



Central Asia Regional Economic Cooperation Program

Reference Document
For Session 4 of the Senior Officials' Meeting
June 2014

Energy Sector Progress Report and Work Plan

**Senior Officials' Meeting
Central Asia Regional Economic Cooperation
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Manila, Philippines**

I. KEY DEVELOPMENTS IN THE ENERGY SECTOR

A. Sector Implementation

1. The coverage of this progress report includes activities undertaken since the Senior Officials' Meeting (SOM) and Ministerial Conference held in Astana, Republic of Kazakhstan in October 2013. During these meetings, the progress in the implementation of the Energy Work Plan (EWP) 2013–2015 was noted including: (i) advances made in the complex preparation activities for the Central-Asia – South Asia Regional Power Trade and Cooperation; (ii) capacity development activities under the Regional Energy Security, Efficiency and Trade (RESET) Program of the United States Agency for International Development (USAID), through the CAREC Institute, or in partnership with specialized institutions; and (iii) the proposed study seeking to analyze the financing gap and measures on financing investments for energy assets.

2. The EWP 2013–2015 is envisioned to help achieve the goals of: (a) providing a roadmap for the translation of the vision articulated in the Energy Action Plan Framework into reality; (b) providing a mechanism for identifying and developing projects and programs that have potential(s) for regional integration and trade; and (c) promoting establishment or construction of national generation facilities with the objective of exporting outputs to second and third countries.

3. Progress of work in the energy sector is currently measured through five indicators: (i) increased energy generation capacity (megawatt), (ii) transmission lines installed or upgraded (kilometers), (iii) rehabilitated generation capacity (megawatt), (iv) new substations (megavolt-ampere), and (v) upgraded substations (megavolt-ampere). These indicators are intended to capture how CAREC's physical infrastructure expansion and rehabilitation operations contribute to energy security, energy efficiency, and the CAREC region's ability to enhance power trade as a result of completed projects.

4. The baseline year for the indicators is 2013 and will be included in the 2014 CAREC Development Effectiveness Review (DEfR) process. The energy sector output indicators are presented in the following table:

Energy Sector Output Indicators

Indicator	2013 Baseline Value	2014	2015	Projected Outputs by end 2015	Progress
Transmission lines installed or upgraded (km)	612				
Increased energy generation capacity (MW)	300				
Rehabilitated generation capacity (MW)	0				
New substations (MVA)	250				
Upgraded substations (MVA)	400				

¹ As part of ongoing DEfR methodology review, the criteria and the calculation method for the target figures are being finalized. CAREC member countries have been required to provide their pipeline project lists based on which the total target will be derived.

B. Addressing Actions Proposed in the 2012 CAREC DEfR and Ongoing Key Issues

I. Priority Actions in the CAREC Program for the Energy Sector (Implementation of the EWP 2013–2015)

5. The EWP 2013–2015, formulated to ensure effective and timely achievement of the strategic objectives laid out in CAREC 2020, has six actionable elements to implement sector operational priorities. Implementation of the EWP 2013-2015 is tracked and reported biannually, and reviewed at the SOM and Ministerial Conference.

Element 1: Developing the Central Asia – South Asia Energy Corridor

6. **Action Initiated:** At present, the implementation of Element 1 is supported by two complementary projects, namely: (i) Central Asia – South Asia Electricity Transmission and Trade Project (CASA-1000); and (ii) Turkmenistan, Uzbekistan, Tajikistan, Afghanistan and Pakistan Interconnection Projects (TUTAP).

7. CASA-1000 Project. The World Bank Board of Directors approved US\$526.5 million financing for the CASA-1000 Project on 27 March 2014. The CASA-1000 member countries (Afghanistan, Pakistan, Kyrgyz Republic and Tajikistan) are working with other financing partners to attract funding to cover the full cost of the project. It is noted that Uzbekistan is not participating and opposing the CASA-1000 project. The CASA-1000 project is scheduled to start pre-construction in 2014 and be completed during the winter of 2017–18. The CASA-1000 Power Purchase Agreement, Master Agreement and Coordination Agreement have been substantially agreed and price negotiations are on-going. The CASA-1000 Member Countries' Joint Working Group has agreed on the cost-sharing principles for transmission costs and community support during operation. Legal, procurement and finance committees for the CASA-1000 project have been established. The procurement of converter stations and operator for the CASA-1000 project are progressing with bidders' pre-qualification applications received. A US\$40 million fund for Afghanistan through the Afghanistan Reconstruction Trust Fund administered by the World Bank is under preparation for the community support programs of the CASA-1000 project.

