



# **Energy Sector Progress Report**

**Senior Officials' Meeting  
on Central Asia Regional Economic Cooperation  
28 – 29 May 2009  
Ulaanbaatar, Mongolia**



## 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 September 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. Subsequent to the August 2008 meeting, the newly appointed Executive Director of the Intergovernmental Council Secretariat relocated to Kabul, Afghanistan, to start operations of the office of the Technical Secretariat, which is responsible for the day-to-day management of the project. Each of the four governments has nominated its representative to the Technical Secretariat. The representatives of all four governments are now residing in Kabul.

4. In January 2009, the Asian Development Bank (ADB) informed the four countries that it was suspending its involvement in the CASAREM project as sufficient financing from the Asian Development Fund was not available in 2009-2010 given the countries' other stated priorities. The remaining IFIs (the World Bank (WB), the Islamic Development Bank (IsDB) and the International Finance Corporation (IFC)) remain actively engaged with the four governments and are exploring options to bring the project to financial close in the next 12 months.

#### 2. Transmission links for electricity exports

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

- (i) ***In Tajikistan***, the construction with a credit from People's Republic of China (PRC) of a 350 km North-South 500 kV transmission line from Khodjent to Regar and associated substations continues together with the construction of a 500 kV sub-station in Dushanbe. The project will enable the direct flow of power generated in the south of Tajikistan to the north as well as the transit of Kyrgyz and Kazakh power through Tajikistan to Afghanistan and Pakistan within the Central Asia - South Asia Regional Electricity Market. It is expected that the civil works will be completed in June 2011.
- (ii) ***Afghanistan-Tajikistan 220kV transmission project***. A 20-year Power Purchase Agreement (PPA) between Tajikistan and Afghanistan was signed in September 2008 for exports of up to 500 GWh per year to Afghanistan. In the initial years, the power supply would be during summer period only. Consultants and contractors have been appointed for the Tajik and Afghan portions of the transmission line with a total length of 274km, financed by ADB with a completion date in mid-2010. Tender

evaluation for the construction of the associated Kunduz substation in Afghanistan, financed by IsDB, is underway.

(iii) ***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:

- The work on further increasing power supply to Afghanistan is progressing. Uzbekistan and Afghanistan agreed in December 2008 on the additional supply of up to 40 MW to Kabul through an interim interconnection operated at 110kV to mitigate the severe winter power shortages in the Afghan capital. The supply of additional power started on January 21, 2009, complementing the original ongoing supply of 30MW to Afghanistan.
- Afghanistan has provided funding to Uzbekistan for the ongoing construction of a double circuit 220 kV transmission line from the Surkhan substation in Uzbekistan to the Afghan border, which will allow exports to Afghanistan to increase to 150MW. One circuit of this line is nearly complete.
- IsDB has approved US\$42 million financing for the 500kV transmission line to connect the Surkhan and Guzar substations in Uzbekistan, which will further increase the export potential to Afghanistan to 300 MW.

(iv) ***Kyrgyz Republic continues the 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 contract has been signed with the Korean company EPI for the construction of the 500kV substation Datka, and a feasibility study is underway for the construction of the Datka-Kemin transmission line.

(v) ***Construction of the Ekibastuz-YuKGRES 500 kV power transmission line in Kazakhstan is in progress.*** Construction of the 475 km section from substation Ekibastuzskaya to substation Agadyr as well as the upgrade of these two substations is co-financed by the European Bank for Reconstruction and Development (EBRD) and the World Bank. The construction of the 390km section from substation Ekibastuzskaya to substation YuKGRES is financed by EBRD. The project will improve the reliability of electricity transmission, reduce transmission losses and contribute to development of regional electricity trade in Central Asia.

### **3. The European Union (EU) supports feasibility studies for the rehabilitation of gas transmission and distribution networks in Central Asia.**

6. Feasibility studies have been completed for (i) a \$120 million rehabilitation of the Kyrgyz section of the Tashkent-Bishkek-Almaty (TBA) gas pipeline, and (ii) the emergency rehabilitation of the Fergana valley gas transmission and distribution networks with components in Kyrgyz Republic, Tajikistan and Uzbekistan. The social impact assessment of the rehabilitation of the Bishkek-Tokmok gas pipeline in Kyrgyz Republic is underway.

#### 4. Generation Projects

7. **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 a coal-fired thermal plant based on coal supply from the Fon Yagnob mine. The Ministry of Energy and Industry has selected Metallurgical Resources International, Inc. to conduct the study
8. The preparation of Requests for Proposals for a **Techno-Economic Feasibility Study and an Environmental and Social Impact Assessment of the construction of the Rogun HPP** in Tajikistan has begun, following consultations with riparian states on the Terms of Reference for these studies.
9. **Sangtuda I 670 MW Hydropower Project in Tajikistan** is scheduled for commissioning in May 2009.
10. **Sangtuda II 220MW Hydropower Project in Tajikistan** is scheduled for commissioning in 2012
11. **Nurek 3,000MW Hydropower Project in Tajikistan.** ADB and Tajikistan signed a financing agreement for the rehabilitation of the Nurek 500kV switchyard in December 2009. A Request for Proposal has been issued to short-listed consultants with project completion scheduled for 2013.
12. **Kambarata 1 and 2 Hydropower project in Kyrgyz Republic.** The ongoing construction of the 240MW Kambarata-2 HPP is expected to be completed in the first quarter of 2010. 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 the 1900MW Kambarata-1 HPP, which is expected to be completed in June 2009. Kyrgyz Republic and Russia have formed a joint stock company with equal shares of ownership for the construction of Kambarata-1 HPP.
13. **Central-Asian Electric Power Corporation (CAEPCO) in Kazakhstan.** The EBRD is investing up to €46 million equivalent to acquire a stake in the Central-Asian Electric Power Corporation (CAEPCO), the largest private power company in Kazakhstan, generating more than 6% of the domestic power output. The investment will be used to upgrade the company's generation and transmission assets, which will then improve export potential from northern Kazakhstan to Russia through the existing grid connections.

