



RETAIL MARKET FUNCTIONING INDICATORS

- Status Review and Recommendations for the Energy Community Contracting Parties

January, 2017

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I. INTRODUCTION

1. About ECRB

The Energy Community Regulatory Board (ECRB) operates based on the Energy Community Treaty. As an institution of the Energy Community¹ ECRB advises the Energy Community Ministerial Council and Permanent High Level Group on details of statutory, technical and regulatory rules and makes recommendations in the case of cross-border disputes between regulators.

ECRB is the independent regional voice of energy regulators in the Energy Community. ECRB's mission builds on three pillars: providing coordinated regulatory positions to energy policy debates, harmonizing regulatory rules across borders and sharing regulatory knowledge and experience.

2. Background

Indicators for measuring retail market functioning provide a meaningful tool for analysis of potential shortcomings and the need for regulatory measures supporting retail market efficiency. With retail market opening having started in the Energy Community Contracting Parties (CPs), further development of related indicators will support systematic oversight of retail market functioning. Therefore, ECRB decided to examine the possible use of concepts already developed on European level and prepare an **overview of the relevant/potential indicators for monitoring of retail market functioning** in the Energy Community CPs.

3. Scope of the report

The present report assesses **the existing practices in monitoring of retail market functioning** in the Energy Community CPs **vis-a-vis** the wider concept developed in this context on **European level**. Additionally, the report examines **potentials for expanding the scope** of relevant indicators classified in the following pillars: **Customer Awareness and Satisfaction, Customer Protection, Retail Market Outcomes, Market Structure, Relationship between Wholesale Markets and Retail Prices, as well as Market Conditions and DSO Services**.

The report covers **Albania, Bosnia and Herzegovina, Georgia, FYR of Macedonia, Montenegro, Kosovo***, **Serbia and Ukraine**. In the case of Bosnia and Herzegovina, the results in gas sector are given for Republika Srpska only, while in electricity part it is clearly marked in case they differ for the Federation of Bosnia and Herzegovina (FBiH), Republika Srpska (RS) and Brcko District of Bosnia and Herzegovina (BD).

¹www.energy-community.org. [*Throughout this document the symbol * refers to the following statement: This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Advisory Opinion on the Kosovo declaration of independence].

The analysis is performed separately for the electricity and gas sectors. Taking into account that Montenegro and Kosovo* at the present point do not have gas markets, the relevant information provided in this report refers only to electricity market. **The summary, conclusions and recommendations refer to both the electricity and gas sectors.**

4. Methodology

Data and analyses contained in the present report are based on information **provided by the regulatory authorities** of the analyzed markets. Data collection was done through **separate questionnaires for electricity and gas** sectors with the main purpose to **screen applicability of CEER's and ERGEG's** retail market functioning indicators in the Energy Community CPs.

The list of indicators examined in the questionnaires was taken from the following documents: ERGEG "Final Guidelines of Good Practice on Indicators for Retail Market Monitoring for Electricity and Gas", Ref: E10-RMF-27-03 12 October 2010²; Status Review of the implementation of the ERGEG GGP on indicators for retail market monitoring as of 1 January 2012³ and CEER position paper on well-functioning retail energy markets⁴.

The questionnaires aimed to **identify different practices of the observed NRAs** related to **retail market monitoring**, while collecting **particular data** on the indicators **was not required**. NRAs were required to provide answers for each specific indicator as regards whether it is "measured by NRA", "not measured by NRA", "measured by other institution/body/company" or "could be measured by NRA in mid-term (1-3 years)". Multiple answers were possible and NRAs were also required to provide background information or additional explanation on their answers in the section "additional comment/explanation". Additionally, in order to clarify meaning of certain indicators (if necessary) NRAs were asked to give additional explanations regarding the meaning or scope of the indicator in the CEER/ERGEG documents. In cases where NRAs collect data similar to an indicator listed in the questionnaires but with a definition or understanding different from those in the CEER/ERGEG documents, NRAs were asked to explain the differences.

The questionnaires were distributed to the NRAs on 25th July 2016, with a due date for completion by 5th September 2016 and extended to 20th of September 2016. Moldova did not provide replies within open deadline and are therefore not included in the present report.

²http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Customers/Tab1/E10-RMF-27-03_final%20GGP%20IRMM_12-Oct-2010.pdf

³http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Customers/Tab3/C12-RMF-46-03_RMI-SR_03-Sep-2012.pdf

⁴http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Customers/2015/C15-SC-36-03_V19_Well-functioning_retail_markets.pdf

II. ANALYSIS

1. Electricity Retail Market Indicators

The first chapter of the analysis provides an overview of the existing practices in monitoring of electricity retail market functioning in the Energy Community CPs vis-a-vis the related wider concept on European level. Additionally, the survey examines potentials for expanding the scope of applied retail electricity market indicators in the areas of Customer Awareness and Satisfaction, Retail Market Outcomes, Market Structure, Relationship between Wholesale Markets and Retail Prices, as well as Market Conditions and DSO Services in accordance with the provisions from the 3rd Energy Package⁵.

1.1 Customer Awareness and Satisfaction

The first set of examined indicators refers to customer awareness and satisfaction with retail electricity markets functioning and is comprised of six indicators, namely: percentage of consumers knowing that they can switch supplier; percentage of consumers who know that DSOs are responsible for continuity of supply and, where applicable, metering; percentage of consumers trusting the energy market; number of customer complaints by type of complaint/category; number of customer enquiries/questions that did not result in a complaint and eventual existence of a reliable price comparison website available for customers. The table hereinafter shows related results.

⁵ Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC https://www.energy-community.org/portal/page/portal/ENC_HOME/DOCS/1164180/0633975AB5127B9CE053C92FA8C06338.PDF

Table 1: Overview status of the Customer Awareness and Satisfaction Indicators (Electricity)

Indicator	BA	GE	KS*	MK	ME	RS	UA	AL
Percentage of consumers knowing that they can switch supplier (proven by e.g. a survey or elsehow measured)	Not measured by NRA	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Not measured by NRA	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)
Percentage of consumers who know that DSOs are responsible for continuity of supply and, where applicable, metering (proven by e.g. a survey or elsehow measured)	Not measured by NRA	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Not measured by NRA	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)
Percentage of consumers trusting the energy market (proven by e.g. a survey or elsehow measured)	Not measured by NRA	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Not measured by NRA	Not measured by NRA	Not measured by NRA	Measured by other institution/body/company
Number of customer complaints by type of complaint/category	Measured by NRA	Measured by NRA and DSOs	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA
Number of customer enquiries/questions that did not result in a complaint	Measured by DSOs	Measured by NRA and DSOs	Measured by NRA Measured by other institution/body/company	Measured by NRA Could be measured by NRA in midterm (1-3 years)	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Measured by NRA	Measured by other institution/body/company

Indicator	BA	GE	KS*	MK	ME	RS	UA	AL
Is there a reliable price comparison website available for customers?	No	No. NRA is planning to launch such website in midterm (1-3 years)	No. NRA is planning to launch such website in midterm (1-3 years)	No. NRA is planning to launch such website in midterm (1-3 years)	No.	No	No	No

The first indicator, i.e. the **percentage of consumers knowing that they can switch supplier** (proven by e.g. a survey or elsehow measured) **is not measured in any of the analyzed CPs**, due to the lack of competition as stated in the case of Kosovo* (only one supplier) and lack of measuring tools in the case of Ukraine. In FYR of Macedonia, at the current point of gradual opening of the electricity market, indicative data is available due to the easier access for direct consultations with the relatively small number of eligible customers (270 large consumers and 158 small consumers) on the possibilities for switching supplier. Once households and the rest of small consumers will become eligible, there is a possibility for the NRA to start conducting public polls for measuring this indicator.

