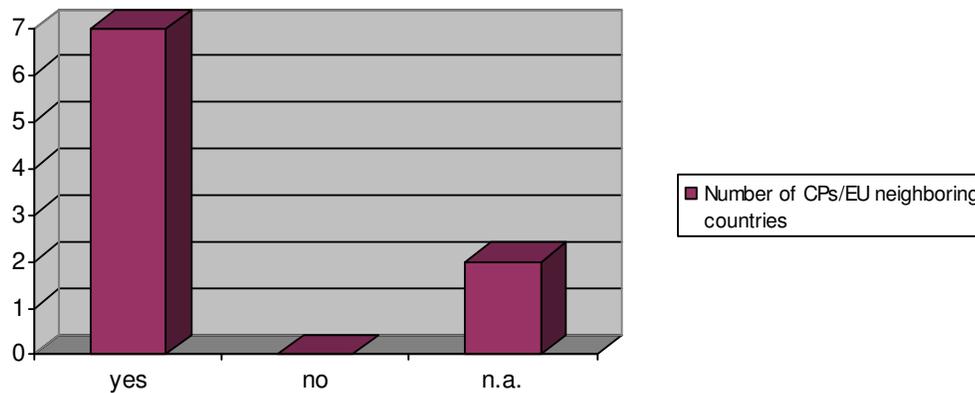
¹³ Details on the gas markets in SEE can be found in ECRB discussion paper “Regulatory Framework for the Development of the Energy Community Gas Ring”, <http://www.energy-community.org/pls/portal/docs/558196.PDF>

¹⁴ Defined as “gas supplier or gas trader who for the needs of his customers concludes a contract for gas transmission with the transmission system operator”.

¹⁵ Defined as “any system user connected to the distribution system”.

¹⁶ For example, transmission system users are distribution companies, suppliers, traders, eligible customers. In Serbia this definition by law is in the regulatory praxis, however, executed in a way that a contractual basis with the system operator is in any case the minimum requirement

Figure 1: Body/entity fulfilling the tasks of a Transmission System Operator



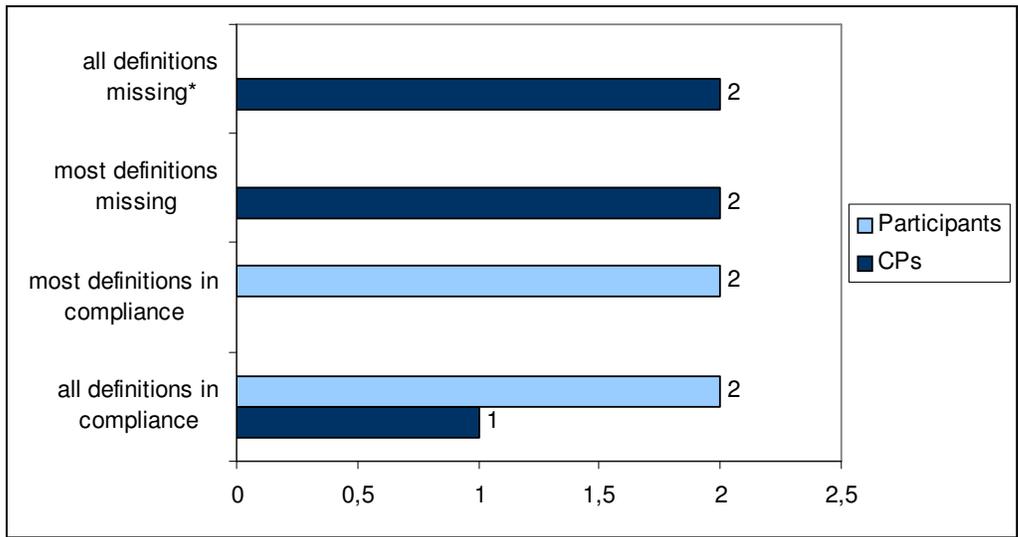
3.2 ARTICLE 2 – DEFINITIONS

Article 2 Regulation (EC) 1775/2005 provides a list of definitions on terms used in the Regulation's body. It has to be underlined that a harmonized and comprehensive implementation and application of definitions has to be understood as the very basic starting point for a streamlining of market models. Where there is not even a common understanding of the terms used, harmonization can not take place properly.