#### B. Energy Sector Strategy

14. A Strategy for Regional Cooperation in the Energy Sector of the CAREC countries was endorsed by the 7<sup>th</sup> Ministerial Conference on CAREC in November 2008 in Baku, Azerbaijan.

#### C. Energy Efficiency and Clean Energy

15. Azerbaijan, Kazakhstan and Uzbekistan are undertaking steps towards reducing gas flaring with support from the Global Gas Flaring Reduction (GGFR) Partnership and the World Bank.

- Azerbaijan and Uzbekistan have joined the Global Gas Flaring Reduction (GGFR) Partnership and a team of consultants will be visiting Uzbekistan to develop the country's gas flaring baseline.
- The Ministry of Industry and Energy (MIE) of Azerbaijan has established a working group for coordinating the country's efforts to reduce gas flaring and the State Oil Company of Azerbaijan (SOCAR) is preparing a Plan for Recovery of Associated Gas, which is expected to be completed by end-2009. SOCAR has already carried out an inventory of gas flaring sources and prepared initial information on potential CDM projects.
- Per a request from Kazakhstan's Ministry of Energy and Mineral Resources (MEMR), a GGFR mission visited Kazakhstan in April 2009 to assist with the improvement of gas flaring legislation. GGFR has offered assistance with the preparation of the Ministry's strategy for the next three years, including a gas sector strategy and establishment of an official system and procedures for gas flaring data collection.
- On May 5, 2009, SOCAR, together with the World Bank/GGFR and the Ministry of Environment and Natural Resources plan a workshop on Global Climate Change and Management of Greenhouse Gases in Azerbaijan.
- The World Bank and GGFR Partnership will participate in the Annual "13<sup>th</sup> Uzbekistan Oil and Gas Exhibition and Conference" in Tashkent, on May 13-14, 2009, and present the Partnership's global activities on reduction of gas flaring.

16. The World Bank is supporting Carbon Finance activities in Uzbekistan, Mongolia and PRC.

- The World Bank is proceeding with the preparation of a Carbon Finance project in Uzbekistan for the utilization of flared associated gases from the North Shurtan, Shakarbulak, Garmiston, and Kumchuk oil fields. The social and environmental consultations and assessments for this project have been completed.
- In Mongolia, the World Bank is managing a Technical Assistance Program "Capacity Building for Development and Implementation of Carbon Finance Projects", funded by the Japan Policy and Human Resource Development (PHRD) Grant.
- In PRC, the World Bank is facilitating Emissions Reduction Purchase Agreements (ERPA) between World Bank-managed Carbon Funds and project sponsors. Four ERPAs have been signed with Baotou Iron and Steel Ltd. Co., Meishan Iron and Steel Ltd. Co., Baoshan Luojing Iron and Steel Ltd. Co., and Nanjing Iron and Steel Ltd. Co. The projects within the ERPAs are expected to generate 4,796,157 tons of Emission Reductions (ERs) from electricity savings due to recovery of waste heat and gas and application of advanced technology with lower energy consumption.
- Preparation of carbon finance components is underway in PRC for (i) biomass power generation projects in Anqiu and Jiangsu Rudong and (ii) district heating projects in Dashiqiao and Yingkou.

17. The World Bank, EU and the EBRD are supporting renewable and energy efficiency projects in PRC, Kyrgyz Republic, Kazakhstan, Tajikistan, Uzbekistan and Mongolia

- ***In PRC, the World Bank has prepared a project for improving energy efficiency*** of medium and large enterprises as well as a Heat Reform and Buildings Energy Efficiency Project, which includes Urumqi, Xinjiang Uyghur Autonomous Region, among its project sites.

- ***Development of small and medium-sized hydropower projects (up to 30 MW) in Kyrgyz Republic and Tajikistan*** is being financed by €1 million grant from EBRD. The Executing Agencies are undertaking the selection of consultancy services for prioritization of potential projects, regulatory/market development, and feasibility assessments of four pilot projects. Also, EU-funded scoping studies for hydropower systems in the Surnob river basin and mini-hydro power schemes in Tajikistan are underway along with a pre-feasibility study on potential hydropower schemes in the Sary Jaz river basin in Kyrgyz Republic.
- ***The EBRD is supporting private sector investments in energy efficiency and renewables in Kazakhstan*** with a new \$75 million framework under which loans will be provided to participating banks for on-lending to local companies. The first \$10 million loan to Bank Center Credit has been approved. The framework also includes donor funded technical assistance to help companies identify areas of energy losses, propose technical solutions for lowering energy consumption, and project preparation.
- ***Under a Sustainable Energy Action Plan with the government of Kazakhstan*** EBRD is providing assistance for the development of (i) a draft Energy Efficiency Law, (ii) incentive-based price control methods for power distribution networks, and (iii) competitive generation market. The EBRD has been investing in power plant refurbishment as well as in grid modernization over the years to facilitate meeting the growing power demand in southern Kazakhstan.
- ***In Uzbekistan, EU has allocated funds for a study on the rehabilitation of the Andijan district heating system and application of renewable energy in remote areas.***
- ***In Mongolia, EBRD is implementing until June 2009 a one-year Technical Cooperation project “Renewable Energy Regulatory Development Road Map”*** to improve the performance of the Energy Regulatory Authority towards promoting renewable energy.