GARBA TAWAGHAT H.E. PROJECT
SALIENT FEATURES

LOCATION

State	Uttaranchal
District	Pithoragarh
River	Kali (Sarda)
Dam site	Near Village Garba on Kali river
Nearest Airport	Delhi
Nearest rail head	Tanakpur
Location of Dam Site	
Latitude	30^{o} 0’ 0” N
Longitude	80^{o} 43’ 53” E

HYDROLOGY

Catchment area at dam site	1367 sq km
Maximum average Discharge at dam site	96.23 cumec
Minimum average Discharge at dam site	63.48 cumec

RESERVOIR

Full reservoir level (FRL)	1615 m
Minimum drawdown level (MDDL)	1590 m
Gross storage at FRL	5.29 M cum
Live storage	3.26 M cum
Area under Submergence at FRL	14.6 ha

DIVERSION TUNNEL

Number	1
Size	6.5 m
Length	760 m
Diversion discharge	340 cumec

DAM

Type	Concrete Gravity Dam
Top elevation of dam	1618
Height of dam above	93 m
Deepest foundation level	
Length of dam at top	250 m
River bed level	1535 m

SPILLWAY

Design flood	4921.90 cumec
Type	Sluice spillway
Crest elevation	1576 m
Number	8
Length of spillway	48.0 m
Energy dissipation type	Ski jump bucket

INTAKE

Invert level	1576.74 m
Number	3
Size of gate opening	4.2m x 4.2m
Trash rack	4.5m x 13.26m x 5 nos.

DESILTING CHAMBER

Number	3
Size	12m(w)x20m(d)
Length	355 m
Design discharge	62 cumec each
Particle size to be removed	0.20 mm and above

HEAD RACE TUNNEL

Number	1
Size	6.75 m
Shape	Horse shoe
Length	13.15 km

SURGE SHAFT

Number	1
Size	20 m
Height	132 m

PRESSURE SHAFT

Numbers	1
Size	5.9 m
Length	624 m

POWER HOUSE

Type	Underground
Installed capacity	630 MW (3x210 MW)
Number of units	3
Power house cavern size	112 m x 19 m
Type of turbine	Vertical Francis
C.L. of turbine	1095.5 m
Rated Head	470.97 m

TAIL RACE

Size	6.75 m
Type	Tunnel – D shaped
Length	268 m
Design Discharge	148.81 cumecs
River Bed Level	1098.0 m
Normal TWL	1103.0 m

SWITCHYARD

Size	GIS on the floor above the transformers in transformer cavern of size 16 m x 86 m

POWER GENERATION

Installed capacity	630 MW (3x210 MW)
Annual energy generation	
i) 90% dependable year	2483.11 GWh
ii) Energy in 90% year on 95% availability	2449.38 GWh

CONSTRUCTION PERIOD	5 years and 9 months