



Central Asia Regional Economic
Cooperation (CAREC)
Senior Officials Meeting (SOM)

Energy Committee Progress Report
By World Bank
September 8, 2007
Manila, Philippines



The views expressed in this presentation are the views of the author and do not necessarily reflect the views or policies of the Asian Development Bank (ADB), or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy of the data included in this presentation and accepts no responsibility for any consequences of their use. Terminology used may not necessarily be consistent with ADB official terms.



Progress Report Outline

- Review of Progress since March 2007 SOM
- Regional Energy Projects
 - Institutional and Legal Framework(s)
 - Electricity Transmission Projects
 - Generation Projects
 - Gas Project
- Regional Energy Sector Strategy Status
- Clean Development Mechanism Interventions
- CAREC Member Energy Regulators Forum (CMERF)



Central Asia South Asia Regional Electricity Market (CASAREM)

- An overall strategic umbrella for regional electricity trade
 - Afghanistan, Kyrgyz Republic, Pakistan and Tajikistan
 - IFIs - ADB, EBRD, IFC, IsDB, World Bank
 - Private Investors quite interested
- Will involve, in terms of priority:
 - Institutional and Legal Framework to underpin multi-country electricity trade
 - Electricity Transmission investments
 - Electricity generation investments
- Other countries can join
 - Kazakhstan, Turkmenistan and Uzbekistan as exporters
 - India, Iran and China as importers



CASAREM

Creation of Institutional & Legal Framework

Two Sub-dimensions

Central Asia - Afghanistan

- Tajikistan-Afghanistan
 - August 2007 Protocols - 1000 GWh/year in summer; 300 MW year round power later
- Uzbekistan - Afghanistan - June 2007 Protocol
 - Annual exports of 300MW upon transmission upgrade
- Turkmenistan-Afghanistan
 - 300 MW under discussion
- Bilateral character
- Existing institutions

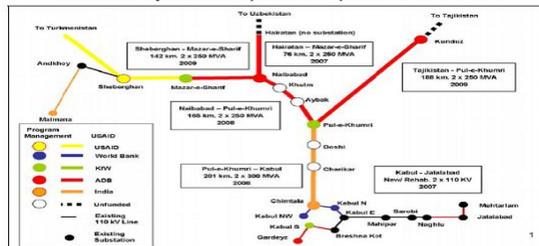
Central Asia - Pakistan

- Via Afghanistan
- Initial target is 1000 MW of year round power
- To be increased to 4000 MW
- Afghanistan will act as transit country; but also will take power
- multi-lateral character
- Institutional framework will involve:
 - Inter-Government Council
 - Secretariat for CASAREM
 - Corporate entities for physical systems



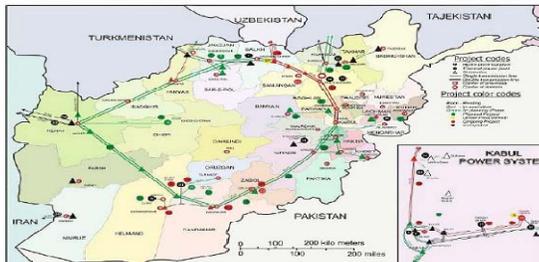
Central Asia Afghanistan Electricity Trade Transmission Links

Transmission System Development for Import of Power and NEPS



Source: Draft Report on Power Sector Strategy, Ministry of Energy and Water, February 2007.

