

STATUS REPORT ON

ENERGY SECTOR PROGRESS

Senior Officials' Meeting on Central Asia Regional Economic Cooperation
26–27 April 2005
Manila, Philippines

STATUS REPORT ENERGY SECTOR PROGRESS

I. Introduction

1. The purpose of this Report, prepared by the World Bank with contributions from other IFIs and bilateral donors, is to convey progress made on the agenda items set by the November 2003 Inter-Ministerial Conference (IMC) in the area of Energy and related Water Energy Consortium issues. The report captures the developments since the last IMC in early November 2004.

2. The report is organized as follows: Regional Projects in Energy and their Status; a summary of the findings of the World Bank's Regional Electricity Export Potential Study (REEPS); a brief on the status of the discussions among countries and with the World Bank (and other IFIs) on the establishment of the Water Energy Consortium; and the status of the CAREC Member Electricity Regulators Forum (CMERF).

II. Regional Energy Projects

3. The ADB approved the **Regional Power Transmission and Modernization Project** with two loans on 17 December 2002, one to Uzbekistan for \$70 million and another to Tajikistan for \$20 million equivalent. EBRD is considering a cofinancing loan of \$49 million to Uzbekistan, and the OPEC Fund is considering a \$2.4 million loan to Tajikistan. The loan and project agreements were signed by Uzbekistan and Tajikistan on 13 and 15 March 2004, respectively. In order to make the two ADB loans effective, the Governments need to: (i) fulfill the normal conditions related to loan, project and subsidiary loan agreements (execution and delivery of duly signed agreements, legal opinion, cross-link between Tajikistan and Uzbekistan loan signing, cofinancing arrangement); and (ii) sign the Power Trade Relations Agreement (PTRA).

4. Tajikistan and Uzbekistan have carried out detailed examination of the proposed PTRA and have held several rounds of discussions. The latest bilateral technical discussions were held on 19 November 2004 to reach agreement over minor changes. Approval by the respective governments is expected soon and the PTRA will be signed thereafter. During the discussions, Tajikistan and Uzbekistan also agreed to implement an environmental impact assessment of industrial activities in the border areas. The detailed terms of reference for the environmental impact assessment will be prepared under ADB's regional technical assistance to Central Asian Republics for Capacity Building in Environmental Information Management Systems in Central Asia.

5. ADB is assisting in the preparation of a **Regional Gas Transmission Improvement Project** to improve the quality and reliability of supply of natural gas from Uzbekistan to Kyrgyz Republic and southern Kazakhstan, and also to Tajikistan. The final round of technical discussions is scheduled in May 2005. Following the technical preparation, discussions will be started on the rehabilitation of the Tajikistan pipeline along with identification of sources of required funds.

6. To enhance bilateral electricity trade, the Kyrgyz Republic and Tajikistan have almost completed the construction of a **220-kV transmission line between Batken in Kyrgyz Republic and Kanibodom in Tajikistan**. The purpose of the project is to partially meet the

power demand in the northern part of Tajikistan through imports of 900 GWh per year from southern Kyrgyz Republic. The countries themselves have financed this transmission link at an estimated cost of US\$9 million.

7. A third electricity transmission project is the **North South Transmission Line Project in Kazakhstan**. This project, though within Kazakh territory and implemented by KEGOC, has significant regional implications. The first phase of the US\$273 million venture has been initiated, linking YukGres to Shu in Southern Kazakhstan, at a cost of US\$ 89 million. EBRD is part-financing this project with a commercial, non-sovereign guaranteed loan to KEGOC. The Government of Kazakhstan is very keen to accelerate implementation of the next phase, in view of significant electricity shortages already being experienced in southern Kazakhstan during winter. Discussions are underway with the World Bank and EBRD for financing of the second phase and a decision is expected in the near future.

III. Central Asia Regional Electricity Export Potential Study (REEPS)

8. The World Bank finalized and distributed the REEPS report in January 2005. The key findings of the study are:

- Annual domestic demand in the Central Asian Republics can be met until about 2020 through the implementation of loss reduction measures, the rehabilitation of existing generation capacity *and regional trade at the margin*. However, seasonal supply shortages in the winter will persist, and some new generation will be needed to meet winter demand requirements.
- The most attractive new generation options to meet winter demand are the Talimardjan Thermal Power I Project (Unit 1) in Uzbekistan (which is largely complete)¹, and the Bishkek II Thermal Power Project in the Kyrgyz Republic (which is partially constructed). The Bishkek II Thermal Power project provides a more cost effective and expeditious option for meeting the Kyrgyz Republic's future requirements than the Kambarata hydropower projects. In addition, the construction of the North South Line in Kazakhstan is a critical investment that is needed to facilitate intra-regional trade. The Sangtuda hydropower scheme in Tajikistan is also a viable option in view of its competitiveness, its contribution to meeting winter demand, and the keen interests being shown by Russia and Iran to invest in this scheme.
- The larger new generation options, Rogun in Tajikistan, Talimardjan II (Units 2 to 4) and Kambarata, can only be justified by finding firm export markets outside the region. Afghanistan, Pakistan, Iran, China and Russia are all potential markets for electricity produced in Central Asia. Pakistan and Iran have the added attraction of experiencing their peak demand in the summer when the largest potential electricity surpluses exist in Central Asia.
- While the Central Asian Republics have the potential to supply electricity markets outside the region, accessing these markets will face a number of constraints. Central Asian electricity supplies would be cost competitive, but the cost advantage is not overwhelming in all cases. Also, electricity trade is not just about economics - electricity supply is often viewed as a national security issue, and consequently electricity trade is politically more sensitive than general trade. In addition, there are specific risks with each of the target markets and access

¹ It has been put into operation in late 2004.

would, in many instances, require agreement on power transit among the Central Asian countries themselves.

