

Market Working Group – System Analysis Through the Gathering of Data – 31.08.2009

Question	EP HZHB	RSERC/EP RS	EP BiH	FERC	Proposed Next Steps																				
<b>I. CURRENT STATUS</b>																									
<b>Wholesale Market</b>																									
<b>1. Distribution companies (or EPs) and customers connected to transmission network</b>																									
<p><b>Customer structure by the consumption volume?</b></p>	<p>The below data relates to 2008.</p> <ul style="list-style-type: none"> <li>• Available electricity: 3.691,1 GWh</li> <li>• Generated electricity: 1.355,6 GWh</li> <li>• Total consumption: 3.691,1 GWh</li> <li>• Consumption of potential el. customers/number of cust.:               <ol style="list-style-type: none"> <li>110 kV and above:2.127 GWh/3</li> <li>35 kV:138 GWh/3</li> <li>10(20) kV: 140 GWh/119</li> <li>other consumption:258 GWh/14.870</li> </ol> </li> <li>• Households:676 GWh/167.999</li> <li>• El. customer consumption (i) current: 1.259GWh/1; potential: 1.523 GWh/15.135</li> <li>• Total number of el. customers without Other consumption: 265</li> </ul> <p>Tariff customers that are connected to the transmission network:</p> <table border="1" data-bbox="321 1044 699 1149"> <tr> <th>Customer</th> <th>Total annual consumption</th> </tr> <tr> <td>Aluminij</td> <td>683.3 GWh</td> </tr> <tr> <td>Railways of FBiH</td> <td>4 GWh</td> </tr> <tr> <td>BSI</td> <td>181 GWh</td> </tr> </table> <p>Eligible customers:</p> <table border="1" data-bbox="321 1235 699 1287"> <tr> <th>Customer</th> <th>Total annual consumption</th> </tr> <tr> <td>Aluminij (part)</td> <td>1.259.040.000,00 kWh</td> </tr> </table>	Customer	Total annual consumption	Aluminij	683.3 GWh	Railways of FBiH	4 GWh	BSI	181 GWh	Customer	Total annual consumption	Aluminij (part)	1.259.040.000,00 kWh	<p>The below data relates to ?????</p> <ul style="list-style-type: none"> <li>• Available electricity: 5.001,4 GWh</li> <li>• Generated electricity: 5.001,4 GWh</li> <li>• Total consumption: 2.885,5 GWh</li> <li>• Consumption of potential el. customers/number of cust.:               <ol style="list-style-type: none"> <li>110 kV and above:148,23 GWh/5</li> <li>35 kV:119,5/23</li> <li>10(20) kV:430,7/543</li> <li>other consumption:533 GWh/33.877</li> </ol> </li> <li>• Households:1.598 GWh/474.456</li> <li>• El. customer consumption (i) current: 0 GWh; (ii) potential:1.231 GWh/34.448</li> <li>• Total number of el. customers without Other consumption: 571</li> </ul> <p>Tariff customers that are connected to the transmission network:</p> <table border="1" data-bbox="747 1044 1125 1149"> <tr> <th>Customer</th> <th>Total annual consumption</th> </tr> <tr> <td>Birač</td> <td>119,5 GWh</td> </tr> <tr> <td>Željeznice RS</td> <td>23,1 GWh</td> </tr> <tr> <td>Novi rudnici Ljubija:</td> <td>20,5 GWh</td> </tr> </table> <p>Eligible customers: none</p>	Customer	Total annual consumption	Birač	119,5 GWh	Željeznice RS	23,1 GWh	Novi rudnici Ljubija:	20,5 GWh	<ul style="list-style-type: none"> <li>• Available electricity:</li> <li>• Generated electricity:</li> <li>• Total consumption:</li> <li>• Consumption of potential el. customers/number of cust.:               <ol style="list-style-type: none"> <li>110 kV or more: 658,4 GWh</li> <li>35 kV: 335,7 GWh</li> <li>10(20) kV:620,2 GWh</li> <li>other consumption: 735,7 GWh</li> </ol> </li> <li>• Households: 1.861,3 GWh</li> <li>• El. customer consumption (i) current 0; (ii) potential: 1.614,3 GWh.</li> </ul> <p>Tariff customers that are connected to the transmission network:</p> <p>Customer Total annual consumption  <i>Arcelor Mittal: 534,6 GWh</i>  <i>Railways of FBiH: 32,3 GWh</i>  <i>Cementara Kakan:83,6 GWh</i>  <i>Željezara Ilijaš:4,9 GWh</i>  <i>Polihem Tz:2,5 GWh</i></p> <p><i>Eligible Customers: None</i></p>		<p><i>REAP suggests the following:</i></p> <ul style="list-style-type: none"> <li>• <i>Develop comparison tariff prices for potential eligible customers in BiH and region, as well as corresponding electricity quantities.</i></li> <li>• <i>Determine differences between tariffs for potential eligible customers in BiH and tariffs on the market</i></li> <li>• <i>Consumption of potential eligible customers in BiH is the following:</i> <ol style="list-style-type: none"> <li><i>110 kV and above:2.933 GWh</i></li> <li><i>35 kV: 593 GWh</i></li> <li><i>10(20)kV:1.190 GWh</i></li> <li><i>0.</i></li> <li><i>Consumption : 1.527 GWh</i></li> <li><i>Households: 4.136 GWh</i></li> </ol> </li> </ul>
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					<ul style="list-style-type: none"> <li>• <i>Tariff prices in BiH are:</i> <ul style="list-style-type: none"> <li>i. <i>110 kV a.a:</i></li> <li>ii. <i>35 kV</i></li> <li>iii. <i>10(20)kV</i></li> <li>iv. <i>0. consumption</i></li> </ul> </li> <li>• <i>Tariff prices in the region are:</i> <ul style="list-style-type: none"> <li>i. <i>110 kV a. a.:</i></li> <li>ii. <i>35 kV</i></li> <li>iii. <i>10(20)kV</i></li> <li>iv. <i>0. Consumption</i></li> </ul> </li> <li>• <i>El. prices on wholesale market 2007-09:</i> <ul style="list-style-type: none"> <li>i. <i>PX spot market/DAH</i></li> <li>ii. <i>PXfutures</i></li> <li>iii. <i>OTC DAH</i></li> <li>iv. <i>OTC Forward</i></li> </ul> </li> </ul>
<p><b>The manner of metering on the electricity delivery points (hourly metering, peak load metering, automatic reading capability etc).</b></p>	<p>Measuring of received/delivered electricity of the customers connected to the transmission network shall be performed by Elektroprijenos BiH (there is 15 minutes measuring of active and reactive energy, measuring of peak load and it is all is remotely read).</p> <p>Measuring of received/delivered electricity for EP HZHB Distribution that is connected to the transmission network shall be performed by Elektroprijenos BiH (for all delivery points there is 15 minutes measuring of active and reactive energy, measuring of peak load and it is all remotely read (Requires clarification).</p> <p>EPHZHB has access to the data of Elektroprijenos (read only) for all</p>	<ul style="list-style-type: none"> <li>- Metering of received electricity for the customers connected to the transmission network is performed by the Transmission Company, and it submits the data to Distribution Company.</li> <li>- There is a possibility for automatic reading by the Transmission Company.</li> </ul> <p>Peak metering is submitted by the Transco and often that “peak” differs from the billing capacity the distribution company includes in the invoice (the tariff system prescribes that the peak load achieved in the period of the higher daily tariff be taken into account, unlike the data from the Transco that includes data based on the achieved peak load during 24 hours period).</p>	<p>Metering of received electricity between the EP BiH Distribution parts and transmission network is performed by Elektroprenos BiH (for all delivery points there is 15 minutes metring of both active and reactive energy, metering. of peak load and it is all automatically read.</p>	<p>The Transmission Company does the metering and submits the data to the distribution company. The Transmission Company has the possibility of remote metering. Peak load metering is done by the Transmission Company.</p>	<p><i>REAP: Determine whether EPs have the possibility of remote metering at all places of electricity delivery (EPs; FERK; RERS)</i></p>