8. TUTAP/Afghanistan Power Sector Master Plan. The Tajikistan/Afghanistan and Uzbekistan/Afghanistan 220kV interconnections exist and are in operation supplying island network in Afghanistan. The Turkmenistan/Afghanistan 500 kV interconnection (to be initially operated at 220kV) is under implementation with Turkmenistan 500kV line under construction (to be completed in 2014) and bids for Afghanistan component under evaluation with contract awards expected in Q4 2014. Within Afghanistan, implementation of the North-South 500kV project is underway after the Asian Development Bank (ADB) approval of the project in November 2013. Financing of the first 500MW high voltage direct current back-to-back converter station and extension of the 500kV Afghanistan-Turkmenistan interconnection, with full interconnection then to be operated at 500 kV, is planned for the ADB Board consideration in Q4 2014.

9. **Next Steps:** Concerns need to be addressed related to the Afghanistan power system requirement, as both CASA-1000 supported by World Bank and TUTAP supported by ADB, will affect the Afghanistan power system configuration. There is a need for the Afghanistan government through its Ministry of Energy and Da Afghanistan Breshna Sherkat (DABS) to synchronize the power system requirements through an addendum of the Afghan Power Sector Master Plan. The Afghanistan Power Sector Master Plan, financed by ADB, was completed in 2013. An addendum to the Afghanistan Power Sector Master Plan to ensure optimum compatibility between TUTAP and CASA-1000 is under preparation by ADB. The draft Final Report will be completed by end of July 2014, and the results are

to be presented at the next Energy Sector Coordinating Committee (ESCC) meeting in September 2014.

Element 2: Resolving Regional Energy Dispatch and Trade Issues

10. **Action Initiated:** USAID through RESET also commissioned a study by Energy System Researches LLP,¹ which examined the conditions of parallel operation of the power systems of South Kazakhstan, the Kyrgyz Republic, and Tajikistan taking into account the proposed construction of new transmission facilities within the CASA-1000 project and their impact on steady-state and transient stability of the Central Asia Interconnected Power System. The report containing the conclusions of the study and recommendations for measures to mitigate potential problems was completed in late March 2014.

11. The World Bank program “Enhancing Central Asia Regional Power Trade and Cooperation” aims to promote energy and/or power trade and integration between Central Asia countries with a view to increase efficiency of their respective power systems, enhance reliability and security of electricity supply, reduce power shortages, and avoid greenhouse gas emissions. The program will be implemented in two phases: (i) phase 1—fact-finding and data analysis, and (ii) phase 2—implementation of specific activities identified in phase 1. Phase 1 was completed in April 2014, while phase 2 will take place between May 2014 and June 2015.

12. **Next Steps:** The USAID will conduct more training seminars until the conclusion of the RESET program on 30 September 2014. USAID-RESET, in partnership with the CAREC Institute and ADB, co-sponsored the Energy Efficiency Training Seminar in Kuala Lumpur, Malaysia on 28–30 May 2014 and is considering the possibility of co-sponsoring another CAREC capacity building activity in the second half of 2014.

13. The World Bank conducted consultations with power sector counterparts of the four Central Asian countries (Kazakhstan, Kyrgyz Republic, Tajikistan, Uzbekistan), as well as the power sector Regional Coordination Dispatch Center, based in Tashkent, on 24 March– 1 April 2014 with a view to discussing issues and options for Central Asia power trade and identifying priority issues and areas for assistance. The outcomes of the consultations were presented at the ESCC on 2–3 April 2014. The ESCC meeting agreed with the proposed next steps.

Element 3: Managing Energy-Water Linkages

14. **Action Initiated:** Several activities, including energy sector vulnerability to climate change, “Basin Economic Allocation” and AraIDIF demonstration models,² and Central Asia energy and water knowledge data portal and network, are being initiated by the World Bank. At the ESCC meeting in April 2014, the Hydropower Sustainability Assessment Protocol was presented with the aim of informing CAREC members of the tool and possibilities for training.

15. **Next Steps:** Further updates on ongoing activities will be presented by the World Bank in subsequent meetings of the ESCC. All development partners were encouraged to make available data and/or studies on energy vulnerability to climate change and related topics through the CAREC website.