With regard to the Regulation's definitions regulators were asked if all relevant definitions exist in gas law and/or network code and, from those that exist, what definitions differ from the Regulation. The overall picture shows an **unharmonised approach and – in some Contracting Parties - significantly lacking implementation.**

- In Croatian, Italian and Romanian legislation all definitions are in compliance with the Regulation;
- In Austria, Greece and Slovenia some definitions are missing or differ from the Regulation - for example, all regulators stated that there is no definition of congestion management in their legislation; in the Greek Network Code interruptible third party access services (and interruptible capacity) are not explicitly foreseen although implied as a measure to relief contractual congestion.
- In Serbia and FYR of Macedonia most of the definitions are missing (the network code in Serbia is still under preparation but in FYR of Macedonia exists);
- In Albania and UNMIK, having no gas market, most of the definitions do not exist.

Figure 2: How many definitions from Regulation 1775 do not exist or differ?



In the context of definitions, also a common understanding of operational rules is relevant. On European level EASEE Gas develops Common Business Practices (CBP) in various areas of gas operation¹⁷, including a CBP defining the gas day from 06:00 - 06:00 next day¹⁸. EASEE Gas CBPs are part of the *common applicable standards* under the Energy Community Treaty.

Table 1 provides an overview of the definition of the **gas and storage year** as well as the **gas day** in the CPs and neighboring EU countries. The analysis shows that the approaches used in the Contracting Parties are broadly streamlined, however not in line with the EASEE Gas recommendations as regards the definition of the gas day. The latter is, however, also true for the EU Member States Austria, Greece and Italy.

¹⁷ E.g. on nominations, gas quality, interconnection agreements etc; www.easee-gas.org.

¹⁸ <http://www.easee-gas.org/docs/cbp/approved/EASEE-gasCBP2003-002-01Rev3.doc>.

Table 1: Gas year, storage year, gas day in SEE gas markets¹⁹

| | Gas year | Storage year | Gas day |
|-----------------------------|-------------------------|------------------------|------------------------|
| EASEE GAS CBPs | Not defined | Not defined | 06:00 - 06:00 next day |
| Albania²⁰ | n.a. | n.a. | n.a. |
| Austria | 1 st October | 1 st April | 08:00 – 08:00 next day |
| Croatia | 1 st October | 1 st April | 06:00 - 06:00 next day |
| FYR of Macedonia | 1 st January | n.a. | 08:00 – 08:00 next day |
| Greece | 1 st January | 1 st April | 08:00 – 08:00 next day |
| Italy | 1 st October | 1 st April | 06:00 - 06:00 next day |
| Romania | 1 st July | 15 th April | 06:00 - 06:00 next day |
| Serbia | 1 st January | n.a. | 08:00 – 08:00 next day |
| Slovenia | 1 st January | n.a. | 08:00 – 08:00 next day |
| UNMIK²¹ | n.a. | n.a. | n.a. |

3.3 ARTICLE 3 – TARIFFS

Different from the ECRB “Report on the Regulation of Gas Cross Border Flows in the Energy Community”²² the following chapter does not analyze details of the tariff models applied – such as WACC, rate of return et al – but strictly refers to the implementation of the tariffication related legal requirements of Article 3 of the Regulation (EC) 1775/2005²³.

¹⁹ Abbreviation “n.a.” used for “not applicable” throughout the document

²⁰ No gas market.

²¹ No gas market.

²² ECRB, Report on the Regulation of Gas Cross Border Flows in the Energy Community, 2010; www.ecrb.eu.

²³ For details on the tariffication models applied for gas transmission in the Energy Community see: ECRB, Report on the Regulation of Gas Cross Border Flows in the Energy Community, 2010; www.ecrb.eu.

Table 2: Main aspects of transmission tariffication in the CPs and neighboring EU countries

| | Regulator determines tariff methodology | Regulator approves tariffs | Tariff model applied | Are actual costs recovered | How is the RoR calculated | Are costs for securing interoperability included in tariffs |
|-----------------------------|---|----------------------------|--|----------------------------|----------------------------|---|
| Albania²⁴ | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Austria | yes | Yes | Post- stamp (entry-exit under preparation) | yes | By using WACC | yes |
| Croatia | Yes | No | Post- stamp | yes | By using WACC | yes |
| FYR of Macedonia | Yes | Yes | Post- stamp | yes | By using WACC | yes |
| Greece | tariffs are set by ministerial decisions, following RAE's concurrent opinion to DESFA's original proposal | | Post- stamp | yes | 6.56% (WACC real, pre-tax) | yes |
| Italy | yes | Yes | Entry- exit | yes | By using WACC | yes |
| Romania | yes | Yes | Post- stamp (entry-exit under preparation) | yes | By using CAPM | n.a ²⁵ . |
| Serbia | yes | No | Post- stamp | yes | By using WACC | yes |
| Slovenia | yes | Yes | Post stamp | yes | By using WACC | yes |
| UNMIK²⁶ | yes | yes | n.a. | n.a. | n.a. | n.a. |

²⁴ No gas market.