Similarly, the second examined indicator, i.e. the **percentage of consumers who know that DSOs are responsible for continuity of supply** and, where applicable, metering (proven by e.g. a survey or elsehow measured) at the current point is **not measured in any of the observed CPs in a systematic way**. Even though this indicator is not measured in Georgia, it may be **presumed that most of the consumers are aware of this fact, proven by the number of complaints** submitted to the Georgian NRA and DSOs. Similarly, the NRA of Kosovo* reported that contacts with the customers show their awareness of the relevant DSO role. In FYR of Macedonia there is a **possibility for the NRA to start conducting public polls** for measuring this indicator once households and most of the small consumers become eligible, while in Ukraine currently there is lack of measuring tools for this indicator.

Likewise, the third indicator, i.e. the **percentage of consumers trusting the energy market** (proven by e.g. a survey or else how measured) **is not measured** in any of the examined Energy Community CPs. It is worth mentioning at this point that the consumer trust in energy retail market's is, however, a **complex issue to quantify**. It is usually monitored using survey data from a large number of market participants, such as in the **European Commission's market monitoring in its annual Consumer Markets Scoreboard**. Another example of a European-wide survey is the **Eurobarometer**, which often includes questions on trust in public organizations."⁶

⁶ http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Customers/2015/C15-SC-36-03_V19_Well-functioning_retail_markets.pdf (page 21)

On the other hand, the fourth indicator, i.e. the **number of customer complaints** by type of complaint/category **is measured in all** examined CPs. In **Bosnia and Herzegovina** this indicator is measured by NRAs, although there is **no single classification** of complaints due to different practices in different administrative units in three regulatory areas. In **Georgia** data on customer complaints is collected by the NRA and DSOs and includes the following categories: connection to the grid, **increasing capacity of an existing connection**, **reduction of network-related service fees**, metering, invoicing, continuity of supply, voltage quality, inadequate construction services rendered by DSO, failure of DSO to address a customer's request, **misconduct by the staff of DSO**, and other. In **Kosovo*** there is an evidence of customer complaints on **bills**, debts, transfer of electricity debt, unmetered billing, disconnections, voltage quality, **extra charges** and others issues. In FYR of **Macedonia** customer complaint categories include **connection to the grid**, metering, continuity of supply, **voltage quality**, **commercial quality**, contract provisions, **invoicing**, prices, **switching** and other issues. In **Montenegro** customer complaints refer to **non-payment**, connection to the grid and **disconnections due to theft**. In **Serbia** usual customer complaints categories are connections, **metering**, billing and **disconnections**, while in **Ukraine** there is a measurement of the customers complaints regarding connection, billing, metering, commercial quality, **continuity of supply** and **application of tariffs**.

Similarly, the fifth indicator, i.e. the **number of customer enquiries/questions** that did not result in a complaint is **measured in most** of the assessed CPs. In **Bosnia and Herzegovina** it is measured by the DSOs, while in **Georgia** it is measured by both the NRA and DSOs. In **Kosovo*** within the Ministry of Trade and Industry there is a Customer Department which measures this indicator, while the NRA requests from the licensed electricity supplier detailed reports every six months on all activities related to supply, such as complaints, enquires, disconnections, number of customers, etc. In **Montenegro** there is an evidence of a certain number of cases where complaints are submitted but did not result in formal complaint due to lack of fulfillment of mainly administrative criteria. At this point the NRA of FYR of **Macedonia** is **measuring** this indicator only for the **regulated electricity supplier**, although this indicator is part of the new Market Monitoring Rulebook which is in the process of implementation and, this, will **be measured** for the **other electricity suppliers** as well. In **Ukraine** measuring of this indicator is **already part** of the NRA market monitoring activities, while in **Serbia** this indicator is planned to be measured in **midterm** (1-3 years).

The sixth and final indicator in this section, i.e. the availability of a **reliable price comparison website** available for customers, shows **lack of such instrument** in the analyzed markets, which reflects the reality that the retail electricity markets in the Energy Community CPs are in **an early stage of development**. This is due to the **lack of competition**, such as stated in the case of Montenegro; the situation of retail market opening, especially **regarding households and most of the small customers**, is similar in the other CPs.⁷ As reported, with further development of the electricity retail markets, NRAs of Georgia, Kosovo* and FYR of

⁷ ECRB Market Monitoring Report 2015 https://www.energy-community.org/portal/page/portal/ENC_HOME/DOCS/4120377/310EA70C92EB668EE053C92FA8C042FA.pdf (page 54)

Macedonia **express potential for establishing** such price comparison website. In Albania this is not measured by NRA, but ERE is planning to launch such website as soon as possible.

1.2 Customer Protection

The second set of examined indicators refers to customer protection in the retail electricity markets and is comprised of three indicators: time between notification to pay and disconnection for non-payment; number of disconnections due to non-payment and percentage of suppliers using some standards for key information in advertising and bills. The table hereinafter shows related results.

Table 2: Overview status of the Customer Protection Indicators (Electricity)

Indicator	BA	GE	KS*	MK	ME	RS	UA	AL
Average time between notification to pay and disconnection for non-payment	Measured by DSO	Measured by NRA and DSOs	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Measured by other company (DSO)
Number of disconnections due to non-payment	Measured by DSO	Measured by NRA and DSOs	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by DSO
Percentage of suppliers using some (please define which) standards for key information in advertising and bills	Not measured by NRA	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Not measured by NRA	Not measured by NRA	Not measured by NRA

The **first indicator** in this section, i.e. the average time between notification to pay and disconnection for non-payment is **measured** by the NRAs in **Kosovo*** (the time limit for disconnection of the customer due to non-payment is defined in the Rules on Connection and Disconnection in Electricity Sector) and **Serbia**, while in **Bosnia and Herzegovina** a DSO

obligation to pass related data to the NRA exists only in **Republika Srpska**. In **Georgia** the NRA determines the minimum period of time between notification to pay and disconnection for non-payment, although at this point DSOs do not report on fulfillment of this indicator to the NRA. However, if a DSO fails to fulfill its obligation and a customer submits a complaint, the DSO may be fined by the Georgian NRA which **intends to start monitoring this indicator through DSOs' quarterly and annual reports as of 2017**. FYR of **Macedonia** and **Ukraine** NRAs stated that this indicator **could be measured** by the NRA in midterm (1-3 years), while in **Montenegro** at the current point this indicator is not monitored. In Albania this indicator is measured by the DSO. This is also determined in the regulation of "General Condition of contract universal service electricity supply and end customer".

The second indicator, i.e. the number of **disconnections due to non-payment** is **measured in all** of the assessed CPs. Similarly to the previous indicator, in **Bosnia and Herzegovina** the DSO obligation to pass the data to NRA regarding the specified indicator exists only in **Republika Srpska**.

The third and final indicator in this section, i.e. the **percentage of suppliers using some standards for key information** in advertising and bills, is **not measured in the examined CPs**. The **Georgian NRA** determines the **key information** that has to be provided in bills and **regulated suppliers** use the standard. Similarly, in **Kosovo***the **NRA approves the content of the bill**; this regards only to the public supplier that is currently the only supplier on the market. However this indicator could be measured in midterm also for new suppliers. In Montenegro the situation is similar due to the fact that there are no commercial suppliers yet present in the electricity retail market, while in **Ukraine the content of the bill is prescribed by the NRA and the Government**, although there is a lack of **defined standards for key information in advertising**. In FYR of **Macedonia** standards for **key information to be provided in bills is prescribed** in the Electricity Supply Rules (namely: contact data of the supplier and the customer, invoice number, payment period, consumption period, consumption data and price of electricity, network tariffs, percentage of share of the electricity from the preferential producers from renewable energy sources and average price, information on debts, system operator contact data, etc.) and this indicator could be measured in the following period as market opening progresses.

1.3 Electricity Retail Market Outcomes

The third section refers to electricity retail market outcomes and is comprised of the following examined indicators: end user prices for typical household and/or small customer (for incumbent and alternative suppliers, divided into taxes/grid/energy costs); prices spread on comparable products for typical household and/or small customer; number of available contracts to typical household and/or small customer (availability of a variety of pricing and billing options, availability of online offers, availability of contracts guaranteeing the origin of energy); percentage of customers eligible to receive a regulated end-user price and percentage of eligible customers supplied under regulated end-user prices. The table hereinafter shows related results for the CPs.