- Nevertheless, the Central Asian states should push for increased intra-regional electricity trade, as this will provide significant economic benefits. Appropriate agreements are required among the countries, and in all likelihood these will have to be negotiated on a bi-lateral basis, though efforts should be made to ensure that agreements are based on consistent principles. Once agreements are in place they will then have to be carefully managed to ensure the benefits from intra-regional trade are optimized.
- To realize effective regional cooperation in electricity, several categories of risk need to be addressed. These comprise **reform risks** (implementation of policy reforms in each country); **cooperation risks** (water energy nexus; riparian agreements, transmission access; resource availability) and **market risks** (risks in the potential importing countries). Overcoming these risks will require time and strong political will both within the CARs and in the target markets.

9. The REEPS also proposes strategies for development of the energy sectors of each country, as summarized below:

- **Tajikistan:** Electricity demand in Tajikistan is projected to remain relatively flat (with an initial period of decrease) due to implementation of energy loss reduction/efficiency improvement and price adjustment measures. The supply option to meet a large part of the demand is through the reduction of losses in the transmission and distribution networks. The larger projects, Sangtuda and Rogun, can only be justified after securing export markets.

A two-track approach is therefore needed—firstly, to focus on the recovery and stabilization of the domestic energy sector in the short and medium term, with a combination of policy (pricing, social protection, institutional reform) and investment (for loss reduction and efficiency improvement) measures. Secondly, to focus on measures to secure seasonal export markets for existing surplus production, e.g. with Russia, Afghanistan, etc. These efforts would help in removing some of the perceived risks and build the necessary confidence for securing longer term export contracts that could justify the larger investment projects. The north-south transmission link within Tajikistan would ultimately be justified on the basis of these new projects.

- **Kazakhstan:** Electricity demand in Kazakhstan is projected to increase at a compounded average annual growth rate of just over 3% per year through 2025, a function of high levels of sustained economic growth. The supply options to meet a large part of this demand comprise, in order of priority: reducing losses in the transmission and distribution networks; rehabilitating existing generating capacity, and development of new thermal capacity. However, even with such supply options, winter deficits are likely to persist throughout the period, and the most economical option to meet this deficit is for Kazakhstan to trade for electricity.

The investment needs for the above supply options amount to around US\$3.9 billion equivalent over the 20-year period. The North South transmission line, a critical investment from both the regional and national points of view, is already

being implemented by KEGOC (see earlier discussions). The investments in generation and distribution are expected to be mobilized largely from the private sector, as per the current policy of the Government. However, there may be a need for the public sector to complement in certain situations (e.g. in regional electricity companies and distribution investments).

- **Kyrgyz Republic:** Electricity demand in the Kyrgyz Republic is projected to increase only marginally over the 2005-2025 period (with an initial period of decrease), due to implementation of energy loss reduction/efficiency improvement and price adjustment measures. The supply option to meet the demand, especially in the winter, is through a combination of: loss reduction in the transmission and distribution networks; operating Toktogul in a modified irrigation mode, and constructing the Bishkek II thermal power plant. Kambarata I is considered comparatively uneconomic, with its high capital cost and long gestation period, and also faces high level of riparian risks.

Therefore, as with Tajikistan, a twin-track approach is recommended—firstly, to focus on the recovery and stabilization of the domestic energy sector in the short and medium term, with a combination of policy (pricing, social protection, private sector participation) and investment (for loss reduction and efficiency improvement and for Bishkek II) measures. Secondly, to focus on the measures to secure export markets with existing surplus production on a seasonal basis, e.g. with Kazakhstan, Russia, etc.

- **Uzbekistan:** Electricity demand in Uzbekistan is projected to increase on a compounded annual average growth rate of just over 1% over the 2005-2025 period, with an initial period of decrease due to implementation of energy loss reduction/efficiency improvement and price adjustment measures. The demand growth rates are low due to the extensive gasification of the country over the last decade. The supply options to meet a large part of this demand comprise, in order of priority: loss reduction in the transmission and distribution networks; rehabilitation of existing generating capacity and development of new thermal capacity, especially Talimardjan I. The estimated investment needs are about US\$2.4 billion, excluding Talimardjan II, which would be justified only once export markets are secured. As per the current government policy, these investments would be met from a combination of self-financing, public investments and private sector participation.

Uzbekistan stands to gain considerably from cooperating in regional electricity trade. With the completion of Talimardjan I, it would be the only country with surpluses to meet regional winter demand. As a transit country it could also benefit from power transmission revenues. At the same time, it could meet its own growing summer demand more economically with imports of hydroelectricity from neighbors, and thereby conserve gas for export to more lucrative international markets. Despite these incentives, if Uzbekistan chooses to follow a unilateral path towards energy (and water) security, this may ultimately force its neighbors to seek alternative strategies, e.g. construction of the Naryn-Nurek transmission link, which would increase costs for all concerned.

IV. Status of the Establishment of the Water Energy Consortium

10. A Concept on the Creation of an International Water and Energy Consortium (IWECC) was approved by the CACO Heads of State in May 2004. The main purpose of the consortium is to (i) ensure optimal operation of reservoirs in accordance with water sharing and reservoir operation agreements; (ii) enable the mobilization of investments for rehabilitation of existing assets and for construction of both water and hydropower facilities; and (iii) create the conditions for coordination of hydro and thermal power generation and for expanding electricity exports.

