Note on BiH Power System and Directive 2005/89/EC (Directive) concerning measures to safeguard of electricity supply and infrastructure investment

REAP has been analyzing the Energy Community Ministerial Council Decisions, all of which BiH as a Contracting Party is required to implement. This Note addresses Directive 2005/89/EC and the Ministerial Council Decision incorporating it into the Energy Community Treaty obligations. An analysis of the below directives and Energy Community Ministerial Council Decision, alongside the BiH Grid Code, written by the ISO and approved by SERC, indicates that some of the required provisions for safeguarding electricity network during big disruptions have not been implemented.

Directive 2005/89/EC:
This Directive Concerning Measures to Safeguard Electricity Supply and Infrastructure Investment paid special attention to operational network security; in the Article 4, the Directive creates an obligation of the Member States to set minimum operational rules and obligations on network security.

Ministerial Council Decision:
The Ministerial Council of the Energy Community adopted Decision No 2007/06/MC-EnC on December 18, 2007. Article 1 of the Decision reads: "Each Contracting Party shall implement Directive 2005/89/EC concerning measures to safeguard security of electricity supply and infrastructure investment before December 13, 2009."

Directive 2003/54:
Directive 2003/54 Concerning Common Rules for the Internal Market in Electricity, Article 4 reads the Member states shall ensure the monitoring of security of supply issue.

Directive 2003/54, Article 5 provides that the Member States shall ensure that technical safety criteria are defined.

ISO Grid Code:
Background:
On June 8, 2006, the ISO issued and SERC approved the Grid Code, the objective of which is to define the elements for safe and reliable operations of the electric power system of Bosnia and Herzegovina in compliance with defined quality standards, providing connection to the electric power system of current and potential users in an objective, non-discriminatory and equal way.

As set forth in the ISO Law, (*Official Gazette of Bosnia and Herzegovina 35/4*), Article 7(f), provides that the ISO is responsible for the Grid Code, while Article 3(13) defines the Grid Code as "the rules and procedures governing the technical issues relating to connection to, use and operation of the transmission system, *including a provision describing exigent circumstances under which immediate action to rectify a supply incident may be taken and by whom*." [Emphasis added.]

As set forth in the Law on ISO, Transco and SERC, Article 4.2 provides the following:

- SERC approves and monitor the rules and regulations developed by the ISO Article 4.2(r).
- SERC monitors the activities of the ISO pursuant to its license. Article 4.2(h).

Operational network security in the Grid Code:
Item 8 of the Grid Code, approved by SERC on June 8, 2006, Code of Measures in Unexpected Situations provides as follows:
"Taking into account the technical features of the transmission system and User, the ISO will define detailed measures and procedures for guarding the system from major disruptions that may lead to disintegration of the system accompanied by partial or total breakdown, as well as the procedures for restoration of the system after major disruptions."
Status: ISO has never developed such measures and procedures. As a result, the BiH Power system may face serious risk due to the nonexistence of the above-mentioned document. The process to develop such document is long and complex in the BiH environment; therefore, commencement of development of such paper is a must.

Example: One of the methods to control consumption as a measures to guard a system from major disruption, is an automated sub-frequency unloading. There are, at a minimum, two pre-conditions to implement this measure:

- A sufficient number of relays that serve for automated sub-frequency unloading must exist in the network;
- A plan for automated sub-frequency unloading agreed upon by three EPs, ISO and Transco has been developed;

The UCTE standard says the total available power that could be turned off automatically if needed, has to be in the amount of 55% of peak power in BiH (app 2.000MW). At this time the available power that can be unloaded is 23% of the peak power only. This means that in case of a major disruption in the system, the automated sub-frequency unloading method will not be of enough help to "save" the system from a black out.

Comment:
This is the example on how slow and inefficient both SERC and ISO are in performing their duties and the possible resulting consequences to customers and EPs as a result.

It is urgent that ISO updates the Grid Code taking into account Directive 2005/89 to develop a document that will define measures and processes to guard the power system from disruptions. All stakeholders EPs, Transco, ISO have to agree on the document and implement it, which is not a matter of commitment only but it is financial issue, since EPs must purchase and install missing equipment for automated sub-frequency unloading.

REAP intends to communicate this problem to the ISO and EPs to try to build momentum to initiate the procedure.

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