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	metering points for delivery of electricity within its area of operation (Requires clarification).				
<p><b>Supply contracts and contracts on the use of the transmission network or only one contract that gives the possibility to the customer to have a contractual relationship with only one party?</b></p>	<p>Tariff customers located in the operational area of EP HZHB have a Supply contract with EPHZHB.</p> <p>Contract on use of transmission network??</p>	<p>Customers on 110 kV, that are supplied as tariff customers and are connected to the transmission network, enter into a supply contract with the tariff customer’s supplier that operates within the distribution company in whose territory the customer is located. at the applicable tariffs.</p> <p>The customers <b>should</b> execute the Contract on the use of the transmission network with the Transmission Company?? (Need clarification).</p>	<p>Customers on 110 kV located in the operational area of EP BiH only have a Supply contract with EP BiH, and EP BiH covers, pays the transmission costs.</p>	<p>Customers on 110 kV that are being supplied as tariff customers and are connected to the transmission network conclude a contract on electricity supply according to applicable tariffs with the I tier supplier.</p> <p>Customers must conclude the contract on use of transmission network with the Transmission Company.</p>	<p><i>REAP: Determine whether the customers connected to the transmission network have one contract with the supplier that also includes the use of transmission network (EPs; RERS; FERK)</i></p>
<p><b>Is there a precise unbundling of tariffs into separate tariffs for the use of the transmission network (including the data on all costs that are included in the network fee) and the price of energy?</b></p>	<p>There is none on the bill.</p> <p>The tariff for tariff customers is not unbundled into the tariff for the use of transmission and distribution network and the price of energy. Calculation of supplied electricity is performed in accordance to the Decision of the FERC on Tariffs for electricity sale to ineligible (tariff) customers of JP“Elektroprivreda HZ HB“ d.d. Mostar number 07-02-7-57/1/08 dated 29.1.2008 whereby the FERC used the above tariffs for Transco and ISO in the process of determination of tariffs for end users, according to structure of tariff elements within specific consumption categories.</p>	<p>There is none on the bill.</p>	<p>For tariff customers, the tariff for the use of transmission network is not unbundled to the tariff for the use of transmission network and operation of ISO and the price of energy (the total tariff is presented on the bill)</p> <p>Calculation of delivered electricity is performed according to the decision of the FERC on tariffs for the sale of electricity to ineligible (tariff) customers.</p>	<p>There is none on the bill.</p>	<p><i>REAP: Determine the underlying reasons why such unbundling has not occurred and develop proposal to change the practice.</i></p>
<p><b>Reading, calculation and billing (who reads, who</b></p>	<p>Employees of Elektroprijenos BiH, Customer and EP HZHB jointly read meters.</p>	<p>- Reading is performed by the transmission company and it submits the data to the competent distribution company that is the supplier, i.e., the</p>	<p>Reading of used electricity for the customers connected to transmission network is jointly performed by responsible persons of Elektroprijenos</p>	<p>The Transmission Company does the metering and submits the data</p>	

