

**21st CAREC Energy Sector Coordinating Committee Meeting
11-13 April 2016, Islamabad, Pakistan**

MEETING SUMMARY

Agenda Item	Action Taken
Session 1: Updates on the ESCC Energy Sector Work Plan 2016-2020 and ESCC Investment Forum	
<p><u>Element 1: Developing the East-Central-South Asia Energy</u></p> <p>Mr. Omer Rasul, Additional Secretary, Ministry of Water and Power, for CASA 1000 reported on the progress of the different segments of the CASA 1000 project. The presentation highlighted procurement challenges, barriers to regional connectivity and the new initiatives on power import options. Given the current issues being resolved, the expected completion is moved to 2020.</p>	<p>The ESCC noted the updates presented on CASA 1000 TUTAP and TAPI.</p> <p>Comments from member countries:</p> <ul style="list-style-type: none"> - Afghanistan: CASA 1000 should consider a simple, robust and proven technology. - CAREC Institute: CASA 1000 should conduct further evaluation to determine most appropriate technology, explore synergies and incorporate unresolved energy and water issues that might affect the project. - Uzbekistan: The potential price escalation and the seasonality of the CASA 1000 may affect the viability of the project. - Tajikistan: During the implementation of the CASA1000, the parties will comply with water regulations addressing the concerns of all countries in the region. CASA 1000 will not negatively impact the water and energy balance in the region. - Pakistan: The declining oil prices may also affect competitiveness of CASA 1000. <p>Mr. Omer Rasul (Pakistan) expressed that the Power Purchase Agreements reflect the issues raised.</p>
<p>Mr. Qudratullah Delawari, CEO, DABS presented Afghan perspective on unified grid and power synchronization challenges in the region, and shared updates on CASA and TUTAP Power Interconnection Projects. The presentation highlighted the benefits that can be derived for Afghanistan by transit fees and higher electrification rate, through energy trade between the energy rich and energy deficient countries from the Central Asia-South Asia Connectivity. A number of options were discussed to further strengthen regional power market by bulk power transfers from Turkmenistan into Afghanistan and Pakistan by building interconnections along TAPI route as well as new off-shoot lines from TUTAP transmission backbone into northern and western Pakistan</p>	<p>A tripartite technical working group will look into various options adopting a phased approach, and recommend priority list of such interconnection by October 2016.</p>
<p><u>Element 2: Promoting Regional Electricity Trade and Harmonization</u></p> <p>The World Bank, through Mr. Yuriy Myroshnychenko, (Senior Energy Specialist), presented the results of the study conducted by AF Mercados on Regional Power Trade.</p> <p>According to the study, a total of USD 6.4 Billion in total benefits can be derived from efficient energy trade for 2010 – 2014. The study also confirms that the current situation is costly for the four countries (Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan).</p>	<p>World Bank will share the final report to the ESCC.</p>

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<p>According to Mr. Yuriy Myroshnychenko, only 2,500 GWh is being traded currently compared to the 25,000 GWh that was traded in the 1990s. He also confirmed that the study is limited to Central Asia countries only.</p> <p>The study also proposes near-term, medium-term and longer-term steps leading to an efficient energy trade.</p>	
<p><u>Element 3: Managing Energy-Water Linkages (Issues and Future Areas for Cooperation)</u></p> <p>A discussion on energy-water linkages was facilitated by Mr. Yuriy Myroshnychenko, Senior Energy Specialist of World Bank.</p> <p>The ESCC recognizes the importance of energy and water as resources as well as the impact of climate change on these resources.</p>	<p>It was suggested to include climate change either as a sub-component of Element 3 or as a new Element. The ESCC agreed to raise this at the next Senior Officials Meeting in July 2016.</p> <p>Aral Sea Group will be invited in future meetings to serve as resource for water resource management.</p> <p>ESCC to explore use of climate change simulation model to understand impact of climate change in the region. This could be done by developing climate change simulation based on the works in other regions.</p>
<p><u>Element 4: Mobilizing Financing for Priority Projects</u> ADB-funded consultants, PricewaterhouseCoopers, presented the initial results of the Study for Power Sector Financing Road Map (ADB RETA-8727).</p> <p>The results presented include:</p> <ul style="list-style-type: none"> - Priority project selection criteria - Investment requirements for the priority projects and potential funding sources - Barriers to private investments and mitigation measures <p>According to the study, the estimated investment requirement of CAREC member countries (excluding PRC) between 2017 and 2023 is USD 118 Billion.</p>	<p>The consultant team will share country-specific summaries (presentation) and reports to CAREC energy focal points (each country will receive only its own summary and report). Each country will confirm the assumptions and the project list.</p> <p>The project list will be disclosed publicly through the CAREC website and will be part of the information to be shared with investors as part of the ESCC investor's forum.</p>
<p><u>Renewable Energy Resource Mapping, Pakistan</u> Mr. Anjum Ahmad, Senior Energy Specialist of World Bank presented the initial results of the Renewable Energy Resource mapping in Pakistan. Focused on biomass, solar and wind mapping, the outputs of this initiative can be used as reference data for planning and developing renewable energy projects.</p>	<p>The ESCC appreciated the informative presentation.</p>
<p><u>Element 5: Capacity Development and Knowledge Management</u></p> <p>The Capacity Building and Knowledge Management (2016-2020) is focused on four themes:</p> <ul style="list-style-type: none"> - Knowledge sharing, - Technology adoption, - Regulatory issues, - Training <p>ADB, through Mr. Sohail Hasnie presented the learnings from the CAREC Workshop on New Technologies which covered energy efficiency and renewable energy development, smart metering and battery energy storage system.</p> <p>Each country also presented their learnings and their</p>	<p>The ESCC has defined the following as possible learning areas for future capacity development activities:</p> <ul style="list-style-type: none"> - Energy efficiency and conservation on both supply and demand sides - Regulatory issues - Tariff setting - Knowledge sharing on high voltage transmission design <p>The ESCC also discussed an idea of Regional/CAREC level efficiency standards.</p>

