Review of the Medium-Term Priority Projects List

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Rationale

11th CAREC Ministerial Conference held in October 2012 (Wuhan, PRC)

One of the priority actions identified is to <u>plan</u>, <u>prepare</u>, <u>mobilize financing</u> for and <u>implement</u> energy priority projects



Approach

ESCC Meeting (June 2013) agreed to circulate draft MTPP list to members for review and comments. Each country is expected to:

- Update project list based on confirmation of national and regional priorities (taking into account project prioritization plan in RPMP; and
- Indicate, where needed, concerns on projects identified by other countries.



Criteria

MTPP list should include projects:

- In CAREC countries interconnected with the grid(s) of other CAREC countries;
- With financing approved in 2013-2015;
- Involving installation of new generation or high-voltage transmission assets, or sizable rehabilitation of such assets

Criteria (continued)

- Impacting on power trade between CAREC countries interconnected by high-voltage transmission lines:
 - New or rehabilitated generation units of 50 MW or above; and
 - New or rehabilitated transmission lines or substations of 220 kV or above.



Draft MTPP Circulated to CAREC Countries



Table 1. Generation (including Renewable Energy)

Country	Project Name	Total Amount (\$ million)	Project Start Year	Remarks
UZB	Takhiatash CCGT Power Generation Project	300	2013	510 MW
UZB	Samarkand Solar Power Project	310	2013	100 MW
TAJ	Golovnaya HPP Rehabilitation Project	150	2013	
TAJ	Construction of Nurabadskaya Hydropower Plant 2	400	2014	
TAJ	Construction of Shurobskaya Hydropower (Phase 1)	600	2014	
TAJ	Nurek HPP Rehabilitation Project	900	2015	
TAJ	Kairakum HPP Rehabilitation Project	120	2014	
UZB	Solar Power Development Project II	300	2015	
KAZ	Modernization of Shardara Hydropower Plant	102	2013	
KGZ	Toktogul Rehabilitation Phase 2	190	2014	
KGZ	Bishkek Combined Heat and Power Plant	380	ТВА	Chinese investment
TKM	Zerger 400MW	290	2014	
4				

4,042

Total

Country Project Name Total Amount (\$ million)

North-South Power Transmission

Dushanbe-Obi Garm 500 kV Power

Rehabilitation of Regar 500 kV

Construction of Obi Garm 500 kV

Regar-Sangtuda1 500 kV Power

Transmission Improvement Project

Enhancement Project (NEPS II)

Energy MFF II: Tranche 1

Energy MFF II: Tranche 2

Transmission Project

Transmission Project

KAZ Transmission Project

Total

Substation Project

Switchyard

AFG

AFG

AFG

AFG

TAJ

TAJ

TAJ

TAJ

UZB

KAZ

Energy Sector Development Investment
Program: Tranche 5

Table 2. Transmission

53

220

400

250

130

32

80

50

200

215

1.630

Project

Start Year

2013

2013

2014

2015

2012

2012

2013

2013

2014

2015

Remarks

500 kV substation at Dashte

225 km 500 kV line between

Dashte Alwan and Kabul +

500 kV substation in Kabul TKM 500kV extension to Pule-Khumri, 200 MW back-to-

back convertor station at

along with 4 substations

between Kabul and Kandahar

Takhiatash-Burunni-Ellikala

220kV (Ellikala-Karakal

500kV)

A 350 km 220 kV line

Awlan (NE AFG)

Dashte Alwan

Inputs/comments received from CAREC countries



Country	Comments	Action Taken
AFG	Suggested inclusion of CASA 1000 project in the list of transmission projects for AFG – A 750km high voltage direct current transmission system between TAJ and PAK via AFG together with associated converter stations at Sangtuda (1300MW), Kabul (300MW) and Peshawar (1300MW)	Incorporated but as a regional project
	Suggested inclusion of CASA 1000 project in the list of transmission projects for TAJ Provided further details (i.e., name, amount, start year, size) of TAJ projects:	Incorporated but as a regional project
TAJ	 A. Generation Projects 1. Construction of Nurabadskaya HPP 2 - 200MW 2. Construction of Shurobskaya Thermal Power Station (Phase 1) - 300MW 3. Kairakum HPP Rehabilitation - 150MW 	Incorporated Revalidated by
	 Golovnaya HPP Rehabilitation – 150MW Nurek HPP Rehabilitation – 3850MW 	ADB at: 240MW 3000MW

Country	Comments	Action Taken
TAJ	 B. Transmission Projects 1. Dushanbe-Obi Garm 500kV Power Transmission Project - 2014; 2x100km 500kV line 2. Rehabilitation of Regar 500kV Substation - US\$37million; 2013; replacement of 2 autotransformers, 2x801 MVA 3. Construction of Obi Garm 500kV Switchyard - 2014; 501MVA 4. Regar-Sangtuda1 500kV Power Transmission Project - 115km 500kV line 	Incorporated
UZB	 Inclusion of the following to the list of generation projects for UZB: 1. Extension of Talimajaran TPP with construction of two combined cycle gas turbine units – US\$1280million; 2013; 450MW 2. Extension of Navoly TPP with construction of a combined cycle gas turbine unit – US\$516million; 2013; 450MW 	Incorporated