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<p><b>performs the settlement, who submits the invoices and what is the structure of invoices)?</b></p>	<p>For the tariff part (Need clarification) EPHZHB calculates delivered electricity and submits an invoice to the customer.</p> <p>The invoice contains the data about all tariff elements in accordance to the decision of the FERC on tariffs for electricity sale to ineligible (tariff) customers of JP“Elektroprivreda HZ HB“ d.d. Mostar number 07-02-7-57/1/08 dated 29.1.2008 (active energy, excessive take-on of reactive power, billing capacity and customer metering point).</p> <p>The activities are performed once a month.</p>	<p>power utility.</p> <ul style="list-style-type: none"> <li>- Billing and invoicing for the end customer is performed by the tariff customer’s supplier within the competent distribution company.</li> <li>- The bill to the customer is submitted by the supplier.</li> </ul> <p>The invoice for the 110 kV customers within its structure contains the data on: billing capacity, consumed active energy, excessive off-take reactive energy and tariffs for the supply on 110 kV voltage level.</p>	<p>BiH, customers and EP BiH. For these customers EP BiH, based on the reading, calculates delivered electricity and submits an invoice to the customer.</p> <p>The bill contains the data on all tariff elements in accordance to the decision of the FERC on tariffs for electricity sale to ineligible (tariff) customers of EP BiH (active energy, excessive take on reactive energy, billing capacity and metering point of the customer.</p> <p>Activities are carried out once a month.</p>	<p>to the authorized supplier and power company. Calculation and invoicing for end customers is done by I tier supplier. The invoice to the customer is submitted by supplier. The bill of a customer on 110 kV voltage level contains the following data: billing capacity, consumed active energy, excessive take on reactive power and tariffs for supply on 110 kV voltage level.</p>	
<p><b>2. Transmission System Operator</b></p>					
<p><b>How does the system for provision of ancillary services function? (including coverage of the transmission losses)?</b></p>	<p>The Decision of the SERC on determination of tariffs for ancillary services number 04-28-413-52/08 dated 25.3.2009. and the Decision on the amendments of the decision on determination of tariffs for ancillary services number 04-28-413-69/08 dated 16.6.2009, regulate the tariffs for ancillary services and cover the transmission losses in BiH</p> <p>For all ancillary services the ISO BiH prepares the monthly settlement and submits it to the SERC, service providers and service users in accordance to the Decision.</p>		<p>The Decision of the SERC on determination of tariffs for ancillary services number: 04-28-413-52/08 dated 25.03.2009. and the Decision on determination of tariffs for ancillary services number 04-28-413-69/08 dated 16.06.2009. regulate the tariffs for ancillary services and covering transmission losses in BiH.</p> <p>For all ancillary services the ISO BiH prepares a calculation on monthly basis and submits it to the SERC, service providers and service users according to the above decisions with a note that the ISO does not have an access to the transmission network cut off points and that instead of missing ones it uses dispatcher’s data. The ancillary services settlement is based on the principles</p>		<p><i>REAP: Determine the obstacles to smooth functioning of ancillary services (DERK,NOS;EPs) and develop alternatives to resolve them .</i></p>

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			defined in the Market Rules but without consistent implementation of these principles.		
Functioning of the balancing mechanism and reconciliation of deviations (payments) within the existing conditions with only three BRPs?					<i>REAP: Develop proposal(s) to resolve the process for a balancing and settlement mechanism.</i>
Problems in relation to the use of cross-border capacities?					<i>REAP: Develop proposals to resolve the cross-border capacity allocation mechanism.</i>
Are the transmission network, ISO and distribution tariffs fully cost-based?	[Data still to be provided]	<p>The RSERC methodology prescribes that the costs of distribution network, recognized as justified costs of distribution companies in Republic of Srpska, are as follows:</p> <ul style="list-style-type: none"> <li>▪ Costs of operation, maintenance and control of distribution network, including costs of maintenance of connections and metering devices, and metering devices reading,</li> <li>▪ costs of the distribution network development,</li> <li>▪ costs for reimbursement of justified costs of electricity losses.</li> </ul> <p>The tariff methodology is based on the calculation of the annual revenue requirement of the electric power companies, which consists of justified costs increased by the rate of return on capital, for the effects defined by the power balance for the year for which the tariffs are determined.</p> <p>Based on the data submitted by the distribution company, RERS overviews the justifiability of costs. Justification of</p>	The tariffs should be cost based. However, the current situation is as such that the tariffs for transmission are over-estimated and tariffs for distribution are much lower that they should be.	In Federation BiH there are different tariffs for use of distribution systems in EP HZ HB and EP BiH. Tariffs for use of distribution system consist of the distribution price determined by FERC and transmission price determined by SERC. FERC methodology prescribes that the following distribution network costs can be recognized as justified costs:	<i>REAP: Determine whether the tariffs for transmission network, ISO and distribution network reflect actual costs. According to the „Study on Tariff Methodologies and Impact on Prices and Energy Consumption in the Energy Community“ IPA 2009, transmission and distribution tariffs do not fully reflect real costs because they do not contain, or contain only partly, the rate of return costs. Even so (according to the Study), the transmission tariff in Bosnia and</i>

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		<p>costs is estimated based on the cost nature using the analysis of functionality, analysis of quantities and prices and benchmarking.</p> <p>Through tariff proceedings RSERC approves the percentage of amount of losses.</p> <p>Are the tariffs completely cost based? (According to the RSERC Annual Report the network fee is 46% of the total electricity price for households (cca 11,7 pf/kWh) which is cca 5,38 pf/kWh. This is 25% to 45% less than the network fee that should be paid by the households (when the Eurostat methodology for categorizing of customers).</p>		<p>and running of distribution network, including the costs of maintenance of connections and metering devices as well as reading of metering devices;</p> <ul style="list-style-type: none"> <li>- Costs of development of distribution network;</li> <li>- Costs for compensation of justified costs that occurred due to energy losses in distribution network.</li> </ul> <p>The justifiability of a cost is evaluated according to the nature of the cost by analyzing its purposefulness, the analysis of quantities, the price and through benchmarking.</p>	<p><i>Herzegovina is the second highest in the Region I (Euro/transferred TWh). The distribution tariff, which is among the lowest in the region according to the transferred TWh) is theoretically decreased by the revenues from other distribution activities.</i></p> <p><i>REAP: Remaining cross subsidies should be removed with development of effective vulnerable customer programs a precondition.</i></p>
<p><b>What will the settlement mechanism be to settle all contracts?</b></p>	<p>???</p>	<p>-</p>	<p>According to the Market Rules</p>		<p><i>REAP: Define the question more precisely, define potential alternatives for settlement and suggest next steps.</i></p>

