

SALIENT FEATURES

1. LOCATION

i) State	- Arunachal Pradesh
ii) District	- Lower Subansiri
iii) Town	- Yachuli (about 25 km from project area)
iv) Access	- Jorani-Tallo village Road
v) Nearby village	- Tallo
vi) Geographical Coordinates	Latitude = 27°32'14" N Longitude = 93°44'09" E
vii) Toposheet Reference	- 83 E/10
viii) Nearest Railhead	- Naharlagun (100 Kms)
ix) Nearest Airport	- Guwahati (400 Kms)

2. HYDROLOGY

i) Name of the Stream	- Ruth Nala
ii) River Basin	- Panyor River
iii) Catchments Area	- 8 km ²
iv) Type of Stream	- Perennial
v) Design Flood	- 100 m ³ /s
vi) Average Annual Inflow	- 15 MCM
vii) 75% dependable inflow	- 12.80 MCM
viii) Design Discharge	- 0.33 m ³ /s

3. TRENCH WEIR

i) Shape	- Rectangular drop type
ii) Length	- 10 m
iii) Width	- 1 m
iii) Discharge	- 0.523 m ³ /s
iv) Top level of trench	- EL 1410 m
v) Size of gate	- 0.8 m (H) x 0.8 m (W)
vi) Invert Level of Intake	- EL 1408.65 m

4. POWER CHANNEL

i) Length	:- 8 m
ii) Shape	:- RCC Rectangular Section
iii) Size	:- 0.7 m (W) x 0.8 m (H)
iv) Full Supply Depth	:- 0.6 m
v) Discharge	:- 0.436 m ³ /s
vi) Bed Slope	:- 1 in 500

5. DESILTING-CUM-FOREBAY

i) Size	:- 8.0 m long x 3.0 m wide
ii) Desilting length	:- 8.0 m
iii) Storage	:- 3 Minutes
iv) Capacity	:- 48 m ³
iv) Full Supply Level	:- EL 1409.36 m
v) Max. Draw Down Level	:- EL 1407.36 m
vi) C/L of penstock	:- EL 1406.56 m

6. PENSTOCK

i) Size	:- 400 mm (ID) trifurcating into 250 mm (ID)
ii) Length (main penstock)	:- 285 m
iii) Design Discharge	:- 0.363 m ³ /s
iv) Liner Thickness	Varies from 8 mm to 10 mm

7. POWER HOUSE

i) Type	:- Surface
ii) Head	:-
Gross	74.0 m
Design (net)	68.0 m
iii) Design Discharge	:- 0.363 m ³ /s (Including 10% overload)
iv) Size of Power House	:-
Length	:- 22 m
Width	:- 7 m
Height from Machine Floor Level	:- 8 m
Machine Floor Level	:- EL.1338 m

v)	Installed Capacity	:-	150 KW
vi)	Turbines		
	Type	:-	Francis (Horizontal)
	Number	:-	3 Nos.
	Capacity	:-	50 kW each
vii)	Generator		
	Type	:-	Synchronous
	Voltage	:-	415 V
	Frequency	:-	50 Hz

8. TAIL RACE CHANNEL

i)	Type	:-	Open RCC Channel
ii)	Shape	:-	Rectangular
iii)	Size	:-	1.2 m (W) x 0.85 m (H)
iv)	Design discharge	:-	0.363 m ³ /s
v)	Length	:-	20 m

9. LAND REQUIREMENT

i)	Submergence	:-	NIL
ii)	Permanent Land Requirement	:-	0.591 Ha.
iii)	Temporary Land Requirement	:-	0.27 Ha.

10. GENERATION

i)	Annual Generation in 75% Dependable Year	:-	0.97 MU
ii)	Annual Energy Generation at 95 % plant Availability	:-	0.92 MU
iii)	Annual Load Factor (%)	:-	69.93 %
iv)	Generation in Lean Period (Nov.-Mar.)	:-	0.30 MU

11. COST ESTIMATE & FINANCIAL PROJECTIONS

i)	Land & Preliminary expenses	:-	Rs. 0.52 Cr.
i)	Civil and HM Works	:-	Rs. 3.75 Cr.
ii)	Electro-mechanical works	:-	Rs. 2.02 Cr.
iii)	Evacuation	:-	Rs. 0.14 Cr.
iv)	Total Project Cost	:-	Rs. 6.43 Cr.
v)	IDC and Escalation	:-	Rs. 1.64 Cr.
vi)	Project cost (including escalation and IDC)	:-	Rs. 8.07 Cr.

vii)	Cost per KW	:-	Rs. 5.38 Lacs
	Cost of generation (Rs/ kWh)		
viii)	a) 1 st Year	:-	Rs. 18.06/ Unit
	b) Levelised Cost	:-	Rs. 15.89/ Unit

12. SCHEDULE

i)	Pre construction Activities	:-	9 months
ii)	Construction Period	:-	12 months