

BRIEF SUMMARY OF PROJECT

Project Name: - Kalisindh Major Multipurpose Irrigation Project District Jhalawar Rajasthan.

Project Proponent :- Chief Engineer Water Resources Zone, Kota
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Through: Executive Engineer, Water Resources Kalisindh Project
Division Jhalawar, Email: eekalisindh.wr@gmail.com

Project Category :- As per MOEF Notification New Delhi 14th September, 2006 Schedule 1 (c) ii, Project lies in '**Category –A**' as CCA of project is 14250 Ha which is $\geq 10,000$ Ha.

Introduction:

Kalisindh Major Irrigation project was conceptualized in year 2004. A preliminary report was prepared & submitted to CWC for approval. CWC during 2006 conveyed in principle approval and thereafter work for preparation of DPR, survey & investigation, necessary Interstate consent from MP etc were initiated.

Looking towards anticipated time required for obtaining necessary sanctions of the project from CWC /other clearances and the emerging water demand of Kalisindh Thermal Power Plant, Government of Rajasthan during 2008 decided to implement the project in two phases so as to meet the timed water requirement of Thermal Power Project in Phase I & thereafter implement complete project after obtaining necessary sanctions from concern agencies.

Phase I of Project: In first phase, dam is constructed so that 54.37 Mcum water can be stored upto EL 316.0 m. Water is impounded in dam during monsoon 2014 & is being provided to Kalisindh Thermal Power Plant Jhalawar for operating their Units I & II (2X600= 1200 MW). Commercial power generation has been started by Kalisindh Thermal power plant and the benefits intended from Phase I of project have been achieved.

Project II Phase: The entire construction of Dam including its foundation, embedded parts etc during 1st Phase have been executed in such way that during 2nd phase, skin plate of 3.25 m height are to be added over existing radial gates & thus water can be stored upto EL 319.25 m & storage of 148.11 Mcum can be achieved. The water reservation/availability after implementation of second phase will be as under:

ANTICIPATED BENEFITS

S. No	Item	First Phase		Second Phase	
1	Gross storage capacity	54.37	Mcum	148.11	Mcum
2	Dead Storage capacity	0.42	Mcum	0.42	Mcum
3	Live Storage capacity	53.95		147.69	Mcum
4	75% dependable yield	139	Mcum	139	Mcum
5	Water Reservation/proposal				
a.	Kalisindh Thermal Project Phase I (2X600=1200 MW)	34	Mcum	34	Mcum
b.	Kalisindh Thermal Project Phase II (2X600=1320 MW)	-		37.38	Mcum
c.	Provision for Drinking water	-		10	Mcum
d.	Provision for Irrigation	-		38.295	Mcum
e.	Center of Excellence (Horticulture & Forestry College)			0.255	Mcum
e.	Agro food park & Industrial Development			1.0	Mcum
e.	Water losses (evaporation & other losses 13%)	7.07	Mcum	18.07	Mcum
f.	Balance Water	12.88	Mcum	0	Mcum
6	Proposed CCA	-		14250	Ha
7	Irrigation facility in Nos villages	-		100	Nos

A- PHASE I OF PROJECT

1. **Environmental Clearance:** As Phase I of the project is an integral part of Kalisindh Thermal Power Project Jhalawar, the environmental clearance of Phase I of project has been included in Environmental clearance for 2X600 MW Kalisindh Coal based Thermal Power Plant in Jhalawar District Rajasthan issued by Ministry of Environment & Forest (IA Division) during 26th meeting of Expert Appraisal Committee held at N Delhi on July 10-11, 2008 in SCOPE Complex N Delhi issued vide file no. J- 13011/80/2007-IA.II (T) dated 26 Feb, 2009. The conditions imposed during environmental clearance have been complied with. The status of compliance of conditions has been included in the Draft TOR for Environmental clearance of Phase II of the project.
2. **Forest Clearance:** Total 29.962 Ha forest land was coming under Phase I of the project. The final clearance for diversion of forest land was issued by APCCF MOEF Regional (Central) Lucknow vide their letter no. F 8 B/Raj/08/06/2009/FC/1731 dated 24.2.2012. The status of compliance of conditions has been included in the Draft TOR for Environmental clearance of Phase II of the project.
3. **Geological Investigations:** The planning of dam was conducted after detailed preliminary geological investigations & entire dam is constructed in consultation with the Geological Survey of India.
4. **Catchment Area, Submergence, Hydrology, Design Flood, Sedimentation studies:** The total catchment area up to dam site is 7547 Sq. Kms out of which free catchment area in Rajasthan is 8,62 Sq.Kms. The area can be examined on G.T sheet No. 45 P, 54D,46M, 55A, 55 B on scale 1: 2,50,000/-.

