GANGOTRI HE PROJECT (1x55=55 MW)
SALIENT FEATURES

LOCATION

State	Uttaranchal
District	Uttarkashi
River	Bhagirathi
Dam site	
Location	About 2.5km d/s of Gangotri Shrine.
Latitude	30^{o} 59' 54" N
Longitude	78^{o} 55' 03" E
Nearest Airport	Dehradun
Nearest rail head	Rishikesh/Dehradun

HYDROLOGY

Catchment area at dam site	944 sq. km
Maximum average discharge at dam site	94.2 cumec
Minimum average discharge at dam site	4.7 cumec

RESERVOIR

Full Reservoir Level (FRL)	El 2989.0 m
Minimum Drawdown Level (MDDL)	El 2984.0 m
Gross storage at FRL	4.370 M cum
Live storage	0.91 M cum
Area under submergence at FRL	24.96 ha

DIVERSION TUNNEL

Number	1
Size	4 m dia
Length	400 m
Diversion discharge (assumed)	50 cumecs

DAM

Type	Concrete gravity
Top elevation of dam	El 2991.0m
Height of dam above river bed level	26.0 m
Length of dam at top	110.0 m
River bed level	El 2965.0

SPILLWAY

Design flood	2500 cumecs
Type	Ogee
Crest elevation	El 2975.0
Number & Size	3 of 12.5 m x 14.0 m
Length of spillway	49.5 m
Energy dissipation	Stilling basin

INTAKE

Size	2.75 m ϕ D-shaped
Invert level	El 2977.0 m
Number	1
Size of gate opening	3.0 m x 3.0 m
Design discharge	21.83 Cumecs

DESILTING CHAMBER

Number	1 no
Size	110.0 m x 8.0 m x 9.0 m
Design discharge	21.83 cumecs
Particle size to be removed	0.2 mm & above

HEAD RACE TUNNEL

Number	1
Size	2.5 m
Shape	D-shaped
Length	5.2 km
Rated Discharge	18.19 Cumecs

SURGE SHAFT

Number	1
Size	6.0 m dia
Height	92.0 m

PRESSURE SHAFT

Numbers	1 No.
Size	2.0 m
Length	315.0 m

POWER HOUSE

Type	Underground
Installed capacity	55 MW
Number of units	1
Power house cavern size	40 mx20.5mx30m
Type of turbine	Vertical Francis
C.L. of turbine	El 2634.50
Rated Head	El 336.33 m

TAIL RACE

Size	3.0 m
Type	D-Shape
Length	450.0 m
Design Discharge	18.19 cumecs
River Bed Level	El 2638.0 m
Normal TWL	El 2642.0 m

SWITCHYARD	
Size	Gas Insulated Switchyard (GIS) on the floor above the transformer/s in P/H cavern
POWER GENERATION	
Installed capacity	55 MW
Annual energy generation	
i) 90% dependable year	264.76 GWh
ii) Energy in 90% year on 95% availability	256.64 GWh
CONSTRUCTION PERIOD	5 years