Table 3: Overview status of the Retail Market Outcomes Indicators (Electricity)

Indicator	BA	GE	KS*	MK	ME	RS	UA	AL
End user prices for typical household and/or small customer	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by State Statistical Office Could be Measured by NRA in midterm (1-3 years)	Measured by NRA	Measured by NRA
- for incumbent and alternative suppliers	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA Could be measured by NRA in midterm (1-3 years)	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Measured by NRA	Could be measured by NRA in midterm (1-3 years)
- divided into taxes/grid/energy costs	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA Could be measured by NRA in midterm (1-3 years)	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Measured by NRA	Measured by NRA
Prices spread on comparable products for typical household and/or small customer	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Measured by other institutions/body/company
Number of available contracts to typical household and/or small customer		N/A	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Measured by NRA
- Availability of a variety of pricing and billing options	Could be measured by NRA in midterm (1-3 years)	N/A	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Measured by other institutions/body/company
- Availability of online offers	Could be measured by NRA in midterm (1-3 years)	N/A	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Measured by other institutions/body/company
- Availability of contracts guaranteeing the origin of energy	Could be measured by NRA in midterm (1-3 years)	N/A	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Measured by other institutions/body/company

Indicator	BA	GE	KS*	MK	ME	RS	UA	AL
Percentage of customers eligible to receive a regulated end-user price	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA
Percentage of eligible customers supplied under regulated end-user prices	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA

The first indicator in this section, i.e. the **end user prices** for typical household and/or small customer is **measured in all** analyzed CPs and at this point the data mainly refers to the **incumbent regulated suppliers**. In Serbia the State Statistical Office collects data on this indicator and reports to EUROSTAT. Similarly, end user prices for typical household and/or small customer divided into taxes/grid/energy costs are measured in all of the assessed CPs for the regulated incumbent suppliers, except in Ukraine where end user prices for households are measured only with and without taxes (grid and energy costs are not separated). In FYR of **Macedonia** end user prices for eligible small customers, divided into taxes/grid/energy costs, **will be measured for alternative suppliers as well** in the near future with the implementation of the new Market Monitoring Rules, while in Serbia the NRA calculates the average end user price for all household and small customers, divided by taxes/grid/energy costs.

The second indicator, i.e. the **prices spread** between comparable products for typical household and/or small customer is **not measured** by NRAs in any of the analyzed CPs due to the fact that there are **no comparable products** at this point –namely, households and (most of) small customers are supplied by the regulated incumbent suppliers. It is reported that this indicator is **not relevant for Georgia** since the customers either purchase electricity at a fixed tariff from the electricity DSOs or negotiate the price and purchase electricity from small power plants. On the other side it is reported that this indicator **could be measured** by NRAs in midterm (1-3 years) with the development of the electricity retail market functioning in **Bosnia and Herzegovina** and **Serbia**, and progression of the market opening in FYR of **Macedonia**.

Similarly, the third set of indicators, i.e. the **number of available contracts** to typical household and/or small customer (availability of a variety of pricing and billing options, availability of online offers, availability of contracts guaranteeing the origin of energy) is **not measured** in any of the assessed CPs due to the fact that at this point households and small consumers are **dominantly supplied by the regulated incumbent suppliers** and there are **common contracts** for typical household and/or small customer which are **approved by NRAs**. Additionally, at this point there is also a **lack of certificates** for guaranteeing the **origin of energy** in the Energy Community CPs. However, **most of the NRAs reported** that

these indicators **could be measured** in the midterm (**1-3 years**) with the development of the electricity retail market functioning and availability of certificates guaranteeing the origin of energy. In Georgia, similarly as for the second indicator, it is reported that the third set of indicators are not relevant.

The last two indicators in this section, i.e. the **percentage of customers eligible to receive a regulated end-user price and percentage of eligible customers supplied under regulated end-user prices are measured in all of the examined CPs.**

1.4 Market Structure

The fourth section refers to market structure and is comprised of the following examined indicators: Herfindahl-Hirschman Index; number of active suppliers that are selling electricity to households and/or small customers across the same market; market shares of suppliers by number of customers and consumption and percentage of customers is served by supplier having a separate branding from the DSO of its vertically integrated undertaking. The table hereinafter shows the results for the CPs.

Table 4: Overview status of the Market Structure Indicators (Electricity)

Indicator	BA	GE	KS*	MK	ME	RS	UA	AL
Herfindahl-Hirschman Index	Measured by NRA	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA
Number of active suppliers that are selling electricity to households and/or small customers across the same market	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Could be measured by NRA in midterm (1-3 years)
Market shares of suppliers by number of customers and consumption	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Could be measured by NRA in midterm (1-3 years)

Indicator	BA	GE	KS*	MK	ME	RS	UA	AL
Percentage of customers is served by supplier having a separate branding from the DSO of its vertically integrated undertaking	Not measured by NRA DSOs unbundling not finished yet	Not measured by NRA DSOs not unbundled yet.	Measured by NRA	Not measured by NRA DSO will be unbundled as of 1 st of January 2017	Measured by NRA	Not measured by NRA	Not measured by NRA DSOs are not unbundled	Measured by other institutions/body/company

Despite the lack of advanced functionality of the electricity retail markets, some of the **NRAs** in the analyzed CPs, such as **Bosnia and Herzegovina, Georgia** and FYR of **Macedonia** have **established practices for measuring the Herfindahl-Hirschman Index** (not publishing yet in most of the cases), while in **all of the assessed CPs** the number of **active suppliers** that are selling electricity to households and/or small customers across the same market, as well as **market shares** of suppliers by number of customers and consumption are **monitored**. This practices will be **further utilized** with the development of the electricity retail market functioning.

On the other hand, due to the fact that the indicator **percentage of customers served by a supplier having a separate branding from the DSO of its vertically integrated undertaking**⁸ stems from the provision contained in the **3rd Package** (Article 26.3 in the 2009 Directives) which establishes the obligation for vertically integrated DSOs not to create confusion with respect to the separate identity of the supply branch of the vertically integrated undertaking⁸, and the fact that this provision from the 3rd Energy Package is not being implemented in most of the Energy Community CPs yet, **this indicator is not being measured** in the examined CPs, **except for Kosovo* and Montenegro**, where monitoring of this indicator shows that 100% of the customers are served by the DSOs that are legally unbundled from the supplier with different branding (<http://www.keds-energy.com/en/about.asp> and <http://www.kesco-energy.com/en/index.asp> in the case of Kosovo* and <http://www.cedis.me/> and <http://www.epcg.com/en> in the case of Montenegro).

⁸ http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Customers/Tab3/C12-RMF-46-03_RMI-SR_03-Sep-2012.pdf (page 34)

1.5 Relationship between Wholesale Markets and Retail Prices

The fifth section refers to relationship between wholesale markets and retail prices and is comprised of the following examined indicators: correlation over time (relevant time defined nationally) between a transparent, market-based wholesale price and the retail energy price and mark-up between wholesale prices and retail energy prices. The table hereinafter shows the results for the CPs.

Table 5: Overview status of the Indicator measuring relationship between wholesale markets and retail prices (Electricity)

Indicator	BA	GE	KS*	MK	ME	RS	UA	AL
Correlation over time (relevant time defined nationally) between a transparent, market-based wholesale price and the retail energy price	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Measured by State Statistical Office Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Measured by other institutions/body/company
Mark-up between wholesale prices and retail energy prices	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Measured by State Statistical Office Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)

Monitoring of over time correlation between a transparent, market-based wholesale price and the retail energy price, as well as mark-up between wholesale prices and retail energy prices is lacking due to the fact that in the analyzed CPs **market-based organized trading platforms or power exchanges** do not exist yet, except in Serbia⁹ from recently, and at the current point main forms of wholesale transactions for quantities provided on the open market are **bilateral agreements** between the dominant incumbent suppliers and licensed traders; while in **Ukraine** as of 1996 all electricity is sold and bought based on a

⁹ <http://seepex-spot.rs/en/>

“**single buyer**” model and bilateral agreements are not allowed. Additionally, as it was stated previously, households and small customers in the examined CPs are dominantly supplied by the **regulated incumbent suppliers** which are in most cases **procuring electricity from the domestic production under regulated prices**.