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<b>How are the electricity traders (besides the three EPs) involved in the electricity market in BiH?</b>					
<p><b>How are the electricity traders (besides the three EPs) involved in the electricity market in BiH?</b></p>		<p>In 2008 the licensees (five obtained a license from RSERC) with a trade license performed the purchase and sale of electricity on the internal market in BiH, on the basis of bilateral contracts concluded in advance with the generators within the three existing companies in BiH (MH ERS, EP BIH and EP HZ HB) and with other traders as well as cross-border trade in accordance to the license for the performance of this activity.</p> <p>According to the data from the ISO the biggest trade (the data on physical volumes MWh) in 2008 was realized by EFT 35%, and then MH ERS 34% and RUDNAP 31%.</p>		<p>According to the applicable Rule on Tariff Methodology and Tariff proceedings of FERC a trader means any legal person engaged in electricity trade, including but not limited to the procurement or sale of electricity which is not needed for its own consumption, as well as representation and mediation in the electricity market.</p> <p>Electricity trade is done based on bilateral contracts between electricity stakeholders.</p> <p>In 2008, five traders, besides the power companies on the territory of FBiH possessed the II tier supply license issued by FERC.</p>	<p><b>EP RS: Launch an initiative for the gathering of opinions in regard to market opening both from the licensees for trade and supply and from significant participants at the market.</b></p>

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<b>Retail Market</b>					
<b>1. End users whose facilities are connected to distribution network</b>					
<b>Customer structure by categories and consumption volume?</b>	Consumption/number of customers. i.35 kV:5,7 GWh /3 ii.10(20) kV:139,2 GWh/119 iii.Other consumption: Itg:112,1 GWh /837 IItg:105,5 GWh/8.631 IIItg:38,8GWh/5.402 iv.Households: Itg:404,7 GWh /104.152 IItg:268,7 GWh/62.949 v.Public lighting: 21,9 GWh/1.474	Consumption/number of customers i 35 kV:119,5/23 ii 10(20) kV: 430,7/543 iii Other consumption:533 GWh/33.877 iv Households:1.598 GWh/474.456 v Public lighting:55,8 GWh/628	Consumption of customers: i 35 kV: 335,7 GWh/40 ii 10(20) kV:620,2 GWh/599 iii Other consumption: 735,7 GWh /51.149 iv Households: 1.861,3 GWh/621.830 v Public lighting: 73 GWh/4.869		
<b>The manner of measuring on the electricity delivery points (hourly measuring, measuring of peak load, possibilities for automatic meter reading etc.)?</b>	<p>Customers that receive electricity on 35 kV and 10 kV voltage, active energy, reactive energy and peak load are being measured.</p> <p>Customers from household category I tariff group have a single-tariff or two-tariff meter without a timer.</p> <p>Customers from household category II tariff group have a two-tariff meter with a timer.</p> <p>For customers from the commercial category I tariff group, active and reactive energy are measured with two-tariff meters with a timer.</p> <p>For customers from the commercial category II tariff group, active energy is measured with two-tariff meters with a timer.</p> <p>For customers from the commercial category III tariff group, active energy is measured with a single-tariff meter or two-tariff meter without a timer.</p> <p>Note: The detailed characteristics of metering devices for each consumption category are described in the Rulebook on the metering point of the end customer.</p>	<p>Peak load is measured for all customers on medium voltage and to the first tariff group from the commercial customer’s category. For these customers, billing capacity is determined by metering, while for the customers from the commercial category and households, billing capacity is determined in a fixed amount based on their load research and peak load of the electricity sector in the RS and these customer groups.</p> <p>A part of the existing customers on the medium voltage has a possibility for automatic reading of consumption.</p>		<p>Peak load is measured for all customers on medium voltage and the I tariff group from the category Other consumption. For these customers the billing capacity is measured through metering, while for the other customers from the category of Other Consumption as well as households the billing capacity is determined in the fixed amount based on analysis of their consumption.</p>	<p><b>EP RS:</b></p> <ul style="list-style-type: none"> <li>● The distributors to ensure the data on connection capacity until 1-1-2009, and 1.1.2010 for the category Other Consumption and households.</li> <li>● All new customers on medium voltage must have meters with remote metering option.</li> <li>● The distributors should submit data on the exact number of customers that have the remote metering option as well as their consumption.</li> </ul>

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					<p><b>EPHZHB:</b> Currently there are a lot projects of remote metering in branch offices Mostar and Čitluk and the total includes 361 metering points with narrow PLC systems for AMM.</p> <p><i>REAP: Develop a proposal that defines what type of metering will fulfill the needs of market opening and suggest its implementation via the regulators in regulating the EPs &amp; the EPs directly.</i></p>
<p><b>Supply contracts and contracts on the use of the transmission network or a single contract that enable the customer to have a contractual relationship with only one or two parties? [If the customer is, by definition, connected to the distribution network, the charges for the use of the upstream transmission network should</b></p>	<p><i>There are no concluded contracts on supply and contracts on use of network with all customers., According to this information, two contracts are concluded.</i></p> <p>New General Conditions for Electricity Supply (Official Gazette FBiH number 35/08; 81/08) shall be applied as of 01.07.2009.</p> <p>Thus, Supply Contracts and Contracts on the Use of Distribution Network will be signed with all customers during 2009.</p>	<p><i>There are no concluded contracts on supply and contracts on use of network with all customers, According to this information two contracts are concluded.</i></p> <p>The obligation to conclude contract is prescribed by the General Conditions. The Distributer shall be obligated to enter into agreement with all customers that are connected to distribution network apart from the household customers, and the tariff customer's supplier that operates within the distribution company shall be obligated to conclude a supply contract with the customer. (Elektro Bijeljina concluded a contract on access to the network and supply contract with all customers for whom the capacity is measured, currently they are in the process of preparation of contract for other customers).</p>	<p>General conitions for electricity supply (Official Gazette FBiH number 35/08; 81/08) came into effect on 01.07.2009. The Supply contract an Contract on the use of distribution network will be concluded with all customers. Until these contracts are executed the provisions of applicable tariffs and General conditions for electricity supply shall be applied. All new customers as of July 1, shall get both contracts, the existing customers on medium voltage by the end of this year shall have executed contracts for the next year, and gradually all other existing customers (0,4 and households) will be getting both contracts.</p> <p>The tariffs for ineligibile (tariff) customers by categories and groups of consumption are determined depending on costs of generation, procurement, distribution and supply, and the costs for</p>	<p>The obligation to conclude a contract is prescribed by the General Conditions. Distributer is obliged to conclude a contract on connection/increase of capacity and a contract on use of distribution network with all the customers connected to distribution network and the I tier supplier must conclude a contract on</p>	<p><b>EP RS: It is needed to collect data on activities pertaining to the conclusion of contracts from all distributors.</b></p> <p><i>REAP: Conclude contracts on supply and connection to the network. One and/or two contracts for eligible and tariff customers? How will the transmission tariff be handle under the current conditions?</i></p> <p><b>EPHZHB:</b> Conclude contract on supply and</p>

