



Energy Sector Status Report

**Senior Officials' Meeting
on Central Asia Regional Economic Cooperation
8-9 September 2007
Manila, Philippines**

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REPORT ON ENERGY

1. The purpose of this Report, prepared by the World Bank with contributions from other IFIs involved in CAREC activities, is to capture the developments since the last Senior Officials Meeting in March 2007.

A. Regional Energy Projects

2. **Central Asia South Asia Regional Electricity Market (CASAREM).** Progress continues in the preparation of this initiative, which includes a set of projects for power generating capacity and transmission lines along with corresponding inter-governmental and commercial agreements as discussed further below. Five IFIs (ADB, EBRD, IFC, IsDB and WB) are participating together with four governments (Afghanistan, Kyrgyz Republic, Pakistan and Tajikistan) in CASAREM. To realize CASAREM, the focus is on firstly creating the necessary institutional and legal frameworks, followed by in parallel the necessary transmission links with a view to trade electricity from existing generation facilities; and then on the new generation projects.

- **Creation of Institutional and Legal Framework.** Afghanistan and Tajikistan have initiated in-depth discussions on the establishing the necessary institutional and legal framework for bilateral electricity trade. In August 2007, the two countries met at the energy ministers' level and signed a protocol whereby Tajikistan commits to export a minimum of 1000 GWh between May- Sep of each year to Afghanistan; and Afghanistan commits to take this power and ensure payments for this electricity in a credible way. Based on these critical agreements, an international standard Power Purchase Agreement is being developed and the target date of having such an agreement in place is January 2008. The World Bank is providing legal and financial advisory assistance to Afghanistan and Tajikistan (under separate projects) to realize this trade along commercial lines and to follow international practices.

In addition, as part of the CASAREM initiative to supply Central Asia electricity to Pakistan via Afghanistan, the consulting outputs of Phase 1 of Design of Institutional, Financial, Risk Mitigation and Legal Framework (IFRL Framework) were reviewed in Montreal, Canada in August 2007. Clear directions were given to the consulting team with regard to private participation, institutional structures to meet financing, asset ownership, common operation of the system, risk mitigation, and benefits to participants, especially Afghanistan. The revised outputs would be discussed at the 3rd CASAREM conference in Kabul in end-October 2007.

- **Transmission Links for electricity exports.** *There are several projects that would enable electricity trade between Central Asia and South Asia:*
 - **A 220 kV transmission system is being developed to supply power from Tajikistan to Afghanistan,** which will also aim to supply power to towns and other population centers from the northern borders of Afghanistan to Kabul (e.g., Kunduz, Baghlan, Pul-e-Khumri, etc). Tajikistan is undertaking to build the transmission links needed to supply up to 300 MW of electricity in the summer to Afghanistan. For this purpose, ADB and IsDB approved the Regional Power Transmission Interconnection Project totaling US\$56.5 million in December 2006; and efforts are aimed at realizing this trade by late 2008. This line is part of the larger North East Power System (NEPS) that is being developed by Afghanistan

with the help of IFIs (ADB, World Bank, IsDB) and bilateral donors (Germany, India, US).

