



# Energy Report

Preparatory Senior Officials' Meeting on  
Central Asia Regional Economic Cooperation

14 October 2005  
Bishkek, Kyrgyz Republic

**Central Asia Regional Economic Cooperation (CAREC)  
Proceedings of the Energy Sector Coordinating Committee (ESCC) Meeting**

**October 13, 2005**

A meeting of the CAREC ESCC was held at the World Bank Office in Bishkek on October 13<sup>th</sup> 2005. Energy experts from Azerbaijan, PRC, Kazakhstan, the Kyrgyz Republic, Mongolia, Tajikistan and Uzbekistan, as well as representatives from ADB, World Bank, EBRD, IsDB and USAID participated. The meeting was chaired by Mr A. Tumenbaev, Deputy Director, State Energy Agency of the Kyrgyz republic.

The purpose of the meeting was to discuss progress made in the energy sector since the Senior Officials Meeting in April 2005, to discuss issues related to the development of a regional electricity market in Central Asia, and to make recommendations to the SOM on the role of the ESCC in future. Presentations were made on the status of regional energy projects; an update on the establishment of the Water Energy Consortium; a brief on power exports and regional trade potential, and the status of the CAREC Member Electricity Regulators Forum (CMERF).

**I. Regional Energy Projects**

1. In July 2005, ADB terminated the financing made to Uzbekistan for the **Regional Power Transmission and Modernization Project**, since Uzbekistan was unable to sign the Power Trade Relations Agreement (PTRA). ADB may also terminate Tajikistan's portion of the two-loan umbrella operation, but is looking into options for re-deploying these funds.

2. The **220-kV transmission line between Batken in Kyrgyz Republic and Kanibodom in Tajikistan** has become operational. The purpose of the project is to meet partly the power demand in the northern part of Tajikistan, through import of 900 GWh per year from the south of Kyrgyz Republic. The countries themselves have financed this transmission link, at an estimated cost of US\$9 million.

3. The second and third phases of the **North South Transmission Line Project in Kazakhstan** are being assessed for partial financing through a US\$100 million World Bank loan along with a US\$87.8 million non-sovereign loan from the EBRD. Board consideration of this project is scheduled for 27<sup>th</sup> October 2005. EBRD Board approved the project on 6<sup>th</sup> September 2005. This second phase includes the construction of a new 475 km, 500 kV single circuit overhead electricity transmission line from substation Ekibastuz (1,150/500 kV) to substation Agadyr (500 kV), including a fiber optic communication line and an extension to substation Chui. The primary objective of the new line is to address energy and peak supply deficit in southern Kazakhstan. In addition, the project supports regional integration with respect to optimizing the use of energy resources through electricity trade. The project aims to promote competition both at the national and regional level by allowing low cost producers in Kazakhstan, Tajikistan and Kyrgyzstan to compete in the broader regional market.

4. The EBRD, in addition to having part-financed the first phase of the North South Transmission line, is providing technical assistance to the Kazakh regulator, the Agency for Regulation of Natural Monopolies, which, *inter alia*, will review existing tariff methodologies and recommend further improvements in line with international best practice. Discussions are underway (EBRD to confirm) between EBRD and the Kazakh authorities on the scope of activity to be carried out by EBRD for the third phase of the North South Transmission line.

5. ADB is assisting in the preparation of a **Regional Gas Transmission Improvement Project**, to improve the quality and reliability of natural gas supply from Uzbekistan to Kyrgyz Republic and southern Kazakhstan, and from Uzbekistan to Tajikistan. The draft final reports were discussed at a regional conference in Almaty on 27-28 April 2005, and financing options were also discussed. As a consequence of these and further bilateral discussions, two main project proposals have been agreed. One is the Tajik section of the Uzbekistan to Dushanbe pipeline, which is to be rehabilitated at a cost of US\$25 million, including replacement of about 30% of the pipeline. For this purpose, ADB has programmed a loan of US\$10 million to Tajikistan for 2006. The second project is the rehabilitation of the Tashkent-Bishkek-Almaty (TBA) pipeline, for which US\$100 million is needed. The Kyrgyz Republic authorities have decided that the rehabilitation of the western section of the TBA pipeline (63 kilometers from the border with Kazakhstan to Bishkek) has priority, to ensure uninterrupted gas supplies to Bishkek. This would cost US\$58 million, for which ADB has programmed a loan of US\$20 million to Kyrgyz Republic for 2006. ADB is actively seeking co-financing from other multilateral and bilateral financiers for both projects.

