



DRAFT

Outline of Energy Work Plan (EWP) for 2016-2020

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Topics for Discussion

- Background
- Proposed changes to the Energy Work Plan
- Proposed Energy Work Plan for 2016-2020
- Discussions and Conclusion



Evolution of the Energy Work Plan

EAP 2010-2013

- Energy Demand/ Supply Balance and Infrastructure Constraints
- Regional Dispatch and Regulatory Development
- Energy-water linkages

EWP 2013-2015

- Developing the Central-South Asia Corridor
- Resolving regional energy dispatch and trade issues
- Managing energy-water linkages
- Mobilizing funds for building energy assets
- Implementation of energy sector priority projects
- Capacity building & knowledge management

Progress since 2013

- Construction & procurement of several projects under TUTAP initiative
- Addendum to AFG Power Sector Master Plan complete
- Finalized prices and all commercial issues related to CASA PPAs and Master Agreement
- CASA procurement for key packages commenced
- Study of potential impacts of CASA-1000 on CAPS stability and parallel operation of regional power systems
- Identification of technical/methodological barriers facing regional power trade
- Energy Sector Vulnerability to Climate Change Study
- Energy-water modeling training
- Central Asia energy water knowledge data portal & network.
- TA for CAREC Power Sector Financing Roadmap Study approved
- Consultants have been engaged and started to work
- Inputs from CAREC member countries have been consolidated to create a list of priority projects
- ESCC agreed that the project list is only shared at ESCC level
- Seminars and workshops on regional energy trade and energy efficiency were conducted
- Energy Page on CAREC website was improved

CAREC 2020

Strategy for Regional Cooperation in Energy

Interim feedback from CAREC members

Common Priorities among CAREC Countries	1	2	3	4	5	6	7	8	9	10
New generation and/or transmission/distribution capacity	X		X	X	X	X	X	X		X
Rehabilitation or modernization of assets		X	X	X	X		X		X	
Legal/regulatory reform	X	X	X	X					X	
Increasing renewable energy generation		X	X	X		X			X	
Improve sector management/ capacity building	X			X		X			X	X
Regional cooperation/power trade			X	X			X			
Reduce losses		X	X			X				
Increase private sector participation	X				X					
Energy efficiency				X				X	X	X
Common Challenges among CAREC Countries										
Energy Security and reliability	X			X	X	X	X			
Lack of funding	X		X		X		X			
Shortage of human resource capacity and management	X			X		X			X	
Energy intensity (high losses; inefficient generation)		X	X							
Aging Assets			X	X						