11. In late 2004, a new working group was formed to elaborate the concept and develop the organizational structure and other details of the WEC. The World Bank has been providing assistance to the working group on the institutional framework needed for enhanced electricity trade, and on experiences from International Transboundary Agreements, particularly regarding issues of dispute resolution. The working group met most recently in Almaty in February 2005².

12. Several key issues have emerged during deliberations:

- A recognition by all parties that the Syr Darya and Amu Darya are trans-boundary rivers and the sharing of these resources should be according to international norms;
- The original idea that the WEC should be an asset owning corporate entity (in particular the Toktogul hydro power cascade) is not viable, since all assets pertaining to the Syr Darya basin (hydroelectric plants, irrigation structures and even transmission systems) would have to be transferred to this entity. This is neither practical nor realistic in the Central Asian context, and is inconsistent with international practice.
- Assets could, however, be owned (or leased) by various corporate entities at the so 5th-tier of the proposed WEC organizational structure. These would be the hydropower operating companies (e.g. JSC in the Kyrgyz Republic, and KEGOC in Kazakhstan) and new companies established for particular purposes e.g. Sangtuda.
- Nevertheless, the WEC itself would be a 'legal entity' as envisaged in the WEC Concept. In accordance with international best practice, such a legal entity can exist with its own legal framework, without reference to any one country's legal framework (a good example being the World Bank). Most transboundary water organizations (Mekong, Indus, etc.) operate this way.
- In the light of these points, the WEC starts to look more like a Water Energy Commission for the Aral Sea Basin than a Consortium per se. It would have an Executive Directorate, whose functions would be to: (a) prepare the necessary subsidiary agreements, protocols, decisions, etc. (see below); (b) facilitate the adoption of subsidiary legal agreements; (c) thereafter, monitor and verify adherence to these agreements, and (d) promote new investments. The Directorate would be expected to play a proactive role in preventing non-adherence to agreements and, in the event violation, in dispute resolution.
- A WEC Framework Agreement has been drafted, which envisages the creation of subsidiary agreements to address specific water and energy resource use issues. These would include, but not be limited to:

² Representatives of Kyrgyz Republic and Uzbekistan were not present at this meeting

- An Agreement on the Use of Waters of the Syr Darya (or Amu Darya) Basin accompanied by The Rules of Reservoir Operation (for that basin);
 - An Agreement on the Coordinated Operation of the Electricity Transmission Systems accompanied by a Regional Electricity Transmission Grid Code;
 - Association Agreements between the WEC and ICWC for Data and Information Exchange, Monitoring and Verification;
 - Articles of Association for the Transmission Service Organizations;
 - Articles of Association for agencies to regulate interstate energy trade.
- The creation and successful implementation of these subsidiary agreements will be crucial to the success of the WEC. At this juncture focus is on the Framework Agreement itself, leaving the drafting and negotiation of subsidiary agreements to the Executive Directorate.:

13. A draft of the Framework Agreement (see Appendix 1), incorporating the above points, has been prepared and circulated by the Government Of Tajikistan, which currently holds the (rotating) Chairmanship of CACO. The views of other CACO members on the draft agreement need to be incorporated before further progress can be made.

14. Prospects for the WEC being successful at improving regional cooperation are considered favourable as: (a) it brings together water and energy issues; (b) underpins the agreements with an institutional framework; (c) incorporates verification, monitoring, dispute resolution mechanisms³; and importantly (d) combines agreements on the one hand and investment mobilization on the other. This is in sharp contrast to the ICWC (and subsequently IFAS) agreement, which only considered water; and the 1998 Framework Agreement which, while it considered both water and energy, did not have the institutional framework to support it and was vague on investment mobilization. All the same, the risks are still high - as evidenced by the differing perceptions of the CACO members on the concept of the consortium, continued insistence on water and energy independence, etc.

V. Establishment of the CAREC Member Electricity Regulators Forum (CMERF)

15. The 3rd Ministerial Conference supported the proposal to establish a forum of electricity regulators, so as to harmonize electric power regulation and conduct training programs for members. ADB is consulting member countries to prepare a draft memorandum of understanding for the establishment of the CMERF in 2005. ADB has also fielded a study tour, which is preparing a diagnostic review of regulatory approaches and challenges (DRRAC), which compares the regulatory and structural situation in the electricity sectors of each CAREC country. The Peoples' Republic of China has agreed to co-host the next meeting of the regulatory forum in June 2005.

³ At the Working Group's request, a separate note on Enforceability of International Agreements was prepared by the World Bank and distributed to all the CACO members in March 2005.

AGREEMENT
on Establishment of International Water-Energy Consortium
between the Republic of Kazakhstan, the Kyrgyz Republic, the Russian Federation, the
Republic of Tajikistan and the Republic of Uzbekistan

Member countries of the Central Asia Cooperation Organization, the Republic of Kazakhstan, the Kyrgyz Republic, the Russian Federation, the Republic of Tajikistan and the Republic of Uzbekistan (further referred to as Parties):

Guided by the Treaty signed by the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan and the Republic of Uzbekistan on Establishment of “Central Asia Cooperation” Organization (CACO) of February 28, 2002, Protocol of 18 October 2004 on the Russian Federation’s accession to the Treaty, signed between the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan and the Republic of Uzbekistan on Establishment of “Central Asia Cooperation” Organization of February 28, 2002, and the Stipulations of the Concept of Creation of an International Water-Energy Consortium of the CACO member countries, approved at the session of the Council of the CACO member countries of 18 October 2004;

Recognizing political, economic and social changes that have taken place in the countries of the Central Asia;

Emphasizing that improvement of the water-energy policy means progress along all of the three components of sustainable development: Social, economic and environmental components;