Transmission System After Interconnection of Regional Power Systems

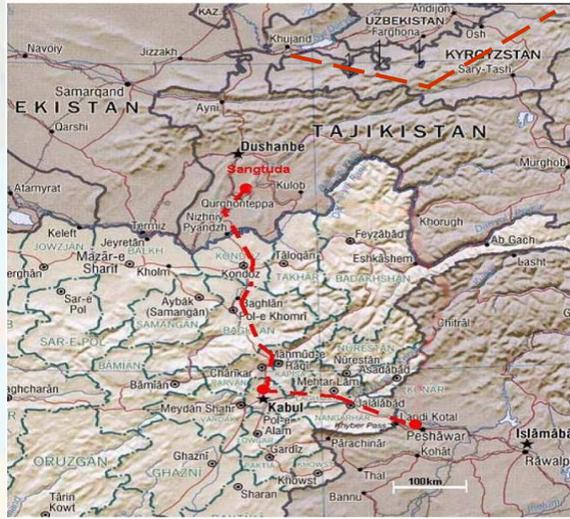


Source: Ministry of Energy and Water

- Tajikistan-Afghanistan
 - Sangtuda - Phul-e-Khumri 220 kV system
- Uzbekistan - Afghanistan
 - Uzbekistan will build double circuit 220kV line by end 2008 to ensure 150 MW; and
 - 500kV line Surkan - Guzar to reach 300MW exports in a 2nd phase
- Turkmenistan-Afghanistan
 - Consideration for building a 500kV line to the Afghan border



Central Asia Pakistan Electricity Trade Transmission Links (CASA 1000)



--- Indicative Transmission Line Route

Involves two links

- Kyrgyz Tajik link
 - Alternating current
- Tajik Pakistan Link
 - Direct Current

Transmission Line Length (km)

Tajikistan	120 + 50
Kyrgyz Rep.	300
Afghanistan	560
Pakistan	70
Total	1100



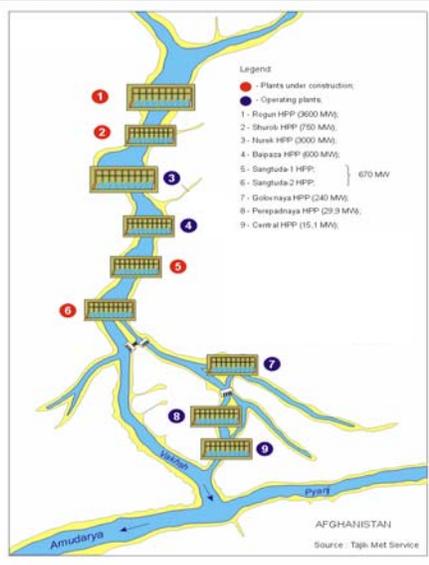
North South Link in Tajikistan



- An important link under construction
- With Financing from China
- Completion in 2008
- Will enable Kyrgyz summer surplus to flow to South Asia



CASAREM - Generation Projects Sangtuda 1 Hydroelectric Project



- Construction progresses
- First unit commissioning in Dec 2007 or March 2008
- Full plant commissioning in April 2009
- Summer power (60-65% of production) will be exported to South Asia



CASAREM - Generation Projects Thermal Generation Capacity

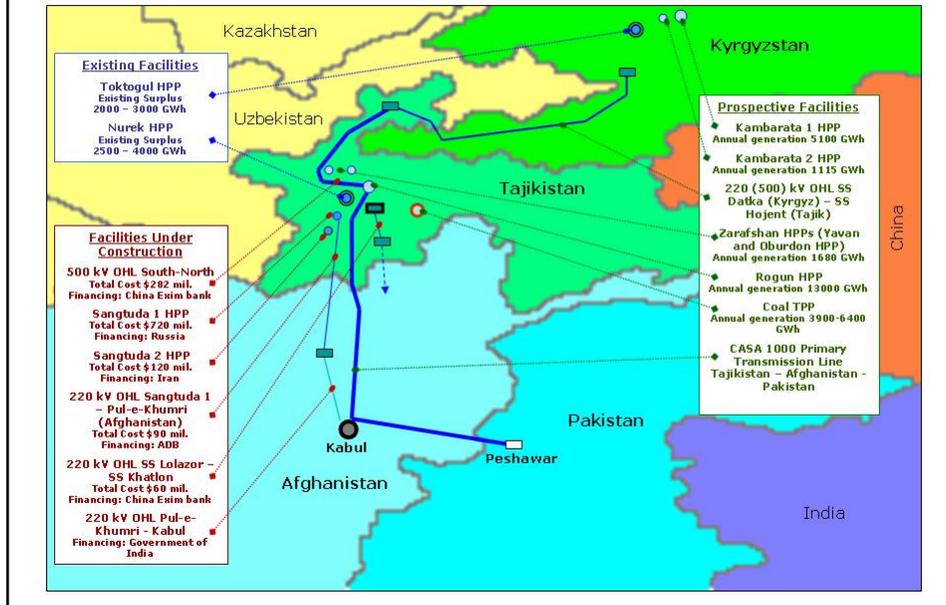


- Tajikistan launched development of coal resources
- Quality of coal reserves is high - average 7000 kcal/kg
- Developing these resources crucial for meeting:
 - domestic winter demand;
 - year round power demand in export markets