- ***In June 2007, Afghanistan and Uzbekistan signed a Protocol*** whereby Afghanistan declared their need for 300 MW and Uzbekistan declared that it had the potential to deliver up to 300 MW to Afghanistan after upgrading their transmission network. Furthermore, Uzbekenergo agreed to undertake the construction of a double circuit 220 kV line from Surkan substation to the Afghan border plus the installation of a second autotransformer to enable the export of up to 150 MW to Afghanistan by end 2008. As a second phase, Uzbekistan will construct a 500 kV transmission line to connect the Surkan substation to the Guzar substation in order to increase their export potential to 300 MW.
 - ***In addition, Afghanistan is in discussions with Turkmenistan***, which is considering building a 500 kV line to the Afghan border, in order to increase significantly their current level of power exports to Afghanistan in future. USAID is financing a feasibility study to determine the most suitable arrangement to tie this connection to Northern and Eastern Power System (NEPS) in Afghanistan.
 - ***In September 2006, the construction of the 500 kV South-North Line in Tajikistan was begun*** with a US\$280 million financing from China. This line is an important link between Tajikistan's main power generation facilities in the country's south and its north, and it will contribute significantly to de-congest the transmission grid in Central Asia, especially in Uzbekistan. It will also enable Kyrgyz Republic to export its summer surplus to South Asia. This line is planned to be completed in late 2008 or early 2009.
 - ***Progress continues to be made on understanding the viability of CASA 1000 transmission link.*** This link would be a dedicated link essentially aimed at supplying Pakistan, but deliver some power to Kabul. A 2nd Multi-Country Working Group (MCWG) meeting was held on May 22-24, in Jeddah, hosted by the Islamic Development Bank, and the inception reports for the two critical studies - Techno-Economic Assessment (TEA) funded by ADB, and Design of Institutional, Financial, Risk Mitigation and Legal Framework (IFRL Framework) with funding arranged by the World Bank) studies were reviewed; and criteria for taking a go/no/go decision for the project in 3rd CASAREM Conference in Kabul were agreed upon. More recently, in August 2007, draft outputs of Phase 1 of were reviewed in Montreal in the 3rd MCWG Meeting. In addition to the clear directions to the IFRL Framework study consultants (discussed earlier), directions were also given to the TEA consultants. These include, among other things, that export surplus analysis should be assessed on generation from existing capacities plus Sangtuda 1; and transmission links should include those needed to connect Kyrgyz Republic to Tajikistan directly. Revised outputs are expected by mid-September and these would be discussed in the 3rd CASAREM Conference in end-October 2007 in Kabul.
- ***Generation Projects***
 - ***Sangtuda I Hydropower Project in Tajikistan***, Government of Republic of Tajikistan (GoRT) and RAO UES of Russia, the main sponsors of this 670 MW run-of-river hydroelectric project (HEP), continue to make significant progress in

the completion of construction of this project. The first unit could be installed as early as December 2007 (and latest by March 2008); and the full capacity would be commissioned by April 2007. In accordance with the Tripartite MoU of February 2007, the summer production of Sangtuda 1 as a minimum would be earmarked for exports to South Asia.

- ***Tajikistan has launched the development of its coal resources in an integrated manner.*** Tajik authorities are aware that the high quality coal reserves they possess need to be developed in order to meet the winter demand for electricity as well as that for space heating. Following the Government's request for expressions of interests from interested parties for the development of integrated coal mines and power plants complexes, a round table was held at end-May, 2007 in Dushanbe with interested investors, bilateral donors and the IFIs. It was decided to launch feasibility studies in accordance with the standards of the IFIs for the development of 1300MW to 1500MW thermal generating capacity on the basis of coal from the Fon Yagnob mine, the reconstruction of Dushanbe and Yavan thermal power plants and the construction of a new thermal power plant. The US Trade and Development Agency has offered to finance the feasibility studies.

3. **Regional Gas Projects.** After assessing the pre-feasibility of rehabilitation of the Tajik section of the Uzbekistan to Dushanbe pipeline and rehabilitation of the Kyrgyz section of the Tashkent-Bishkek-Almaty (TBA) pipeline, ADB has decided to pursue the latter project with participation from KyrgyzGas (KG) and KyrKazGas (KKG, a joint venture of between KazTransGas and KG). ADB is currently working on the technical design of the proposed pipeline project, and is developing an innovative financing structure that would involve co-financing from other multilateral, bilateral, and private sector financiers, including possible public private partnerships/concessions and privatization of Kyrgyzgas.

B. Energy Sector Strategic Action Plans

4. Work is progressing on the development of a "Strategy for Regional Energy Cooperation in CAREC Countries (a.k.a CAREC Energy Strategy). Contributions, comprising the countries views on the energy sector strategy, have been received to date from Afghanistan (the Ministry of Mines - for oil, coal and gas, and the Ministry of Energy and Water of Afghanistan), Azerbaijan, Kyrgyz Republic, Tajikistan, Mongolia and Uzbekistan (the oil and gas company UzbekNeftigas, and the power company of Uzbekistan – Uzbekenergo,). People's Republic of China (PRC), and Kazakhstan, and are yet to submit their respective actions plans.

5. The first draft of the Energy Strategy will be discussed at the next meeting of the CAREC Energy Sector Coordination Committee (ESCC) scheduled for Sep 14th, 2007 in Ulaan Bataar Mongolia. After the discussion and incorporating the views of ESCC, the Energy Strategy would be presented to the next SOM (prior to the Ministerial Committee meeting).