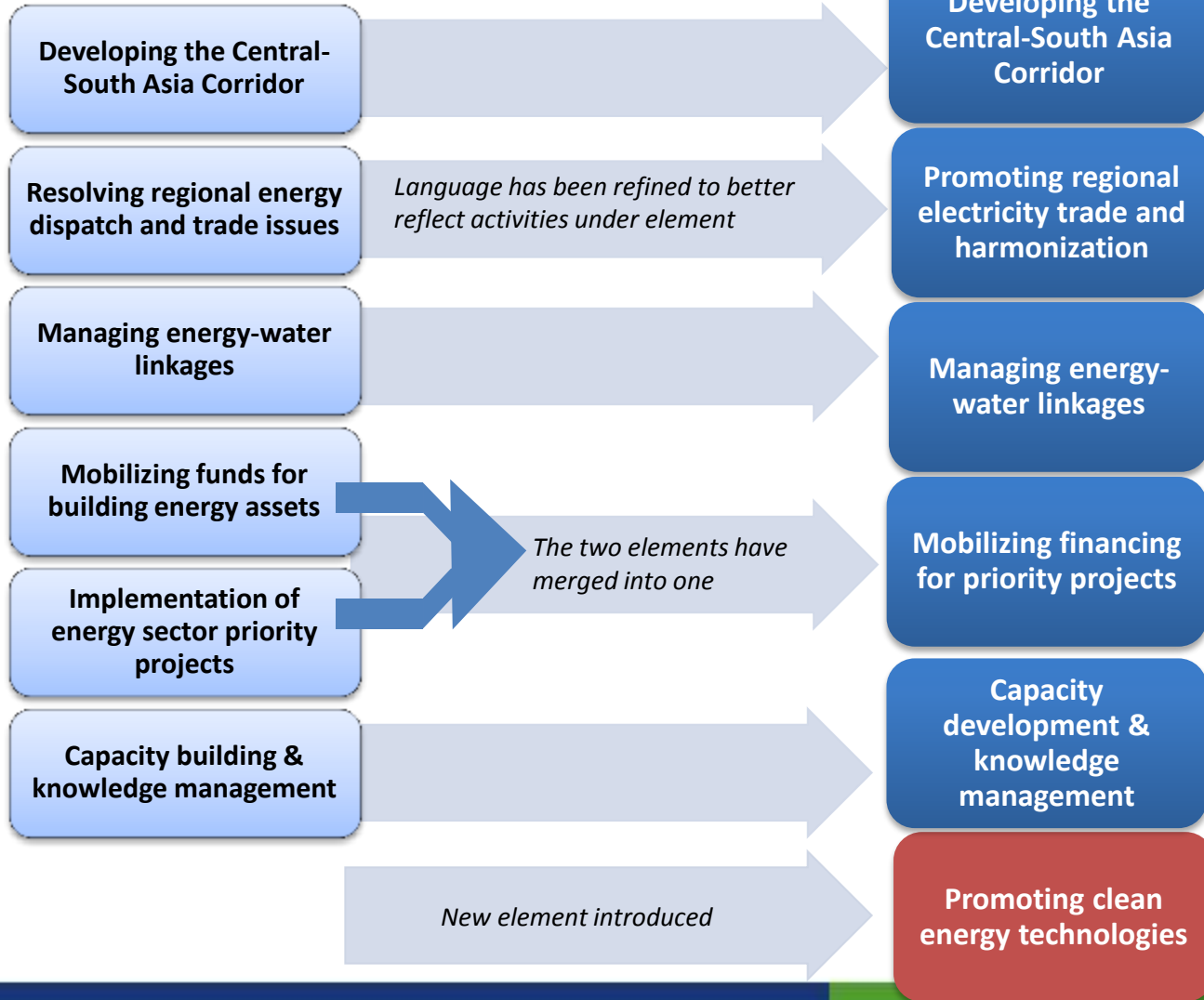


* Turkmenistan did not provide interim feedback on challenges

Proposed Changes to the Energy Work Plan

EWP 2013-2015

EWP 2015-2020



Energy Work Plan (2013-2015) Updates

Element	Progress	Action Points
<p>Element 1: Developing the Central-South Asia Corridor</p>	<p><u>CASA-1000 Project</u></p> <ul style="list-style-type: none"> • Finalized prices and all commercial issues related to PPAs and Master Agreement • Approx. 75 % financing approved (WB, USG, EIB) • Procurement commenced for key packages: <ul style="list-style-type: none"> • Received proposals for the Owner's Engineers; • Launch of bidding for 2 major packages (AFG Transmission Line-longest section of DC line- and the HVDC converter stations and O&M package) <p><u>TUTAP</u></p> <ul style="list-style-type: none"> • Completion of addendum to the AFG Power Sector Master Plan considering impact of CASA-1000 on future AFG development needs • Turkmenistan/Afghanistan 500 kV interconnection is under implementation <ul style="list-style-type: none"> • Construction of Turkmenistan 500kV line (est. completion: 2019) • Bids for Afghanistan component under evaluation (contract targeted to be signed end-May, 2015) • On-going implementation of the North-South 500kV project in AFG 	<ul style="list-style-type: none"> • World Bank and ADB to continue to report on project updates in subsequent meetings
<p>Element 2: Promoting regional electricity trade & harmonization</p>	<ul style="list-style-type: none"> • Completion of study on potential impacts of CASA-1000 on Central Asia Power System stability and on conditions of parallel operation of power systems of South Kazakhstan, the Kyrgyz Republic and Tajikistan • Consultations, fact-finding and data analysis under the TA to Enhance Central Asia Regional Power Trade and Cooperation, which led to the identification of technical and methodological barriers facing regional power trade • Completion of training seminars 	<ul style="list-style-type: none"> • Support removal of technical and methodological barriers to trade • Hold regular workshops on regional power trade issues

