

Proposal for the creation of a regional working group

SEERC RWG - 02	Name of Convenor: Maks Babuder (Slovenia) E-mail address: maks.babuder@eimv.si
Technical Issues: Promotion and backing the issuing of Technical Specifications of the material and of the control and protection schemes	Strategic Directions: OTLs capacity enhancement, congestion prevention, transmission system reliability improvement
The WG applies to transmission and distribution networks	
Title of the WG: Regional perspective of various reactive power sources introduction in the transmission system	
Scope, deliverables and proposed time schedule of the Group : Background : The reactive power support and its control became a typically local and regional issue. The large penetration of RES gave to it a primordial importance. Different networks, different compensation devices and different optimization objectives in SEER may lead to various approaches and solutions. The improvements in static reactive power sources performance and development of promising optimization methods calls for a mutual cooperation between experts in the SEE Region. This document embraces and describes the objectives of and the reasons for establishing a working group aiming to increase the needed knowledge and sharing of experiences concerning the use of reactive power sources necessary for better cooperation of regional interconnected electric power transmission systems and power systems in general. The cyclic nature of reactor power caused by new supply side facilities (some of renewable sources) as well as challenging demand side requirements are impacting on the network planning and invite to introduce new advanced methods to handle this problem. Maintaining of the highest allowed voltage (maximum operating voltage) in any of the network's location requires a suitable balancing of the reactive power in the system, taking care of the voltage profile, energy losses and reliability of the system. Many of technical issues concerning reactive power compensation have been dealt with in the past by the CIGRÉ WGs (Dealing with Reactive Power Compensation Analysis and Planning Procedures). This Regional Working Group will seek to develop a Technical Report which may provide Guidelines for the analysis, planning and commissioning of compensating stations projects for the interconnected transmission system in the SEER. Scope : 1. An up to date SEERC survey of selected and applied solutions to cope with overall system reactive power challenges 2. Concepts of future AC and DC interconnected transmission system 3. Reactive power planning practice (analysis technique and optimization objectives) 4. The impact of reactive power on voltage profile and loads (case studies aiming to select the size, location and type of compensator units) 5. Experience with various devices (Shunt reactors, Synchronous condensers, STATCOM, SVC...)	



6. Regulation and compliances (Related to Network Codes and Equipment Standards)
7. Reactive sources general design concepts and operating characteristics
8. Cases of resumed operation of turbine generators after a thermal plant shutdown and its use as a reactive power source
9. Comparison of Technologies and Reactive power strategies (based on latest related CIGRE Brochures)
10. Report

Deliverables :

Technical Report

Time Schedule: Start : September 2014⁷

Final report: August 2016⁸

Approval by SEERC Advisory Group Chairman:

Date:

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