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<p>ideas/suggestions for future capacity development activities</p> <p>Learnings presented by the country representatives:</p> <ul style="list-style-type: none"> - Mongolia: Energy efficiency initiatives and policies, tariff regulation, and promoting renewable energy. - Tajikistan: Renewable energy, management of technical issues, financing projects. - Uzbekistan: Power metering, power storage and demand management. - Afghanistan: Recognizes CAREC as a venue for sharing of ideas. They are also focused on demand management and energy efficiency. <p>Kazakhstan and Uzbekistan representatives also shared their experience and status of renewable energy fixed tariffs (KAZ) and advanced metering (UZB).</p>	
<p><u>ESCC Investment Forum</u></p> <p>ADB, through Mr. Sohail Hasnie presented the key objectives ESCC Investment Forum:</p> <ul style="list-style-type: none"> - showcase successes - identify regulatory gaps for investing in the energy sector - understand incentives from attracting private sector interest (local & international) - forge possible financing partnerships <p>The investment forum will bring together potential investors, energy companies, financial institutions, development partners and government officials.</p> <p>Panel discussions, parallel sessions and one-to-one sessions will be organized as part of the 2-day event. The forum will also cover new technology demonstrations, discussion macro-economic climate, and investment opportunities.</p> <p>Ms. F. Cleo Kawawaki emphasized the ESCC investment forum can be a showcase of CAREC countries as a collective market.</p> <p>Comments from country representatives:</p> <ul style="list-style-type: none"> - Azerbaijan: There is a need to prepare a list of projects before the forum. - Uzbekistan: Willing to explore energy saving technologies. - Kazakhstan: Expressed that from their experience, investors look at the return on investment of projects and requires government guarantee. - Tajikistan: A framework for identifying priority projects should be define. - Afghanistan: Risk guarantee instruments from ADB 	<p>The ESCC agreed that the investment forum is essential and it is fully supported.</p> <p>The ESCC also agreed on the participants, objectives, duration, forum design and elements.</p> <p>The ESCC agreed that the output of the Study for Power Sector Financing Road Map (PWC) will be used as preliminary data to develop the project list per country and that this will be made available to the investors before the investment forum.</p> <p>It was suggested that a 2-day workshop is organized on the sidelines of the Senior Officials Meeting in July 2016 to finalize each of the countries marketing to investors.</p>
Session 2: Energy Sector Output Indicators	
<p><u>Element 6: Promoting and Prioritizing Clean Energy Technologies</u></p> <p>ADB, through Mr. Sohail Hasnie presented details of two</p>	<p>Comments on LED public lighting:</p> <ul style="list-style-type: none"> - Afghanistan: If the efficiency of LED is already established, a pilot may not be required anymore. - Uzbekistan: Replacement of conventional bulbs with

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<p>Regional Technical Assistance for approval</p> <p><u>Regional Technical Assistance #1: Increase Electricity Access Using Off-grid Solar Power and New Technology</u></p> <p>The Project will develop studies, workshops, financial and technical package, including:</p> <ul style="list-style-type: none"> - 100 off-grid solar kits distributed to 5 of the CAREC member countries; - Open source design available for developing new businesses by private sector; and - Hands-on training and technical materials developed and distributed through social media and other appropriate channels. <p><u>Regional Technical Cooperation #2: Leapfrogging of Clean Technologies in CAREC Countries</u></p> <p>The Project will develop studies, workshops, financial and technical package, including:</p> <ul style="list-style-type: none"> - Demonstration of select new technologies; - Open source design available for developing new businesses by private investors and entrepreneurs; - Recommend an enabling framework on new technologies regulation and accreditation; - Trainings and capacity building on new technology planning and forecasting; - Establishment of Central Asian Regulators' Network and associated training of the regulators; and - Establish technology partnerships. 	<p>LED is already underway.</p> <p>Comments on electric vehicles</p> <ul style="list-style-type: none"> - Afghanistan: Interested in electric tricycles/rickshaws - Azerbaijan: There is a need for more public awareness campaign on the use of electric vehicles. - Uzbekistan: Concerned on leasing electrical buses, particularly, cost of maintenance, recovery period. - Pakistan: Adoption of cleaner technologies is largely influenced by cost. - Kazakhstan: Interested in piloting electric car/ buses. - Turkmenistan: Electric vehicles will not be feasible for areas where fuel is cheaper. <p>ADB will take account of the comments of the ESCC.</p>
<p><u>Energy Sector Output Indicators and Country Summary Data</u></p> <p>The following countries presented their respective performance indicators</p> <ul style="list-style-type: none"> - Azerbaijan - Kazakhstan - Mongolia - Tajikistan - Turkmenistan - Uzbekistan 	<p>Mr. Yuriy Myroshnychenko suggested countries to provide a general picture of the national energy and trade situation, legal and regulatory framework.</p> <p>ESCC Secretariat will send a summary and additional data request by end of April. Countries to submit requested information by end of May.</p>