²⁵ The Romanian TSO is not interconnected at the moment so no such costs are included. Investments for Arad Szeged has been already recognized as they were finished.

²⁶ No gas market.

The analysis shows that the regulated tariff models **well comply with the general requirements** of Article 3 of the Regulation (EC) 1775/2005. At the same time the **main principles for determination of transmission tariffs are well harmonized**, with the exception of differences between tariff methodologies applied in Contracting Parties and EU countries²⁷. More in detail table 2 and 3 show the following picture:

- The regulated tariff systems cover all actual costs incurred by gas transmission operation, including costs for securing interoperability of transmission networks.
- The rate of return is calculated by using the same methodology in all countries. Whether the values of return on investments are appropriate goes beyond the scope of this paper.
- Wherever the regulatory authority applies an incentive based tariff methodology (such as price and revenue cap) an efficiency factor is included in the calculation of allowed revenues. This is the case in most of the investigated markets. In Croatia and Serbia the cost efficiency is secured by detailed evaluation and comparison of past and planned costs instead of implementing simpler and more incentivizing X factor for efficiency.
- Cross- subsidization between different gas activities and/or network users is not reported by regulators. In principle cross- subsidization between transmission and other activities is to a relevant extent avoided via legal unbundling of transmission activities²⁸ in almost all Contracting Parties and neighboring EU countries, with the exception of Serbia, where legal unbundling has not been executed yet²⁹.

Going beyond the assessment of compliance with the legal requirements of Article 3 Regulation (EC) 1775/2005, table 3 also provides an overview of the **role of regulators in the approval of investment plans**. While not referring to a precise legal requirement under Regulation (EC) 1775/2005, regulatory approval of network investment plans is broadly understood as useful tool in two directions – first, regulatory approval of the investment plan typically also explicitly or implicitly involves a statement on the involved costs to be acknowledged by the regulator as part of the regulated network tariff and thereby provides a predictable framework to investors. Second, the regulatory approval of the investment plan also provides the regulator with a tool to ensure that the regulatory investment incentives reach the system relevant investments.

- Gas legislation in Albania and UNMIK allows the regulatory authority to directly approve investment plans of transmission system operators. This is not the case in other jurisdictions.
- In Croatia the regulator gives an opinion on investment plans before their approval by the relevant Ministry.
- The role of the Serbian regulator with regard to investment plans is an indirect one: investments that are not justified cannot be included in Regulatory Asset Base for the next regulatory period.

²⁷ For details on the tariffication models applied for gas transmission in the Energy Community see: ECRB, Report on the Regulation of Gas Cross Border Flows in the Energy Community, 2010; www.ecrb.eu.

²⁸ However, legal unbundling is not a guarantee of non- existence of some kind of preferential status for the incumbent company- TPA rules have to secure equal treatment of all network users.

²⁹ Non- compliance with the Directive 2003/55/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in natural gas and repealing Directive 98/30/EC; OJ L 176 of 15.7.2003, p 57 et seqq.

Table 3: Cross- subsidization, efficiency and investment incentives

| | Are efficiency incentives included in the tariff methodology | Does cross-subsidization between transmission and other activities exist ³⁰ | Does cross-subsidization between network users exist | Does the regulator approve investment plans | Does a regulatory incentive for promoting new investments exist |
|-----------------------------|--|--|--|--|---|
| Albania³¹ | n.a. | n.a. | n.a. | yes | n.a. |
| Austria | yes | no | no | yes | yes |
| Croatia | no | no | no | No, but gives opinion | Yes, TPA exemptions |
| FYR of Macedonia | yes | no | no | no | no |
| Greece | yes | no | no | Regulatory involvement ³² | no |
| Italy | yes | no | no | no | Yes, TPA exemptions and “incentivized tariffs” |
| Romania | yes | no. | no | no | no |
| Serbia | no | no | no | Not directly, but has the right not to include non- justified planned investments into RAB | no |
| Slovenia | yes | no | no | no | no |
| UNMIK³³ | n.a. | n.a. | n.a. | yes | Yes, TPA exemptions |

³⁰ This question applies only in case TSO is not yet legally unbundled from the other gas related activities.

³¹ No gas market.

³² According to the Network Code, the TSO is obliged to submit every two years a 5-year investment plan and a 10-year development study to the Regulatory Authority. The 5-year investment plan is approved by a Ministerial Decision following RAE’s concurrent opinion. Before doing so, RAE may request changes to the investment plan taking into account various inputs, including the input from public consultation on the investment plan and the fulfillment of criteria set by the Law regarding the inclusion of certain investments to the investment plan. The 10-year development study is issued by the TSO without any form of approval.