However, monitoring of the correlation between wholesale prices and retail prices, as well as the mark-up between wholesale prices and retail energy prices **is taking place in some way**. In Kosovo* for instance the NRA monitors this correlation, although the wholesale price is defined as the price of electricity from domestic production and the price of imports, where the price of electricity imports is market based and the price of domestic electricity production is mainly regulated. Similarly, in Ukraine monitoring of these indicators is taking place **for the regulated prices**, as well as in Georgia regarding the mark-up between wholesale price and retail energy price. In FYR of Macedonia the State Statistical Office, since 2014, is publishing data which could be used for monitoring of these indicators, although the incumbent regulated supplier of households and most of the small consumers at the current point is still purchasing electricity under regulated prices from the domestic producer which has a public service obligation and only a small portion of electricity is procured from the licensed traders through a monitored tendering procedure. Monitoring of these indicators in FYR of **Macedonia will take place** by the NRA with the implementation of the new Market Monitoring Rulebook **in the near future**, and also the **NRAs from other assessed CPs** reported that this indicator could be monitored **in the following years**, as organized markets or power exchanges will become key points for wholesale trading and electricity retail markets advance their functionality.

1.6 Market Condition and DSO Services

The final and sixth section refers to market conditions and DSO services and is comprised of examining the following indicators: number of switches for household and/or small customer as a percentage of customer numbers; number of renegotiated contracts for household and/or small customer as a percentage of customer numbers; number of delayed switches; number of failure switches in relation to the total switching rate; average time between a connection being requested by a customer and completed; relative number of disconnections and If there is a charge for execution of maintenance services, then: average time taken for execution of maintenance services and average charge for execution of maintenance services. The table hereinafter shows the results for the CPs.

Table 6: Overview status of the Market Condition and DSO Services Indicators (Electricity)

Indicator	BA	GE	KS*	MK	ME	RS	UA	AL
Number of switches for retail customers as a percentage of customer numbers	Measured by NRA	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)
Number of renegotiated contracts for household and/or small customer as a percentage of customer numbers	Measured by companies	Measured by NRA*	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Not measured by NRA	Measured by other institutions/body/company
Number of delayed switches	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	N/A	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)
Number of failure switches in relation to the total switching rate	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)
Average time between a connection being requested by a customer and completed	Measured by NRA	Measured by NRA and DSOs	Measured by NRA	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Measured by other institutions/body/company
Relative number of disconnections	Measured by NRA	Measured by NRA and DSOs	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by other institutions/body/company

Indicator	BA	GE	KS*	MK	ME	RS	UA	AL
If there is a charge for execution of maintenance services, then:								
- Average time taken for execution of maintenance services	Measured by DSOs	No charge for execution of maintenance services	Not measured by NRA	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Not measured by NRA	Measured by other institutions/body/company
- Average charge for execution of maintenance services	Measured by DSOs	No charge for execution of maintenance services	Not measured by NRA	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Not measured by NRA	Measured by other institutions/body/company

The first indicator in this section relates to the **number of switches** for retail customers as a percentage of customer numbers for which is reported that NRAs in **Bosnia and Herzegovina, FYR of Macedonia, Serbia and Ukraine are collecting data**, although at the current point received data in most of the examined markets **refers to switching procedures for large customers, as well as for minor portion of small non-household customers in FYR of Macedonia and Ukraine. In Georgia switching is not allowed** for households and small customers who are supplied by the regulated DSOs/Suppliers, **although exception applies** for purchasing electricity from small power plants (up to 13 MW), based on direct contracts. On the other side **Kosovo*, Montenegro and Ukraine** reported that this indicator **could be monitored in midterm** (1-3 years) once electricity retail markets develop to a more advanced level.

A renegotiated contract, according to ERGEG GGP is defined as “changing to a new contract (excluding the automatic renewal of the current contract) with the existing supplier.”¹⁰, and it is assumed that renegotiation refers to the key elements of the contract, such as price, payment options, quantities and similar. The second indicator, i.e. the number of renegotiated contracts for household and/or small customer as a percentage of customer numbers is **not been measured by NRAs in the assessed CPs**. In Bosnia and Herzegovina data on this indicator is collected by the suppliers, which is assumed that could be the case in some of the other observed markets. The Georgian NRA reported that a similar indicator is presently measured for those consumers who purchase electricity directly from small power

¹⁰ http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Customers/Tab3/C12-RMF-46-03_RMI-SR_03-Sep-2012.pdf (page 41)

plants and renegotiate contracts. The NRAs of Kosovo*, FYR of Macedonia and Montenegro reported that this indicator could be measured in midterm.

The third indicator, i.e. the number of **delayed switches** is **not measured** in the examined CPs, except for Bosnia and Herzegovina. In **Serbia** monitoring of this indicator is not applicable due to the fact that there is **no legal possibility** for delayed switches, meaning that if the switching procedure was not successfully finalized within 21 days, the whole switching process starts from the beginning. **Other NRAs** stated that this indicator **could be monitored in midterm**, once electricity retail markets further develop.

The fourth indicator, i.e. the number of **failure switches** in relation to the total switching rate is monitored in Bosnia and Herzegovina, although until now there is no record of failed switches. NRAs from other CPs reported that **this indicator could be part of the monitoring activities** at the later stage of electricity retail market development.

The fifth indicator, i.e. the **average time between a connection being requested by a customer and completed** is being **part of the monitoring** activities of the NRAs in **Georgia, Bosnia and Herzegovina, Kosovo* and FYR of Macedonia**, while in **Montenegro and Ukraine** was reported that this indicator **could be monitored** in near future.

For the purpose of this report, the sixth indicator, i.e. the relative **number of disconnections is not including disconnections due to non-payment** of bills (initiated by suppliers and/or DSO/suppliers), which are observed as a separate indicator in the section Customer Protection. Relative number of disconnections is a ratio between disconnections initiated by the DSO (planned disconnections) and total number of disconnections (planned, unplanned, vis-major), and **it has been monitored in all CPs**.

The indicator of the case where there is a **charge for execution of maintenance services, including average time taken for execution** of maintenance services and **average charge for execution** of maintenance services derives from the "provision contained in the 3rd Package (Article 37.1(j) in electricity and 41.1(j) in gas in the 2009 Directives), which establishes a monitoring duty to the NRAs for execution and charge of maintenance services."¹¹ This indicator is measured by the DSOs in Bosnia and Herzegovina, while in Georgia it is reported that even though there is no charge for execution of maintenance services, the NRA monitors the time period for execution of such services and if they exceed the limit set by the regulator, tariff incentive schemes apply. In the other CPs this **indicator has not been measured by the NRAs until now**.

¹¹ http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Customers/Tab3/C12-RMF-46-03_RMI-SR_03-Sep-2012.pdf (page 56)

2. Natural Gas Retail Market Indicators

This second chapter of the analysis refers to the existing practices in monitoring of natural gas retail markets and provides an overview of their functioning in the observed Energy Community CPs vis-a-vis wider concept in this context developed on a European level. Further on it examines potentials for expanding the scope of relevant indicators of retail gas markets in the areas of Customer Awareness and Satisfaction, Retail Market Outcomes, Market Structure, Relationship between Wholesale Markets and Retail Prices, as well as Market Conditions and DSO services in accordance with the provisions from the 3rd Energy package.¹²

2.1 Customer Awareness and Satisfaction

The first set of examined indicators is related to the customer awareness and satisfaction in the retail gas markets and is comprised of six indicators: percentage of consumers knowing they can switch supplier; percentage of consumers who know that DSOs are responsible for continuity of supply and, where applicable, metering; percentage of consumers trusting the energy market; number of customer complaints by type of complaint/category; number of customer enquiries/questions that did not result in a complaint and eventual existence of a reliable price comparison website available for customers. The table hereinafter shows the results for the CPs.

