PPIAF Assistance across Multiple Regions

Technical Assistance for Electricity Interconnection in Central and South Asia

Interconnection between power systems of neighboring countries is an effective means of improving the overall level of system reliability and economy by offering a number of advantages compared to the situation where country power systems are operated independently.

In order to accrue potential benefits from the cross-border transmission interconnection, Afghanistan, the Kyrgyz Republic, Pakistan, and Tajikistan have been pursuing the development of electricity trading arrangements and the establishment of a Central Asia–South Asia Regional Electricity market (CASAREM). One of the key components of this initiative is the development of the cross-border transmission interconnection linking the four countries to facilitate the transfer of surplus power that would be made available in the Kyrgyz Republic and Tajikistan to Pakistan and Afghanistan. In order to examine the possibility of regional electricity trade, the four countries, together with experts from the Asian Development Bank and World Bank, first met in Islamabad in May 2006. Subsequent meetings to further explore the potential of regional cooperation in electricity trade were held in Istanbul and Dushanbe in June 2006 and October 2006 respectively. Subsequently, a Memorandum of Understanding (MOU) was signed in Dushanbe that commits the countries to pursue the feasibility of the transmission interconnection and trading of electricity with the concomitant institutional and legal framework for a 1,000 MW power transfer (CASA-1000).

In December 2006 the Multi-Country Working Group formed by the four countries involved in the project requested PPIAF assistance to assess the feasibility of the project through a public-private partnership arrangement.

The output of the PPIAF technical assistance consisted of a report that assessed and provided recommendations on five main areas: potential for private sector investment, institutional framework, financial framework, risk framework, and legal framework. The main conclusions and recommendations are listed below.

Regarding the potential for private sector participation, the study confirmed that RAO UES and AES were potentially interested in participating as shareholders and/or project operators and/or participants in the implementation of CASA-1000. The report also surveyed and listed the potential interest of public organizations in participating as lenders or risk mitigators for the project as a public-private partnership.

Regarding the institutional framework, the study proposed two possible frameworks at the project level. The first one was the creation of a special purpose company, as it is usually done, to serve as an investment vehicle for providing the public and private sector shareholding and financing for CASA-1000. The second option was the creation of four Project Companies, which would be country-specific for each of the participating countries. The legal agreements for such a structure would create an optimal structure, although such a structure could be more cumbersome than having just one Project Company. Trading and transmission operations could both be carried out by the Project Company or separately carried out by two companies with separate management and functions and contractual arrangements.

Regarding the financial structure, the study proposed a financing structure, utilizing primarily public sector debt with the equity shared among public and private sector entities. The proposed financial structure would contemplate 20-year debt and common equity investments. The proposed debt/equity split was 70/30, and the equity was further divided among the private and the public sector investors with public sector equity taking up 70% of the equity and private sector equity taking up 30% of the equity. Ownership was to be shared among the countries based on the value of the assets located in their territories.

Regarding the risk framework, the study concluded that the four primary risks faced by investors in CASA-1000 (Supply Risk, Transmission Risk, Payment Risk, and Government Performance Risk) could be successfully mitigated if the participating governments were prepared to take ultimate responsibility for
the success of the Project (for instance, through partial risk guarantee indemnity agreements with the World Bank). Political risks could also be mitigated through various mechanisms and through the acceptance by each participating government of its specific responsibilities, and by the four participating governments of their collective responsibilities, necessary for the success of CASA-1000.

Regarding the legal framework, the study concluded that no domestic legal impediments existed in the considered exporting and importing countries that prevent implementation of CASA-1000 as it was proposed.

Following this first phase of technical assistance, the governments decided to pursue the project and agreed to form an Intergovernmental Council to lead the project in November 2007. During 2008 a series of draft term sheets were prepared, which articulated a detailed vision as to how the CASA-1000 Transmission Project could be implemented. It involved the creation of a Concession Company after a bidding process to invite private sector participation into the Project, the establishment of four new Line Companies (one for each member country), and a web of contractual relationships between them and third parties, as well as arrangements for financing and fund flows.

In January 2009 PPIAF assistance was requested for a second time to support to complement Asian Development Bank assistance to fund legal advisory services for the Intergovernmental Council to further review the structure of the project developed in 2008.

The assistance provided consisted in a report reviewing the 2008 Structure. The reports was completed in March 2012, their key findings are listed below:

The 2008 Structure is unduly complex and structured to protect the returns to the private equity investor to a level that is disproportionate in terms of likely costs and time to implement it when compared to the amount of private risk capital proposed (6% of total project cost).

The project structure can be significantly simplified by the removal of the Concession Company and the four separate Line Companies.

Private sector participation can still be achieved through the joint appointment of a suitable operator for the Direct Current Facilities under an operation and maintenance (O&M) Agreement with appropriate risk and reward balance with potential equity investment through the funding of certain investments against an enhanced O&M fee.

Packaging the O&M Agreement with an Engineering, Procurement, and Construction Contract should be considered as a viable contracting strategy provided that the terms of the O&M Agreement form a reasonable business case in their own right so as to minimize the risk that the Engineering, Procurement, and Construction Contract is priced excessively due to the perceived risk by the Engineering, Procurement, and Construction Contractor of the O&M Agreement.

### Results of PPIAF’s Activity for Electricity Interconnection in Central and South Asia

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Following the two PPIAF-funded technical assistance activities for CASA-1000, the Intergovernmental Council continues to work on developing the project. This project is expected to have great impacts on development in the long term in Afghanistan, the Kyrgyz Republic, Pakistan, and Tajikistan.