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<p>be covered in the tariff or contract between the customer and the Distribution Company.]</p>		<p>Access to the network for tariff customers from the household customers, is regulated by the tariff customers' suppliers on the basis of a supply contract that contains necessary provisions on the network.</p>	<p>the use of transmission network and costs for operation of the ISO BiH, including ancillary services costs. The distribution network fee besides the distribution costs should cover the costs of Transmission, ISO and Ancillary services. In accordance to the applicable decision of the FERC on determination of distribution fee the costs of transmission network losses costs are not included in tariff.</p>	<p>supply with the customer. General conditions for electricity supply anticipate the possibility for the category of households to conclude a contract on supply with the I tier supplier, while in that case, the supplier has the obligation to regulate the use of network with the distributor.</p>	<p>contracts on use of distribution network.</p>
<p>Is there precise unbundling of tariffs for the use of the network and the price of energy?</p>	<p>The tariff proceeding was conducted and the FERC issued the Decision on tariffs for the distribution system users for JP EP HZ HB d.d. Mostar number 07-02-7-58/1/08 dated 29.1.2008.</p>	<p>The RSERC in the special decision determined tariffs for the distribution system users but on the invoice to the end customer, tariffs for network and energy are not separately shown. Determined tariffs for the distribution system users are inserted into the price for the supply of tariff customers in the RS for all consumption categories, except for the commercial customers category because there is still a cross subsidy between them that the RSERC is trying to eliminate. Because of the existence of cross-subsidies, it is not possible to separately show the tariff for the network use and the price of energy for these categories.</p>	<p>Yes. The tariff proceeding was conducted and the FERC issued the Decision on tariffs for the EP BiH distribution system users. The problem is that these tariffs are determined based on situation in 2007. and currently are not realistic and are significantly underestimated.</p>	<p>With its special decisions FERC determined tariffs for use of distribution system for EP HZ HB and EP BiH, but on the bill for the end customer there is no special listing for the network tariff and energy.</p>	<p><i>REAP: Develop recommended energy regulatory plan to eliminate cross subsidies. Suggest precise unbundling of tariffs for use of network and electricity consumption.</i></p>
<p>What is included in the tariffs for the use of the network (costs for the use of the transmission network, costs for the use of the distribution</p>	<p>Article 2 of the FERC's Decision on tariffs for the distribution system users for JP EP HZ HB d.d. Mostar number 07-02-7-58/1/08 dated 29.1.2008 defines the following:  The tariffs for the distribution system users shall be applied for calculation and billing for the use of distribution and</p>	<p>Yes: In the decisions on setting the tariffs for the supply to ineligible customers and tariffs for the distribution system users, the costs for Elektroprenos, operation of the ISO, ancillary services and transmission losses are shown separately, i.e., associated prices thereof taken by the SERC. These costs are allocated to consumption categories by</p>	<p>The tariffs for the distribution system users are determined based on costs of distribution, costs for covering distribution losses, transmission costs and ISO costs, including costs of system services and excessive take-on of reactive electricity but not the transmission network losses.</p>	<p>Tariff for use of electricity network includes: costs for use of transmission network, costs for ISO operation, costs for use of distribution</p>	<p><i>REAP: FERC could consider requiring unbundling the charges on the bill.</i></p>

Question	EP HZHB	RSERC/EP RS	EP BiH	FERC	Proposed Next Steps
<p><b>network, costs for covering transmission and distribution losses, costs for ancillary services etc.) and can these costs be precisely identified within the network tariff structure?</b></p>	<p>transmission network to eligible customers whose facilities are connected to the distribution network for the purpose of compensating the costs for the use of distribution and transmission network, operation of the ISO, including costs of service for secondary and tertiary regulation and excessive take-on of reactive power.</p>	<p>voltage levels together with prices for the use of distribution network and comprise the price for the use of electricity network (network fee) for the electricity customers in the RS.</p>		<p>network, costs for covering of transmission and distribution losses, ancillary services costs, but in the structure of network tariff the tariffs for these costs are not listed separately.</p>	
<p><b>Who reads the meters, who performs the settlement, who submits the bills, what is the structure of the bill and what are the time intervals for the performance of these activities?</b></p>	<p>Distribution employees read, supply employees bill, the Post Office submits the invoices. Activities are conducted once a month.  The invoice contains the data on all tariff elements for a specific consumption category.</p>	<p>Consumption on the metering point is read by the competent distribution. The supplier submits the invoice on the basis of the reading of the meter. Reading the meter and submission of invoices is performed once a month. Invoice for the customer contains the data on: billing capacity, consumed active energy, excessive off-take reactive energy and tariffs for supply.</p>	<p>Reading of electricity consumption is performed by the organizational unit for distribution within the competent distribution branch office within EP BiH, and the settlement and submission of invoices is performed by the organizational unit for supply within the same branch office. The activities are performed once a month. The bill contains the data on all tariff elements for a specific consumption category.</p>	<p>-The distribution reads consumption on metering place. -Supplier calculates and delivers bill based on the metering. -Reading and submitting of the bill is done once a month; there is no legal option for advance delivery of bills. The bill for customers contains the following data: billing capacity, consumed active energy, excessive take off reactive energy and tariffs for supply.</p>	
<p><b>2. Distribution System Operators</b></p>					
<p><b>Are the Distribution System Operators ready for market</b></p>	<p>Distribution and supply are two unbundled organizational parts within JP EP HZ HB d.d. Mostar. Within distribution there is the Department for control and metering that controls the</p>	<p>Legal and accounting unbundling of the distribution system operator from the tariff customer's supplier has not been completed.</p>	<p>Organizational unbundling was performed. Legal and accounting unbundling between distribution system operator and supply has not been performed yet.</p>	<p>The distribution system operators still operate within two public power companies</p>	<p><i>REAP: The MWG documents on market opening that will be submitted to the governments,</i></p>