Table 7: Overview status of the Customer Awareness and Satisfaction Indicators (Gas)

Indicator	BA	GE	MK	RS	UA
Percentage of consumers knowing they can switch supplier (proven by e.g. a survey or elsewhere measured)	Not measured by NRA	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Not measured by NRA
Percentage of consumers who know that DSOs are responsible for continuity of supply and, where applicable, metering (proven by e.g. a survey or elsewhere measured)	Measured by NRA	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Not measured by NRA

¹² Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC https://www.energy-community.org/portal/page/portal/ENC_HOME/DOCS/1164181/0633975AB5157B9CE053C92FA8C06338.PDF

Indicator	BA	GE	MK	RS	UA
Percentage of consumers trusting the energy market (proven by e.g. a survey or elsehow measured)	Not measured by NRA	Not measured by NRA	Not measured by NRA	Not measured by NRA	Not measured by NRA
Number of customer complaints by type of complaint/ category (if yes, please insert which categories in the column " explanation")	Measured by NRA	Measured by NRA DSOs and Suppliers	Measured by NRA	Measured by NRA	Measured by NRA
Number of customer enquiries/questions that did not result in a complaint	Measured by NRA	Measured by NRA and DSOs	Could be measured by NRA in midterm (1-3 years)	Measured by NRA)	Measured by NRA
Is there a reliable price comparison website available for customers?	No	No	No	No	No

The first indicator, i.e. the **percentage of consumers knowing they can switch supplier** (proven by e.g. a survey or elsehow measured) **is not measured** in any of the CPs, due to the **lack of competition** as stated in the case of FYR of Macedonia and **lack of measuring tools** in the case of Ukraine. In FYR of Macedonia, with eventual entrance of new active suppliers on the gas market and diversification of the gas supply sources, this indicator **could be measured** by the NRA through conducting **public polls**.

Similarly, the second examined indicator, i.e. the **percentage of consumers who know that DSOs are responsible for continuity of supply** and, where applicable, metering (proven by e.g. a survey or elsehow measured) is **not measured in the observed CPs, except indicatively in Bosnia and Herzegovina** for which it is reported (there are information included in the bills – in line with the Distribution Network Code and General conditions for supply of natural gas) that NRA's communication with the customers showed some level of awareness of the DSO role and **in Georgia**, where it may be presumed that most of the consumers are aware of this fact, proven by the number of complaints submitted to Georgian NRA and DSOs on this matter.

The third indicator as well, i.e. the **percentage of consumers trusting the energy market** (proven by e.g. a survey or elsehow measured) is **not measured in any of the examined Energy Community CPs**.

On the other hand, the fourth indicator, i.e. the **number of customer complaints by type of complaint/category** is **measured in all** of the examined CPs. **In Georgia this indicator is measured by NRA, DSOs and suppliers** and includes the following categories of complaints:

connection to the network, increasing capacity of an existing connection, reduction of network-related service fees, metering, invoicing, continuity of supply, pressure irregularities, inadequate construction services rendered by DSO, failure of a DSO or a supplier to address a customer's request, misconduct by the staff of DSO or a supplier, and other. Similarly, in **Bosnia and Herzegovina** this indicator is measured by the NRA, where the DSO submits reports including data on number on complaints in metering, calculation, access and reading. In FYR of **Macedonia** customer complaint categories include connection to the grid, metering, continuity of supply, commercial quality, contract provisions, invoicing, prices, switching, etc. In **Serbia** usual customer complaints categories are related to connection, system access, supply termination, disconnection, metering and billing, while in **Ukraine** there is monitoring of complaints by category of service provider, such as on DSO operation, supplier issues and other.

The fifth indicator, i.e. the **number of customer enquiries/questions** that did not result in a complaint at this point **is monitored in Georgia, Serbia and Ukraine** (where this indicator includes data on customer enquiries/questions regarding customers rights, switching procedures and other issues), **while in Bosnia and Herzegovina DSOs submit reports to the regulator** on regular basis since 2012 in accordance with the Reporting Rulebook, including data on the total number of oral/written contacts to the DSO service centre and the number of written complaints. In FYR of **Macedonia** this indicator **will be included** in the new Market Monitoring Rulebook and measured in the following period.

The sixth final indicator in this section, i.e. the **availability of a reliable price comparison website** available for customers, shows **lack of such instrument** in the observed CPs, which reflects the reality of retail gas markets in the Energy Community CPs still being in the early stage of development, mainly due to the **lack of competition** and **diversified gas sources**. It was reported that in FYR of Macedonia, where the gas market is fully liberalized, but there is a lack of competition, the NRA could launch such website in midterm with the entrance of new active suppliers on the gas market, while in **Georgia** it is intended that once new switching rules for households and small customers are in place, a price comparison website to be created.

2.2 Customer Protection

The second set of examined indicators refers to the customer protection in the retail gas markets and is comprised of three indicators: time between notification to pay and disconnection for non-payment; number of disconnections due to non-payment and percentage of suppliers using some standards for key information in advertising and bills. The table hereinafter shows the results for the CPs.

Table 8: Overview status of the Customer Protection Indicators (Gas)

Indicator	BA	GE	MK	RS	UA
Average time between notification to pay and disconnection for non-payment	Measured by NRA	Measured by NRA and DSOs	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)
Number of disconnections due to non-payment	Measured by NRA	Measured by NRA and DSOs	Measured by NRA	Measured by NRA	Measured by NRA
Percentage of suppliers using some (please define which) standards for key information in advertising and bills	Not measured by NRA	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Not measured by NRA

The first indicator in this section, i.e. the **average time between notification to pay and disconnection for non-payment is not measured in the analyzed CPs, except for Bosnia and Herzegovina**, where time between notification (after 2 unpaid bills and finalized complaint procedure) and disconnection takes 8-24 days (the disconnection takes place after 8 days in case a customer is not filing a complaint to the DSO and 23 days if the complaint is declined by the DSO), and **in Georgia** where the NRA determines the minimum period of time between notification to pay and disconnection for non-payment, although presently DSOs do not report on fulfillment of this indicator to the NRA. However, if a DSO fails to fulfill its obligation and a customer submits a complaint, the DSO may be fined by NRA. The Georgian NRA intends to start monitoring this indicator through DSOs' quarterly and annual reports starting from 2017. On the other hand, FYR of **Macedonia, Serbia and Ukraine** stated that this indicator **could be measured** in the later stage of retail gas market development.

The second indicator, i.e. the **number of disconnections due to non-payment is measured in all** of the observed CPs, while the third and final indicator in this section, i.e. **standards for key information in advertising and bills until now is not monitored in the CPs, except for Georgia** where the NRA determines the key information that has to be provided in the bills and all DSOs use the standard. For the case of FYR of Macedonia it was reported that standards for key information in bills are prescribed in the Supply Rules (namely: contact data of the supplier and the customer, invoice number, payment period, consumption period,

consumption data and price of natural gas, VAT rate, terms of payment, interest rate for late payment, information on due bills, etc.) and that this indicator could be measured in the progress of market development. It is worth pointing out that there is a **lack of standards for advertising**, as reported in the case of Ukraine, and that **for regulators**, as stated by Serbian NRA, **it will be beneficial to gain knowledge on standards for key information in advertising in order to be able to monitor this indicator in the future.**

2.3 Gas Retail Market Outcomes

The third section of this chapter includes the following examined indicators: end user prices for typical household and/or small customer (for incumbent and alternative suppliers, divided into taxes/grid/energy costs); prices spread on comparable products for typical household and/or small customer; number of available contracts to typical household and/or small customer (availability of a variety of pricing and billing options, availability of online offers, availability of contracts guaranteeing the origin of energy); percentage of customers eligible to receive a regulated end-user price and percentage of eligible customers supplied under regulated end-user prices. The table hereinafter shows the results for the analyzed markets.