³³ No gas market.

3.4 ARTICLE 4 – NETWORK ACCESS

Following the scope of the present report this chapter analyses the level of compliance with Article 4 Regulation (EC) 1775/2005. Beyond that and more in general related to third party access as such, however, the findings of the ECRB “Report on the Regulation of Gas Cross Border Flows in the Energy Community”³⁴ have to be re-called showing that – and neglecting the detailed requirements of Article 4 Regulation (EC) 1775/2005 – **network access is not at all regulated in some jurisdictions:**

- Access to **national transmission pipelines** is regulated in all Contracting Parties except for 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. 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**³⁵. It has to be stressed that **legally this argumentation is not sound**³⁶: 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. Taking into consideration the low level of capacity utilisation rates, the application of especially “use it or lose it” (UIOLI) and “use it or sell it” (UIOSI; 2ndary market trading”) principles seems to be more than necessary.
- The 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 2004³⁷ (for EU countries) and 2007³⁸ (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 do not regulate access for cross border (“transit”) flows³⁹ or keep different treatment of transit and transmission flows⁴⁰.

³⁴ ECRB, Report on the Regulation of Gas Cross Border Flows in the Energy Community, 2010; www.ecrb.eu.

³⁵ Hungary, even more specifically refers to sanctity of contracts concluded before 2004. KEMA, [Study on Methodologies for Gas Transmission Network Tariffs and Gas Balancing Fees in Europe](#), 2010.

³⁶ For details see ECRB, Report on the Regulation of Gas Cross Border Flows in the Energy Community (2010), chapter 3.1; www.ecrb.eu.

³⁷ 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.

³⁸ One year after entering into force of the Treaty Establishing the Energy Community.

³⁹ E.g. infringement proceedings against Belgium concerning regulated access to its gas transit system. See European Commission, Press Release of 08 Oct 2009: <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/09/1490&language=en>.

⁴⁰ European Commission, Memo of 25 June 2009 – Country Fact Sheets: <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/09/296&format=HTML&aged=0&language=en>.

Article 4 Regulation (EC) 1775/2005 requires TSOs to provide a certain set of minimum network products to the market. Table 4 shows that the relevant provisions are mostly transposed in the network codes of analyzed CPs and neighboring EU countries. The exception is Serbia, where these – as well as all other provisions of the Gas Regulation – wait for the amendments of the energy law to be promulgated.

Table 4: Network products – Services offered ⁴¹

| | Is there only one network code/standard contract for all users? | Does the TSO offer both firm and interruptible services? | Does TSO offer both long and short- term services? | Do transportation contracts signed with non- standard dates or with shorter duration result in higher or lower tariffs? | Are guarantees from network users required in order to grant TPA? |
|-------------------------|---|--|--|---|---|
| Austria | Network code based on template | yes | yes | | Yes, deposit at the balance group coordinator |
| Croatia | yes | yes | yes | no | Yes, financial guarantees ⁴² |
| FYR of Macedonia | yes | yes | yes | no | no |
| Greece | yes | yes ⁴³ | yes | Yes, shorter duration results in higher tariffs | no |
| Italy | yes | yes | yes | Yes, shorter duration results in higher tariffs | Yes, bank guarantees |
| Romania | yes | yes | yes | no | Yes, technical and financial guarantees |
| Serbia | no | none of them | no | no | Yes, bank guarantees, bank drafts, etc. |
| Slovenia | yes | yes | yes | no | no |

⁴¹ Due to non- existence of gas markets Albania and UNMIK not taken into consideration

⁴² Promissory note, bank guarantees, drafts.

⁴³ In the current version of the Network Code interruptible third party access services are not explicitly foreseen and thus no tariffs related to interruptible capacity have been determined.

Necessary network services do not only involve a minimum range of products to be offered but also call for certain service level and user friendliness. Table 5 shows the level of compliance with the relevant requirements of chapter 1 annex to Regulation (EC) 1775/2005.

