

1st Security of Supply Coordination Group – Electricity Sub-Group Meeting

Energy Community Secretariat, Vienna

Tuesday, 16 December 2014 – 15:00-17:30; Wednesday, 17 December 2014, 08:30-11:00

1. Opening of meeting - Welcome and Introduction of Agenda

- 1.1. The meeting was attended by Security of Supply Coordination Group Sub-Group Electricity (SoS CG SG Electricity) representatives of all Energy Community Contracting Parties (EnC CPs), excluding FYR of Macedonia, representatives of Observers (Georgia, Turkey), the European Commission/DG Energy (Chairman), ENTSO-E, TSO Security Cooperation (TSC), and TSOs' representatives from EnC CPs (CGES, EMS, KOSTT, OST), Observers (TEIAS) and Participants (APG), as well as representatives of the Energy Community Secretariat (ECS).
- 1.2. ECS welcomed participants in the meeting and presented the draft Agenda organized in two parts, aimed at discussing needs and options for regional network security cooperation and the security of supply state and prospects for the forthcoming winter season. The Secretariat recalled massive floods that left long-term consequences on the power systems of some of the EnC CPs and highlighted the importance of strengthening cooperation of all relevant institutions (Ministries, NRAs, TSOs and DSOs) on ensuring security of supply in the Energy Community region.

2. Operational Network Security

- 2.1. ECS revisited obligations of the EnC CPs with regard to operational network security stemming from the Energy Community acquis on electricity. ECS stressed the importance of timely implementation of the 3rd Energy Package and explained the procedure for the adoption of the Network Codes in the Energy Community.
- 2.2. ENTSO-E Operational Planning and Scheduling Network Code (OPS NC) Drafting Team Convenor, Mr. Jean-Philippe Paul, presented the current status of development of Network Codes with the special emphasis on main objectives and requirements behind OPS NC.
The main aim of OPS NC is to establish a uniform and coordinated preparation of real-time operation at all timeframes from year-ahead to intra-day. OPS NC promotes building at European level common grid model and implementing at regional level common processes for security analysis, outage planning and adequacy analysis.
OPS NC is expected to be adopted until the end of 2015. However, the importance of early implementation was underlined.
In order to ensure the proper implementation of OPS NC, the use of the following tools is foreseen: ENTSO-E Operational Planning Data Environment (OPDE) as a global common repository for all information exchanged, with the access granted to all TSOs and RSCIs (project on the way), Quality

Portal (to be operational at the beginning of 2015) and Regional Security Cooperation Initiatives (RSCIs) which shall ensure that the processes are implemented at regional instead of national or bilateral level (ENTSO-E Policy paper on future TSO coordination for Europe, published in November 2015, defines participation in RSCIs mandatory for interconnected TSOs).

- 2.3. TSC representative Mr. Rudolf Baumann presented the changing operational environment caused by the increase of cross-border flows and RES production, development of electricity market, and other challenges behind the need for strengthening the collaboration between TSOs and the establishment of RSCIs.

Main tasks of TSC with the joint office in Munich, and services provided by TSCNET Services - the joint venture established by TSC member TSOs, were presented, highlighting the importance of coordinated security assessment and implementation of multilateral remedial actions (MRAs) for ensuring system security in the TSC region which is covering 13 TSOs and 10 countries, with the possibility of further extension to other TSOs.

Strengthening TSO cooperation on the improvement of common grid model and capacity calculation is foreseen as a crucial activity to provide the electricity market with the right amount of capacities available for the cross-borders exchange. Improvement of data quality was identified as a key element for good operational planning on all time frames. The cooperation between TSC and Coreso, another operational RSCI, on coordinating processes and data exchange was emphasised. The relevance of geographical position and regional know-how for those services that are regionally important was stressed.

- 2.4. The common initiative of CGES and EMS to establish South East European (SEE) RSCI was introduced by EMS representative Mr. Dusko Tubic, recalling both the need and the obligation for TSOs to procure services from RSCI and presenting activities undertaken so far on SEE RSCI establishment. Mr. Tubic informed about the plenary decisions of the Regional Group Continental Europe (RG CE) aimed at improving operational cooperation between TSOs and data quality. In line with the decision that each TSO that is still not participating in RSCIs (TSC and Coreso) has to choose its service provider for coordinating model corrections, EKC (Electricity Coordinating Center) and EMS are currently providing these services for CGES, EMS, IPTO, MEPSO and NOS BiH, until SEE RSCI is established, envisaged for the beginning of 2015. Mr. Tubic informed that CGES and EMS have contracted an agreement, expected to be signed also by NOS BiH, to establish SEE RSCI that will be open for cooperation with all SEE TSOs to enter either as beneficiaries, or both as beneficiaries and service providers (shareholders).

Mr. Tubic informed that TSC, Coreso and EKC signed the agreement to develop a common tool – Quality Assessment (QA) Service Portal, for the purpose of monitoring, improvement and harmonization of quality assessment of individual grid models (IGMs) in the operational planning process, planned to be put into operation at the beginning of 2015. A number of possible benefits for SEE TSOs were presented in the case that they implement security coordination at regional level.