Country	Comments	Action Taken
	Expressed reservation on the inclusion of the following projects:	Incorporated
	1. <u>Generation</u> – With regard to the construction of the new medium–capacity HPPs (Nurabadskaya HPP 2 and Shurobskaya HPP, Phase 1), they should be excluded from consideration, until the complete information is provided on parameters and transboundary impact, necessary for the making of a concerted decision.	
UZB	2. <u>Transmission</u> – Considering that there is no consensus and any positive international expert assessment of the Rogun HPP construction project, it is inappropriate to include in the proposed Investment Plan the Dushanbe–Obi Garm (Rogun) 500 kV Power Transmission Line with a 500kV substation on Rogun river (Obi Garm SS), which are intended for the output of energy from the Rogun HPP, the construction of which on a transboundary watercourse is disputable.	

Revised Draft MTPP list to be Presented to CAREC SOM/MC in October 2013



Table 1. Generation (including renewable energy) **Total Amount** Country **Project Name Project Start Year** Remarks (\$ million) **UZB** Takhiatash CCGT Power Generation Project 2013 510 MW 300 Extension of Talimajaran TPP with construction of two combined **UZB** 1280 2013 450 MW cycle gas turbine units Extension of Navoly TPP with construction of a combined cycle gas **UZB** 516 2013 450 MW turbine unit

310

150

400

600

900

120

300

102

190

380

290

5,838

Reservation from UZB: With regard to the construction of the new medium-capacity HPPs (Nurabadskaya HPP 2 and Shurobskaya HPP, Phase 1), they should be excluded from consideration, until the complete information is provided on their parameters and transboundary

2013

2013

2014

2014

2015

2014

2015

2013

2014

TBA

2014

100 MW

240 MW

200 MW

300 MW

3000 MW

150 MW

Chinese investment

Samarkand Solar Power Project

Nurek HPP Rehabilitation Project

Kairakum HPP Rehabilitation Project

Solar Power Development Project II

Toktogul Rehabilitation Phase 2

Zerger 400MW

Modernization of Shardara Hydropower Plant

Bishkek Combined Heat and Power Plant

Golovnaya HPP Rehabilitation Project

Construction of Nurabadskaya Hydropower Plant 2

Construction of Shurobskaya Thermal Power Station (Phase 1)

Total

impact, necessary for the making of a concerted decision.

UZB

TAJ

TAJ

TAJ

TAJ

TAJ

UZB

KAZ

KGZ

KGZ

TKM

Note:

Table 2. Transmission

AFG Energy Sector Development Investment Program: Tranche 5 53 2013 500 kV substation at Dashte Awlan (NE AFG)

AFG North-South Power Transmission Enhancement Project (NEPS II) 220 2013 2013 500 kV substation at Dashte Awlan (NE AFG)

225 km 500 kV line between Dashte Alwan and Kabul + 500 kV substation in Kabul

at Dashte Alwan

501 MVA

2 x 100km 500 kV line

115km 500 kV line

TAJ: P = 1300 MW

2014

2015

2014

2013

2014

2013

2014

2015

2014

2014

1. The MTPP lists projects for which financing should be approved in 2013-2015. The MTPP includes generation (50MW or above) and

2. Reservation from UZB: Considering that there is no consensus and any positive international expert assessment of the Rogun HPP

construction project, it is inappropriate to include the project in the proposed Investment Plan with a 500kV substation on Rogun river (Obi Garm SS), which are intended for the output of energy from the Rogun HPP, the construction of which on a transboundary watercourse is disputable.

400

250

130

32

80

50

200

215

270

300

2,200

transmission (220kV or above) projects in CAREC countries with interconnected grid only.

AFG

AFG

TAJ

TAJ

TAJ

TAJ

UZB

KAZ

REG

Note:

Energy MFF II: Tranche 1

Energy MFF II: Tranche 2

Transmission Project

Transmission Project

KAZ Transmission Project

Project

Switchyard

Dushanbe-Obi Garm 500 kV Power

Construction of Obi Garm 500 kV

Regar-Sangtuda1 500 kV Power

Transmission Improvement Project

Total

Central Asia - South Asia Power

Transmission System (CASA 1000)

Rehabilitation of Regar 500 kV Substation

TKM 500kV extension to Pul-e-Khumri, 200 MW back-to-back convertor station

A 350 km 220 kV line between Kabul and Kandahar along with 4 substations

AFG: A 750km high voltage direct current transmission system between

TAJ and PAK via AFG together with associated converter stations at

Sangtuda (1300MW), Kabul (300MW) and Peshawar (1300MW)

Replacement of two autotransformers, 2x801 MVA

Takhiatash-Burunni-Ellikala 220kV (Ellikala-Karakal 500kV)

Group Discussion

