

SALIENT FEATURES

1. LOCATION

i)	State	:-	Arunachal Pradesh
ii)	District	:-	Lower Subansiri
iii)	Town	:-	Yachuli (about 30 km from project area)
iv)	Access	:-	Joram-Tallo-Aribu village Road
v)	Nearby village	:-	Aribu
vi)	Geographical Coordinates	:-	Latitude = 27°29'38" N Longitude = 93°44'20" E
vii)	Toposheet Reference	:-	83 E/10, 83E/11 and 83E/14
viii)	Nearest Railhead	:-	Naharlagun (105 Kms)
ix)	Nearest Airport	:-	Guwahati (495 Kms)

2. HYDROLOGY

i)	Name of the Stream	:-	Pein Nala
ii)	River Basin	:-	Panyor River
iii)	Catchments Area	:-	68 km ²
iv)	Type of Stream	:-	Perennial
v)	Design Flood	:-	420 m ³ /s
vi)	Average Annual Inflow	:-	127.80 MCM
vii)	75% dependable inflow	:-	109.10 MCM
viii)	Design Discharge	:-	2.59 m ³ /s

3. TRENCH WEIR

i)	Shape	:-	Rectangular drop type
ii)	Length	:-	15 m
iii)	Width	:-	1.5 m
iii)	Discharge	:-	4.103 m ³ /s
iv)	Top level of trench	:-	EL 968 m
v)	Size of gate	:-	1.2 m (H) x 1.2 m (W)

vi) Invert Level of Intake :- EL 965.50 m

4. INTAKE CHANNEL

i) Length :- 15 m
ii) Shape :- RCC Rectangular Section
iii) Size :- 1.4 m (W) x 1.6 m (H)
iv) Full Supply Depth :- 1.4 m
v) Discharge :- 3.419 m³/s
vi) Bed Slope :- 1 in 500

5. DESILTING BASIN

i) Size :- 30.0 m long x 6.0 m wide
ii) Slope Height :- 1.50 m
iii) Vertical Height :- 3.0 m
iv) Silt Catch Drain :- 0.5 m x 0.5 m
v) Full Supply Level :- EL 967.086 m

6. POWER CHANNEL

i) Length :- 425 m
ii) Shape :- RCC Rectangular Section
iii) Size :- 1.3 m (W) x 1.6 m (H)
iv) Full Supply Depth :- 1.4 m
v) Discharge :- 2.849 m³/s
vi) Bed Slope :- 1 in 600

7. FOREBAY TANK

i) Size :- 26.0 m long x 10.0 m wide
ii) Storage :- 3 Minutes
iii) Capacity :- 520 m³
iv) Full Reservoir Level :- EL 966.37 m
v) Max. Draw Down Level :- EL 964.37 m
vi) C/L of penstock :- EL 962.55 m

8. PENSTOCK

- | | | | |
|------|------------------------|----|---|
| i) | Size | :- | 1100 mm (ID) bifurcating into 800 mm (ID) |
| ii) | Length (main penstock) | :- | 94 m |
| iii) | Discharge | :- | 2.849 m ³ /s |
| iv) | Liner Thickness | | Varies from 8 mm to 10 mm |

9. POWER HOUSE

- | | | | |
|------|---------------------------------|----|--|
| i) | Type | :- | Surface |
| ii) | Head | :- | |
| | Gross | | 42.0 m |
| | Design (net) | | 37.0 m |
| iii) | Design Discharge | :- | 2.849 m ³ /s (Including 10% overload) |
| iv) | Size of Power House | :- | |
| | Length | :- | 15 m |
| | Width | :- | 7 m |
| | Height from Machine Floor Level | :- | 8 m |
| | Machine Floor Level | :- | EL.928 m |
| v) | Installed Capacity | :- | 600 KW |
| vi) | Turbines | | |
| | Type | :- | Francis (Horizontal) |
| | Number | :- | 2 Nos. |
| | Capacity | :- | 300 kW each |
| vii) | Generator | | |
| | Type | :- | Synchronous |
| | Voltage | :- | 415 V |
| | Frequency | :- | 50 Hz |

10. TAIL RACE CHANNEL

- | | | | |
|------|-----------|----|-------------------------|
| i) | Type | :- | Open RCC Channel |
| ii) | Shape | :- | Rectangular |
| iii) | Size | :- | 2.5 m (W) x 1.15 m (H) |
| iv) | Discharge | :- | 2.849 m ³ /s |
| v) | Length | :- | 20 m |

11. LAND REQUIREMENT

i)	Submergence	:-	NIL
ii)	Permanent Land Requirement	:-	1.293 Ha.
iii)	Temporary Land Requirement	:-	0.27 Ha.

12. GENERATION

i)	Annual Generation in 75% Dependable Year	:-	4.02 MU
ii)	Annual Energy Generation at 95 % plant Availability	:-	3.82 MU
iii)	Annual Load Factor (%)	:-	72.60%
iv)	Generation in Lean Period (Nov.-Mar.)	:-	1.30 MU

13. COST ESTIMATE & FINANCIAL PROJECTIONS

i)	Land & Preliminary expenses	:-	Rs. 0.63 Cr.
i)	Civil and HM Works	:-	Rs. 6.59 Cr.
ii)	Electro-mechanical works	:-	Rs. 4.03 Cr.
iii)	Evacuation	:-	Rs. 0.18 Cr.
iv)	Total Project Cost	:-	Rs.11.43 Cr.
v)	IDC and Escalation	:-	Rs. 2.44 Cr.
vi)	Project cost (including escalation and IDC)	:-	Rs.13.87 Cr.
vii)	Cost per KW	:-	Rs. 2.31 Lacs
Cost of generation (Rs/ kWh)			
viii)	a) 1 st Year	:-	Rs. 7.00/ Unit
	b) Levelised Cost	:-	Rs. 5.78/ Unit

14. SCHEDULE

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