Question	EP HZHB	RSERC/EP RS	EP BiH	FERC	Proposed Next Steps
opening concerning the required unbundling from the performance of market activities (the level of unbundling accomplished)?	distribution network and that cooperates with the ISO in accordance to the Distribution Grid Code.			and the legal or accounting unbundling of the distribution system operator and I tier supplier has not been performed.	<i>propose the unbundling of competitive from regulated activities.</i>
Are there any plans for improving measuring on metering points (prescribed standards for the new customers, replacement of old metering devices, schedule for the activities, etc.).	<p>The Rulebook on the end user metering point defines that all metering places that are going to be designed, implemented or reconstructed following the effective date of the above Rulebook must comply with its provisions.</p> <p>Replacement of old metering devices is done continuously in accordance to the Annual Calibration Plan prepared by the Metering Department.</p>	<p>The situation in regard to metering improvement for the existing end customers is not the same in all distribution companies. With regard to new connections, it is expected that the Rulebook on methodology for the determination of the fee for connection to the distribution network and the connection fee that should be set based on it, and in particular the fact that the building of connections is within exclusive jurisdiction of the distributor, will result in equalization and improvement of the situation on metering devices.</p> <p>The General conditions prescribe the obligatory installation of meters with automatic reading capabilities for all new customers on the medium voltage.</p>		It can be concluded from the available information that JP EP HZ HB has ambitious plans for gradual replacement of induction meters with electronic ones. EP BiH has not submitted such information.	<p>EP RS: It is required to collect some specific data in relation to the current situation and planned activities in regard to the improvement of metering by distribution companies.</p> <p>REAP: In the final product documents, the MWG could suggest plans for improvement of metering at metering points for market opening.</p>
Are there any plans for the improvement of the manner of collecting data and submission of metering data (ICT – Informational Communication Technologies)?	Pilot projects are being analyzed and expansion of the same is planned to be done during this year.				<p>EP RS: It is required to collect the data in relation to the current situation and planned activities from distribution companies.</p> <p>REAP: If needed, the MWG can propose plans in the final product documents.</p>

Question	EP HZHB	RSERC/EP RS	EP BiH	FERC	Proposed Next Steps
<p>Are there any plans for the improvement of the procedures and rules for metering data?</p>	<p>In the preparation stage.</p>				<p>EP RS: It is required to collect the data in relation to the current situation and planned activities from distribution companies.</p>
<p>Do the Distribution Companies have daily load curves for the whole network for which they obtained the Distribution System Operator license?</p>	<p>We do not have load diagrams for the whole network but daily diagrams for transmission substations 110/x kV can be done.</p>			<p>With current technologies the distribution companies can obtain data on daily load diagrams with connection points (transformer stations 110/x kV). There is no obligation for hourly metering for any customer category</p>	<p><i>REAP: The MWG could work with the Eps to determine how much and according to which schedule a load diagram should be developed for the whole network. This idea could be proposed in the MWG product document.</i></p>
<p>Are the activities for the development of the daily load curve for the specific consumption categories being planned?</p>	<p>The activity program on estimation of the load for the specific consumption categories and the proposal for realization of the load estimation project was done.</p>	<p>There is no obligation for an hourly metering for any category or group of consumption, but all distributors are obligated to analyze load with a view to review the consumption diagram for categories and groups of customers. In regard to this, undertaken measures and achieved results differ in distributions. These analyses are more thoroughly conducted in Elektro Dobož and Elektro-Bijeljina when they measure (monitor) load diagrams for the specific customers and sub-stations, but they also work on the assessments for all categories and groups of consumptions.</p>		<p>Pilot projects are being planned for development of daily load diagrams for individual consumption categories.</p>	<p>EP RS: It is needed to communicate to distribution companies and to collect the latest analyses from Elektro-Bijeljina and Elektro Dobož, and initiate other distribution companies to intensify the activities in regard to load research and monitoring of the consumption profile. After these contacts it is necessary to develop a list of customers (category</p>

Question	EP HZHB	RSERC/EP RS	EP BiH	FERC	Proposed Next Steps
					<p>of consumption, number and consumption) for which it is already possible to have a consumption diagram and based on what basis it can be done (metering, estimate or metering and estimate).                      Initiate the formation of working group which will be comprised of representatives from all distributions and directorate for distribution in MH ERS (and maybe someone from the RSERC or they will only inform the RSERC) to deal with these analyses (metering capabilities, sample methods, estimate of the consumption diagram depending on the number of working hours and purpose of consumption (for industrial and commercial customers). This working group should, among other things, deal with and inform the end customers about the need and benefits associated with</p>

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					<p>being better informed about their consumption.</p> <p><i>REAP: The MWG could work with the EPs to determine how much and according to which schedule a load diagram should be developed for the whole network. This idea could be proposed in the MWG product document.</i></p>
<p><b>Is there a future need for the load curves to be developed for each individual supplier being analyzed?</b></p>	<p>For the time being, no.</p>	<p>All past analyses that were submitted to the RSERC were related to the whole distribution area, i.e., tariff customer’s suppliers. There were neither the requirements nor the initiatives by the RSERC for the analysis, that is, examining the possibility for the development of load diagram for another supplier.</p>		<p>Until now there haven’t been any requests or initiatives for these activities because none of the II tier suppliers supplied eligible customer supply.</p>	<p><b>EP RS: An initiative for such analyses should be launched, but not only at the level of distribution companies but also in MH ERS as BRP. Generally, MH ERS as BRP should be involved in all these activities and analyses related to the possibility of market functioning, because they, together with the ISO, will be responsible for balancing, rather than the DSO.</b></p> <p><i>REAP: The MWG could work with the EPs to determine how much and according to which schedule a load diagram should be</i></p>

