

KALIKA DANTU HE PROJECT

SALIENT FEATURES

LOCATION

State	Uttaranchal
District	Pithoragarh
River	Kali (Sarda)
Barrage site	About 1 km u/s of Kalika village and about 200 m d/s of Gothi village
Nearest Airport	Delhi
Nearest rail head	Tanakpur
Location of barrage site	
Latitude	29 ^o 48' 45" N
Longitude	80 ^o 30' 05" E

HYDROLOGY

Catchment area at barrage site	3,385 sq km
Maximum average Discharge at barrage site	238.29 cumec
Minimum average Discharge at barrage site	157.19 cumec

RESERVOIR

Full reservoir level (FRL)	798.0 m
Minimum drawdown level (MDDL)	791.0 m
Gross storage at FRL	3.82 M cum
Live storage	2.50 M cum
Area under Submergence at FRL	46 ha

DIVERSION TUNNEL

Number	No diversion tunnel required for barrage construction
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DIVERSION STRUTURE

Type	Barrage
Top elevation of barrage	800.0m
Height of barrage above Deepest foundation level	26 m (including gate height)

Length of barrage at top	367m
River bed level	775 m
Design flood	14,458.64 cumec

MAIN BAY

Crest elevation	782.0 m
Number	25
Width of each bay	10 m
Total floor length	150 m

UNDER SLUICE BAYS

Crest elevation	778 m
Number	5
Width of each bay	10 m
Total floor length	150 m

INTAKE

Invert level	780.3 m
Number	4
Size of gate opening	5.5 m x 5.5 m
Trash rack	5 spans of 5.5 m each

DESILTING CHAMBER

Number	4
Size	14 m (w) x 21 m (h)
Length	195 m
Design discharge	89.08 m ³ /sec each
Particle size to be removed	0.2 Mm and above

HEAD RACE TUNNEL

Number	1
Size	9.3 m dia
Shape	Horse shoe
Length	5.2 m

SURGE SHAFT

Number	1
Size	25 m dia
Height	77.2 m

PENSTOCK

Numbers	2.
Size	5.75 m dia
Length	461m

POWER HOUSE

Type	Surface
Installed capacity	230 MW
Number of units	2
Power house size	21.5 m x 70.75 m
Type of turbine	Vertical francis
C.L. of turbine	685.0 m
Rated head	99.75 m

TAIL RACE

Size	40 m bed width
Type	open channel
Length	130 m
Design discharge	260.69 cumec
River Bed Level	688.0 m
Normal TWL	693.0 m

SWITCHYARD

Size	200 m x 150 m
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POWER GENERATION

Installed capacity	230 MW
Annual energy generation	
i) 90% dependable year	1067.27 GWh
ii) Energy in 90% year on 95% availability	1039.20 GWh

CONSTRUCTION PERIOD

5 years