Table 5: TPA services

| | Were network users consulted during developing network code? | Do standardized nomination and re-nomination procedures exist? | Do information systems and electronic communication means (that provide adequate data to network users to simplify transactions) exist? | Are request procedures and response times formalized? | Are information requests charged? |
|-------------------------|--|--|---|---|---|
| Austria | yes | In Control Area East two different procedures exist- for national and cross- border transmission | yes | yes | Registration for Open Season is separately charged. |
| Croatia | yes | Yes | yes | yes | no |
| FYR of Macedonia | yes | Yes | yes | yes | no |
| Greece | no | partly ⁴⁴ | yes | yes | no |
| Italy | yes | Only nomination | yes | yes | no |
| Romania | yes | Yes | yes | yes | no |
| Serbia | n.a. ⁴⁵ | Yes informal, for bigger network users | no | no | no |
| Slovenia | yes | Yes | yes | yes | no |

⁴⁴ Standardized procedures for nomination are specified in the Network Code. A re-nomination procedure is not foreseen in the current version of the Network Code.

⁴⁵ Network code does not exist.

3.5 ARTICLE 5 – CAPACITY ALLOCATION, CONGESTION MANAGEMENT

Undisturbed cross- border gas flows and optimal use of gas infrastructure require application of transparent, efficient, non- discriminatory and market- oriented capacity allocation mechanisms (CAM). Moreover, capacity products and allocation mechanisms should be harmonized among transmission system operators. Article 5 Regulation (EC) 1775/2005 sets a minimum list of capacity allocation related requirements. Table 6 provides an overview of the related compliance status in the monitored markets. As for TPA related aspects, the questions were not applicable to Albania and UNMIK, both so far lacking a gas market.

The analysis shows that - similar to the outcomes of the analysis on third party access – in countries where network codes have been passed, provisions related to **capacity allocation mechanisms are mostly in line with the requirements of the Gas Regulation**. The only **exception** is the non-existence of specific instruments that facilitate investments in new infrastructure in most of the countries⁴⁶.

Table 6: Capacity Allocation Mechanisms

| | Is the maximum capacity available to the market at all relevant points? | Is the applicable CAM published? | CAM applied | Does the applied CAM include specific instruments that facilitate investments in new infrastructure? |
|-------------------------|---|----------------------------------|--|--|
| Austria | yes | yes | FCFS ⁴⁷ , auction, lottery, capacity goes with customer | For cross- border transmission, the surplus revenue from auctions has to be used by TSO to sort out congestion |
| Croatia | yes | yes | Pro- rata | no |
| FYR of Macedonia | yes | no | FCFS | no |
| Greece | yes | yes | FCFS, capacity goes with customer | no |
| Italy | yes | yes | capacity goes with customer, pro rata | no |

⁴⁶ Similar: ECRB, Regulatory Framework for the Development of the Energy Community Gas Ring (2010), chapter 6 indent 1. The Energy Community Secretariat – upon request of the ECRB - has commissioned a study on regulatory investment incentives in 2010.

⁴⁷ First come first serve.

| | Is the maximum capacity available to the market at all relevant points? | Is the applicable CAM published? | CAM applied | Does the applied CAM include specific instruments that facilitate investments in new infrastructure? |
|----------|---|----------------------------------|------------------------|--|
| Romania | yes | yes | FCFS | no |
| Serbia | no | no | CAM is not applied | n.a. |
| Slovenia | yes | yes | Allocation on deadline | no |

The appropriate management of contractual and physical congestion is a prerequisite for proper functioning of a regional gas market and prohibition of capacity hoarding. Article 5 Gas Regulation therefore requires transmission system operators to apply **congestion management procedures**. Table 7 provides an overview about the level of compliance.

Considering that Use It Or Lose it (UIOLI) on interruptible basis is applied as prevailing congestion management procedure in the investigated markets, table 7 additionally analyses the performance related to chapter 2.2 annex to Regulation (EC) 1775/2005, i.e. the calculation of the price for interruptible capacities. The revenues from the release of interruptible capacity are usually allocated back to the network users. The results show that the **price for interruptible capacity** is mostly calculated by using the same methodology as for the firm capacity, but the calculation results in lower price (in Austria only if the actual interruption happens). Only in FYR of Macedonia the price of interruptible capacity is not calculated separately.

It has to be noted, however, that network congestion currently is not a relevant issue in the Contracting Parties. Congestion problems during the coldest winter days occur in Serbia for which it is, however, expected that an increase of storage capacity (*Banatski Dvor*) would mitigate this constraint.