Taking into account the mutual interest in rational use of water-energy resources, joint operation, rehabilitation and construction of water-energy and hydraulic structures;

Noting that water in required volume and quality is one of the preconditions of a sustainable development and environmental security;

Acknowledging that problems of rational use and protection of water resources of transboundary waterways can be solved through close cooperation of the Parties only;

Convinced of the necessity of strengthening of existing regional institutional and legal mechanisms of joint management and protection of transboundary waters;

Eager to create favorable economic and legal conditions for national authorities and economic entities of the water-energy systems of the Parties;

Affirming that the cooperation regarding the water-energy system shall be implemented based on the principles of sovereign equality and territorial integrity of the Parties; and

guided by common norms and principles of the international law;

made an agreement to establish International **Water-Energy Consortium** (hereinafter referred to as “Consortium”).

Article 1

Objectives of the Consortium

- Developing and implementing agreed activities in the area of rational and efficient development and use of water and fuel-energy resources of the region;
- Ensuring the implementation of the international agreements of the CACO member countries on the issues of cross-supply of water and fuel-energy resources;
- *Ensuring the optimum proportion between the power and irrigation regimes for operation of cascades of water reservoirs in consideration of annual and multi-annual cycles of inflow fluctuations and in consideration of balances of water and fuel-energy resources;*
- Attracting investments for reconstruction of the existing and construction of new water, fuel and water-energy facilities for the development and effective use of the water and energy potential of the region;
- Creating conditions for production and technological cooperation in the water and fuel-energy sectors, expanding their export potential, and introducing innovation technologies;
- Ensuring the safety of the population, the territories during the operation of the hydro technical facilities and the regulation of the water regimes of the rivers and the water reservoirs

Other functions provided for by international agreements may be assigned to the Consortium.

Article 2

Main Areas of Consortium Activities

- Coordination of the joint activities of the Entities in the area of rational and effective development and use of water and energy resources within the competences extended to the participants in the Consortium;
- Coordination of scientific research and analytical works in developing feasibility studies for water and fuel-energy projects of regional importance funded through domestic and external sources;
- Development of mechanisms for implementation of agreements on use of water resources and regional trade in energy and fuel;
- Preparation of proposals on harmonization of respective legislations and improvement of international legal framework of the member countries;
- Ensuring coordination with international organizations and other bodies concerned;
- Drafting international agreements aimed at ensuring effective operation of the water and energy systems, taking advantage of the parallel operation of national energy systems and mutually beneficial cross-supplies of water and fuel-energy resources;
- Development of measures to prevent damage to other member countries as a result of the activities of the Consortium Entities;
- Monitoring the practical implementation by the parties of international agreements on rational and effective use of water, fuel and energy resources.

Article 3 Membership

- Members of the Consortium shall be concerned national agencies and economic entities of the Parties, based on the voluntary, equal and parity principles, irrespective of their types of property.
- The Consortium shall be open for participation of any legal entities of other countries, which assume the obligations implied by this Agreement.
- The procedure and provisions of joining Consortium are defined by the Charter of the Consortium.

Article 4 Principles of Cooperation

- The principles of cooperation governing this Agreement are based on the fundamental principles of international law in documents as follows:
 1. 1992 Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes (commonly known as the "Helsinki Convention")
 2. Convention on the Law of the Non-navigational Uses of International Watercourses, 1997 (commonly known as the "1997 UN Watercourses Convention")
 3. Helsinki Rules on the Uses of the Waters of International Rivers. Adopted by the International Law Association at the fifty-second Conference, held at Helsinki in August 1966 (commonly known as the "Helsinki Rules").
 4. Energy Charter Treaty. The Energy Charter Treaty supports long-term cooperation between the EU and its neighbors and partners by promoting investment in energy facilities, free trade in energy, and the uninterrupted transit of energy.

And include the following:

- a. Precautionary principle
- b. Joint monitoring and information exchange principle
- c. Consultation principle
- d. Equitable and Reasonable Utilization principle
- e. Active Adaptive Management principle

Article 5 Status

The IWEAC shall, for the purposes of the exercise of its functions, enjoy the status of an international body, including right for entering into agreements and obligations with the donor or international community, in accordance with assigned to it full powers.

Article 6 Management Bodies

The Interstate Council is the Supreme Body of the Consortium

The Management Bodies of the Consortium shall be:

- Supervisory Board
- Executive Directorate and its regional water and energy regulatory organizations and corporate legal entities carrying out generation (including operation of the reservoirs) transmission and load dispatch.

Article 7 Supervisory Board

The Supervisory Board shall be the management body of the Consortium. The Board shall consist of two representatives from each Party of this Agreement, authorized by the Governments of the Parties. (at a level not lower than a Head of Ministry).

The Supervisory Board shall consider fundamental problems associated with the activities of the Consortium, determine its strategy and directions for development and make decisions aimed at implementation of objectives and tasks of the Consortium.

The decisions of the Supervisory Board, made on the basis of consensus, shall be binding on all the members of the Consortium.

The Supervisory Board of the Consortium shall be headed by the Chairman of the Consortium Board, elected from within the Board members for a period of two years.

The successive presidency shall be rotating, according to a Russian alphabet.

Functions and procedures of the Board's activities shall be determined by Regulations to be approved by the Board after its reconciliation by the Parties.

The Chairman of the Supervisory Board of the Consortium can be dismissed before the expiration of the indicated timeframe of his presidency, by a justified decision of the Parties.

The Board shall meet not less frequently than twice a year.

