

Energy: Recent Developments and Key Matters

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Three Strategic Pillars under Energy Sector Action Plan Framework:

Pillar 1: Energy Demand/Supply Balance and Infrastructure

Pillar 2: Regional Dispatch and Regulatory Development

Pillar 3: Energy-Water Linkages

Progress to Date

Investment (See next slide)

Dialogue

- Pillar 1 - 1st Subcommittee Meeting, March 2011
- Pillar 3 - National consultations in Kazakhstan, Kyrgyz Republic, Tajikistan and Afghanistan.
- ESCC Meeting, May 2011

Analysis

- Pillar 1: Inception Report - Regional Power Sector Master Plan
- Pillar 2: Agreement on leveraging USAID's RESET program with ESCC for Pillar 2 activities.

Capacity building

- Decision Support Software for Power System Planning and Operations
- Carbon Finance Opportunities for CAREC - Case Study of Cross Border CDM Trade Between India and Bhutan
- Regional Metering System for Cross-Border Power Flows

New Projects in CAREC Countries

Project	Amount (\$M)	Status
AFG (Grant) Power System Development Project Additional Financing	25	Approved
KAZ (Loan) Alma Transmission Project	78	Approved
KGZ (Loan/Grant) – Power Sector Improvement	45	Approved
KGZ (Credit/Grant) Emergency support	35	Approved
KGZ (Grant) – Naryn River Rehab	est. 45	Under process
TAJ (Credit) Energy Loss Reduction Additional Financing	est. 12	Under process
UZB (Loan) - Talimarjan Power Project	300	Approved
UZB (Loan) Talimarjan Transmission Project	140	Approved
UZB (Loan) Advance metering/Energy Efficiency	est. 200 ~ 300	Under process

ESCC Capacity Building in 2011

- Decision Support Software for Power System Planning & Operations;
- Carbon Finance Opportunities for CAREC - Case Study of Cross Border CDM Trade Between India and Bhutan
- Regional Metering System for Cross-Border Power Flows
- Other activities identified for future.

Pillar 1: Demand/Supply Balance and Infrastructure Constrains

Objectives

- I. Complete Regional Power Master Plan Study for 4 Central Asian countries (Kazakhstan, Kyrgyz Republic, Tajikistan, Uzbekistan + Afghanistan)
- II. Develop the Medium-term (5 year) Priority Projects list for investments

Pillar1: Regional Power Master Plan Study

Objectives

- i. Identification of bankable investment projects for optimizing transmission and generation expansion between 4 Central Asian Countries and Afghanistan
- ii. Preparation of a technical study on Afghanistan interconnection to CAR power system

Pillar 1: Regional Power Master Plan Study - Activities as of Today

- In March 2011, 1st Subcommittee Meeting under Pillar 1 approved methodology and implementation arrangements presented in the Inception Report
- Data collection phase completed
- Data processing and analysis is ongoing

Pillar 1: Planned Activities for 2011

Activity	Date
Completion of the Interim Report	June 2011
Quarterly Progress Report No. 2	Beginning of July 2011
2nd Subcommittee Meeting - Presentation of Interim Report	Mid of July 2011
Completion of Draft Final Report	End of September 2011
3rd Subcommittee and ESCC Meetings - Presentation of Draft Final Report	Beginning of October 2011
Completion of the Final Report	December 2011

Pillar 2: Regional Dispatch and Regulatory Development

Objective

- I. Identification of measures to improve Regional Dispatch, Operation and power trade in Central Asia Region.
- II. Build institutional capacity to support implementing these measures
- III. Arrange knowledge exchange for the CAREC countries related to this Pillar2

Pillar 2: Activities as of Today

- Exploring Collaboration with USAID's RESET program in identified areas for the next three years.
- Capacity Building and knowledge exchange activities conducted and needs for three years identified.
- Assessment of the opportunities and challenges in strengthening electricity dispatch and system operations across Central Asia completed.

Pillar 2: Planned Activities for 2011

Activity	Date
Sub-committee meeting to identify the “low hanging fruits” i.e. immediate opportunities for easing constraints or improving coordinated grid operation, without any major investments	July/ Augusts 2011
Prepare an Action Plan	August 2011
Capacity building on developing and using International commercial Agreements	July- Sep 2011
Other Capacity building and knowledge sharing activities	tbd

Pillar 3: Energy-Water Linkages (Phase 1)

Objectives

- I. To strengthen cooperation and dialogue by integrating energy and water analysis
- II. To better understand the linkages between energy and water across Central Asia countries (and AFG)
- III. To develop a mutually agreed analytical tool (e.g., mathematical model) as a basis for evaluating energy and water management and investments

Note: This activity does not seek to establish or review allocations of water among countries.

Pillar 3: Activities as of Today

➤ September 2009/10:

Workshops at regional and national levels – Brainstorming on energy and water needs and opportunities

➤ Feb/March 2011:

National workshops in Kazakhstan, Kyrgyz Republic, Tajikistan, and Afghanistan

- To define priority issues, criteria and design parameters for an energy-water decision support system from national perspectives
- Reviewed results of a survey of existing models
- Presentation and discussion of similar efforts (Kabul, Canada, World Bank demonstration model)
- Discussion and agreement to establish national technical working groups and a regional level, with senior government approval

- **Ongoing:** Development of an independent demonstration model of water resources in Central Asia based on existing, publically available data

Pillar 3: Looking Forward

➤ Complete national workshops

- World Bank and CAREC look forward to completing similar workshops in Uzbekistan and Turkmenistan to understand priorities for modeling
- Additional workshops in Afghanistan

➤ Build on basis for regional model and decision support system

- Build on strong thread of common interests (e.g., drinking water, agriculture, winter energy security, environment)
- Undertake detailed review of most promising existing models
- Engage senior government in establishing national technical teams, and advising on participation in regional workshop
- Regional workshop (Fall 2011) to review models and agree on the specifications for a Terms of Reference for a new/strengthened regional decision support system on energy-water linkages

➤ Complete demonstration model

Discussion Topic

ESCC identified following topics as additional activities in 2012-2013:

- Energy Efficiency and Renewable Energy
- International commercial agreements
- software for power system planning and operation
- Cross border metering protocol
- Institutional structure of energy sector and regulation
- Water energy linkages – expansion to other members
- Attracting foreign investments - successes and failures in CAREC countries
- Database of sector expertise in CAREC countries

Are these topics acceptable for SOM and what are the other areas ESCC should concentrate in 2012-2013?