

## RISHI GANGA-II HE PROJECT (1x35=35 MW)

### SALIENT FEATURES

#### LOCATION

State	Uttaranchal
District	Chamoli
River	Rishi Ganga
<b>Dam site</b>	
Location	D/S of confluence of Raunthi Gad with Rishiganga river
Latitude	30° 28' 03"N
Longitude	79° 43' 50"E
Nearest Airport	Dehradun
Nearest rail head	Rishikesh

#### HYDROLOGY

Catchment area at dam site	680 sq km
Snowbound catchment area (including area under Glacial cover)	393 sq. km
Maximum average discharge at dam site	69.5 cumec
Minimum average discharge at dam site	4.5 cumec
Average annual runoff	737.30 M cum
Average monsoon runoff	580.16 M cum
Average non-monsoon runoff	156.14 M cum

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## RESERVOIR

Full Reservoir Level (FRL)	2306.7 m
Maximum Water Level (MWL)	2306.7 m
Minimum Drawdown level (MDDL)	2303.0 m
Gross storage at FRL	1.52 M cum
Live storage	0.50 M cum
Area under Submergence at FRL	1.65 ha

## DIVERSION TUNNEL

Number	1
Size	3.5 mØ
Length	230 m
Diversion discharge	25 cumec

## DAM

Type	Concrete gravity
Top elevation of dam	EI 2309.0 m
Height of dam above the River bed	29.0 m
Length of dam at top	112 m
River bed level	EI 2280.0 m

## SPILLWAY

Design flood	2800 cumecs (SPF)
Type	Ogee spillway
Crest elevation	EI 2294 m

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Number of bays	4
Size of Radial gates	11m x 12.7m
Length of spillway	600 m
Energy dissipation	Trajectory bucket

### **INTAKE**

Invert level	EI 2296 m
Number	1
Size of gate opening	3.0 m x 3.0 m
Trash rack	4 No of 4m x 8.5 m
Length of intake tunnel	80 m
Shape of tunnel	D-shaped

### **DESILTING CHAMBER**

Number	1
Size	140 x 8m x 11m
Design discharge	20.53 cumec
Particle size to be removed	0.2 mm and above
Flushing discharge	4.10 cumec
Flushing tunnel size	1.8 m $\phi$
Flushing tunnel length	170 m

### **HEAD RACE TUNNEL**

Number	1
Size	2.6 m
Shape	D- Shaped
Length	3.24 km

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Design discharge 16.43 cumec

### **SURGE SHAFT**

Number 1  
Size 6 m dia  
Type Restricted type  
Size of orifice 1.5 m  
Height 66 m

### **PRESSURE SHAFT**

Numbers 1  
Size 1.8 m  
Length 340 m  
Inclination 5i

### **POWER HOUSE**

Type Underground  
Installed capacity 35 MW  
Number of units 1  
Power house size 34.5 m x 21.5m x 30 m (H)  
Type of turbine Vertical Francis Turbine  
C.L. of turbine El 2053.8 m  
Rated Head 236.96 m

### **TAIL RACE**

Size 3 m

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Type	D Shaped
Length	300 m
Design Discharge	16.43 cumec
Maximum TWL	EI 2060 m
Minimum TWL	EI 2058 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	35 MW
Annual energy generation	
i) 90% dependable year	164.64 GWh
ii) Energy in 90% year on 95% availability	160.11 GWh

**CONSTRUCTION PERIOD**

5 years