An extraordinary session of the Supervisory Board of the Consortium may be convened either by decision of its Chairman, or upon the request of any Party to this Agreement.

Article 8 Functions of Supervisory Board

The functions of the Supervisory Board are:

1. To approve by consensus the work plan, budget and sources of financing prepared by the Executive Directorate, ensuring that the work plan is in conformity with the vision / strategic plan and areas of cooperation formulated by CACO);

2. To approve by consensus specific cooperation proposals of the Executive Directorate in the areas of developing new agreements on water sharing, regimes of operation and water release for hydro reservoirs, establishment of regional joint ventures for the construction of new hydro or thermal generating units, or transmission lines;
3. To review the report of the Executive Directorate on the progress in implementation by the IWECC member states the specific obligations under the various adopted Agreements, stipulate corrective action or make proposals on applying sanctions; in cases of noncompliance with this Agreement.
4. To refer matters to CACO for review and solution of those disputable issues, where consensus is not reached within the Supervisory Board;
5. To analyze the organizational structure of the Executive Directorate and make recommendations on modifications and restructuring to the Executive Directorate to CACO;
6. To co-ordinate with the ICWC the current and perspective issues on basin-wide development issues [Note: if the ICWC is to be maintained as a separate organization outside the IWECC]
7. Preparation and implementation of proposals to harmonize the corresponding legislations and improve the international legal framework of the parties.

Article 9 Supervisory Board Decision Making

Decisions of the Supervisory Board shall be by consensus, and if the Rules of Procedures do not stipulate the other.

When making decisions the Supervisory Board may seek technical and advisory services of outside experts, as it deems necessary.

Article 10 Executive Directorate

The Executive Directorate shall render technical and administrative services to the Supervisory Board and shall be under the supervision of the Supervisory Board.

Article 11 Location of Executive Directorate

The location and structure of the permanent office of the Executive Directorate shall be decided by the Heads of State of members of CACO.

Article 12 Functions of Executive Directorate

The functions and duties of the Executive Directorate will be to:

1. Carry out the decisions and tasks assigned by the Supervisory Board;
2. Provide technical services and financial administration and advise as requested by the Supervisory Board;
3. Formulate the annual work program, and prepare all other plans for implementing the adopted agreements, as well as develop project and documents, and carry out their technical economic and environmental assessments;
4. To attract new investments in the water-energy sectors by using potential investors such as financial institutions, donors, charitable institutions and governments;
5. Assist the regional structural units (of the Consortium) in the implementation and management of projects and programs;
6. Maintain databases of information;
7. Prepare materials for the sessions of the Supervisory Board;
8. To co-ordinate with the Secretariat of the ICWC on development plans and water-related issues in proposed Agreements [Note: if the ICWC is to be maintained outside the IWECC structure].
9. Coordinate and manage the design, adoption and implementation of any secondary legislation, including agreements, rules, regulations and others that will be necessary to ensure the implementation of this Agreement.
10. Carry out all other assignments, linked with ensuring the realization of this Agreement; coordinate and manage the design, adoption and implementation of additional decisions, rules/procedures and guidelines, linked with the subsidiary Agreements, such as those, listed in Article 16 this Agreement.

Article 13

Chief Executive Officer of Executive Directorate

The Executive Directorate shall be under the direction of a Chief Executive Officer (CEO), who shall be appointed by the Supervisory Board on a competitive basis.

Candidates to this position should be Heads or Deputy Heads of a Ministry.

The Terms of Reference of the CEO shall be approved by the Supervisory Board.

The CEO shall report to the Supervisory Board.

Article 14

Staff of Executive Directorate

The chief experts of the structural units of the Executive Directorate are to be recruited at the proposal of the Parties; and the number of posts shall be assigned on an equal basis among the IWECC members in accordance with the adopted structural chart. The chief experts will work in the Executive Directorate under a contract for no more than two three-year terms.

When necessary, for the implementation of specific projects, specialists (experts and consultants, etc) can be recruited directly by the Executive Directorate on a competitive basis.

Article 15

The budget of IWECC shall be prepared by the Executive Directorate upon agreement with the Supervisory Board and is approved by a decision of the Interstate Council of CACO.

The budget will consist of contributions from the member countries of the Consortium in the proportions agreed upon by the Interstate Council of CACO.

Contributions from members to fund the IWECE are made three months prior to the beginning of the next financial year, based on the approved budget.

Article 16

Subsidiary mechanisms for implementing and refining the Framework Agreement

It is necessary to stipulate the subsidiary mechanisms for coordination of the Parties' efforts to implement the Framework Agreement in the area of water – energy activity:

1. Agreement on Regulation of the water and energy sectors;
2. Agreement on the Functions of the water and energy regulators;
3. Agreement to Establish the Association of operators of electricity transmission systems, and energy regulators;
4. Agreement on multi-year perspective of exchange of electricity and fuel resources.
5. Agreement on payment for services, ensuring water use
6. Agreement on electricity tariffs and tariffs for transit of electricity.
7. Adoption of a Regional Grid Code (Code for regional power transmission lines)
8. Agreement on the coordination of the operation of the transmission lines in accordance with the adopted Regional Grid Code
9. Agreements on the Coordination of water and energy activities between IWECE, including:
 - a) Agreement on cooperation with UDC Enerzia
 - b) Agreement on cooperation with ICWC
 - c) Agreement on cooperation with ISDC
 - d) Agreement on cooperation with IFAS

Article 17

Monitoring, verification and compliance

The Executive Directorate develops recommendations to the Supervisory Board regarding the design of programs for monitoring, verification of implementation and adoption of measures to ensure compliance with adopted agreements.