C. Energy Efficiency and Opportunities Offered by Clean Development Mechanism

6. ADB and WB continue to develop CDM programs and projects as summarized below.
- The ADB Energy Efficiency Initiative is implementing its second Phase until December 2007, which includes the preparation of country-level investment and action plans on energy efficiency, development of the project pipeline for 2008-2010,

design and establishment of the Clean Energy Financing Partnership Facility, and identification of immediate energy efficiency investment opportunities. ADB has also established the Clean Energy Financing Partnership Facility (CEFPF) in April 2007. It is designed to finance (i) smaller EE investments that require quick and efficient transactions; (ii) technology transfer costs of clean technologies for a small number of high demonstration impact, large interventions that will catalyze deployment of clean energy technologies; and, (iii) grant assistance for activities such as developing the knowledge base and incentive mechanisms, advocacy, institutional capacity building, project preparation, and establishment of the monitoring and evaluation mechanisms.

- The ADB Carbon Market Initiative (CMI) was approved by the ADB Board in November 2006. CMI is another concrete effort to deepen ADB's commitment to clean energy and climate change mitigation. It provides financial and technical support to developers and sponsors of projects with greenhouse gas mitigation benefits that can qualify as an eligible CDM project. As part of the CMI, the Asia Pacific Carbon Fund, a trust fund established and managed by ADB on behalf of fund participants, will provide up-front funding against the purchase of an estimated 25%–50% of future carbon credits expected from projects. In addition, the initiative will provide grant-based technical support for preparation and implementation of eligible projects as well as marketing support for additional carbon credits.
- In June 2007, ADB hosted the Asia Clean Energy Forum: Regional Policy and Finance Solutions at its Headquarters in Manila. The forum provided an excellent opportunity for project developers, the financial community and government representatives, to share information, identify and pursue financing opportunities, and to devise strategies to scale up clean energy investments. ADB will also sponsor the upcoming 2007 Methane to Markets Partnership Expo to be held in Beijing, PRC on 30 October–1 November 2007.
- The World Bank continues its engagement in Central Asia within its recently endorsed assistance program for countries, which have ratified the Kyoto Protocol and have a portfolio with the World Bank.
- Following up on the workshops on Clean Development Mechanism, held in early 2007 in Uzbekistan, the Bank as trustee to a number of carbon funds intends to purchase Emission Reduction (ER) resulting from efficiency improvement (i) to be introduced at the power generation unit of the Tashkent Electrical Power Station (TPS), as well as (ii) efficiency improvements resulting from the collection and improved utilization of associated gases generated during the extraction of petroleum hydrocarbons in the North Shurtan, Garmiston, and Kumchuk fields in Uzbekistan, and thereby eliminating their flaring.
- The World Bank has accepted the invitation from the Uzbek government to participate in a CDM Carbon Forum in October 2007 where Uzbekistan will present 50 Project Idea Notes to the Carbon Market. The World Bank will assist in designing the program of the Forum, and will follow up on training needs that may be identified at the forum.

D. Enabling Legal and Regulatory Environment for Energy Sector Development

1. CAREC Member Electricity Regulators Forum (CMERF)

7. At the Second Annual Meeting of CMERF held in September 2006 the participating countries reemphasized the practical value that CMERF adds to the process of harmonizing energy regulations, encouraging and facilitating regional trade, and developing the capacity of the regulators and the regulatory bodies. The countries requested ADB to further support the CMERF program in 2007-2008. The countries advised CMERF to focus on providing training on specific regulatory topics to its participants.

8. In March 2007 ADB approved a regional technical assistance (TA), financed by the PRC Government's Poverty Reduction and Regional Cooperation Fund, as a continuation of its efforts supporting CMERF and developing the capacity of its participants to provide sound regulation and regulatory support of energy sector reforms..This regional TA will build on the outcomes of the past CMERF activities and provide direct and hands-on support for regulatory bodies through designing and implementing tailor-made training programs for regulatory staff.

9. ADB is currently designing two training workshops on: (i) the roles, functions, and skills required for effective energy regulation in the CAREC region, and (ii) the costs and benefits of incentive regulation. These workshops will be delivered in conjunction with the Third Annual Meeting of CMERF, which will be held in Ulaanbaatar, Mongolia in September 2007. The event will be hosted by the Energy Regulatory Authority (ERA) of Mongolia. At the Second Annual Meeting, the participating countries supported ERA's initiative to host the 2007 meeting. In the CAREC region, Mongolia conceptually has the most independent power regulation structure and body. ERA which celebrated its 5th Anniversary in 2006 has been instrumental in reducing commercial losses in Mongolia's power system.