- 2.5. Representative of the APG, Mr. Milan Vukasovic pointed out that transmission network reality and electrical influence among different systems shall be taken into account in choosing the RSCI as well as costs of participation in RSCI which shall be justified and approved by the NRAs.

Conclusions:

1. ECS recalled the obligation of EnC CPs to implement the 3rd Energy Package as of 1 January 2015, including provisions on stronger regional cooperation in operational network security, requiring the Contracting Parties to ensure that TSOs have one or more integrated systems at regional level for checking the security of the network.
2. Given the importance of ensuring and maintaining an appropriate level of operational network security, EnC CPs are encouraged to enforce a higher level of TSO coordination in operational planning processes, in line with the ENTSO-E approach defined by the Policy paper on future TSO coordination for Europe and OPS NC requirements.
3. The initiative of CGES, EMS and NOS BiH for establishment of SEE RSCI is welcomed as a serious and highly feasible option and the TSOs are encouraged to consider the possibility and the format of their participation.

3. Security of Supply Update

3.1. The Chairman, Mr. Bartłomiej Gurba, introduced the background and finding of the Stress Test 2014, emphasising that for the first time EU MSs and EnC CPs have implemented the coordinated way of situation assessment, and pointed out that cooperation in terms of identifying how the impact will spread and what measures can be taken, including the impact on electricity sector, shall be further analysed. The Chairman recalled the 2013 Communication from the Commission on Generation Adequacy in the internal electricity market following the challenges in ensuring generation adequacy and security of supply.

The Chairman emphasised the need for more cross-border cooperation in dealing with these challenges. The Chairman underlined that the security of supply issues and cooperation with the EnC CPs in that respect will be in the focus of the Commission in 2015. In addition to the transposition of the legislation and opening of the market, the electricity remuneration, financial flows, impact of regulated prices, and ensuring transparency to the investors shall be analysed. With that respect, more inputs are expected to be provided from the EnC CPs. Various state interventions in the energy sector are recognized as one of the reasons for the lack of investments.

3.2. The follow up of the SoS CG Gas Subgroup activities in 2014 and findings of the "Stress Test 2014" for the gas supply were presented by ECS. The share of electricity production in total gas consumption largely varies between EnC CPs (0 to 80%). Electricity was indicated as the main choice for switching in the case of gas shortage. The dependency on electricity imports of 6 out of 8 EnC CPs and 1 Observer makes the availability of electricity supply at regional level highly sensitive on the gas supply. However the regional multisectoral impact was not provided by the Stress Test and the prospects for trans-national impacts on energy supply are still missing adequate assessment.

3.3. The ENTSO-E Winter Outlook Report 2014-2015 was presented by the ENTSO-E Secretariat representative Mr. Robert Schroeder, who highlighted the importance of bottom-up approach, based on the inputs collected from TSOs, for the better understanding of the situation. Main findings were presented on the example of Belgium where potentially stressed situation may be expected in the

coming winter. In the snap-shot based analysis various parameters were analysed such as available capacity, temperature, wind variation, load shedding and import possibilities.

Operational challenges that would need coordinated remedial actions between TSOs in order to ensure system security were also addressed. For assessing the impact of potential gas shortage joint ENTSO-E and ENTSO-G task force is set up.

The regional generation adequacy is critical – the assessment is under way (on higher political level) – including the need of renewing base load power plants to save expenses (e.g. Poland). The analysis is shifting from snapshot to market-based stochastic adequacy assessment and use of clear and right indicators for interlinked power systems (harmonization of indicators and careful understanding of the power systems is needed for a pan-European view) with a more detailed view of cross-border contributions to a country's system adequacy and the need for flexibility in the power systems.

- 3.4. Albania reported lack of gas network for the time being, as well as heating on firewood or electricity in villages. The system is virtually relying on 100% hydro generation – water is on high level in the accumulations (e.g. Fierza) and the prospects for supply are relatively good. Next to that, the country depends on 30-40% imports of electricity for which interconnection capacity is available (the construction of new 400 kV OHL with Kosovo* is under way (to be operational by 2016), there are plans for interconnections with FYR of Macedonia and Italy. Legal measures to combat electricity theft and improve collection provided very good results in reduction of losses.
- 3.5. Bosnia and Herzegovina reported on the severe floods during 2014 which had impact mostly in the distribution and to moderate extent in the production while the system operation was sustained – the surplus production was exported in Serbia (which suffered from deficit) as a good example of mutual cooperation. The campaign for international assistance from the industry was partially successful due to mismatch with the needs in the country and administrative barriers. Coal mine Sikulje flooded in May 2014 remained unavailable, but no problems are expected with the production in the coming winter season since the water level and coal depots are at the planned and sufficient level.
- 3.6. Kosovo* reported that the security of supply is the biggest issue due to the full dependency on thermal production of electricity with no flexibility, relatively low tariffs, weak distribution system (high losses), insufficient imports and almost regular disconnections. Co-generation of heat has started in TPP Kosovo B1 (to cover 60.000 customers), expecting the future new interconnection line with Albania to improve the supply conditions. The lignite stocks are well maintained (covering 25 days of production). However, the accident in TPP Kosovo A in June 2014 still represents a risk for 35% of the production, planning to restore full operation in the beginning of 2015.
- 3.7. Moldova reported high dependence on the production of a single TPP Moldavskaya Gres - covering virtually 100% of the demand (since imports from Ukraine are stopped in November 2014). The possibility of higher dependence on electricity used for heating in case of gas supply shortages is considered realistic, as is the need of enforced reliability of the system and demand measures. Future plans were presented to construct three lines with back-to-back DC convertors in order to exchange electricity with ENTSO-E and improve security of the supply. Working in an "island mode" from Romania is considered less favourable, while the diversification of local electricity generation and import sources is considered as an adequate answer to all challenges regarding the security of supply.
- 3.8. Montenegro reported on its main features from the energy balance for 2015 with no specific security concerns. All production capacities are well maintained and supplied. Transmission network is

