

DEODI HE PROJECT (2X 30 = 60 MW)

SALIENT FEATURES

LOCATION

State	Uttaranchal
District	Chamoli
River	Rishi Ganga
Dam site	
Location	D/s of confluence of Trisul Nalla with Rishi ganga
Latitude	30° 26' 01" N
Longitude	79° 40' 0" E
Nearest Airport	Dehradun
Nearest rail head	Rishikesh

HYDROLOGY

Catchment area at dam site	544 sq km
Snowbound catchment area (including area under glacial cover)	369.0 sq km
Maximum average discharge at dam site	60.60 cumec
Minimum average discharge at dam site	3.40 cumec

RESERVOIR

Average Annual runoff	600.50 M cum
Full Reservoir Level (FRL)	El 3449.0 m
Maximum water level (MWL)	3449.0 m
Minimum Drawdown Level (MDDL)	El 3438.0 m
Gross storage at FRL	0.75 M cum
Live storage	0.40 M cum
Area under Submergence at FRL	5.60 ha

DIVERSION TUNNEL

Number	one
Size	3.5 m diameter
Length	300 m
Diversion discharge (assumed)	25.0 cumecs

DAM

Type	concrete gravity dam
Top elevation of dam	El 3451.0 m
Height of dam above river bed level	41 m
Length of dam at top	136.0 m
River bed level	El 3410.0 m

SPILLWAY

Design flood	2100 cumec (PMF)
Type	Ogee with breast wall
Crest elevation	El 3430 m
Number of bays	3
Gate Size	3 of 14.25 m x 12.0 m
Length of spillway	54.75 m
Energy dissipation type	Trajectory type bucket

INTAKE

Invert level	El 3432.0 m
Number	1
Size of gate opening	3.0m x 3.0m
Trash rack	30 F 2.5m x 8.4m

DESILTING CHAMBER

Number	One
Size	120m x 6.0 m x 7.30 m
Design discharge	14.60 cumecs
Particle size to be removed	0.20 mm & above

HEAD RACE TUNNEL

Number	One
Size	2.5 m
Shape	D-Shape
Length	4.80 km
Design discharges	12.13 Cumecs

SURGE SHAFT

Number	1
Size	6 m diameter
Height	75.0 m

PRESSURE SHAFT

Numbers	1
Size	1.70 m diameter
length	595.0 m

POWER HOUSE

Type	Underground
Installed capacity	60 MW
Number of units	2
Power house cavern size	63 m x 21 m x 30m
Type of turbine	Pelton
C.L. of turbine	El 2878.0 m
Rated discharge	12.13 Cumecs
Rated Head	560.33 m

TAIL RACE

Size	3.0 m dia
Type	D-Shape
Length	1030.0 m
Design Discharge	12.13 cumec
River Bed Level	El 2870.0 m
Maximum TWL	El 2875.0 m

SWITCHYARD

Size	Gas Insulated Switchyard (GIS) on the floor above the transformer/s in P/H cavern
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POWER GENERATION

Installed capacity	60 MW (2x30 MW)
Annual energy generation	
i) 90% dependable year	296.76 GWh
ii) Energy in 90% year on 95% availability	287.41 GWh

CONSTRUCTION PERIOD

5 years