

INDIRA SAGAR PROJECT (CANALS)

Introduction:-

Indira Sagar Project (District Khandwa) is a multipurpose key project of M.P. on the Narmada River u/s of Sardar Sarovar Project. It is the only feasible and excellent storage site d/s of Bargi multipurpose project. It is a very important project since the Projects proposed d/s of it i.e. Omkareshwar, Maheshwar and Sardar Sarovar would be able to attain their full potential of irrigation and power generation only after getting regulated releases from ISP.

The project comprises of a 92 m high and 653 m long concrete gravity dam. with a surface power house of 1000 MW installed capacity (8x125) and a 248.65 km long canal to provide Irrigation in 1.23 lakh ha of C.C.A in the districts of Khandwa, Khargone and Barwani. The reservoir is having 7.90 MAF live storage capacity.

The foundation stone of the project was laid by the then Prime Minister late Smt Indira Gandhi on 23.10.1984.

Salient Features:-

The Administrative Approval .has been accorded to the project by GOMP, NVDD vide No. 913/12/245/27/90 dt. 5.11.1990 for an estimated cost of Rs.2167.67 crores at 1988 price level. The latest estimated cost of ISP (Canal) works out as Rs.2808.26 crore at 2006 price level.

NHDC Ltd., a joint venture of GOMP and NHPC, has been entrusted with the responsibility of completing the dam and power house.NHDC has revised the cost of Dam and Power House for Rs. 4209.35 crore.

Main Canal

To provide irrigation facilities in 1.23 lakh ha., a lined gravity flow canal off-takes from reservoir through a 3.4 Km.long Punasa tunnel. The total length of the left bank main canal is 248.65 Km. The main flow canal alignment further passes through 5 tunnels viz Amba, Ahirkheda, Thikri, Kundiyamal and Gulalnia. It is proposed to irrigate 98768 ha. of land through flow canal in Khandwa, Khargone and Barwani districts. The distribution system is also proposed to be lined.

Khargone Lift Canal

The Khargone lift canal is proposed to off take from 79.72 Km of main flow canal. It is 83 Km. long and involves 38 m lift to provide irrigation in 24232 ha. of land in higher areas of Khargone district.

The district wise benefited villages are as under :-

S.No.	District	Proposed irrigation (Lakh Ha.)	No. of Villages
1	Khandwa	0.19	76
2	Khargone	0.68	345
3	Barwani	0.36	150
	Total	1.23	571

Punasa Lift Irrigation Scheme

A provision of future expansion to irrigate about 35008 hact.of land by lift is also considered in the design of Intake component of Indira Sagar Project canal. It will serve the areas around Punasa and Mundi village in command of the earlier proposed Chhota Tawa Project. The Administrative Approval has been accorded to the scheme by the Govt. of M.P. N.V.D.D. vide No. F-2/28/27/2/2005/2817 dated 19.9.2005 for an estimated cost of Rs. 185.04 crores.

Composite Control Structure Cum Canal Head Power House

Punasa LIS is proposed and linked up with the composite control structure at R.D.3045 M. of Punasa Facilities. This work comprises of head regulator and a Canal Head Power House with 3 units of 5 MW each.

Principal features.

Reservoir Levels

TBL (M)	267.00
MWL (M)	263.35
FRL(M)	262.13
MDDL (M)	243.33
Crest level of Spill way (M)	245.13

Canal

(i) Length of main canal (M)	248.65
(ii) Head discharge (Cumec)	160
(iii) Full supply level (M)	239.15
(iv) Bed width (M)	16.4
(v) Full supply depth (M)	9.0

Command Area (lakh Ha)

(i) G.C.A.	2.10
(ii) C.C.A.	1.75
(iii) Irrigated Area	1.23
(v) Annual Irrigation	1.69

Completion schedule:-

The ultimate creation of potential from the project has been planned in three phases as tabulated below.

S.No.	Phase	Canal reach	Proposed Irrigation (Ha.)	Year of completion
1	Phase-I	Main canal from 0 to 71 Km	36100	March-2008
2	Phase-II	Main canal from Km.71 to 206	46800	June-2009
3	Phase-III	Main canal Km.206 to 248.65 & Khargone lift scheme	40100	June-2011

Present Status

Physical:-

- The work of main dam and power house is complete.
- The work of Punasa Facilities is complete.
- The work of main canal upto km 131 has been awarded to various agencies.
- Drawing, Design & estimates work of Main Canal from Km 131 to 150 is under progress.

The position of works is as below:-

(I) Earth work

Main Canal is complete upto Km 107 except forest reach between Km 63 to 67 Km

Main canal from km 107 to Km 131 is in progress.

(ii) Lining

(a) Complete upto Km 58 except in some patches totalling about 2 km

(b) No work is executed in Km 63 to 67

(c) Work is in progress between Km 67 to 82

(d) Lining is complete between Km 82 to 107

(iii) Structures

Km 0- 58

All structures except 1 cross regulators, 1 railway crossing and 1 D.R.B. are complete. These 3 structures are under progress.

Km 58-82

There are total 32 structures. Out of which 15 structures are complete & 7 are under progress.

Km 82-107

There are total 43 structures. Out of which 38 structures have been completed.

Km 107-131

There are total 56 structures in this reach. 1 Structure is in progress.

Distribution Network

- (a) Agencies for distribution network upto Km 71 of main canal covering an area of 36100 Ha. have been fixed and the work is in progress.
- (b) Drawing, Design & estimates work of distribution network from km 71 to 125 is complete. Land acquisition is in progress.

Financial:- Expenditure up to November 07 is about Rs 1120.00 Crores
