

HANDIA (DIMAWAR) HEP (2x27.5 MW)

INTRODUCTION

This project having a installed capacity of 55 MW is located in Sehore District near village Dimawar. The project has an estimated cost of Rs. 699.60 Crores and will generate 326.6 MU energy on completion.

SALIENT FEATURES (As per Draft DPR)

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LOCATION

STATE	:	MADHYA PRADESH
□ DISTRICT	:	SEHORE
□ RIVER	:	NARMADA
□ BARRAGE SITE	:	NEAR VILLAGE DIMAWAR LATITUDE 22°35'20" N LONGITUDE 77°21'10" E
□ NEAREST BG RAIL HEAD	:	BUDHNI (Right Bank- Distance 57km) SEONI MALWA (Left Bank- Distance 27km)
□ NEAREST AIRPORT	:	BHOPAL

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HYDROLOGY

□ CATCHMENT AREA	:	50,548 sq km
□ LOCATION OF CATCHMENT	:	LATITUDE 22°35' N TO 23°45' N LONGITUDE 77°21' E TO 81°45' E
□ AVERAGE ANNUAL RAINFALL	:	1295.2 mm
□ AVERAGE MAXIMUM TEMPERATAURE	:	46.5° C

- AVERAGE MINIMUM TEMPERATURE : 7.40°C
- MAXIMUM OBSERVED DISCHARGE AT HOSHANGABAD G&D SITE (1990-2002) : 26,483 Cumecs
- MINIMUM OBSERVED DISCHARGE AT HOSHANGABAD G&D SITE (1990-2002) : 42 Cumecs

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RESERVOIR

- FULL RESERVOIR LEVEL (FRL) : EL 287.0 m
- MIN. DRAW DOWN LEVEL (MDDL) : EL 286.70 m
- GROSS STORAGE (TENTATIVE) : 354 M Cum
- AREA UNDER SUB-MERGENCE AT FRL : 39.44 sq km (tentative)
- LIVE STORAGE : 9.0 M Cum

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BARRAGE

- TYPE : RCC RAFT FLOOR
- PIER TOP ELEVATION : EL 302.50 m
- CREST ELEVATION : EL 273.50 m
- DOWNSTREAM FLOOR LEVEL : EL 269.00 m
- BRIDGE DECK LEVEL : EL 292.50 m
- LENGTH AT THE TOP : 518.70 m

- THICKNESS OF D/S RAFT : 1.8 m TO 2.3 m
- UPSTREAM FLOOR LEVEL : EL 269.00 m
- UPSTREAM FLOOR THICKNESS : 1.30 m
- THICKNESS OF PIER : 2.50 m
- HEIGHT OF BARRAGE : 25 m (from deepest bed level)

5 SPILLWAY (WEIR)

- DESIGN FLOOD (1 IN 100 YEARS FLOOD) : 37,500 Cumecs
- 1 IN 500 YEARS FLOOD : 47,830 Cumecs
- TYPE : GLACIS
- CREST ELEVATION : EL 273.50 m
- NUMBER & SIZE OF OPENINGS : 29 NOS , 15.3 m X 13.5 m

6 DIVERSION ARRANGEMENT

- TYPE : DIVERSION CHANNEL
- HEIGHT OF DYKES : 9.9 m

7 INTAKE

- SILL LEVEL : EL 255.92 m
- NUMBER & SIZE OF GATE OPENING : 2 NOS , 10.2m (W) X 11.4 m (H)
- TRASH RACK : INCLINED AT 25° (FROM VERTICAL)
- STOPLOGS OPENINGS : 2 BAYS OF 12.70 m X 37.20 m
- STOPLOGS OPENINGS : 1 SET STOPLOGS, 10.2 m WIDE AND 20 m HIGH

8 HEAD RACE CHANNEL

- SHAPE : TRAPEZOIDAL
- BASE WIDTH : 35 m
- LENGTH : 110 m
- WEIR TOP LEVEL : EL 272.00 m

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POWER HOUSE

- TYPE & LOCATION : SUB-SURFACE, RIGHT BANK
- DESIGN DISCHARGE : 200 CUMECS (each unit)
- INSTALLED CAPACITY : 2 X 27.5 MW
- POWER HOUSE : 35 m (W)X 50 m (L) X 47 m (H)
- DRAFT TUBE OPENING : 2 OPENINGS, 9.925 m (W) X 7.3 m (H)
- GROSS HEAD (One unit running) : 14.99 m
- RATED NET HEAD (One unit running) : 14.74 m
- TYPE OF TURBINE : BULB

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IMPORTANT ELEVATIONS

- SERVICE BAY : EL 277.56 m
- MACHINE HALL FLOOR : El 270.56 m
- CENTRE LINE OF M/C : El 261.62 m
- BOTTOM OF DRAFT TUBE : EL 257.97 m
- MIN. TAIL WATER LEVEL (for one machine) : EL 271.91 m

- NORMAL TAIL WATER LEVEL (for two machines) : EL 272.94 m
- MAX. FLOOD LEVEL WITH 1IN 500 YEARS FLOOD OF 47,830 CUMECS : EL 290.0 m

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TAIL CHANNEL

- SHAPE : TRAPEZOIDAL
- BASE WIDTH : 35.0 m
- LENGTH : 86.0 m
- WEIR TOP LEVEL : EL 270.50 m

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SWITCHYARD

- SIZE AND LOCATION : 100 m X95 m AT EL 292.5 m ON RIGHT BANK

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POWER GENERATION

- ANNUAL ENERGY GENERATION IN 90% DEPENDABLE YEAR
 - INITIAL PHASE : 326.60 MU
 - FINAL PHASE : 268.09 MU

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PROJECT COST (AT SEPTEMBER 2006 PRICE LEVEL INCLUDING IDC)

- TOTAL COST : Rs 699.60 Crores

PRESENT STATUS

The work of Survey & Investigation, Preparation of DPR and execution of Handia HEP has been awarded to NHDC. The Draft DPR of Handia HEP has been prepared by NHDC and viability of the project is being assessed.