Table 7: Congestion Management Procedures⁴⁸

| | Which CMPs are applied? | How are revenues from released interruptible capacity allocated? | How is the price for released interruptible capacity calculated? | Does the regulator approve this price? |
|-------------------------|--|--|--|---|
| Austria | Interruptible UIOLI, secondary market | Revenues from interruptible capacity have to be used by TSO to sort out congestion or for a tariff reduction | The price is the same as for firm capacity, reduction granted in case of actual interruption | Tariff methodology approved by the regulator |
| Croatia | Interruptible UIOLI, secondary market ⁴⁹ | According to the tariff system | According to the tariff system | <i>same as transmission tariff</i> |
| FYR of Macedonia | Interruptible UIOLI | Rules do not exist | Such price does not exist | n.a. |
| Greece | UIOLI, secondary market | | | set by ministry following NRA's opinion to DESFA's proposal |
| Italy | Interruptible UIOLI, secondary market | Revenues are used for tariff reduction | n.a. | Regulator fixes the price |
| Serbia | CMP not applied ⁵⁰ | n.a. | n.a. | n.a. |
| Slovenia | Pro rata, 2ndary market, interruptible capacity | Revenues are used for tariff reduction | Price of interruptible capacity 10% lower | Methodology approved by regulator |
| Romania | Voluntary release of capacity, mandatory transfer of capacity by TSO, in case of long-term congestions: obligation for TSO to expand | Revenue stays with TSO | Using the same methodology as for firm capacity, but price of interruptible capacity lower. | Price approved by regulator |

⁴⁸ No gas market in Albania and UNMIK.

⁴⁹ In market rules. In praxi still to put in operation.

⁵⁰ Network code missing.

3.6 ARTICLE 7 – BALANCING RULES AND IMBALANCE CHARGES

Article 7 Regulation (EC) 1775/2005 requires balancing rules to be fair, non-discriminatory and transparent and to reflect actual system needs taking into account the resources available to transmission system operators. With a view to ensure the appropriate design of balancing rules Article 25 para 2 lit b Directive 2003/55/EC provides that the balancing rules shall be fixed or approved by the regulatory authority prior to their entry into force. Table 8 provides an overview about the status in the investigated markets.

The analysis shows that

- Only in Austria⁵¹ **market based** balancing is implemented.
- In Croatia market based balancing is foreseen in the market rules with an implementation deadline starting with the gas year 2011/2012.
- In most other Contracting Parties and neighboring countries - Serbia, Italy, Romania and Slovenia - the TSO is obliged to provide energy for balancing purposes. More specifically:
 - The TSO may contract the balancing energy on the market in Romania and Slovenia or provide it via the vertically integrated supply branch in Serbia and Italy. In the latter case, the price users have to pay for the balancing energy in Italy is different from the price TSO paid for it. In Serbia, however, the cost of buying balancing energy is passed through to users.
- The existence of **penalty charges** for the network users is reported in half of the investigated markets, namely Croatia, FYR of Macedonia, Italy and Slovenia.
- In Serbia, the relevant provisions of Regulation (EC) 1775/2005 still have to be transposed into national legislation.

All over, balancing regimes need to develop towards more market oriented purchase of gas by the TSO in all investigated Contracting Parties with the exception of Croatia.

⁵¹ For national transmission – a control zone manager (responsible for the administration of all national transmission capacities) is responsible for system stability via balancing. The control zone manager buys necessary balancing energy on the market based on a merit order list. Austria, however, treats national transmission differently from cross border transmission. In case of cross border transmission TSOs are responsible for the balancing of their system and operate with a +/-2 % tolerance band free of balancing charge.

Table 8: Balancing regimes

| | Balancing model applied | Is balancing regime approved by the regulator? | Does TSO impose penalty charges on network users? |
|-------------------------|-------------------------------------|--|---|
| Albania | n.a. | yes | n.a. |
| Austria | Market based | no | no |
| Croatia | Market based | yes | yes |
| FYR of Macedonia | Not answered | Indirectly by approving network code | yes |
| Italy | TSO has to provide balancing energy | yes | yes |
| Romania | TSO has to provide balancing energy | n.a. | no |
| Serbia | TSO has to provide balancing energy | no | no |
| Slovenia | TSO has to provide balancing energy | yes | yes |
| UNMIK | n.a. | yes | n.a. |

3.7 ARTICLE 8 – TRADING OF CAPACITY RIGHTS

According to the provisions of Article 8 Regulation (EC) 1775/2005 TSOs shall take reasonable steps to allow capacity rights to be freely tradable and to facilitate such trading activities.

