

SALIENT FEATURES (BASANIA)

Sl. No		
1	State	Madhya Pradesh
2	District	Mandla
3	Latitude	22° 49' 43" N
4	Longitude	80° 29' 01" E
5	River	Narmada
6	Location	50 km from Mandla and 15 km from Mandla-Dindori Highway.
7	Catchment area upto dam site	4836 Sq. km
8	Total Land to be acquired	1724 ha
9	Maximum annual rainfall (1926)	2212 mm
10	Minimum annual rainfall (1966)	682 mm
11	Average annual rainfall	1400 mm
12	Design flood (SPF)	32463 cumecs
13	Probable Maximum Flood	36100 cumec
14	Available runoff at Basania	
	i) At 50% dependability	2624.8 MCM
	ii) At 75% dependability	1576.2 MCM
	iii) At 90% dependability	1177.5 MCM
15	Reservoir data	
	i) Average River Bed Level	452.00 m
	ii) Maximum water level	486.20 m
	iii) Full reservoir level	485.00 m
	iv) Silt Elevation	461.78 m
	v) Minimum Draw Down Level (MDDL)	474.00 m
	vi) Water spread at FRL (Submergence)	1694.00 ha
	vii) Gross storage at FRL	105.20 MCM
	viii) Dead storage (MDDL)	9.21 MCM

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ix)	Live storage	95.99 MCM
x)	Maximum tail water level	454.62 m
xi)	Minimum tail water level	454.50 m
xii)	TWL against Flood	473.53 m
16	DAM	
(A)	Overflow Dam	
i)	Top of dam	488.00 m
ii)	Length of spillway	265.90 m
iii)	Crest level	468.0 m
iv)	Foundation drainage gallery level	446.52 m
v)	Maximum height from deepest bed level	42.50 m
vi)	No. & size of crest gates	13 gates of size 16.30 m x 17 m
vii)	Type of Energy Dissipater	Slopping type Stilling Basin
viii)	Width of road on top of dam including parapets	7.5 m
(B)	Non overflow dam	
i)	Top of dam	E L 488.00
ii)	Length of non-overflow (concrete) dam	LHS 112.15 m RHS 29.70 m
iii)	Length of Earthen dam	RHS 528.00 m
iv)	Maximum height above foundation level	40.00 m
(C)	Power Dam	
i)	Top of dam	EL 488.00
ii)	Length of power dam	40 m
iii)	Maximum height above foundation	40.00 m
iv)	No. & diameter of penstocks	2 No.& 3.10 m dia.
v)	Length of penstock	59.50 m
vi)	Thickness of Penstock liner	10 mm
vii)	Center line level of penstocks at bell mouth intake	466.96 m

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viii)	Design discharge	89.00 Cumecs(44.5 cumecs each)
(D)	Power generation	
i)	Type of Power House	Surface type
ii)	Size of Power House	50.25 m x 25.5 m
iii)	Foundation level of Power House	EL 445.00 m
iv)	No. & size of units to be installed	2 units of 8 MW
v)	Type of turbine	Francis
vi)	Installed capacity	16 MW
vii)	Gross head	25.83 m
viii)	Net rated design head	24.45 m
ix)	Total Head Loss	1.38 m
x)	Size of draft tube gate	3.75 m x 2.5 m
xi)	Size of Tail pool	22.00 m x 33.25 m
xii)	Length of TRC	50 m
xiii)	Size of switch yard	75 m x 100 m
(E)	Total Length of Composite Dam	935.75 m
17	ESTIMATE OF COST	
a	Unit I (Head Works)	
i)	Direct Charges	318.63 crore
ii)	Indirect Charges	5.14 crore
b	Unit II Hydroelectric Installation	
1)	Civil Works	21.65 crore
ii)	Electro mechanical equipments	34.16 crore
iii)	Transmission line	12.0 crore
	Total Cost	391.57 crores
18	Cost per MW of installed capacity (without IDC) chargeable towards hydroelectric installation	5.36 crores per MW
19	Levellised Tariff (Rs./Unit)	Rs. 1.68/ KWh
20	Design Annual Energy Generation (MU)	69 GWh