The Executive Directorate has to ensure concordance between regulatory and research/analytical aspects of IWECE activity, including inputs from the regulatory and investment agencies.

Article 18

Disputes Resolution Processes and Mechanisms

Whenever any disagreement or dispute may arise between two or more parties to this Agreement regarding any matters covered by this Agreement or actions taken by the implementing organization through its various bodies, particularly as to the interpretations of the Agreement and the legal rights of the parties every effort shall be made to resolve the issue through consultations and negotiations among the interested parties within the Consortium.

In the event it is not possible to resolve the disagreement or dispute in a timely manner on the given situation within the Consortium, the solution of this issue is forwarded to the CACO Supreme body.

Should the Parties find it necessary, they may, by mutual agreement, request the intermediary assistance of a third party mutually agreed upon, and thereafter to proceed according to the principles of international law.

Article 19 **Reporting and Review of Operation and Recommendations for Change**

The Executive Directorate submits to the Supervisory Board periodic and annual reports on its activities and makes recommendations on improving management policies and practices by learning from outcomes of operational programs.

Article 20 **Scope**

This Agreement shall consist of a Preamble and all provisions thereafter and amendments thereto, the Annexes, and all other agreements entered into by the Parties under this Agreement. Parties may enter into bi- or multi-lateral special agreements or arrangements for the implementation and management of any programs and projects to be undertaken within the framework of this Agreement. Such agreements shall not be in conflict with this Agreement.

Article 21 **Procedure of entry into force and termination of the Agreement**

This Agreement shall be enforced since the date of sending to the depositary the last notification on fulfilling by the Parties their internal procedures, required for its enforcement.

The Parties notify the depositary on implementing such procedures within three months since the date of signing this Agreement.

The depositary of this Agreement is the Central Asian Cooperation Organisation.

This Agreement shall be perpetual with the procedure for advanced notification for exiting as outlined below

Article 22 **The provisions for premature withdrawal**

Any Party can withdraw from this Consortium after prior fulfilling of its financial and other obligations to other participants by giving advanced written notice to the depositary on its withdrawal from this Agreement not later than twelve months prior to the date of withdrawal.

The validity of such Agreement will be terminated in relation to such Party by expiration of 12 months since the date of receiving such a notification by the depositary.

Article 23
Opportunities for additional Parties

Any other State, sharing the objectives and principles of this Agreement, may become a Party with the consent of the Parties, through submission to the depositary the document on accession. The accession shall be in effect since the date when the depositary acknowledges the receipt of the document indicating consent to such accession.

This Agreement was executed in the city of _____ on “_____”
_____2005_____ in one original copy in Russian and English language.

The original copy in Russian shall be kept in the Central Asian Cooperation Organisation, which is the depositary of this Agreement, and shall send notarized copies of this Agreement to every participating country, and English copy shall be deposited with the Secretary General of the United Nations.

**For
the Republic of
Kazakhstan**

**For
the Kyrgyz
Republic**

**For
The Russian
Federation**

**For
the Republic of
Tadjikistan**

**For
the Republic of
Uzbekistan**

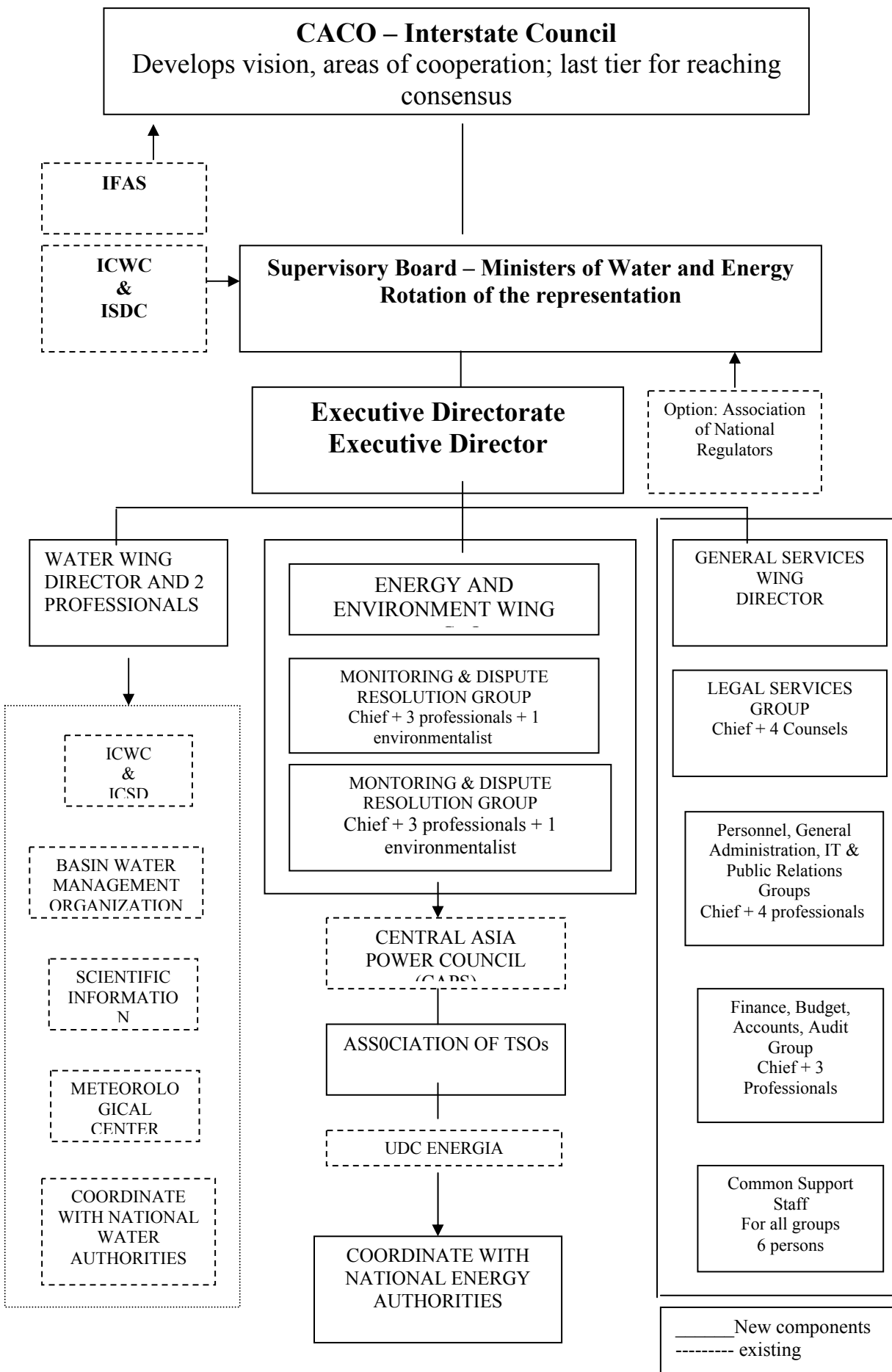
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**CAREC Members' Electricity Regulators Forum (CMERF)
Progress Report
24 March 2005**