The Commission staff working document on capacity allocation and congestion management⁵² more in detail defines the related best practice approach: “[...] 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.” The Commission staff working document thereby makes clear that “facilitating secondary market trading” as stipulated by Article 8 Regulation (EC) 1775/2005 requires that TSOs needs to involve more than the pure lack of forbidding secondary market trading but

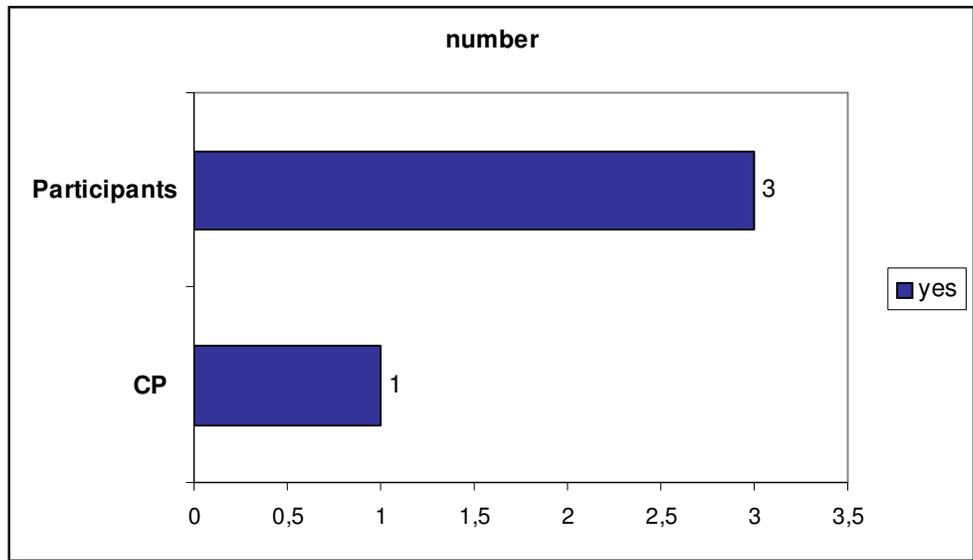
⁵² Commission staff working document on capacity allocation and congestion management for access to the natural gas transmission networks regulated under Article 5 of Regulation (EC) No 1775/2005 on conditions for access to the natural gas transmission networks, SEC(2007) 822 of 12 June 2007 (http://ec.europa.eu/energy/gas_electricity/interpretative_notes/doc/sec_2007_822.pdf), especially para 11 to 11.4.

requires TSOs to actively promote release of unused contracted capacities on the secondary market. The **analysis shows** that:

- In those countries where the secondary market for trading of capacity rights exist – i.e. Croatia, Austria, Italy and Slovenia - such opportunity is given by issuing relevant secondary legislation.
- However, only in Austria trading of capacity rights is performed transparently via a “online bulletin board” and thereby meets the requirements of the Commission staff working document.
- In FRY of Macedonia, Serbia and Romania rules for secondary market trading do not exist.

Figure 3 provides an overview of the existing secondary market framework in the investigated markets.

Figure 3: Are rules for secondary market trading of capacity established?



3.8 ARTICLE 13 – PENALTIES

Article 13 Regulation (EC) 1775/2005 requires national legislation to lay down rules on penalties applicable to infringements of the provisions of the Regulation and to take necessary measures to ensure that they are implemented. It is in this context relevant that penalties to be issued by regulators need to be “effective, proportionate and dissuasive”. This is relevant to the extent that penalties need to develop effective impact on non-compliant TSOs in order to ensure proper compliance.

Experience on European level showed that poor implementation of Article 13 – both as regards the level of “effective, proportionate and dissuasive” penalties and the extent of penalties applied by regulators – showed that inefficiencies related to the practical effect of penalties and their application by regulators⁵³. The 3rd package for the internal gas and electricity market liberalization consequently introduced improvements related to the setting of penalties⁵⁴.

The picture for the Energy Community countries is similar: Most of the answers showed that the **regulators do not have right to sanction** non-compliance with Regulation (EC) 1775/2005. Only in Croatia, Italy and Serbia regulators may use their sanction powers, but even there, they have **never done** it so far.

⁵³ W. Boltz, Regulation (EC) 1775/2005: compliance monitoring ERGEG, presentation to the 14th Madrid Forum, slide 10 et seqq; http://ec.europa.eu/energy/gas_electricity/forum_gas_madrid_en.htm.

⁵⁴ Article 22 Regulation (EC) 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003; OJ L 211, p 15 et seqq of 14.8.2009. Article 27 Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005, OJ L 211, p 36 et seqq of 14.8.2009.

4 CONCLUSIONS – SUMMARY

The analysis of the present report shows that:

The **very general regulatory framework appears to be harmonised at least to a minimum extent**

- In all investigated markets (except for those markets that do not have a gas market yet, i.e. Albania and UNMIK) a **body/entity exists that fulfills the tasks of TSO** exists.
- *However*, similar to the common application of the **definitions** listed in Article 2 Regulation (EC) 1775/2005, already the definition of “network/system users” is unharmonised to a large extent.