Question	EP HZHB	RSERC/EP RS	EP BiH	FERC	Proposed Next Steps
					<i>developed for the whole network. This idea could be proposed in the MWG product document.</i>
<p><b>Is there any awareness among DSO-s that somebody else (supplier) will supply eligible customers that were supplied by the DSO until now and that it is obligated to ensure the data necessary for the functioning of the electricity market and to make them available in a non-discriminatory manner to other market participants?</b></p>	<p>There is, because distribution and supply have been unbundled for some time within JP EP HZ HB d.d. Mostar; thus, the supply to both tariff and eligible customers is performed by supply not the distribution.</p>			<p>Since until now none of the customers who fulfilled the conditions to be eligible didn't use the right fully, it cannot be said whether the distribution system operators have fully developed awareness on the necessity to exchange data with other electricity market participants.</p>	<p><i>REAP: EP RS and EP BiH could evaluate.</i></p>

**II. MARKET OPENING**

<p><b>Which "model" of market should be chosen (for example: bilateral contracts and balancing mechanisms for the settlement of deviations)? [Also: what are the market structure preconditions for successful</b></p>	<p>The legislation in Bosnia and Herzegovina supports the model of a fully opened market. We suggest a bilateral day-ahead market model where electricity supply is contracted for the following day, with the accompanying markets of an ancillary services market and imbalance market.</p>		<p>The legislation in Bosnia and Herzegovina supports the model of a fully opened market. We suggest a bilateral market model where electricity purchase and sale will be contracted, as well as ancillary services provider.</p>		
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Question	EP HZHB	RSERC/EP RS	EP BiH	FERC	Proposed Next Steps
opening of each kind, and the status in BiH? This is related to the issues raised below.]					
Which groups of customers should be “expelled” to the market in a sense that regulated prices will no longer exist for such customers and that they are obliged to select its supplier? [Also: what are the market structure preconditions for “expelling” any customers or group of customers from service at regulated prices?]	<p>Since Bosnia and Herzegovina is a signatory of the Energy Community Treaty, it is obligated to comply with the schedule for implementation of EC Directives 2003/54/EC and 2003/55/EC and to ensure that the customers that are entitled to choose its own supplier:</p> <ul style="list-style-type: none"> <li>- As of 01.01.2008. all customers but households</li> <li>- As of 01.01.2015. all customers.</li> </ul> <p>Preconditions: to inform and educate the customers on the existing changes and their rights and responsibilities, ensure a vulnerable customer program, ensure a default supplier option, ensure a supplier of last resort option.</p>		As BiH is signatory of the Energy Community Treaty, it is obligated to comply with the schedule for implementation of the EU Directives 2003/54/EC and 2003/55/EC and to ensure that the customers can freely choose their supplier: as of 01.01.2008. all customers but households; as of 01.01.2015. all The tariffs for 110 kV customers can be canceled immediately and for the others the deadlines should be defined in advance so the customers can prepare in due time.	Tariffs for 110 kV customers must be removed and for others the deadlines must be defined beforehand so that the customers, distributors and suppliers can prepare themselves in time.	
Is it needed to make two or more steps (time wise) in market opening (“expelling customers to the market”) for other customers other than households?	It is always desirable to introduce changes gradually with the constant education and informing of customers. However, since BiH is a signatory of the Energy Community Treaty, it is obliged to comply with the prescribed deadlines.		Continuous and gradual market opening is the best way in accordance to the prior agreement, with the schedule and requirements known beforehand.		
Should eligible customers be allowed to return to the tariff	The FERC’s Rulebook on obtaining eligible customer status provided that the eligible customer may also be a tariff customer after it had used the right to be		The FERC Rulebook on obtaining an eligible customer status defines that the eligible customer can also be a tariff customer after it had used the right to be		

Question	EP HZHB	RSERC/EP RS	EP BiH	FERC	Proposed Next Steps
<p><b>customer category under certain circumstances? For example, a limitation on which customers may return (like households and small commercial or only to use the SOLR), at a tariff reflecting incremental costs to service them, notice requirements to migrate off the system. The point would be to prevent customers from yo-yoing on and off the system.</b></p>	<p>eligible in the transitional period that will last until 01.01.2012.</p>		<p>an eligible customer in the transitional period that lasts until 01.01.2012. The tariffs should be determined just for households and small industrial customers in case they do not want to exercise their eligibility. The tariffs should not exist for the others, but there should be a mechanism for the obligation of supply (but not at regulated tariffs) in case such customers fail to find supplier or their supplier is unable to supply them.</p>		
<p><b>Is it needed and how to set the tariffs for the universal services and/or SOLR tariffs and which groups of customers are entitled to these tariffs?</b></p>	<p>In order to ensure universal service for households and small enterprises as prescribed by the EC Directive 2003/54/EC, a Member State may appoint a supplier of last resort</p> <p>It is required that every group of customers have a supplier of last resort. A supplier of last resort may only be for one or more groups, depending on business policy and the possibility to recover the costs.</p> <p>Due to the protection of customers who need to know the SOLR tariff, that tariff should be fixed.</p> <p>Possible SOLR tariff components are: energy fee, administrative fee, tariff for access to distribution, acceptance of municipality, access fee, etc.</p>		<p>Same as above. Yes only for households and small industrial customers as defined in the EU Directive.</p>		