Table 9: Overview status of the Retail Market Outcomes Indicators (Gas)

Indicator	BA	GE	MK	RS	UA
End user prices for typical (for your market) household and/or small customer:	Measured by NRA	Measured by NRA	Measured by State Statistical Office Measured by NRA	Measured by State Statistical Office Could be measured by NRA in midterm (1-3 years)	Measured by State Statistical Office Measured by NRA
- for incumbent and alternative suppliers	N/A	Measured by NRA	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Measured by State Statistical Office Measured by NRA
- divided into taxes/grid/energy costs	Measured by NRA	Measured by NRA	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Could be measured by State Statistical Office in midterm (1-3 years)

Indicator	BA	GE	MK	RS	UA
Prices spread on comparable products for typical household and/or small customer	Measured for small customers by NRA Could be measured for typical household by NRA in midterm (1-3 years)	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Not measured by NRA
Number of available contracts to typical household and/or small customer	Measured by NRA	Measured by NRA	Measured by NRA	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)
- Availability of a variety of pricing and billing options	Not measured by NRA	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)
- Availability of online offers	Not measured by NRA	N/A	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)
- Availability of contracts guaranteeing the origin of energy	Not measured by NRA	N/A	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	N/A
Percentage of customers eligible to receive a regulated end-user price	Measured by NRA	Measured by NRA and DSOs	Measured by NRA	Measured by NRA	Measured by NRA
Percentage of eligible customers supplied under regulated end-user prices	Measured by NRA	Measured by NRA and DSOs	Measured by NRA	Measured by NRA	Measured by NRA

The first indicator in this section, namely **end user prices** for typical household and/or small customer is **measured in all** analyzed CPs. Similarly, end user prices for typical household and/or small customer divided into taxes/grid/energy costs are measured in Bosnia and Herzegovina, Georgia and FYR of Macedonia, while in Ukraine and Serbia they could be measured in the midterm. In Bosnia and Herzegovina as of 1st January 2015 all gas customers are eligible and the NRA approves prices only for public supply that could be used by

households, while small customers are not eligible to be supplied through public gas supply. In Georgia regulated retail gas prices are applicable to household customers who became natural gas consumers before August 1st 2008. On the other hand in FYR of Macedonia all customers are eligible and there are no regulated retail prices as of beginning of 2015. In Serbia the NRA approves prices for households and small customers, while in Ukraine retail prices for households and district heating companies are approved by the Government under the PSO mechanism until 1st of April 2017.

The second indicator, i.e. the **price spread on comparable products** for typical household and/or small customer **is not measured in** the assessed CPs, due to the fact that there are **no comparable products at this point**, households and small consumers are either dominantly **supplied by the regulated incumbent suppliers** or there is a **lack of competition** and therefore at this point there are no comparable products on the gas retail market. On the other side, it was reported that the data for price spread on comparable products is measured for small customers in Bosnia and Herzegovina, while the Georgian NRA reported that it has full information about the contracts concluded by suppliers on the deregulated part of the market, and therefore the price spread on comparable products could be measured. With further market opening of retail gas markets and development of competition in the observed countries, this indicator could be measured in midterm.

The third indicator, namely the **number of available contracts** to typical household and/or small customer is reported to be **monitored in Georgia and FYR of Macedonia, while in Bosnia and Herzegovina** the typical supply contract for households and small customers **is defined** by General conditions for Supply. On the other hand, **other indicators**, namely the availability of a variety of pricing and billing options, availability of online offers, availability of contracts guaranteeing the origin of energy **are not monitored in** the examined CPs due to the fact that at this point either households and small consumers are dominantly supplied by the incumbent DSOs/Suppliers and/or there is no competition due to the lack of diversified sources of gas supply, except for Georgia and Ukraine. These indicators, however, **could be monitored in a later stage** with removal of the previously stated obstacles. It is worth mentioning the explanation by **Georgian NRA** regarding the **monitoring of availability of a variety of pricing and billing options**. Namely, In Georgia retail customers are divided into two groups - the so called social sector and the commercial sector. The gas supply activity was deregulated in September 2007, but an exception was made for households who became gas consumers before 1st of August 2008: such customers are subject to the so called threshold (price cap) tariffs set by GNERC and represent the so called social sector. In contrast, prices for the fully deregulated (so called commercial sector) are not fixed and supply agreements are concluded based on the public offers made by suppliers.

The last two indicators in this section, namely the **percentage of customers eligible to receive a regulated end-user price and percentage of eligible customers supplied under regulated end-user prices are measured in all of the analyzed CPs**.

2.4 Market Structure

In this section application of the following indicators have been examined: Herfindahl-Hirschman Index; number of active suppliers that are selling gas to households and/or small customers across the same market; market shares of suppliers by number of customers and consumption and percentage of customers is served by a DSO that has separate branding from the supply branch of its vertically integrated undertaking. The table hereinafter shows the results for the CPs.

Table 10: Overview status of the Market Structure Indicators (Gas)

Indicator	BA	GE	MK	RS	UA
Herfindahl-Hirschman Index	Measured by NRA	Measured by NRA	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Measured by NRA
Number of active suppliers that are selling gas to households and/or small customers across the same market	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA
Market shares of suppliers by number of customers and consumption	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA
Percentage of customers is served by a DSO that has separate branding from the supply branch of its vertically integrated undertaking	Not measured by NRA	Could be measured by NRA in midterm (1-3) DSOs yet to be unbundled	Not measured by NRA	Not measured by NRA	Not measured by NRA n/a

Despite the early stage of market opening and lack of competition, NRAs from **Bosnia and Herzegovina, Georgia, FYR of Macedonia and Ukraine** have established practices for measuring the **Herfindahl-Hirschman Index** (published in Georgia and Ukraine), while **in all of the observed CPs**, the indicators number of **active suppliers** that are selling gas to households and/or small customers across the same market, as well as **market shares** of suppliers by number of customers and consumption, **are monitored**. This **practice is a great basis for further utilization** as gas retail markets are expected to expand functionality in the coming years.

Similar to the findings in the electricity retail markets, the indicator **percentage of customers served by a DSO that has separate branding from the supply branch of its vertically integrated undertaking** “stems from the provision contained in the 3rd Package (Article 26.3 in the 2009 Directives), which establishes the obligation for vertically integrated DSOs not to create confusion with respect to the separate identity of the supply branch of the vertically integrated undertaking.”¹³. Having in mind that this provision from the 3rd Energy Package is not being implemented in all Energy Community CPs at the current point, this indicator **is not being measured in the observed CPs**. However, with its implementation, this indicator **could be monitored** in the following period.

2.5 Relationship between Wholesale Markets and Retail Prices

The fifth section is analyzing potential usage of indicators in the observed CPs regarding relationship between wholesale markets and retail prices. Potential application of the following indicators: correlation over time (relevant time defined nationally) between a transparent, market-based wholesale price and the retail energy price and mark-up between wholesale prices and retail energy prices, was examined in detail. The table hereinafter shows the results for the CPs.

Table 11: Overview status of the Indicator measuring relationship between wholesale markets and retail prices (Gas)

Indicator	BA	GE	MK	RS	UA
Correlation over time (relevant time defined nationally) between a transparent, market-based wholesale price and the retail energy price	Could be measured by NRA in midterm (1-3 years)	Measured by NRA	Measured by State Statistical Office Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Measured by NRA Could be measured by NRA in midterm (1-3 years)
Mark-up between wholesale prices and retail energy prices	Could be measured by NRA in midterm (1-3 years)	Measured by NRA	Measured by State Statistical Office Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Measured by NRA Could be measured by NRA in midterm (1-3 years)

¹³http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Customers/Tab3/C12-RMF-46-03_RMI-SR_03-Sep-2012.pdf (page 34).

Similar to the situation observed in electricity retail markets, monitoring of over time correlation between a **transparent, market-based** wholesale price and the retail gas price, as well as the mark-up between wholesale prices and retail gas prices **is lacking** in the assessed CPs. The main reason for this is the fact that there are **no organized trading platforms** for wholesale gas price reference and the wholesale prices are mostly based on **long term supply** contracts.