Hydrology

The hydrology of entire project has been vetted by CWC and intimated vide their letter no 463 dated 31.8.10. The hydrological aspects vetted by CWC & Intimated vide Director Project Appraisal (Central) Directorate CWC N Delhi vide their letter no Raj/29/95 PAC / 463 dated 31.8.10. includes:

Yield at 75% dependability	139 Mcum
Design Flood	32411 cumecs
Sedimentation studies	

5. **Interstate Aspects:** The project involves interstate aspects with M.P. However, the M.P. Government has given its consent vide letter no. 22A/MPS/31/812 Bhopal dt. 2.4.2007.
6. **Construction completed in Phase I :** Following components have already been completed during Phase I of project
 - 955 m long concrete Gravity dam
 - 607 M long central spillway with a 33 nos radial gates of 15 width & 10.0 m height.
 - 348.0 M long Non overflow portion at both flanks
 - Wing walls at both flanks
 - Fish ladder
 - Infrastructure works for O&M of Project

B - PHASE II of Project

1.0 Present Status:

The preliminary report of second phase has been approved by CWC. DPR amounting to Rs 2148.65 crores have been prepared & submitted to CWC for approval vide Chief Engineer SWRPD letter no. 1593 dated 20.8.2015.

2.0 PROJECT PROPOSAL

The major construction activity i.e Dam works has already been completed during Phase I of Project. The entire construction of Dam including its foundation, embedded parts etc during 1st Phase have been executed in such way that during 2nd phase, skin plate of 3.25 m height are to be added over existing radial gates & thus water can be stored upto El 319.25 m & storage of 148.11 Mcum can be achieved.

Hence in Phase II, project includes:

HEAD WORKS

- Raising the height of Radial gates by adding 3.25 m high skin plates over existing gates
- Construction of saddle dam cum head outlet sluice for LMC-1

R&R WORKS: R&R of the persons likely to be affected during Phase II of the project

Canal Works: Canal network with Aqueduct, VRB's, Falls & other enroute structures

Proposed canal Network

Length of Canal System					
SN	CANAL SYSTEM	LENGTH OF MAIN CANAL	LENGTH OF Distributory with minors	Length of minors	No. of Minors/ Sub Minors
		KM	KM	KM	
1	LMC- 1	10.386	0	14.37	8 minor + 2 sub minors
2	LMC- 2	39.455	16.176	58.778	1 distributory, 20 minors & 2 sub minors
3	RMC	17.065	0	8.959	2 minors
	Total	66.9	16.176	82.107	
	G TOTAL canal system	165.18 KM			

SN	CANAL SYSTEM	LENGTH OF MAIN CANAL	CCA	Discharge at Head	Proposed area for irrigation
		KM	Ha	cumecs	
1	LMC- 1	10.386	1670	0.78	Jhalarapatan , Jhalawar district Left bank of Kalisindh river
2	LMC- 2	39.455	10557	4.577	Kanwas , Kota District Left bank of Kalisindh river
3	RMC	17.065	2022	0.901	Asnawar, Jhalawar District Right bank of Kalisindh river

3.0 Submergence Area: The details of submergence are as under:**ABSTRACT OF SUBMERGENCE**

Submergence level	Private Land		Government Land		Forest Land		TOTAL Land		Remarks
	Bigha	Biswa	Bigha	Biswa	Bigha	Biswa	Bigha	Biswa	
Phase I (316.00 m)	4621	10	2504	1	117	0.7	7242	11.7	Already acquired
Phase II (Between 316 to 319.25 m)	6355	214	2283	273	99	34	8737	521	
TOTAL in Bhiga-Biswa	10976	224	4787	274	216	34.7	15979	532.7	
TOTAL IN HA	2781.57	Ha	1215.37	Ha	55.12	Ha	4052.06	Ha	

4.0 Diversion of Forest Land/Wild Life:

The Phase II of Project will also require diversion of forest land in submergence as well as for construction of canal network. The details of land requiring diversion of forest land for dam construction, submergence and canal network is as under:

ABSTRACT OF Land proposed for Diversion

SN	District / Panchyat Samiti	Gram Panchyat	Village	Land already diverted	Required land diversion	Total	Remarks
				Ha	Ha	Ha	
1	Jhalawar/ J. Patan	Piplod	Bhanwarasi	9.558	5	14.558	
2			Banjari	0.194	17.386	17.58	
3		Girdharpura	Bhanwarasa		0.4	0.4	
4		Ruparail	Jetpura		4.78	4.78	
5			Chariya Kheri		1.92	1.92	
6			Pura		2.37	2.37	
7		Ruparail	Ramdi		2.85	2.85	
8		Mandawar	Bhanwariya		4.524	4.524	
9		Kolana	Kherasi		4.005	4.005	
10			Kherkhera		1.389	1.389	
11			Kolana		3.49	3.49	
12			Semeli Patpadiya		0.945	0.945	
13			Guwari kalan		1.17	1.17	
14		Gagron	Kanpura		4.86	4.86	Adjoining to Mukundra National Park
15	Jhalawar /Bakani	Rechwa	Rechwa		3.811	3.811	
16			Devri	19.877	6.702	26.579	
17	Jhalawar / Khanpur	Bishankhedi	chalet		1.415	1.415	
18		Laifal	Hichar		2.4	2.4	
19	Kota/ Sangod	Danta	Danta		0.84	0.84	Adjoining to Mukundra National Park
20			Barkhera		1.95	1.95	
21		Baevaheri	Baevaheri		0.52	0.52	

