SALIENT FEATURES

1	**Project Location**	
	Development Region	: Eastern Development Region
	Zone	: Mechi
	District	: Taplejung
	VDCs	: Khoklin/Hangdewa/Sawadin and Phurumbu
	Headworks	: Phurumbu, Sawadin
	Powerhouse	: Khoklin
	Geographical Co-ordinates	
	Latitude	: 27° 23' 57" N to 27° 27' 09" N
	Longitude	: 87° 40' 18" E to 87° 42' 40" E
2	**General**	
	Name of River	: Tamor
	Nearest Town	: Phungling
	Type of Scheme	: Run-of-River
	Gross Head	: 94 m
	Installed Capacity	: 54 MW
3	**Hydrology**	
	Catchment Area	: 2007 km^2
	Mean Annual Discharge	: 125.89 m^3/s
	Design Discharge (at 41.7% PoE)	: 73.71 m^3/s
	Riparian Release	: 1.93 m^3/sec
	100 Yrs Flood Discharge	: 2798 m^3/s
	Average Annual Precipitation	: 1,637 mm
4	**Diversion Weir**	
	Type	: Concrete weir
	Weir length (main body)	: 72.50 m
	Weir height (Max from original ground level)	: 11.00 m
	Weir crest level	: 860 m amsl
5	**Undersluice**	
	Size (B x H)	: 5.0 m x 4.0 m (each)
	Number	: 2
6	**Intake Structure**	
	Type of Intake	: Side Intake

	Nos of Opening	: 4
	Intake size (BxH)	: 6.0 m x 4.0 m (each)
7	**Gravel Trap**	
	Type	: Rectangular, RCC
	Particle size to be settled	: 5mm - 100 mm
	No. of bay	: 4
	Size of gravel trap	: 16 m x 6.75 m x 21 m (average)
	Gravel flushing culvert	
	Number	: 4
	Size (B x H)	: 1.5 m x 1.5 m (each)
	Length	: 47 m (average)
8	**Settling Basin**	
	Nos. of chambers	: 2
	Dimension (L x B)	: 140 m x 62.05 m
	Particle trapping efficiency	: 90 %
	Longitudinal slope	: 1:100
9	**Sediment flushing culvert**	
	Number	: 4
	Total length	: 40 m (average)
	Size (B x H)	: 1.5 m x 2.0 m
10	**Headrace Tunnel**	
	Type	: Inverted U shaped
	Length	: 1783 m (approx.)
	Finished Diameter	: 5.4 m
	Support System	: Concrete lining and shotcrete
11	**Surge shaft**	
	Shape	: Vertical, circular section
	Height	: 40 m
	Finished diameter	: 25 m
12	**Steel Penstock Pipe**	
	Material	: Mild steel
	Total length	: 227 m up to branching
	Internal diameter	: 4.5 m / 2.6 m
	Pipe thickness	: 12 mm ~ 32 mm

13 Powerhouse

Type	: Semi-surface
Size	: 47 m x 26 m (L x B)
Turbine axis level	: 764 m amsl

14 Tailrace Culvert

Type	: RCC, Rectangular
Length	: 420 m
Size (B x H)	:3 m x 4.5 m (separated into 2 chambers)
Normal Operating Level	: 766 m amsl

15 Turbine

Type	: Francis
Number	: 3
Rated Output Capacity per unit	: 18 MW
Efficiency	: 91 %
Synchronous speed	: 600 rpm
Net head	: 83.10 m
Discharge per unit	: 24.57 m^3/s

16 Generator

Type	:Synchronous, Single Phase, Vertical axis
Rated Output Capacity per Unit	: 20.43 MVA
Power Factor	: 0.85
Voltage	: 11 kV
Frequency	: 50 Hz.
No of Units	: 3 (Three)
Excitation System	: Brushless
Efficiency	: 97 %

17 Transformer

Type	: Outdoor, oil immersed, single phase
Nos of Unit	: 4 (3+1 spare)
Rated Capacity	: 22.5 MVA
Vector Group	: Ynd11
Voltage Ratio	: 132 kV/ 11kV
Efficiency	: 99 %

18 Transmission Line

Voltage level	: 132 kV single circuit
Length	: 12 km
Conductor	: ACSR “BEAR”
To	: NEA Proposed Hangpang Substation (Koshi corridor)

19 Project Cost Estimate

Total Cost of the Project with IDC	: MNPR 9000

20 Construction Period : 4 years

21 Energy

Total energy at delivery point	: 312.60 GWh
Dry energy	: 47.94 GWh
Wet energy	: 264.72 GWh