



Energy Sector Progress Report

**Senior Officials' Meeting on
Central Asia Regional Economic Cooperation
25–26 September 2008
Baku, Azerbaijan**

REPORT ON ENERGY

1. The purpose of this Report, prepared by the World Bank with contributions from other international financial institutions (IFIs) involved in CAREC activities, is to capture developments since the last Senior Officials' Meeting in April 2008.

A. Regional Energy Projects

1. Central Asia-South Asia Regional Electricity Market (CASAREM)

2. The Inter-Governmental Council (IGC) comprised of representatives of the Governments of Afghanistan, Kyrgyz Republic, Pakistan, and Tajikistan met at the 4th CASAREM conference in Islamabad in August 2008 and (i) signed an Agreement for the Development of the CASA 1000 Power Transmission Project and the Further Development of a Central Asia-South Asia Regional Electricity Market, and (ii) endorsed key aspects of the project organization and financing.

3. At a technical meeting, preceding the IGC conference, a consensus was reached on key project aspects related to (i) institutional structure, (ii) trading arrangements, (iii) legal framework, (iv) energy flows, (v) investments and financing, (vi) project tendering, (vii) transmission tariffs set up, (viii) project processing, and (ix) working arrangements.

4. The Inter-Governmental Agreement for the Development of the CASA 1000 Power Transmission Project and the Further Development of a Central Asia-South Asia Regional Electricity Market

- (i) reaffirmed the principles that the CASA 1000 project
 - will be developed on an economically viable and sustainable basis for all participants
 - will include exports of electricity from Tajikistan and the Kyrgyz Republic to Afghanistan and Pakistan including the relevant technical, institutional, legal and risk sharing arrangements to enable such electricity trade, and
 - will be financed (a) with support from the IFIs and (b) entirely through public funds in case the preferred involvement of private sector does not materialize, and
- (ii) outlined
 - the responsibilities of the IGC as a policy making body, and
 - the treatment of key project aspects such as rights to land, security, title to electricity, environmental and safety standards, and dispute resolution.

5. **The IGC meeting** (i) defined the role of the IGC Secretariat in Kabul in the day-to-day management of the project preparation and requested that it prepare the IGC Charter; and (ii) approved the Head of the IGC Secretariat, the relevant budget, and financial control arrangements.

6. **The technical meeting confirmed** (i) the scope of the envisaged concession to include the construction of the AC Kyrgyz – Tajik transmission link, along with the development, construction and operation of the Tajik-Afghan-Pakistan link; (ii) the joint commitment of Tajikistan and Kyrgyz Republic to export 5 TWh on average per year in summer during the 25-30 year concession period through relevant Power Purchase Agreements (PPAs); and (iii) the willingness of the participating countries to commit by end-December 2008 to go forward with

the project subject to the bids received being consistent with the agreed estimates and availability of financing.

2. Transmission links for electricity exports

7. **Transmission links for electricity exports** continue to be developed under several projects that would enable electricity trade between Central Asia and South Asia:

- **Afghanistan-Tajikistan 220 kV transmission project.** Asian Development Bank (ADB) is reviewing evaluations of bids for two separate technical proposals for the construction of the Tajik section of 118 km and the Afghan section of 156 km of the transmission line. The tendering for the associated Kunduz substation in Afghanistan, financed by the Islamic Development Bank (IsDB), is underway and the contract is expected to be awarded in October 2008. The finalization of a PPA between Afghanistan and Tajikistan depends on the two countries reaching an agreement on provision of sufficient power to Afghanistan in winter at a mutually acceptable tariff.
- **Afghanistan and Uzbekistan continue with the implementation of their June 2007 Protocol** for delivery of 300 MW to Afghanistan upon rehabilitation of the relevant transmission network. Afghanistan is keen to receive power in the winter months of the year 2008.
 - Technical discussions between Uzbekistan and Afghanistan on power import arrangements and a PPA continued. Uzbekistan requires funding from Afghanistan in the amount of US\$12.5 Million for the design and construction of the double circuit 220 kV transmission line from the Surkhan substation to the Afghanistan border, which has been already authorized by Afghanistan. The first installment of US\$2.5 million has been released to Uzbekistan.
 - IsDB was expected to approve in August 2008 US\$42 million financing for the 500 kV transmission line to connect the Surkhan and Guzar substations in Uzbekistan, which will increase the export potential to Afghanistan to 150 MW and eventually to 300 MW.
- **Kyrgyz Republic continues preparation of the construction of the 500 kV line Datka – Kemin**, which will enable transmission of power from the Kambarata 1 and 2 Hydropower Plants (HPPs) in Kyrgyz Republic to Tajikistan and further on to South Asia. A tender has been launched for construction of the 500 kV substation Datka, and a feasibility study has been completed for construction of the Datka-Kemin transmission line.
- **European Bank for Reconstruction and Development (EBRD)** signed in June 2008 a EUR 255 million loan agreement with the state-owned Kazakhstan Electricity Grid Operating Company (KEGOC) to finance the second stage of the modernization of substations and high-voltage equipment to ensure the efficiency, reliability and safety of Kazakhstan's transmission system

3. Generation Projects

8. **Tajikistan proceeds with the development of its coal resources in an integrated manner.** In July 2008 USTDA approved financing for a bankable feasibility study for the construction of coal-fired thermal plant based on coal supply from the Fon Yagnob mine.

9. **Two consultants' shortlists** have been prepared for carrying out an environmental and a technical, economic, and financial feasibility study for the construction of the Rogun HPP in Tajikistan. In-country and regional consultations are underway and Requests For Proposals are being finalized.