In accordance with the timeline presented and welcomed at the CAREC Senior Officials' Meeting (SOM) on 13-14 September 2004 in Almaty, the following progress has been made:

1. The first CMERF meeting is being planned for the last week of June 2005 in Beijing. The Peoples' Republic of China has kindly volunteered to host this meeting. PRC's State Electricity Regulatory Commission (SERC) and ADB are organizing the meeting. Funding for the meeting is being sought from the Public Private Infrastructure Advisory Facility (PPIAF). ADB is securing the views of relevant government and regulatory personnel in member countries on issues that should be on the agenda. The meeting is likely to last four days, although final determination depends upon the agenda.
2. ADB, with the assistance of a consultant, is preparing a Diagnostic Review of Regulatory Approaches and Challenges (DRRAC). This study will provide the necessary factual basis for discussions at the annual meeting. For each member country, this report maps the regulatory landscape, including:
 - (i) the ownership and management structure of the electricity sector
 - (ii) rules governing the trade of electricity
 - (iii) rules governing cash flow to and within the sector
 - (iv) how prices are determined (when prices are market driven)
 - (v) tariff regulation methodology (when they are not)
 - (vi) licensing rules and objectives
 - (vii) the institutional and legal norms for electricity policy making and regulation
 - (viii) the collection of information by the utilities, and its subsequent verification and dissemination to regulators, the government and the public
 - (ix) problems faced by sectors that could be addressed through regulation
 - (x) problems faced by regulators in accomplishing their duties.

Because CAREC members have pursued different solutions to sector problems, there is great opportunity to learn from each other's successes and failures. The report will exploit this fact and will draw on international best practice to suggest solutions to various regulatory problems for discussion at the meeting.

Five CAREC countries have been visited to compile the DRRAC as of the date of writing, and visits to Mongolia and Peoples' Republic of China will be undertaken in April. Individual country chapters of the DRRAC report will be submitted to their respective member countries for a rapid review of their factual accuracy in early May. Following this, the full report will be released.

Extensive efforts are being made to consult with all relevant government officials, regulators, utility personnel and development partners. This will ensure the relevance of the DRRAC and CMERF agenda to country needs, minimize duplication of efforts by all concerned, and ensure proper donor coordination in the technical advice being offered.

3. A draft Memorandum of Understanding (MOU) establishing CMERF has been prepared (attachment 1), and is being circulated to member governments by the team preparing the DRRAC for comment. Final comment on the draft MOU will be solicited from

governments in May. Comments will be incorporated, and an updated draft will be produced. This will be discussed at the meeting. If delegates approve the MOU, they will take it to their member governments for ratification at the next Senior Officials' Meeting or Ministerial Conference.

4. Study topics are being short-listed for further investigation over the CMERF program year. ADB has prepared a tentative short list based on assessments made during compilation of the DRRAC (attachment 2), and is actively seeking member regulator's suggestions for further topics. Selection of topics would be undertaken by CMERF delegates at the end of the annual meeting. Selection of a topic will be taken as a commitment by member countries to participate fully in the accomplishment of such studies, including the provision of identified data and inputs of personnel time. Study funding is sought from ADB and PPIAF.
5. Consultations are underway with other regional regulatory forums to ensure that their experiences are benefited from when designing CMERF's activities. Representatives of these forums are invited to attend the CMERF meeting, and ADB is sending a delegation to attend the Electricity Regulators Regional Association (ERRA) meeting in Budapest in April.
6. A CMERF website will be put together in spring to coordinate communications, and disseminate documents of relevance to members. Key documents will be translated into Russian and Chinese as necessary. Interest in the site will be monitored, and its content and purpose updated accordingly.

Draft
MEMORANDUM OF UNDERSTANDING
for the Formation of the
CAREC Members Electricity Regulators Forum

1. RATIONALE

All the Countries of the Central Asia Regional Economic Cooperation⁴ are moving their electricity sectors from vertically integrated, centralised state ownership and management to unbundled and potentially competitive structures. Progress has been made at different speeds and in different ways.

