

SALIENT FEATURES

Sl. No		
1	State	Madhya Pradesh
2	District	Narsinghpur
3	Latitude	23° 02' 00" N
4	Longitude	79° 05' 24" E
5	River	Narmada
6	Location	20 km from Kareli on NH-26, and 16 km from Narsinghpur, near village Pipariya.
7	Catchment area upto dam site	4377 Sq. km
8	Total Land to be acquired	8250.00 ha
9	Maximum annual rainfall (1926)	2008 mm
10	Minimum annual rainfall (1966)	780 mm
11	Average annual rainfall	1390 mm
12	Design flood (SPF)	52200 Cumecs
13	Probable Maximum Flood	67000 Cumecs
14	Available runoff at Chinki	
	i) At 50% dependability	5110.2 MCM
	ii) At 75% dependability	2851.4 MCM
	iii) At 90% dependability	2020.2 MCM
15	Reservoir data	
	i) Deepest River Bed Level	313.08 m
	ii) Maximum water level	341.60 m
	iii) Full reservoir level	340.0 m
	iv) Silt Elevation	321.85 m
	v) Minimum Draw Down Level (MDDL)	336.00 m
	vi) Water spread at FRL (Submergence)	8053.00 ha
	vii) Gross storage at FRL	345.25 MCM
	viii) Dead storage (MDDL)	136.20 MCM

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ix)	Live storage	209.05 MCM
x)	Average Tail water level	321.50 m
xi)	Minimum tail water level	320.00 m
16	DAM	
(A)	Overflow Dam	
i)	Top of dam	343.5 m
ii)	Length of spillway Main River Saddle	264.00 m 374.00 m
iii)	Crest level Main River Saddle	325.00 m 328.20 m
iv)	Deepest Foundation level Main River Saddle Average Foundation Level Main River Saddle	308.26 m 313.06 m 316.00 m 322.00 m
v)	Maximum height from deepest bed level Main River Saddle	35.24 m 30.44 m
vi)	No. & size of crest gates Main River Saddle	12 gates of size 18.0 x 15.0 17 gates of size 18.0 x 11.5
vii)	Type of Energy Dissipater	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 341.50
ii)	Length of non-overflow (concrete) dam along the main spillway LHS RHS	76.0 m 21.0 m

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iii)	Length of non-overflow (concrete) dam along the Saddle spillway LHS RHS	31.0 m 31.0 m
iv)	Maximum height of NOF above foundation level Main Dam Saddle Dam	26.50 m 19.08 m
v)	Length of Earthen dam LHS RHS In between main and saddle dam	381.45 m 171.0 m and 194.0 m 38.23 m and 319.53 m
vi)	Total Length of Earthen Dam	1104.21 m
vii)	Maximum height above foundation level	18.50 m
(C)	Power Dam	
i)	Top of dam	EL 343.50
ii)	Length of power dam	45.00 m
iii)	Maximum height above foundation	28.50 m
iv)	No. & diameter of penstocks	3 No.& 3.80 m dia.
v)	Length of penstock	49.57 m
vi)	Thickness of Penstock liner	12 mm
vii)	Center line level of penstocks at bell mouth intake	328.16 m
(D)	Power generation	
i)	Type of Power House	Surface type at dam toe
ii)	Size of Power House	63.00 m x 175 m
iii)	Foundation level of Power House	EL 312.00 m
iv)	No. & size of units to be installed	3 units of 5 MW
v)	Type of turbine	Kaplan
vi)	Installed capacity	3 x 5 MW
vii)	Maximum net design head	16.85 m
viii)	Design head	16.3 m

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ix)	Total Head Loss	0.86 m
x)	Size of draft tube gate	3.5 m x 4.0 m
xi)	Size of Tail pool	37.50 m x 67.67 m
xii)	Length of TRC	150 m
xiii)	Size of switch yard	75 m x 100 m
xiv)	Design discharge	102.9 Cumecs
xv)	Energy Generation	47 Gwh
xvi)	Power Tariff	Rs. 3.72 / unit
xvii)	90% dependability	38 MU
xviii)	50% dependability	60 MU
(E)	Total Length of Composite Dam	1902.00 m
17	GRAVITY CANAL	
i)	Length	2.5 km
ii)	Design Discharge	67.7 cumec
iii)	Canal FSL at the off take	335 m
iv)	Canal Bed level at off take	332 m
18	LOWER LIFT CANAL	
i)	Length of Flow canal	78.6 km
ii)	Earth work in cutting	328.25 MCM
iii)	Earth work in filling	1712.00 MCM
iv)	Design Discharge at off take	52.2 cumecs
v)	Lift	9 m
vi)	Canal FSL at the off take	344.00 m
vii)	Canal Bed level at off take	341.74 m
viii)	Discharge at tail end	4 cumec
ix)	Bed slope	1:7500
x)	Type of canal	Lined (cement concrete)
xi)	Lining thickness	0.2 m
xii)	Maximum Bed width	18.0 m
xiii)	Water depth at maximum discharge	2.26 m
xiv)	Free board	0.9 m

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xv)	Side slope of canal	1.5:1 (H:V) in cutting
xvi)	Gross command area	68718 ha
xvii)	Culturable command area	57274 ha
xviii)	Total No. of Distributaries	12
19	UPPER LIFT CANAL	
i)	Length of Lift canal	37.4 km
ii)	Earth work in cutting	
iii)	Earth work in filling	
iv)	Design Discharge	15.50 cumec
v)	Lift	18 m
vi)	Pump house bed level	340 m
vii)	Canal FSL at off take	353.0 m
viii)	Canal Bed level at the beginning	351.35.0 m
ix)	Discharge at tail end	0.71 cumec
x)	Bed slope	1:7500
xi)	Type of canal	Lined (cement concrete)
xii)	Lining thickness	0.15 m
xiii)	Maximum Bed width	8.7 m
xiv)	Water depth at maximum discharge	1.65 m
xv)	Free board	0.75 m
xvi)	Gross command area	20311 ha
xvii)	Culturable command area	16705 ha
xviii)	Total No. of Distributaries	14
20	PUMP HOUSE	
i)	Pump type	Metallic vertical pump
ii)	Discharging capacity Unit-I Unit - II	26.1 cumec x 2 7.75 cumec x 2
iii)	Lift Unit – I Unit - II	12.0 m 21.0 m
iv)	Size of Pump House	75 m x 14 m
v)	Delivery pipe dia	

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	Unit – I	3.5 m
	Unit - II	1.5 m
21	Tunnel	
	Type	Lined Modified horse shoe type
	Velocity	2.5 m/sec
	Bed slope	1 in 1000
	Bed width	4.5 m
	radius	2.9 m
	Transition length	
	In convergence	22 m
	In divergence	44 m
22	Overall	
	Total GCA	89029 ha
	Total CCA	73979 ha
	Benefit Cost Ratio	1.59
	Internal rate of return	17.07%
	Cost:	
	Unit – I: Civil Works	781.66 crores
	Unit – II: Canal System	708.80 crores
	Unit – III: Electro-Mechanical Works	40.54 crores
	TOTAL COST	1531.00 crores