6. IsDB is due to provide technical assistance for a feasibility study of a 500kV South – North transmission line in Tajikistan valued at US \$0.284 million. This project has been approved but not yet signed. A US\$10.5 million loan is also under consideration to build a 110 kV transmission line from Batken to Karabulak in Kyrgyzstan.

7. **Sangtuda 1 Hydroelectric Project**, another project with regional implication, is discussed in detail under the section on Regional Electricity Trade and Potential.

## II. Status of the establishment of the Water Energy Consortium

8. Since the last SOM in April 2005, the World Bank has completed, delivered and disseminated the findings of its work related to the establishment of the Water Energy Consortium under CACO, within the *Joint Economic Research Program* with Kazakhstan. This work included:

- (i) *Case studies on transboundary river management*, detailing examples and lessons learned from other river basins regarding resolution of key issues pertinent to the CA countries in four broad areas: (i) water-energy related issues; (ii) power system operations; (iii) investments, and (iv) legal and institutional issues.
- (ii) *Practitioners' presentations from:* (a) a former Chairman on the Columbia River Commission between the US and Canada; and (b) the Chairman of the Union for the Coordination of Transmission of Electricity (UCTE), a European Association of 35 Transmission System Operators in 21 countries;
- (iii) *A review of national water and energy legislation and relevant regional agreements*, which has revealed that existing laws and subsidiary legislation in each of the four Central Asian Republics (Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan) are broadly consistent with the articles of the draft Framework Agreement on the International Water Energy Consortium, but some amendments to the national legislation are needed.

9. Despite a significant amount of work done by the CACO working group members in 2004 and the early part of 2005, overall there has been only nominal progress towards the establishment of the WEC. This has been in part due to lack of a clear consensus among the CACO members as to the purpose of the consortium, and recommendations by Uzbekistan that the WEC should only be considered once a CACO common market mechanism has been

agreed. The only agreement of note, therefore, has been to establish a Central Asian Electricity Council with rotating chairmanship among the members of Central Asian countries.

10. At the Prime Ministers' CACO meeting in Dushanbe on 27th September 2005, a draft WEC agreement was tabled and discussed. It was agreed that the WEC framework should be finalised before January 2006 and thereafter presented to the Council of Prime Ministers for approval, after incorporating comments from CACO members. A follow up meeting of the CACO energy working group would be set up in due course.

### III. Regional Electricity Trade and Potential

11. The findings of the World Bank's REEPS report have been discussed with Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan, several development partners, as well as key potential importing countries such as Iran, Afghanistan and Pakistan. The outcomes of these discussions are presented below:

**1. REEPS Discussion with CARs:** There is general agreement on the report's approach towards demand projection, and loss reduction and rehabilitation of existing assets as options to meet growing demand.

- (a) **In Kazakhstan**, in addition to the supply options identified in REEPS, generation facilities such as (a) indigenous hydro projects, and (b) use of currently flared gas associated with oil production may also be considered. Kazakhstan sees itself as a transit country for Central Asian power to Russia. The private sector in Kazakhstan, especially AES, is also supportive of the opportunities to bring on stream the currently unused capacity in north/central Kazakhstan for intra- and extra-regional trade.
- (b) **In Kyrgyz Republic**, there is opposition to the REEPS conclusion that Kambarata I is the costliest of the generation options identified for Central Asia. The Government's preference for meeting its winter deficit is to rehabilitate and augment the Bishkek I thermal power station. The option of building Bishkek II with public funds was opposed, but the Government is considering offering it to the private sector as a build and operate scheme.
- (c) **In Tajikistan**, there was agreement to the analytical findings of the REEPS but the country's hydro potential was considered to have been underestimated. An example is the project at Dashtidjumn, a hydro site straddling the Tajik Afghan border on the Pyandj river, with a reported power potential of 4,000 MW and a huge reservoir for both power and irrigation use (much of the irrigation benefits would accrue to Afghanistan). The Tajik Government estimate this scheme to cost around US\$ 3.2 billion.