Question	EP HZHB	RSERC/EP RS	EP BiH	FERC	Proposed Next Steps
<p><b>After market opening, should any generation license conditions be revisited, for example, export?</b></p>	<p>Compliance with the public service requirement is the main requirement of EC Directive 2003/54/EC. This means that export should be limited by the condition that the consumption needs (especially households and small enterprises) should be met first on the territory of BiH.</p>				
<p><b>Is there a sufficient number of licensed undertakings [with sufficiently small market shares, and in a market with sufficient surplus] and are there suppliers with too much market power and what to do in order for this issue to be commensurate with the market opening?</b></p>	<p>In FBiH there are 10 Tier II suppliers who acquired licenses from FERC. In the RS, RSERC issued 5 licenses for trade and supply on the territory of BiH to different companies.</p> <p>Currently they do not supply customers but rather they trade with EPs and other traders inside BiH</p>		<p>In BiH there are 10 companies with II tier supply licenses issued by the FERC an 5 companies with supply/trade licenses at the territory of BiH issued by RSERC. Due to low tariffs they do not supply customers but rather trade with EPs and other traders inside BiH. Considering that trade in BiH is practically inseparable from cross-border trade, it is necessary to bring the tariffs at the level of market ones, as well as to establish a single trade license (internal and foreign) and redefine license for supply (tariff and eligible).</p>		
<p><b>Whether &amp; what kind of obligations should be imposed on EPs as the existing suppliers in the initial period of substantive market opening with regard to the relationship with customers who will become eligible (to offer a transparent price, give reasonable</b></p>	<p>Require that EPs inform and educate customers about existing changes and their rights and obligations and regulations from that field. The EPs as market participants will work on that to ensure quality service to any customer at acceptable prices.</p>		<p>EPs can only offer assistance in education of customers about the changes that will occur when they will become eligible customers. Obligations that the EPs should have need to be in compliance with EU standards.</p>		

Question	EP HZHB	RSERC/EP RS	EP BiH	FERC	Proposed Next Steps
<p>deadlines for decision-making, etc.) to assure a competitive marketplace can be established, and, at a minimum to ensure compliance with EU standards?</p>					
<p>Based on the research referred to in the previous chapter (CURRENT STATUS) how can we give responses to these questions and plan and implement the activities that will ensure the conditions for the market opening that are contained in these questions?</p>	<p>We suggest to form a team at the level of the state that will review the existing situation and issue a work plan and monitor the implementation thereof in the EPs, transmission company, ISO, SERC, FERC and RSERC.</p>		<p>We suggest to form a team at the level of the state that will review the existing situation and issue a work plan and monitor the implementation thereof in the EPs, transmission company, ISO, SERC, FERC and RSERC.</p>		
<p>What amendments are supposed to be made in secondary legislation (grid code, market rules, distribution grid rules, general conditions for electricity supply, eligible customer rule.)?</p>	<p>We think that it is needed to form a Market Operator and to issue the Law on market operator and amend secondary legislation accordingly if necessary.</p>		<p>There are a lot of incompliances and unimplementability in these documents. All documents should be revised, harmonized and drafted so that they can be implemented immediately. Based on prior experience all ambiguities that may leave the room for double interpretations should be removed.</p>		

Question	EP HZHB	RSERC/EP RS	EP BiH	FERC	Proposed Next Steps
<b>Do we need to issue new secondary legislation (for example something pertaining to a balancing mechanism)?</b>	We think that the Rulebook on Ancillary Services Market and the Rulebook on a Balancing Market should be issued.		Similar as the above answer. Most of the problems related to balancing mechanism are encompassed in these documents, but there are provisions that are unimplementable, different solutions and contraries (for example Gri Code, Market Rules, SERC decisions). All documents should be revised, harmonized and drafted so that they can be implemented immediately. Based on prior experience all ambiguities that may leave the room for double interpretations should be removed.		
<b>What kinds of amendments are required in primary legislation (electricity laws, Law on Transmission, Regulator and System Operator)?</b>	We think a Market Operator should be formed, that a Law on Market Operator should be issued, and, accordingly, primary legislation should be amended if applicable.		No changes should be made in the primary legislation for the time being (Laws on electricity, Law on Transmission, Regulator and ISO) but rather create mechanisms for their consistent implementation in practice.		
<b>Are amendments necessary to laws that regulate public companies business operations?</b>	The Laws pertaining to the business operations of public companies are comprehensive laws, and there is no need for their amendment.		Specificities related to trade and supply should be taken into account. Changes are needed to be made in Law on Business Companies, Law on Public Utilities, Law on Public Procurements.		
<b>Do we need to establish a market operator?</b>	<p>YES</p> <p>We propose the following tasks for the market operator related to the definition of standards and procedures:</p> <ul style="list-style-type: none"> <li>- Executing and registering market transactions such as:               <ol style="list-style-type: none"> <li>1. transactions in the bilateral market arising from concluded contracts between market participants for a specific time period</li> <li>2. transactions on the Day-ahead market, where the market operator is the other contracting party in this market.</li> </ol> </li> </ul>		Not necessary. The main function of a Market Operator (registering of all trade contracts without financial elements, calculation of imbalances...) already exists within functions of the ISO BiH. If this refers to some kind of PX, cost effectiveness and market liquidity becomes a question. Considering the size of market in BiH, the most rational solution is regional PX.		

Question	EP HZHB	RSERC/EP RS	EP BiH	FERC	Proposed Next Steps
	<p>3. balancing market where the Transmission System Operator is the other contracting party on this market.</p> <p>4. transactions on the Ancillary services market,</p> <ul style="list-style-type: none"> <li>- development, maintenance and updating of market participants data base, eligible customers, generation units, concluded transactions (data on trading), billing metering, transmission losses, determined deviations in quantity and financial obligations arising from them,</li> <li>- Development of a daily schedule</li> <li>- Procurement of electricity for covering losses on the transmission network</li> <li>- Allocation of rights for the use of cross-border capacities for the transmission of electricity</li> </ul> <p>Calculation of imbalance quantity for the final settlement of BRPs and their financial settlement on the market.</p>				
<p><b>What will the settlement mechanism be to settle all contracts?</b></p>	<p>Rulebook on deviations market will determine the mechanism.</p> <p>The responses to the previous and some other questions through clear designation of roles for specific entities at the electricity market will define the manner for the functioning of the electricity market in BiH.</p>		<p>The Market Rules define the settlement mechanism.</p>		

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