10. **Sangtuda I Hydropower Project in Tajikistan.** The first unit was commissioned in January 2008, and the second one was commissioned in June 2008, increasing the current operating capacity to 210 MW. The third and fourth units are expected to be commissioned by end-December 2008.

11. **Kambarata 1 and 2 Hydropower project in Kyrgyz Republic.** The ongoing construction of the Kambarata -2 HPP is expected to be completed in December 2009. Russia's Unified Energy System RAO-UES, the Joint Stock Company "Power Plants" of Kyrgyz Republic and the Kazkuat company of Kazakhstan are jointly financing the preparation of a pre-feasibility study for the construction of Kambarata-1 HPP.

12. **Financing Agreement for a US\$6.3 million Grant for the Energy Emergency Recovery Assistance Project** was signed on July 17, 2008 between the World Bank and the Government of Tajikistan. The financing will increase the amount and reliability of the national energy supply in Tajikistan, especially in the winter season, thus preventing the recurrence of the winter 2008 energy crisis, triggered by a dramatic drop of the water levels of the Nurek reservoir in Tajikistan, due to 25-year low freezing temperatures, which affected 90% of the predominantly hydro-based generation in the country.

B. Energy Sector Strategy

13. A revised draft of the Energy Sector Strategy, including comments from the CAREC countries, received after the April 2008 SOM in Baku, has been distributed to relevant energy officials for further review. A finalized strategy document is expected to be submitted to the September 2008 SOM in Baku for further consideration.

C. Energy Efficiency and Opportunities Offered by Clean Development Mechanism (CMD)

14. ADB, World Bank, and EBRD continue to develop energy efficiency and CDM programs and projects as summarized below.

15. ADB hosted the Asia Clean Energy Forum: "Investing in Solutions that Address Climate Change and Energy Security" from June 2 through 6, 2008 in Manila, Philippines. The Forum provided an opportunity for over 500 policymakers, private sector firms, and non-governmental organizations (NGOs) from 40 countries in Asia to share best practices in enabling policies, market incentives and proven financing models that foster investment in energy efficiency, cleaner fossil energy and renewable energy projects. It also served as a platform for sharing ways to: (i) catalyze public-private partnerships between energy producers, equipment suppliers, end-users and government agencies to enhance deployment of clean energy technologies and systems; (ii) explore opportunities for improved cooperation among donors and other stakeholders involved in financing clean energy programs in the region; and (iii) identify financing challenges for project developers and initiate follow-up assistance.

16. After assessing the pre-feasibility of rehabilitating the Kyrgyz section of the Tashkent-Bishkek-Almaty (TBA) pipeline, ADB is assisting KyrKazGaz (a joint venture between KyrgyzGas, the Kyrgyz national gas company and KazTransGaz, a Kazakhstan gas transmission company) in (i) carrying out a CDM assessment for pipeline replacement and rehabilitation of gate and compressor stations and (ii) developing a new assessment methodology for the transmission pipeline component. ADB is assisting KyrKazGaz to prepare a project design document (PDD) for the gate and compressor station component for an estimated annual reduction of about 20,000 tons of CO₂ equivalent.

17. The World Bank is proceeding with the preparation of two Carbon Finance (CF) projects in Uzbekistan: (i) utilization of flared associated gases from the North Shurtan, Garmiston, and Kumchuk oil fields and (ii) installation of a new combined-cycle thermal power generating unit at the Tashkent Electric Power Station. The ongoing social and environmental consultations and assessments for these two projects are expected to be completed in the fall of 2008. The finalization of the CF processing of the project for the rehabilitation of the Tashkent power plant depends on the completion of the ongoing bidding process and defining the final rehabilitation design.

18. Uzbekistan has signed an agreement with the Global Gas Flaring Reduction (GGFR) Partnership and a team of consultants will be visiting Uzbekistan to develop the country's gas flaring baseline.

19. In China, the World Bank is facilitating Emissions Reduction Purchase Agreements (ERPA) between World Bank-managed Carbon Funds and project sponsors. An Emissions Reduction Purchase Agreement (ERPA) was signed in April 2008 for the Bao Tou Iron and Steel Company, based on using recovered heat from coke production for electricity generation and heat supply. Another ERPA based on energy saving technology for iron and steel production in Luojing was signed in July 2008.

20. Based on the "Sustainable Energy Action Plan" agreed between EBRD and the Government of Kazakhstan in early 2008, EBRD is promoting the introduction of proven technologies and techniques that enhance energy efficiency and reduce environmental impacts through technical cooperation. EBRD started in June 2008 a one-year technical cooperation project "Renewable Energy Regulatory Development Road Map" in Mongolia. The project will improve the performance of the Energy Regulatory Authority of Mongolia towards promoting renewable energy.

1. CAREC Electricity Regulators Forum (CERF)

21. A training workshop on tariff setting principles and practices for energy regulators was co-hosted by the Tariff (Price) Council of Azerbaijan and ADB in Baku, Azerbaijan, from April 7 - 11, 2008.

22. The Fourth Annual Meeting of the CERF will be co-hosted by the State Department of Regulation of the Energy and Fuel Complex of the Kyrgyz Republic and ADB. The theme of the Fourth Annual Meeting will be "Independent Energy Regulation in Promoting Private Sector Participation, Energy Efficiency and Renewable Energy." It will be held in the Kyrgyz Republic on September 15-16, 2008 followed by a training workshop on September 17-19, 2008. The Training Workshop will build on the Annual Meeting theme and include tariff setting topics that cover detailed technical and functional exercises on a rate setting computer model.