

Updates on Energy Sector Work Plan and Strategy

Presentation to SOM

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Current Challenges

- Supply shrinking
- Old infrastructure needs rehabilitation
- Large funding gap
- Increased Regional cooperation needed to maximize benefits



New Challenges

- Technology Changes
- Solar power reaching grid parity
- Super efficient appliances
- Off-grid and on-grid battery storage to improve reliability
- Risk of demand stagnation



Strategies

How to accelerate investment and maximize benefits?

- **Develop and invest in** priority projects
- **Develop** capability and knowledge
- **Demonstrate** leap-frogging technology to lower cost
- **Establish** reliable Regulatory Framework and transparent decision making to attract external investment
- **Adopt policies** to accelerate technology adoption



Energy Sector Coordination



Strategies translated into

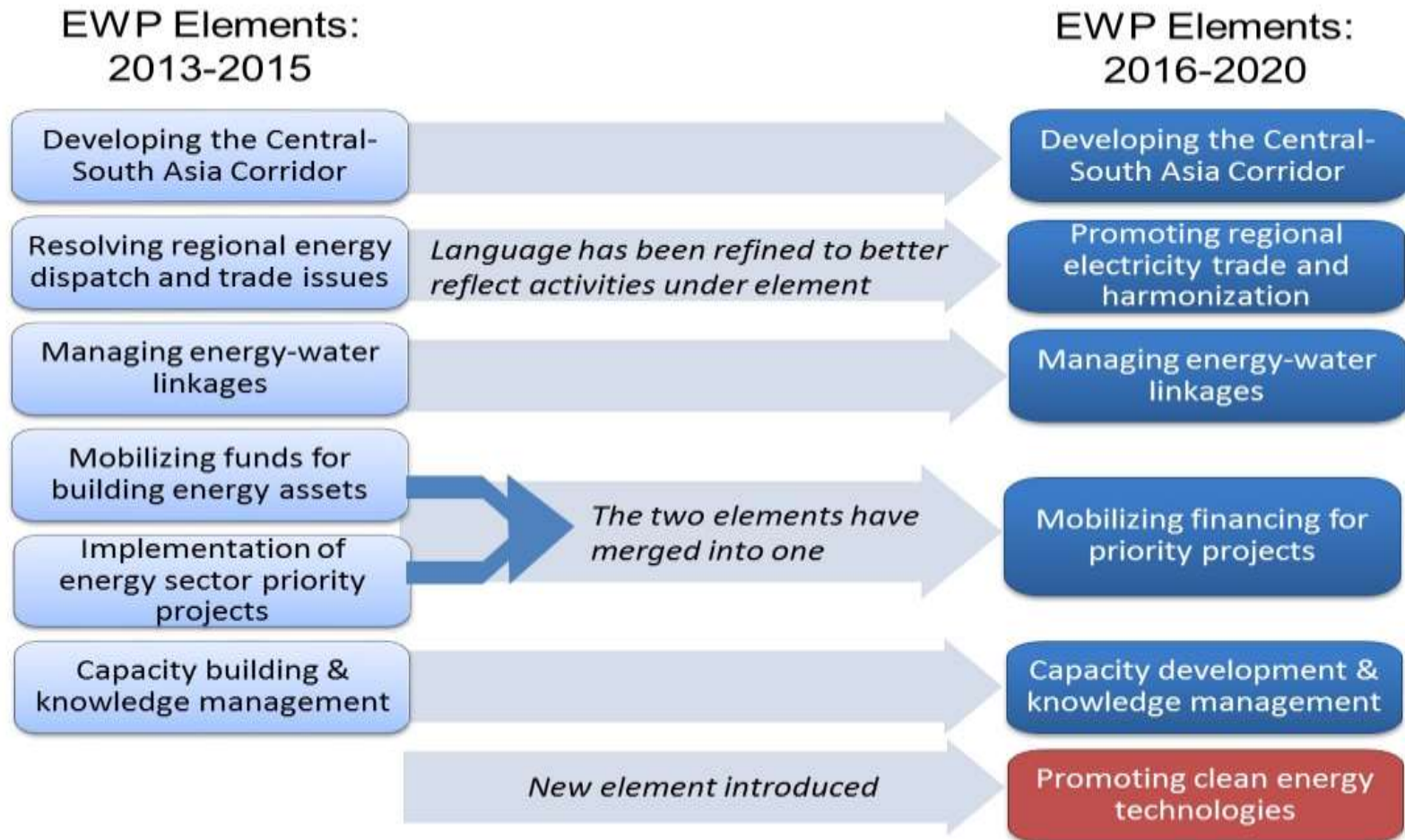
Energy Strategy 2020

Focus:

- Formulate renewable energy and energy efficiency policies
- Invest in cross-border energy transmission
- Facilitate access/transit to third country energy markets
- Develop sustainable energy resources where possible
- Build capacity for energy trade, energy efficiency, new technology and tackling climate change



Workplan update to implement **Energy Strategy 2020**



Capacity Building and Knowledge Management (2016-2020)

Four themes

Knowledge sharing: smart meters, project management, independent regulation, tariff policy, forecasting, planning and energy efficiency

Technology adoption: smart meters, solar power, battery based storage, electric vehicles, and energy efficiency

Regulatory issues: framework for independent regulation, tariff setting for time-of-use tariffs, pre-paid meters, IPP tariffs, and benchmarking

Training: demand management, forecasting, solar power, battery storage, energy efficiency, and management of large projects

Monitoring of Performance: Energy Sector Output Indicators

- Indicators to capture performance of completed projects' contribution to energy security, energy efficiency, and power trade

Indicator	2013 Baseline Value	2014	2015
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		



* Following the 19th CAREC ESCC Meeting, member countries were requested for country data. Total target is developed based on data from ADB and WB projects with support of the member countries.

Results Framework

Monitoring of Performance: New Energy Sector Output Indicators

- Indicators to capture performance of completed projects' contribution to energy security, energy efficiency, and power trade



Indicator	2015 Baseline Value	2016	2017
Wind Power Installed, MW			
Solar Generation Installed, MW			
Electric Vehicle Adoption, Nos			
LED public lighting, km of roads			
Energy Efficiency savings, MWh			

* Following the 19th CAREC ESCC Meeting, member countries have been requested to provide their respective country data and project lists based on which the total target will be derived.

New Technology Training

Tokyo, July 2015



- **Solar power generation** (rooftop, especially for public facilities) and solar micro-grid
- **energy efficiency and demand side management**
- Use of **electric vehicles** (for public fleet) and use of vehicle to home charging as emergency measures
- **Clean coal technology** (removal of Sox, Nox and PM10 from a power plant)



Proposed Investment Projects by Each Country (Based on brainstorming session on 29 July 2015)

Project No.	A. Supply Side	AFG	AZE	KAZ	KGZ	MON	PAK	TAJ	TKM	UZB
1	Solar powered micro-grid for remote areas	X			X					
2	Adoption of clean coal technologies in power generation			X			X			
3	Improve efficiency of solar industry / establish new industry								X	
	B. Electric Vehicle and Storage									
4	Battery based on grid storage for reliability improvement of renewable energy					X				X
5	Electric vehicle pilot for government fleet and public transport	X	X	X			X		X	X
	C. Demand Side and Distribution Efficiency									
6	Demand responses through improved hardware, smart meters and tariffs									X
7	LEDs for public lighting and offices	X	X				X			
8	Solar off-grid to reduce demand from diesel	X			X		X			
9	Distribution efficiency and loss reduction				X		X	X		X
10	Improve load dispatch systems and distribution control within SCADA	X			X			X		X

Status Update:

Ongoing activities:

- Energy Strategy and Energy Work Plan (as an Appendix) combined into one document.
- ESCC endorsement at the 20th ESCC meeting in KL in 7-9 September 2015
- Continue capacity development to leapfrog technology for cheaper and faster systems leading to improved energy security



Status Update:

Proposed activities:

- New **Regional Technical Assistance** to pilot **new technology projects**: combine small markets and attract investors and companies
- Proposed ADB **Technical Assistance to support ASIAN Supergrid + CASAREM grid**
- **ADB and WB** to work on the synergies between the two **CASAREM projects** (TUTAP and CASA-1000)



Leapfrogging...