maintained and operation is considered as satisfactory. Administrative difficulties are reported in the distribution network with the relatively lengthy procedures for procurement of materials and services stemming from the Law on public procurements in the maintenance.

- 3.9. Serbia reported on the floods in May 2014 when 1000 MW of TPP and 500 MW of HPP were unavailable and emergency imports took place for 15-29% of the consumption. Two pits of the Kolubara coal mine were flooded cutting the coal production in half – one is already recovered and the other will be in operation by the end of 2014. Transmission configuration had to be modified due to flooding of two major substations. However only voltage reduction of 5% was applied without disruption of n-1 criterion in the 400 kV and 220 kV networks and no load shedding. The supply was disrupted due to flooding of 7 DSO substations. In December the same year the country suffered from a severe icing event when seven 110 kV OHL were out of operation and a part of the territory was cut out of the grid for three days, however the system was recovered and supply was restored in strong concerted efforts and cooperation of the relevant companies and security forces.
- 3.10. Ukraine reported on the effects from anthracite and gas coal supply shortages resulting both in reduced electricity production in the CHPPs and increased electricity demand of households (by 15-30%) to compensate for the missing heat supply, and of reduced anthracite coal supply from the conflict zones - needed for TPP production. The system stability is maintained mainly through the interconnections with Russia, which provides essential support to sustain east Ukraine network security. However, for the time being, having zero energy exchange program with Russia, significant coal supply deficit and domestic consumption increase have resulted in implementing load shedding measures. The network stability in the conflict region of Eastern Ukraine is fragile due to significant number of OHL which are damaged and switched off. Large quantities of excavated coal cannot reach the production facilities. The supply needs cannot be met and demand measures are enforced such as voltage reduction and load shedding.

Conclusions:

4. Given the findings of the Stress Test 2014, follow-up steps shall be taken in order to further assess the regional impact of gas supply on the electricity sector in the coordinated way. Interlinks between gas and electricity sectors, as well as between EnC CPs and between EnC CPs and EU MSs shall be strengthened.
5. The need for, and significant benefits of, cross-border cooperation with regard to generation adequacy and security of supply are stressed, and EnC CPs are called to undertake measures on improving the cross-border cooperation with that respect.
6. Given the findings of the ENTSO-E Winter Outlook, the follow-up cooperation with ENTSO-E and coordinated feedback from the EnC CPs shall be provided.
7. The consequences from the floods and severe weather conditions in the electricity systems of Bosnia and Herzegovina and Serbia are largely eliminated and will be fully overcome in the first half of 2015; the damages in the distribution are being gradually recovered.
8. The individual assessment of the security of supply and the level of preparedness for the winter 2014/2015 is presented through relatively optimistic statements and with no immediate concerns -

except in Moldova and Ukraine, where regular load shedding is imminent or already applied, in particular, as a consequence of the conflicts in Eastern Ukraine.

9. The overall security at the regional level however has not been assessed or proven as resilient to correlated events of disruption on a broader scale. The SoS CG SG Electricity shall monitor the state of affairs in this respect relying on the data, and coordinate measures taken at the national level. The Secretariat shall take all necessary steps to ensure adequate communication. In the emergency situation EnC CPs shall keep day-to-day contact with the Secretariat.
10. Given the high dependency on only one energy type in most of the EnC CPs, the Commission asked EnC CPs to take into consideration diversifying the portfolio of energy sources.
11. The events of emergency show the necessity to enhance the systems for protection and the level of preparedness in order to react in the most adequate manner, with least possible disruption of the system operation and performance of the markets. The follow-up activity on this topic shall be established.
12. EnC CPs are reminded of their obligation to submit security of supply statements and invited to submit their updates for 2015 to the Secretariat before the end of 2015.
13. At least one meeting of the SoS CG SG Electricity will take place in 2015, back-to-back with the PHLG Meeting in December.