On the other side, **monitoring of the correlation between the current wholesale gas prices and retail prices, as well as the mark-up between wholesale prices and retail gas prices is taking place in some of the examined CPs.** Monitoring of the mark-up between wholesale prices and retail energy prices is taking place in Georgia. The State Statistical Office of FYR of Macedonia, since 2014, is publishing data which could be used for monitoring of these indicators, although there is a lack of transparent and market-based wholesale gas prices. Similarly, the Ukrainian NRA is monitoring these indicators as well. Monitoring of these indicators in FYR of Macedonia, despite market-based wholesale prices are still lacking, will be performed by the NRA with the implementation of the new Market Monitoring Rulebook in the near future. NRAs from other analyzed CPs also reported that the abovementioned market-based indicators could be monitored in the coming years, provided the region to start being supplied by other gas sources and wholesale gas prices references developing.

2.6 Market Condition and DSO Services

Similar as in the electricity retail market chapter, the final sixth section in gas retail market chapter observes the market condition and DSO services through examining application of the following indicators: number of switches for household and/or small customer as a percentage of customer numbers; number of renegotiated contracts for household and/or small customer as a percentage of customer numbers; number of delayed switches; number of failure switches in relation to the total switching rate; average time between a connection being requested by a customer and completed; relative number of disconnections and If there is a charge for execution of maintenance services, then: average time taken for execution of maintenance services and average charge for execution of maintenance services. The table hereinafter shows the results for the CPs.

Table 12: Overview status of the Market Condition and DSO Services Indicators (Gas)

Indicator	BA	GE	MK	RS	UA
Number of switches for retail customers as a percentage of customer numbers	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA	Measured by NRA
Number of renegotiated contracts for household and/or small customer as a percentage of customer numbers	Measured for small customers by NRA Could be measured for typical household by NRA in midterm (1-3 years)	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Not measured by NRA
Number of delayed switches	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	N/A	Measured by NRA
Number of failure switches in relation to the total switching rate	Measured by NRA	Could be measured by NRA in midterm (1-3 years)	Could be measured by NRA in midterm (1-3 years)	Measured by NRA	Measured by NRA
Average time between a connection being requested by a customer and completed	Measured by NRA	Measured by NRA and DSOs	Could be measured by NRA in midterm (1-3 years)	Not measured by NRA	Could be measured by NRA in midterm (1-3 years)
Relative number of disconnections	Measured by NRA	Measured by NRA and DSOs	Measured by NRA	Measured by NRA	Could be measured by NRA in midterm (1-3 years)
If there is a charge for execution of maintenance services, then:					
- Average time taken for execution of maintenance services	Measured by NRA	No charge for execution of maintenance services	Not measured by NRA	Not measured by NRA	Not measured by NRA n/a
- Average charge for execution of maintenance services	Not measured by NRA	No charge for execution of maintenance services	Not measured by NRA	Not measured by NRA	Not measured by NRA n/a

The first indicator, i.e. the **number of switches** for retail customers as a percentage of customer numbers is **monitored** by all NRAs. In Bosnia and Herzegovina in reality there are no switches since DSOs are at the same time suppliers for households and small customers in their distribution area. In FYR of Macedonia and Ukraine data received on this indicator at the current point refers to switching procedures of non-household customers.

A renegotiated contract, according to ERGEG GGP, “is defined as changing to a new contract (excluding the automatic renewal of the current contract) with the existing supplier.”¹⁴, and it is assumed that renegotiation refers to the key elements of the contract, such as price, payment options, quantities and similar. The second indicator, namely the number of renegotiated contracts for household and/or small customer as a percentage of customer numbers is **not monitored** by NRAs in the examined CPs, except for Georgia where the NRA has full information about all contracts concluded by suppliers on the deregulated part of the market and in Bosnia and Herzegovina where the data on renegotiated contracts for small customer are collected by the suppliers and forwarded to NRA. It is reported by the NRA of FYR of Macedonia that this indicator could be measured in the later stage of gas retail market development.

The third indicator, i.e. the **number of delayed switches** is **measured in** Bosnia and Herzegovina **and Ukraine**. In the case of **Serbia** measuring of this indicator is not applicable due to the fact that there is **no legal possibility for delayed switches**, meaning that if the switching procedure was not successfully finalized in 21 days, the whole switching process starts from the beginning. **NRAs of Georgia and FYR of Macedonia** stated that this indicator **could be monitored in midterm**, once the gas retail market develops to a more advanced level.

The fourth indicator, i.e. the number of **failure switches in relation to the total switching rate** is **monitored in** Bosnia and Herzegovina and Serbia, although there are **no switches** at current point, and in **Ukraine at this point the data received refers mainly to non-household consumers**, while NRAs from **Georgia and FYR of Macedonia** stated that this indicator **could be part of the monitoring activities** in a later stage of gas retail market development.

The fifth indicator, i.e. the **average time between a connection being requested by a customer and completed** is been **part of the monitoring** activities of the NRAs in **Bosnia and Herzegovina, Georgia and Ukraine**, while for FYR of **Macedonia** this indicator is **prescribed** in the **Distribution Grid Rules** and **will be measured** with the implementation of the new Market Monitoring Rulebook.

For the purpose of this report, the sixth indicator, i.e. the **relative number of disconnections** is not including disconnections due to non-payment of bills, which are observed as a separate indicator in the section Customer Protection. The relative number of disconnections is a ratio between disconnections initiated by the TSO/DSO (planned disconnections) and the total

¹⁴ http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Customers/Tab3/C12-RMF-46-03_RMI-SR_03-Sep-2012.pdf (page 41)

number of disconnections (planned, unplanned, force majeure), and is **monitored in all of the assessed CPs except Ukraine**, where it was stated that could be measured in midterm.

The indicator analyzing the case where there is a **charge for execution of maintenance services**, including **average time taken for execution** of maintenance services and **average charge for execution** of maintenance services derives from the “provision contained in the 3rd Package (Article 37(j) in electricity and 41(j) in gas in the 2009 Directives), which establishes a monitoring duty to the NRAs for execution and charge of maintenance services.”¹⁵ It was reported that this indicator until now is **not monitored by the NRAs in the examined CPs**, except for Bosnia and Herzegovina where this period is 1 day, and Georgia where it is being reported that even though there is no charge for execution of maintenance services, the NRA monitors the period for execution of such services and if they exceed the limit set by the regulator, tariff incentive schemes apply.

¹⁵http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Customers/Tab3/C12-RMF-46-03_RMI-SR_03-Sep-2012.pdf (page 56).

III. SUMMARY

The summary of results, both for **electricity and gas retail markets** of the present report for relevant/potential indicators for monitoring of retail market functioning in Albania, **Bosnia and Herzegovina, Georgia, FYR of Macedonia, Montenegro, Kosovo***, **Serbia and Ukraine** are characterized by the following:

- Follow up of indicators on **customer's awareness on switching, DSO role and trust in energy markets**, which require conducting of a more complex public surveys **is lacking** in the analyzed Energy Community CPs;
- **Monitoring of customers complaints and enquires in electricity retail markets exist in all** of the assessed CPs, although **at the current point** these indicators refer mainly to the activities of the **incumbent regulated** electricity suppliers;
- In the **gas** sector, **measurement of customer's complaints exists in all** of the examined CPs while **customer enquiries** at the current point are monitored only in **Bosnia and Herzegovina, Georgia, Serbia and Ukraine**;
- **The lack of reliable price comparison websites** reflects the **early stage of electricity and gas** retail markets **development** in the Energy Community CPs. There is a **potential** in the observed CPs **both in electricity and gas, for establishing such tools as market opening progresses**.
- **The number of disconnections due to non-payment is measured** in all of the observed countries **both in electricity and gas**, while the **average time between notification to pay and disconnection for non-payment is monitored** in **Bosnia and Herzegovina, Georgia, Kosovo* and Serbia (electricity)** and **Bosnia and Herzegovina and Georgia (gas)** for the regulated market;
- **The percentage of suppliers using some standards for key information in advertising and bills is not measured** in the analyzed CPs due to the early stage of retail market development and **lack of such standards**, especially **for advertising**;
- **Regulators** could **benefit** from **gaining knowledge** on standards for **key information in advertising** in order to be able to monitor this indicator in the future;
- **End user prices** for typical household and/or small customer divided into taxes/grid/energy costs, as well as the **percentage of customers eligible to receive regulated end-user price** and the **percentage of eligible customers supplied** under regulated end-user prices, **both for electricity and gas, are monitored in all** of the assessed CPs;
- **The prices spread between comparable products and the number of available contracts** to typical household and/or small customer (**availability of a variety of pricing and billing options, availability of online offers, availability of contracts guaranteeing the origin of energy**) **are not measured** in the observed CPs, except for **Bosnia and Herzegovina and Georgia** in gas retail market, due to the fact that households and small consumers are still dominantly **supplied by the regulated**

incumbent suppliers (electricity) and/or there is no competition due to the lack of diversified sources of gas supply;