To the extent regulated, the **regulatory systems investigated in general well comply with**

- The **tarification** requirements of Article 3 Regulation (EC) 1775/2005. At the same time the main principles for determination of transmission tariffs are well harmonized, with the exception of differences between tariff methodologies applied in Contracting Parties and EU countries.
- The requirements on **network access services** of Article 4 Regulation (EC) 1775/2005.
- The requirements of Article 5 Regulation (EC) 1775/2005 on **capacity allocation mechanisms and congestion management procedures**. While for CMP interruptible UIOLI is the prevailing – and to this extent streamlined – method, for capacity allocation a variety of models is applied.

Significant shortcomings are identified related to the following regulatory areas:

- Both for national and cross border transmission networks **access is not fully given on a regulated basis** – be it for reasons of lacking the relevant legal basis or the claimed reason of capacities 100% booked via existing contracts.
- There is need to **improve the role of regulators in the approval of investment plans**.
- Regulatory **investment incentives** are missing in most markets.
- **Balancing models** (Article 6 Regulation (EC) 1775/2005) to a prevailing extent are not based on market based procedures.
- Secondary market trading rules (Article 8 Regulation (EC) 1775/2005) do not exist in the Contracting Parties, with the exception of Croatia. From all investigated markets, however, only in Austria trading of capacity rights is performed transparently via “online bulletin board” and thereby meets the requirements of the Commission staff working document.
- Article 13 Regulation (EC) 1775/2005 related to **penalties** is neither properly implemented nor are existing powers used by regulators.

5 RECOMMENDATIONS – HOW TO OVERCOME THE SHORTCOMINGS

For overcoming the identified shortcomings of gas market models in the Energy Community the followings measures are recommended:

SHORT TERM MEASURES

Third party access to national and cross border transmission networks has to be established.

- For those markets where a proper legal framework is missing – i.e. Bosnia and Herzegovina both for national and cross border transmission and Serbia related to access to cross border transmission networks – the legal framework has to be adjusted. It has to be underlined that lack of access to gas networks is a clear breach of the Energy Community acquis.
- In those cases where access is not given based on the argument of capacities 100% booked under existing contracts, regulators have to include the relevant capacities in their regulated transmission system. It is noted that existing contracts in the Energy Community are not protected and consequently have to be regulated⁵⁵. At minimum the UIOLI/UIOSI principles have to be applied by regulators to these capacities.

Balancing models need to develop towards a market based approach for purchasing balancing gas (by the TSO)

- It is acknowledged that market based balancing requires an – at least partly – liquid gas market for purchasing gas.
- However, also without a liquid gas market – allowing the TSO to e.g. buy from a merit order list – the conditions under which the TSOs buys gas can be transparent and based on a reference market price. It is recommended for the ECRB shall develop common balancing principles, making use of the already existing European experience and best practice models.

Regulatory activities for facilitating investment need to be improved

- Regulators shall be involved in the approval of investment plans.
- Regulatory investment incentives have to be implemented.

Penalties have to be properly implemented and applied by regulators

- For follow up of this element the ECRB shall prepare an update report on the status and application of penalties in 2011.

⁵⁵ For the legal argumentation see ECRB, Regulation of Cross Border Transmission Flows in the Energy Community (2010), chapter 3.1.

Secondary market rules shall be included in the regulatory system

- It is acknowledged that, before entering into secondary market trading, first efforts for developing the primary market are more stringent.
- It is further taken note of the fact that contractual congestion currently does not exist in the Energy Community markets.
- However, having in mind the need to overcome the – legally not sound but still applied - protection of transmission capacities contracted under existing capacities, UIOLI and/or UIOSI are the only reasonable tools to overcome related capacity reservations.

MID TERM MEASURE

Capacity allocation mechanisms should be streamlined in a mid term perspective to auctions

- A variety of different capacity allocation mechanisms is applied throughout the Region. It is acknowledged that such differences also exist(ed) on European level and are only able to create barriers to cross border flows to the extent interconnections and cross border trade exists.
- However, European experience also shows that – with gas markets developing to integrate – the need for capacity allocation mechanisms streamlined across borders grows.
- It is therefore recommended to harmonize capacity allocation mechanisms in a mid term perspective and **linked to the development of gas interconnections and cross border trade** in the Region. More precisely it is recommended to follow the European best practice example⁵⁶ and head towards **auctions** as only capacity allocation mechanism applied.

⁵⁶ Capacity allocation rules currently discussed on European level, see presentation ERGEG to the 18th EU Gas Regulatory Forum ("Madrid Forum"), http://ec.europa.eu/energy/gas_electricity/forum_gas_madrid_en.htm.