

Two interesting issues solved before reconnection of I and II UCTE synchronous zones

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Introduction

Activities related to reconnection of I and II UCTE synchronous zones were started with evaluation of transmission network damages, and continued with study activities in order to determine necessary objects of transmission network for reconnection. Finally, after repairing of damaged network elements, detailed preparation for operational realization of reconnection was done.

In all mentioned reconnection phases there were many interesting technical, and also non-technical, issues which had to be solved in order to enable that process can go ahead. It required a lot of different knowledges and skills.

Based on documents and memory two interesting problems discovered in preparation for reconnection as well as ways of their solving are presented.

Control areas and blocks and status of Albania

II UCTE zone TSOs were coordinated by Elektroenergetski Koordinacioni Centar – EKC, Belgrade.

Way of Integration of control blocks and areas from II UCTE zone in common UCTE control and accounting structure had to be defined before reconnection:

- “Old” UCTE members (TSOs from Greece, Macedonia, Montenegro and Serbia) have returned under coordination of ETRANS-Laufenburg (UCTE Coordination Centre South);
- “New” UCTE members (Transelectrica and NEK) have decide to be coordinated by RWE-Brauweiler (UCTE Coordination Centre North) ;
- Finding solution for future status of Albanian TSO as non UCTE member was special chalenge. There were ideas to include Albanian TSO either in JIEL (now SMM) block or in Greek control block, but sustainable solution was the separate Albanian control area/control block “directly connected” to ETRANS-Laufenburg (UCTE Coordination Centre South)

Phase-angle differences

One month before Reconnection Mr. J. Zerenyi (MAVIR) presented measurement results of phase-angle differences (120°) between Croatian and Slovenian and Croatian and Hungarian systems and called it: „Balkan sausage”;

In old ex YU CIGRE papers (1976) phase difference on one 110 kV line between Croatia and Slovenia of 120° has been described. The UCTE grid in SEE during seventies and eighties was an radial structure and due to this reason network operated normaly many years.

There were a few possible options for solving this problem and after large and sometimes emotive discussion we (ET) finally found the best technical solution: change of phase order on all HV lines between Croatia and Slovenia and Croatia and Hungary. These changes was realized within few hours.