- **Most of NRAs reported** that previous indicators **could be measured in midterm** in the course of further development of electricity retail markets functioning, availability of certificates guaranteeing the origin of energy, and **diversification of gas supply sources.**
- Despite the early stage of electricity and gas retail markets functioning in the observed CPs, **some of the NRAs have established practices for measuring Herfindahl-Hirschman Index** (not publishing yet in most of the cases), while in all of the examined CPs monitoring of the **number of active suppliers** that are selling electricity/gas to households and/or small customers across the same market is in place, as well as monitoring of **market shares** of suppliers by number of customers and consumption. This practice is a **great basis for further utilization** once electricity and gas retail markets **further develop functionality in the coming years.**
- **The percentage of customers served by a supplier that has separate branding from the DSO of its vertically integrated undertaking “stems from the provision** contained in the 3rd Package (Article 26.3 in the 2009 Directives), which establishes the obligation for vertically integrated DSOs **not to create** confusion with respect to the separate identity of the supply branch of **the vertically integrated undertaking.”** This provision is being **implemented in Kosovo* and Montenegro (electricity).**
- **Monitoring of over time correlation between a transparent, market-based wholesale price and the retail energy price for both electricity and gas,** as well as the **mark-up** between wholesale prices and retail energy prices **is lacking** since in the observed CPs at the current point there are no market-based organized trading platforms or power exchanges, except in Serbia from recently, and **households and small customers are dominantly supplied** by regulated incumbent suppliers which in most of the CPs are mainly **procuring electricity** from the **domestic electricity production under regulated prices** or from **undiversified gas supplying source.**
- On the other side, **monitoring** of indicators stated in the previous paragraph, although not market based, **is currently taking place in Georgia, Kosovo*, Ukraine and FYR of Macedonia (electricity), and FYR of Macedonia and Ukraine (gas),** while NRAs from **other** observed CPs reported that these indicators **could be monitored** in the following period.
- **The number of switches** by retail customers as a percentage of customer numbers in **electricity** retail market is **monitored in Bosnia and Herzegovina, FYR of Macedonia, Serbia and Ukraine,** although it is assumed that at the current point received data in most of the observed markets refers to switching procedures for large and/or small non-household customers, while, **Kosovo* and Montenegro** reported that this indicator **could be monitored** in midterm when electricity retail

market develops to a more advanced level. **In Georgia switching is not allowed for households and small customers** who are supplied by the regulated DSOs/suppliers, although **exception applies for purchasing electricity from small power plants** (up to 13 MW), based on direct contracts;

- **In the analyzed gas retail markets NRAs monitor the number of switches**, although in Bosnia and Herzegovina currently there are no switches since the DSOs are at the same time suppliers for households and small customers at its distribution area, while in FYR of Macedonia and Ukraine at the current point the received data dominantly refers to switching procedures for large and/or small non-household customers.
- **The number of renegotiated contracts** for household and/or small customer as a percentage of customer numbers is **not monitored** in the assessed CPs, except for Bosnia and Herzegovina (electricity) and Georgia (gas), although most of the NRAs noted that this indicator could be measured in the later stage of the retail markets development;
- **The number of delayed switches is not measured** in the examined CPs, except for **Bosnia and Herzegovina** (electricity and gas) and **Ukraine** in the gas retail market. Other NRAs stated that this indicator could be monitored in midterm, when electricity and gas retail markets develop to a more advanced level;
- **Monitoring of the number of delayed switches in Serbia is not applicable** since there are **no legal provisions for delayed switches**;
- **Failure switches in relation to the total switching rate is monitored in Bosnia and Herzegovina** (electricity and gas) and in **Ukraine in the gas retail market**, while most of the NRAs from other CPs reported that **this indicator could be part of the monitoring activities in the later stage** of electricity and gas retail market development;
- **The average time between a connection being requested by a customer and such being completed** is part of the **monitoring activities** of the NRAs of **Bosnia and Herzegovina, Georgia, Kosovo* and FYR of Macedonia in the electricity retail markets** and in **Bosnia and Herzegovina and Georgia in gas retail markets**;
- **Montenegro (electricity) and Ukraine (electricity and gas)** reported that previous indicator could be monitored in near future, while FYR of **Macedonia reported** that **this indicator is prescribed in the Natural Gas Distribution Grid Rules and will be monitored** with the implementation of the **new Market Monitoring Rulebook**;
- **The relative number of disconnections** is not including disconnections due to non-payment of bills, and it is **monitored in all** of the analyzed CPs **except for Ukraine in gas retail market**;
- Monitoring of the **charge for execution of maintenance services**, including **average time taken for execution of maintenance services** and **average charge**

for execution of maintenance services until now is **not monitored by any of the NRAs** of the examined CPs, except for Georgia where the NRA monitors the average timetaken for execution, and DSOs in Bosnia and Herzegovina which also collect data on the average time taken for execution, both in electricity and gas retail markets.

IV. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the present reports the following conclusions and recommendations are drawn:

- Despite the fact that electricity and gas retail markets are in the early stage of development in the Energy Community Contracting Parties and households and small customers are still dominantly supplied by the incumbent regulated suppliers, most of the observed NRAs have **already established market monitoring practices for approximately 50% of the examined scope of indicators** developed on the European level.
- Retail market monitoring activities in the observed Energy Community CPs are usually taking place for the following indicators: **customer complaints and enquires, disconnections due to non-payment and time between notifications to pay and disconnections, end user prices, percentage of customers receiving regulated end user prices and percentage of eligible customers for receiving end user prices, Herfindahl-Hirschman Index, active suppliers, market shares of suppliers, number of switches, average time between a connection being requested by a customer and completed and relative number of disconnections.**
- On the other hand, due to the early stage of retail market development, lack of competition and other barriers for market opening, the following indicators are mainly not being monitored in the observed Contracting Parties at present time: percentage of customers knowing they can switch supplier, percentage of customers who are aware of DSO role, percentage of customers trusting the energy market, percentage of suppliers using some standards for key information in advertising and bills, prices spread on comparable products, available contracts for households and small customers (variety of pricing and billing, online offers, contracts guaranteeing the origin of energy), percentage of customers supplied by a supplier that has separate branding from the DSO, correlation over time between a transparent, market-based wholesale price and the retail energy price, mark-up between wholesale prices and retail energy prices, renegotiated contracts, delayed switches, failure switches, and average time and charge for execution of maintenance services by DSO. Additionally, there is a lack of reliable price comparison website available for customers in the Contracting parties.
- However, **NRAs stated preparedness for monitoring** of most of the previously stated indicators **in midterm**, as retail markets develops to a more advanced level, and in this context they could benefit from gaining further knowledge on the practices and standards developed on European level.
- **ECRB encourages NRAs to continue** with their ongoing retail market monitoring activities **and further strengthen capacities to fully exercise their powers and duties**

according to the provisions from the 3rd Energy Package, especially regarding Article 37.1(j) in Electricity and 41.1(j) in Gas 2009 Directives.

Acknowledgment:

The presented report was prepared by the ECRB Customers and Retail Markets Working Group - Task Force on Retail Market Functioning, as part of the ECRB Work Program for 2016.

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