- (d) In **Uzbekistan**, discussions highlighted both the benefits of cooperation, and the implications of non-cooperation, i.e. neighboring countries will choose (a) alternative routing of power; (b) alternative resources (e.g., coal); and (c) alternative markets. Uzbekistan's response was that it is cooperating regionally in terms of electricity trade, and its aim was to ensure that such cooperation is not hurting Uzbekistan's own needs.

**2. REEPS Discussions with Development Partners.** The outcome of a series of meetings, beginning with a USAID hosted forum in Almaty in February 2005, is that (a) the REEPS strategy for the development of the CARs power sectors and electricity trade has been endorsed; (b) a number of key development partners are adapting their own assistance strategies accordingly, e.g. USAID's new assistance program to the CARs, the Regional Electricity Market Assistance Project (REMAP), will focus on the transmission needs for enhanced electricity trade within and outside the region, enabling Kyrgyz Republic and Tajikistan, for example, to participate in the Kazakh Electricity market; and (c) ADB and EBRD are cooperating with the World Bank on the Sangtuda 1 hydroelectric project and corresponding transmission links (see next sub-section).

**3. REEPS Discussions with Importing Countries.** The World Bank and ADB participated in a regional conference on electricity trade in Tehran, organized under the auspices of the Economic Cooperation Organization (ECO), of which all CAREC members except China and Mongolia are members. Key potential importing countries for Central Asia's electricity, e.g., Afghanistan, Iran and Pakistan were also present, and reconfirmed their interest in importing electricity from CARs. A two-pronged strategy for enhancing electricity trade was adopted, i.e. (a) a meeting between a smaller number of parties, including Afghanistan, Iran, Pakistan, Tajikistan and Kyrgyz Republic, and the IFIs and key bilateral donors, would be held to agree on the steps needed for accessing the currently available summer surpluses, and possibly the output of projects such as Sangtuda 1. This meeting is to be held in Islamabad in December 2005; and (b) a longer term strategy to enhance electricity trade in all ECO member countries.

12. As assessed by the REEPS, ***Sangtuda 1 Hydropower Project in Tajikistan***, is an attractive investment option, due to its short time frame (4-5 years) for completion, relatively low capital costs (\$750/kW installed), minimal environmental/social safeguard issues, and low output costs. An initial partnership between RAO UES of Russia (the key sponsor) and the Government of Tajikistan has had extended consultations with international financial institutions (World Bank, IFC and EBRD), including a meeting in Washington on 24<sup>th</sup> May. RAO UES has now agreed that at least 80% of Sangtuda 1's output will be exported and has acknowledged its readiness to follow conditions imposed by World Bank and other IFIs for financing the project. These include RAO UES (and its co-investment partners): (i) taking responsibility for Sangtuda 1 electricity at the plant gates and paying for it in foreign currency; (ii) taking responsibility with the Tajik Government for riparian notification (to Uzbekistan and Turkmenistan); and (iii) accepting and implementing safeguards issues. The American firm AES and RAO UES are currently in discussions over equity options for Sangtuda 1 and helping to mobilize other (debt) financing. AES has also confirmed that they would be willing to work on these projects with the World Bank, IFC and other IFIs.

13. Consultations between the World Bank and ADB have resulted in a proposed approach to develop transmission links for electricity trade between Tajikistan and South Asia as a separate project but related to Sangtuda 1. This approach was developed on the understanding that (i) transmission routing and development of new capacity for electricity trade between Central and South Asia is the key objective and (ii) the planned transmission links in Afghanistan are unlikely to be sufficient for enabling this trade.

14. A meeting of the key Sangtuda 1 partners (RAO UES and AES together with Government of Tajikistan) and the IFIs (ADB, EBRD, IFC and the World Bank) is scheduled to take place in Moscow in October. The objective of the meeting will be to reach agreements on the following issues: (a) Power trade - beginning with existing surpluses and including Sangtuda 1; (b) Transmission line construction responsibilities; (c) Project financing; (d) Risk mitigation measures. This would be followed by December Islamabad meeting mentioned earlier, to realize the commitments of the importing countries.