Energy Work Plan (2013-2015) Updates

Element	Progress	Action Points
Element 3: Managing energy-water linkages	<ul style="list-style-type: none"> Initiation of: <ul style="list-style-type: none"> Energy Sector Vulnerability to Climate Change Study, energy-water modeling training, and Central Asia energy water knowledge data portal & network Presentation on the Energy Sector Vulnerability to Climate Change Study was given at the ESCC meeting in September 2014. 	<ul style="list-style-type: none"> Updates on ongoing activities will be presented by World Bank in future ESCC meetings Make data/studies on energy vulnerability to climate change and available through the CAREC website.
Element 4: Mobilizing financing for priority projects	<ul style="list-style-type: none"> TA to develop CAREC Power Sector Financing Roadmap was approved and consultants have been engaged. Each member country has compiled the list of medium-term priority projects based on 10-year (2013-2022) national investment plans. Required investment for the priority projects is estimated to be: 	<ul style="list-style-type: none"> Complete Power Sector Financing Roadmap Identify reform actions for creating enabling investment environment and promoting private participation Catalogues of potential PPP projects

Required investment for priority projects (2013-2022), by country*

<i>Million USD</i>	AFG**	KAZ	KYR	TAJ	UZB	CDC	Trans-boundary	Total
Required investment	10,000	16,075	7,300	4,150	7,800	10	552	45,900

* Source: CAREC Power Sector Master Plan

** Estimated investment needs for Afghanistan are based on the AFG Power Sector Master Plan and encompass the period from 2013-2032

Energy Work Plan (2013-2015) Updates

Element	Progress	Action Points
<p>Element 5: Capacity development & knowledge management</p>	<ul style="list-style-type: none"> • SOM endorsed the energy sector capacity building-knowledge framework program (2013-2015), wherein one substantial event is envisioned per year for 2014-2015 • Completion of capacity building and knowledge sharing activities, including: <ul style="list-style-type: none"> ➤ Visits to Kapchagai Solar Power Station; Malaysian Greentech Corporation; Changping HVDC Demonstration Project; Sihui Electric Bus Charging/Battery Swapping Station; and Philippine Wholesale Electricity Supply Market ➤ Presentations on renewable energy in CAREC countries and electricity market development in Kazakhstan and status of the energy system in Kyrgyz Republic ➤ Energy Efficiency and Regional Energy Trade workshops ➤ The UNECE, UNESCAP and UNDP presented on their energy initiatives and the Energy Charter Secretariat provided a briefing on regional cooperation in Energy Charter framework • Improvement of Energy Page in CAREC website 	<ul style="list-style-type: none"> • ADB will prepare possible capacity building and knowledge sharing activities for 2015, and will improve coordination with other agencies for possible partnerships on events • Incorporate capacity building-knowledge sharing activities in future ESCC meetings • Strengthen links with other energy entities such as the Energy Charter, IEA, International Hydropower Association, etc. • 3-day workshops in June 2015 to target participants from Ministry of Finance, Ministry of Energy and chief engineers from utility companies
<p>Element 6: Promoting clean energy technologies</p>	<p><i>Action points only</i></p>	<ul style="list-style-type: none"> • Develop knowledge products and pilot projects • Identify projects that are proven elsewhere (scale-up) • Complete technical exhibitions/ study tours