- Held an Investor Roundtable in May 2007 in which private investors and IFIs participated
- Decisions reached:
 - Integrated development of Mine and power plant
 - Fan Yagnob mine would be the first one to be developed
 - 1500 MW targeted (1000 MW for exports rest for domestic market)
 - Will be developed as a Public private partnership
 - Tajik Government will bear all initial development costs



CASAREM is a set of projects and institutional framework for enabling this trade

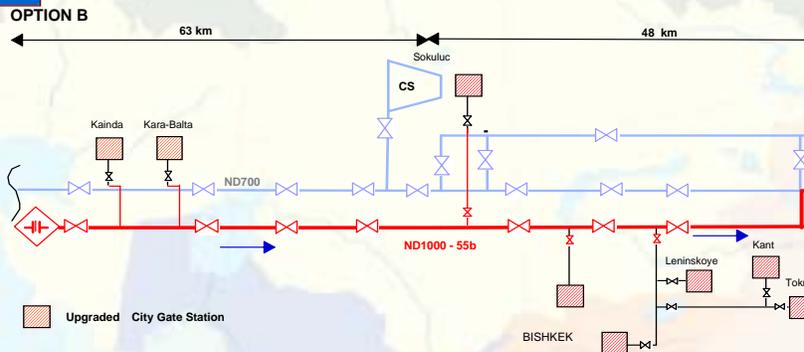


CASAREM - Next Steps

- Realization of CASA 1000 is the key focus
- Consulting Outputs being revised after joint reviews in Montreal
 - Revised outputs expected Sep 15
- Will be discussed in the 3rd CASAREM conference in Kabul
 - efforts underway to schedule it for end-Oct
- A Go/No Go decision will be taken at Kabul
- Detailed feasibility work will be undertaken after that
- Financial close could move to 2nd half of 2008



Regional Gas Transmission Project



- KyrgyzGas and KyrKazGas (a Kyrgyzgas and Kaztransgas JV) involved
- ADB actively pursuing the project
- Pre-feasibility Study completed
- Requires design of innovative financing structure:
 - Options include public/public-private/private; IFI participation



CAREC Energy Sector Strategy Status

- Development of a "Strategy for Regional Energy Cooperation in CAREC countries" (CAREC energy strategy) is underway
- Received Information from:
 - Afghanistan; Azerbaijan; Kyrgyz Republic; Mongolia; Tajikistan, Uzbekistan
- Did not receive anything from:
 - PRC; Kazakhstan;
- First draft of the Energy Strategy will be discussed at the next ESCC meeting (Sep. 14, Ulaan Baatar, Mongolia)
- Upon incorporating comments from this discussion the strategy will be presented to the next SOM, prior to the Ministerial Meeting



Broadening and Deepening Clean Development Mechanism Opportunities

- International Financial Institutions continue to develop programs
 - ADB
 - Carbon Market Initiative
 - Asia Pacific Carbon Fund
 - ADB Energy Efficiency Initiative - 2nd Phase until Dec 2007
 - In June 2007 hosted the "Asia Clean Energy Forum: Regional Policy and Finance Solutions in Manila.
 - World Bank
 - Assistance underway to CAREC members who are signatories to Kyoto Protocol
 - Under MoU signed with Government of Uzbekistan, following projects being actively pursued to purchase CER credits:
 - Tashkent thermal plant rehabilitation;
 - Gas flaring reduction
 - Will participate in Carbon Forum in October 2007 in Tashkent, where Uzbekistan will present Project Ideas Notes to the Carbon Market.



CAREC Members Energy Regulators Forum (CMERF)

- In March 2007 ADB approved a regional TA, financed by PRC to support training programs for regulatory staff in CAREC countries
- Third Annual Meeting of CMERF will be held in September 10-14, 2007 in Ulaan Baatar, Mongolia with workshops on:
 - (i) roles, functions and skills required for effective energy regulation,
 - (ii) Costs and benefits of incentives regulation