¹ A LLP is a limited liability partnership in which some or all partners have limited liabilities.

² AraIDIF is a dynamic information framework which was built under Central Asia Energy Water Development Program as the engine for decision support.

Element 4: Mobilizing Funds for Building Energy Assets

16. **Action Initiated:** The CAREC SOM in October 2013 endorsed the proposed ADB technical assistance (TA) of the CAREC Power Sector Financing Roadmap covering all 10 CAREC member countries. The TA aims to assess the capacity and willingness of CAREC countries to finance power infrastructure development from their own resources, and examine other potential sources of financing, for both national and cross-border projects. The project concept was approved and funding requirement of US\$1.5 million will be sourced from ADB TA Special Fund and the People's Republic of China Regional Cooperation and Poverty Reduction Fund.

17. **Next Steps:** ADB will work on securing TA approval by end of June 2014 for the TA, and provide regular updates on the TA in subsequent ESCC meetings. Physical completion of TA is targeted by December 2015.

Element 5: Implementation of Energy Sector Priority Projects

18. **Actions Initiated:** The priority project list will be compiled and regularly updated, based on the national investment plans of the member countries. This document will be an ESCC working document, and will not be discussed at the higher levels of the Overall Institutional Framework of the CAREC program. The 17th ESCC meeting has tasked the ESCC Secretariat to undertake the compilation and update of the working list, based on country inputs, to aid the assessment of energy sector performance (results framework).

19. **Next Steps:** The ESCC Secretariat is working on compiling the list of energy projects with inputs and information to be requested from CAREC member countries. The information requested from CAREC member countries will focus on the current work plan period of 2013-2015 and the next period of 2016–2020.

Element 6: Capacity Building and Knowledge Management

20. **Action Initiated:** The CAREC SOM in October 2013 endorsed the proposed energy sector capacity building and knowledge framework program for 2013–2015 under the umbrella of the CAREC Institute, wherein one substantial event is envisioned per year for 2014–2015. The CAREC Secretariat also committed to implement improvements on the CAREC website energy page and transform the page into a platform for maintaining and disseminating available information on the energy sector.

21. During the 17th ESCC Meeting, USAID presented its completed, ongoing and future national and regional activities under its RESET Program. The CAREC Secretariat reported on its energy sector capacity building and knowledge framework program which includes three proposed capacity building/knowledge sharing events scheduled for 2014:

- Energy Efficiency Training Seminar: Central and West Asia Region (28–30 May 2014, Kuala Lumpur, Malaysia), co-sponsored by USAID through RESET program;
- Training Seminar on Regional Trade and Cooperation (August 2014, Manila, Philippines); and
- Capacity building and knowledge sharing activity (September 2014) combined with the 18th ESCC Meeting in the People's Republic of China.

22. Country presentations on the development of Kazakhstan's electricity market and status of the Kyrgyz Republic energy system were shared with the ESCC meeting as part of the knowledge sharing component under this element. The United Nations Energy Commission for Europe, the United Nations Economic and Social Commission for Asia and the Pacific, and the United Nations Development

Programme also made a presentation on their respective energy initiatives and meeting encouraged further cooperation between these agencies and the ESCC.

23. **Next Steps:** USAID will continue working on Element 6 beyond the completion of the RESET program in September 2014, coordinating its activities with the CAREC Institute. ESCC will continue to incorporate capacity building and knowledge sharing activities in future meetings to encourage information dissemination and sharing of best practices among member countries.

24. ESCC will continue to strengthen its cooperation with other energy entities such as the Energy Charter, International Energy Agency, International Hydropower Association, etc. especially on improving capacity building and knowledge management events for CAREC countries.

II. KEY ISSUES FOR GUIDANCE BY THE SOM

25. **Commencement of work on developing EWP 2016–2020.** A roundtable discussion among member countries on the ESCC Work Plan 2016–2020 was facilitated, guided by the countries' identification of three priority areas they would want the ESCC to focus on and the ways to eliminate obstacles in these priority areas and/or revision of sector strategies. It was noted that this discussion was the first of several sessions to develop the EWP 2016–2020, in parallel with the Sector Strategy revision. The ESCC Secretariat will incorporate comments from member countries and develop a discussion paper for distribution prior to the next ESCC meeting.

III. CHANGES TO SECTOR ACTION PLAN

26. No changes are proposed.