Efficient and cost-effective electricity sectors in the countries of the region bring enormous benefits, both to the countries making reforms, and to all their neighbours. Improved regulation is vital, as it greatly improves the investment climate in the power sector, the provision of vital human and commercial services, and the economic basis for regional cooperation in the wider energy sector.

As these transitions take place the responsibilities of the regulators will continue to change. Regulatory skills are new to many of the CAREC countries. There will be benefits for all if the experience of regulatory successes and failures are understood and shared across the region so that successes are reproduced and mistakes are not repeated.

With enhanced regional economic development and growing international cooperation, it is appropriate that the power sectors of CAREC move in patterns that are suited to the individual country needs, but at the same time remain compatible with those of their neighbours.

2. BACKGROUND

The 3rd Ministerial Conference of the CAREC was held in Astana, Kazakhstan from 31 October – 1 November 2004. At the conferences ministers noted that CAREC Member Countries can create a climate of trust and positive outlook to attract international investors, tourists and others who will bring capital, innovation, and job opportunities to the people who live in the region and help in securing peaceful relations between countries.

Ministers agreed that regional cooperation provides a strategic means for achieving sustainable and inclusive growth and for reducing poverty in Central Asia, and reaffirmed their earlier pledge to work closely to realize their shared vision of a region where people live in harmony and prosperity, with free movement of goods, services, people and ideas.

⁴ Central Asia Regional Economic Cooperation (CAREC) member countries are: Azerbaijan, Peoples Republic of China Kazakhstan the Kyrgyz Republic Mongolia, Tajikistan and Uzbekistan.

Ministers further stated that economic growth prospects for most CAREC Member Countries are excellent. They also expressed confidence that the improved economic performance in recent years will be sustained, showing the vital importance of economic integration and of strengthening links with regional and global markets.

Ministers agreed that a number of challenges will be jointly addressed if the considerable potential of the region is to be fully realized, including the improvement of infrastructure particularly energy, electric power and other infrastructure.

Ministers reaffirmed their commitment to regional economic cooperation aimed at addressing these challenges and meeting this potential. Electricity regulation has an important role to play in all the fields of international cooperation identified by ministers.

In this regard, the Ministers welcomed ADB's proposal to establish a forum of electricity regulators, so as to facilitate an exchange of ideas between member regulators, help harmonize electric power regulations and to conduct training programs for members.

3. COMMITMENT

It is in the spirit of the Ministerial Conference that those countries represented in CAREC agree to the proposal for the establishment of the CAREC Members Electricity Regulators Forum (CMERF).

The Forum will primarily be an organisation that brings together those involved in the regulation of electricity sectors to share information and experience, jointly investigate common problems, conduct research and training and act as a focal point and knowledge base for regulatory skills and information.

Members will use their best endeavours to ensure and facilitate the attendance and participation of appropriate regulators and regulatory officials, and will give support to studies and research aimed at enhancing knowledge and skills regarding regulatory objectives, practices and processes.

The topics of such studies will be proposed by members and the secretariat, and will be prioritized and agreed by the members at CMERF's annual meetings.

Participation will be voluntary and on a basis of cooperation and mutual benefit among members.

Contributions of resources will be solicited from members, donors and Multilateral Development Institutions according to CMERF's needs.

4. ORGANIZATION

The Governing Body of CMERF will comprise designated principal and alternate member regulators from each country, and will provide overall leadership of the Forum, determining the broad scope of CMERF's priorities, meeting agendas, and

study topics. The chairmanship of the Governing Body will be rotated between the CAREC members every two years.

The Secretariat of CMERF will be responsible for facilitation and implementation of such decisions. This will include the preparation of technical and logistical inputs to, and outputs of, the deliberations of the Governing body.

In the first phase of CMERF's existence, Asian Development Bank (ADB) will serve as CMERF Secretariat. Subsequently, as the demands placed upon CMERF become more regular, the responsibilities of the Secretariat will be passed on to an organization selected by the Governing Body.

5. TENURE

CMERF will continue to exist and operate until it is dissolved by the Governing Body.

6. SIGNED

Possible study topics for CMERF

Economic Regulatory Issues:

1. Designing/approving efficient and adequate tariff structures appropriate to different consumer classes, and involving lifelines, reliability premiums, discounts for pre-payment, and/or wattage limitations.
2. Considerations when licensing new capacity in a regional market.
3. Appropriate pricing of ancillary services/Funding the fixed costs of reliability.
4. Alternative approaches to risk sharing under power purchase agreements.
5. Principles for approving transmission charges for domestic power transfers, imports, exports and wheeling: evaluating the economic costs associated with deviations from non-discrimination and open access.
6. Long-run equilibrium and the likely path towards it in national or transboundary wholesale power markets.
7. Pitfalls and possibilities in the privatization/concessioning of distribution companies.
Focus on how to balance the needs to
 - a. Reduce risk to investors of regulatory inconsistencies
 - b. Prevent commercial risks being passed on to consumers and the government.
 - c. Leverage improvements in reliability and customer service.
 - d. Maintain incentives for the company to increase efficiency
 - e. Ensure adequate transparency.
 - f. Ensure proper payment of generators and transmission companies.
 - g. Obtain a good price for the management contract.
 - h. Manage any necessary tariff adjustments.

Legal/Institutional Issues:

8. Possible arrangements for balancing regulatory autonomy, transparency and accountability in CAREC member countries. Includes composition of the regulatory body, its funding sources, chain of command, public reporting requirements, and arrangements for public hearings and other inputs.
9. Alternative mechanisms for penalizing non-payment by residential, commercial, industrial, agricultural and governmental consumers, and the role of the regulator in monitoring implementation.

Technical Issues:

10. Alternative models for the regional grid code.