#### **IV. Establishment of the CAREC Member Electricity Regulators Forum (CMERF)**

15. Recent trends in power sector reform require the separation of policy formulation and regulatory functions, which brings greater transparency and predictability in operations and thereby improving decision making related to large investments in infrastructure. All the CAREC member countries have designated staff for electricity regulation. ADB has proposed that a forum of electricity regulators be established to: (i) share regulatory and sector reform experiences, (ii) build regulatory skills and conduct training programs for members and stakeholders, and (iii) cooperate to develop common electricity regulations which would create the internal conditions necessary to facilitate deeper power trade. The 3<sup>rd</sup> Ministerial Conference supported ADB's timeline for establishing a forum of electricity regulators, aimed at harmonizing electric power regulation and conducting training programs for members.

16. ADB fielded a study tour to all CAREC member countries to identify the critical regulatory issues and provide a factual basis for further reforms. This study tour culminated in a draft report, '**A Diagnostic Review of Regulatory Approaches and Challenges (DRRAC)**'. CAREC regulators met in Beijing on 4-6 July 2005 to discuss the DRRAC. The regulators' conference was co-hosted by ADB and the State Electricity Regulatory Commission of PRC, and supported by PPIAF. The DRRAC is being finalized based on these discussions, and will be published by ADB. The regulators also short-listed five study subjects that were of common interest to the different countries. Meeting delegates also discussed and approved a draft Memorandum of Understanding establishing CMERF (which had already been shared with member governments at the April SOM) for referral to the October 2005 SOM.

17. A Memorandum of Understanding for the establishment of the CAREC Members Electricity Regulators Forum (CMERF) was agreed by the country delegations at the CMERF meeting on 4-6 July 2005 in Beijing and was referred to their respective Governments for review and signing during the CAREC 4<sup>th</sup> Ministerial Conference (MC) on 5-6 November in Bishkek. Country delegations from Azerbaijan, PR China, Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan and Uzbekistan attending the ESCC meetings recommended that the October 2005 SOM endorse the MOU. Given Russia and Afghanistan's recent membership of CAREC, they may choose to sign the MoU and join CMERF at a later date. Based on the SOM's endorsement, ADB would proceed with the implementation of at least four of the five studies prioritized by CMERF delegates for 2006.

## **V. The Future Role of the ESCC**

18. At the April 2005 SOM in Manila, Senior Officials expressed a need to clarify the scope of issues to be addressed by the ESCC. To date the ESCC has focused on power issues, particularly those relating to the Water Energy Nexus, and enhancing regional export potential. PRC and Azeri delegates suggested that oil and gas exports be included in its scope as well. Azerbaijan and Mongolia suggested roles for the ESCC in coordinating efforts to access GEF funding, improve energy efficiency and avail of opportunities afforded by the Clean Development Mechanism of the Kyoto Protocol. Azerbaijan also suggested that the ESCC could serve to maintain a database of national energy outputs, exports, imports, prices and investment plans. The future participation of Russia and Afghanistan offers the potential to broaden the scope of dialogue on energy export potential, by providing a critical mass of energy importers within CAREC. The ESCC is also the only regional energy forum which formally involves the IFIs. As a basic minimum the ESCC provides a platform for reporting on progress and ensuring that government and IFI investments are consistent with the overall objectives of regional energy cooperation under CAREC. The decision to merge EEC and CACO should help to avoid duplication of efforts to solve regional problems, and EEC are willing to support further on the Water Energy Consortium in whatever form and venue it may be further carried on.

19. Attempts to come to a multilateral agreement on how to develop the regional energy sector, however, have met with limited success. Therefore, bilateral and trilateral approaches are probably more realistic in the medium term. It is not clear whether the ESCC provides the most appropriate platform to reach agreement on bilateral and trilateral issues. At the same time, given the legal status of the ESCC and CAREC in general, questions arise regarding whether countries' commitments made under CAREC are in fact binding. It was recognized that there are a number of existing committees (e.g. The Central Asia Electricity Coordinating Council, and the EEC Energy Policy Council), which already meet regularly to discuss similar issues to those put forward under CAREC among CARs. Recommendations made at CAREC need to be taken to decision-making regional bodies such as EEC, CACO and ECO.

20. It is clear that there has been significant progress during the past 6-12 months in regional energy investment initiatives and analytical work. However, the group found it difficult to come to a conclusion on the role and necessity of the ESCC other than sharing information and reporting on progress. IFIs have expressed a need to consider the resources required to hold regular ESCC meetings, and suggested that occasional meetings coinciding with those of other regional energy coordinating bodies might be utilized instead.