

MEMORANDUM OF UNDERSTANDING

BLACK SEA REGIONAL TRANSMISSION PLANNING PROJECT PHASE TWO

Introduction

The first phase of the Black Sea Regional Transmission Planning Project concluded in May 2007 with the publication of the final report. The report concluded that the project had built up a substantial planning capacity across the three distinct electrical systems comprising the Black Sea network: IPS/UPS (Armenia, Georgia, Moldova, Russia, and Ukraine); Turkey; and the UCTE countries (Romania and Bulgaria). Though the TSOSs in these systems employ different planning criteria, operating principles regarding security and reliability, and speak different languages, over the course of the first phase of the project they succeeded in developing a common regional planning model and applying it to analyze to the regional transmission network. As a result, for the first time, the participating TSOSs are able to exchange forecast data in a common format and examine regional consequences of developing domestic generation and transmission with their neighbors.

Based on the accomplishments in the first phase, the project steering committee, at its march 2007 meeting in Kyiv, recommended extending the project into a second phase. A meeting of the black sea regional transmission planning project, was then conducted in Tbilisi, Georgia from December 5-6, 2007 to initiate the second phase of the project. At the meeting representatives of the Black Sea IPS/UPS TSOSs and the Southeast Europe Black Sea TSOSs, together with USAID and USEA, developed and agreed these organizing principles for phase two of the project.

Project Goals

Building on the accomplishments of the first phase, the participants will continue to support the following project goals:

- Promote regional cooperation on transmission planning among black sea region TSOSs;
- Identify priority investments in transmission systems and interconnection to improve the reliability of the regional power system;
- Support regional harmonization of transmission planning and operational principles; and
- Enhance the trade of electric power in the black sea region.

Project Objectives

In support of the above goal, the objectives of Phase Two are to:

- Maintain and update the regional transmission model developed by the TSOSs in phase one;
- Continue to build institutional capacities within national TSOSs and on a regional basis through the provision of training on the use of transmission planning software;
- Expand the analysis the regional transmission system to further identify the existing potential for electric power trade in the region;
- Identify potential transmission investment projects to expand electric power trade while ensuring security and reliability of the regional power system; and
- Promote the results of the analysis to a wide audience of policy and regulatory authorities

Project Tasks

The project will consist of the following tasks:

- Maintain and update the static model for 2010 developed during the first phase of the project and develop a new model for the summer peak;
- Assess the transmission planning needs and capabilities of the participating TSOs to perform dynamic mode of modeling;
- Provide training on dynamic mode modeling;
- Prepare national inputs and develop a regional dynamic mode transmission model;
- Analyze the regional system in dynamic mode;
- Provide training on economical planning criteria for ranking and prioritizing the regional transmission projects;
- Review planning and system operation criteria in the constituent parts of the black sea system;
- Develop recommendations for harmonizing planning criteria and operational criteria; and
- Rank and prioritize proposed regional transmission projects on the basis of common criteria.

Project Organization

A Steering Committee of the following members will advise the project:

- Black Sea Regional Energy Centre
- Black Sea Economic Council
- Georgian State Electrosystem
- High Voltage Network (Armenia)
- Moldelectrica
- Electricity System Operator (Bulgaria)
- National Power Company Ukrenergo
- System Operator-Central Dispatch Administration of The Unified Energy System of Russia
- Transelectrica (Romania)
- Turkish Electricity Transmission Corporation
- United States Agency For International Development
- United States Energy Association
- Representatives Of The European Commission, World Bank, EBRD, KFW, and UCTE Will be invited to sit on the Steering Committee

The steering committee will primarily communicate via e-mail, with meetings scheduled in the beginning, middle and towards the end of the project as appropriate, to review work plans, assess objectives and plans, and review draft reports and recommendations on investment priorities.

Mr. Dan Preotescu of Transelectrica will serve as the project coordinator.

A regional working group will consist of up to 2 persons from each participating TSOs. A work plan and schedule will be developed for each stage of the project by the regional working group to frame the activities of the project.

Specialized tasks and activities may require the use of consultants and institutes.

Project Cost Sharing

USAID, through USEA, will fund the following expenses:

- Consistent with USAID regulations, purchase of maintenance and support services for the PSS/E software for the first year of phase two of the project;
- Hotel accommodation & per diem for meetings of the regional working group and steering committee;
- Support for regional model integrator; and
- Support for consultants and institutes, as necessary.

The participating TSOSs agree to fund the following expenses:

- Travel to regional working group and steering committee meetings. In limited cases where the participating countries are unable to support travel to and from meetings, they may appeal to USEA for travel support consistent with USAID regulations and the availability of funding from USAID for such travel;
- Salaries of participating personnel;
- Development of national data and national model preparation; and
- Costs associated with volunteering to host meeting and training events. The hosting of meetings is voluntary and would usually involve providing a meeting room located within the host utility, providing audio-visual requirements necessary to conduct the meetings (computer, LCD projector), and coffee breaks.

Project Duration

Though the precise project end date has not been established, this phase of the Project is envisioned as approximately three years in duration, with each year serving as a stage of the project.

Agreement

The following Parties agree to participate in this Black Sea Regional project within the framework of this Memorandum:

HIGH VOLTAGE NETWORK (ARMENIA)

Date

BLACK SEA REGIONAL ENERGY CENTRE

Date

GEORGIAN STATE ELECTROSYSTEM

Date

STATE ENTERPRISE MOLDELECTRICA

Date

ELECTRICITY SYSTEM OPERATOR (BULGARIA)

Date

NATIONAL POWER COMPANY "UKRENERGO"

Date

SYSTEM OPERATOR – CENTRAL DISPATCH ADMINISTRATION OF THE UNIFIED
ENERGY SYSTEM OF RUSSIA

Date

TURKISH ELECTRICITY TRANSMISSION CORPORATION (TEIAS)

Date

NPGC TRANSELECTRICA

Date

USEA

Date