Discussion and Conclusion

EAP 2010-2013

Energy Demand/Supply Balance and Infrastructure Constraints

Regional Dispatch and Regulatory Development

Energy-water linkages

EWP 2013-2015

Developing the Central-South Asia Corridor

Resolving regional energy dispatch and trade issues

Managing energy-water linkages

Mobilizing funds for building energy assets

Implementation of energy sector priority projects

Capacity building & knowledge management

EWP 2015-2020

Developing the Central-South Asia Corridor

Promoting regional electricity trade and harmonization

Managing energy-water linkages

Mobilizing financing for priority projects

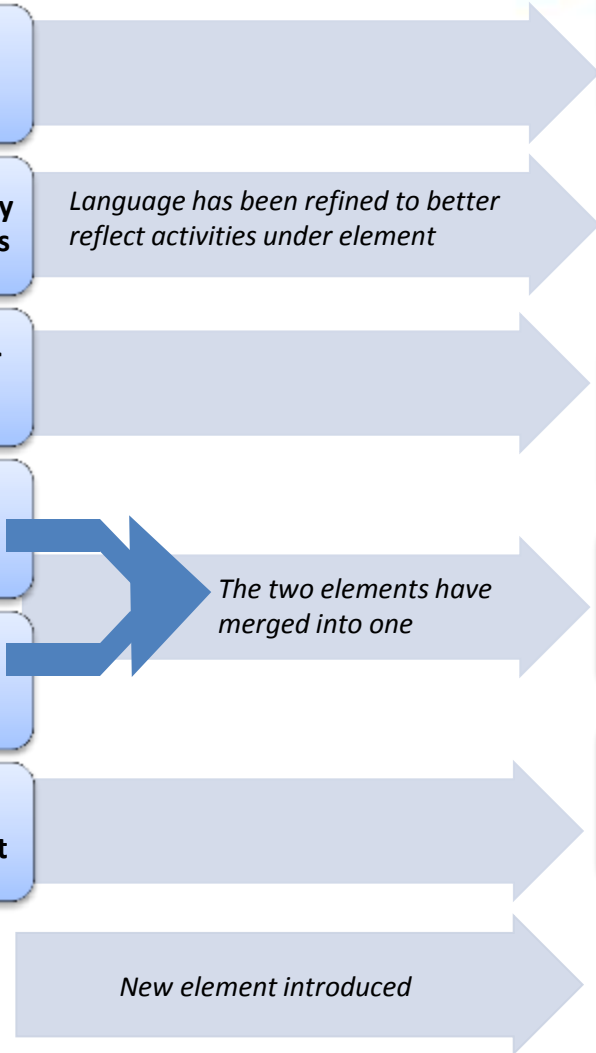
Capacity development & knowledge management

Promoting clean energy technologies

Language has been refined to better reflect activities under element

The two elements have merged into one

New element introduced



Discussion and Conclusion: Next Steps

Element Description	Action Points
Element 1: Developing the Central-South Asia Corridor	<ul style="list-style-type: none"> • World Bank and ADB to continue to report on CASA-1000 and TUTAP project updates, respectively, in subsequent meetings
Element 2: Promoting regional electricity trade & harmonization	<ul style="list-style-type: none"> • Support removal of technical and methodological barriers to energy trade identified under the TA to enhance regional power trade and cooperation • Hold regular workshops on regional power trade issues
Element 3: Managing energy-water linkages	<ul style="list-style-type: none"> • World Bank to provide updates on ongoing activities in future ESCC meetings • Make data/studies on energy vulnerability to climate change available through the CAREC website
Element 4: Mobilizing financing for priority projects	<ul style="list-style-type: none"> • Complete Power Sector Financing Roadmap • Continue updating priority project list • Review priority project list, including financing modalities • Prefeasibility studies/business cases for priority projects • Request technical assistance from development partners to help with priority project selections
Element 5: Capacity development & knowledge management	<ul style="list-style-type: none"> • ADB to prepare capacity building and knowledge sharing activities for 2015, and work with other agencies for possible partnerships on events • Incorporate capacity building/knowledge sharing activities in future ESCC meetings • Strengthen links with energy entities such as the Energy Charter, IEA, International Hydropower Association, etc. • Hold a 3-day workshops in June 2015 to target participants from Ministry of Finance, Ministry of Energy and chief engineers from utility companies
Element 6: Promoting clean energy technologies	<ul style="list-style-type: none"> • Develop knowledge products and pilot projects • Identify projects that are proven elsewhere (scale up) • Complete technical exhibitions/ study tours

2015-2020 Work Plan

Suggestions and Comments?