BOGUDIYAR-SIRKARI BHYOL H.E. PROJECT

SALIENT FEATURES

LOCATION

State	Uttaranchal
District	Phitoragarh
River	Goriganga
Dam site	D/S of confluence of Pating Gad With Goriganga river
Nearest Airport	Delhi
Nearest rail head	Tanakpur
Location of dam site	
Latitude	$30^0 12' 54''$ N
Longitude	$80^0 13' 30''$ E

HYDROLOGY

Catchment area at dam site	935 sq kms
Maximum average Discharge at dam site	62.62 cumec
Minimum average Discharge at dam site	24.77 cumec

RESERVOIR

Full reservoir level (FRL)	2480 m
Minimum drawdown level (MDDL)	2470 m
Gross storage at FRL	6.31 M cum
Live storage	1.73 M cum
Area under submergence at FRL	19.43 ha

DIVERSION TUNNEL

Number	Not required
Size	
Length	
Diversion discharge	

DAM

Type	Concrete gravity
Top elevation of dam	2483 m
Height of dam above	98 m
Deepest foundation level	
Length of dam at top	412 m
River bed level	2400 m

SPILLWAY

Design flood	3484.5 cumec
Type	Ogee spillway
Crest elevation	2460 m
Number	2 nos. bays in 3 blocks
Length of spillway	39.0 m
Energy dissipation	Ski jump bucket

INTAKE

Invert level	2461 m
Number	1
Size of gate opening	4.5 m x 4.5 m
Trash rack	6 m x 9 m x 6 no.

DESILTING CHAMBER

Number	1
Size	13 m x 19 m
Length	210 m
Design discharge	66.63 cumec
Particle size to be removed	0.2 mm and above

HEAD RACE TUNNEL

Number	1
Size	4.2 m dia
Shape	Horse shoe
Length	2.35 km

SURGE SHAFT

Number	1
Size	10 m dia
Height	61.0 m

PRESSURE SHAFT

Numbers	1
Size	3.6 m dia
Length	410 m

POWER HOUSE

Type	Underground
Installed capacity	170 MW (2 x 85)
Number of units	2
Power house cavern size	17.5 m x 82.0 m
Type of turbine	Vertical francis
C.L. of turbine	2112.5 m
Rated head	344.47 m

TAIL RACE

Size	4.5 m dia
Type	D shaped tunnel
Length	280 m
Design discharge	54.9 cumec
River Bed Level	2118 m
Normal TWL	2123 m

SWITCHYARD

Size	GIS on the floor above transformers in transformers cavern of size 50 x 14 m

POWER GENERATION

Installed capacity	170 MW (2 x 85)
Annual energy generation	
i) 90% dependable year	744.0 GWh
ii) Energy in 90% year on 95% availability	722.34 GWh

CONSTRUCTION PERIOD 5 ½ years