

TADI KHOLA HYDROELECTRIC PROJECT

PROJECT SAILENT FEATURE:

Latitude	27° 55' 36" N to 27° 55' 00" N
Longitude	85° 21' 08" E to 85° 19' 15" E
Development Region	Central Development Region
District	Nuwakot
Intake Site	Tadi Rural Municipality- 4 (Previous- Satbise, Sundaradevi, VDC)
Powerhouse site	Tadi Rural Municipality- 3 (Previous- Kosgade, Raluka, VDC)
Name of River	Tadi Khola
Type of Scheme	Run-of-River
Weir type	Boulder- Riprap with RCC Cutoffs
Weir Crest Level	798.50 masl
Static Water Level	798.50 masl
Gross Head	74.12 m
Net Head	65.60 m
Design Discharge	8.91 m ³ /sec
Installed Capacity	5 MW
Dry Season Energy	7.13 GWh
Wet Season Energy	25.34 GWh
Total Energy	32.48 GWh
Catchment Area	247 Km ²
Design Discharge	8.91 m ³ /s
Design Flood Discharge	8.91 m ³ /s (1 in 100 yr. flood)
Type of intake	Side Intake
No.of intake openings	2 Nos. of 3.2 m (B) × 2.4 m (H)
Invert Level of Intake	795.60 masl
No.of approach canal	Single
Size of approach canal	2.82 m (B) × 2.3 m (H-Varies)
No. of Openings	2 Nos. of 2.8 m (B) × 2.5 m (H)
Invert Level of Sluiceway	794.00 masl
Desanding Basin	
Inlet Transition Length	20.00 m

No. of Chambers	2
Parallel Section Dimension (L×B×H)	44 m ×5.0 m×6.1m
Forebay	
Size	10.0 m (L) ×6.4m (Avg. B)×8.25 m (H)
██████████	
RCC Culvert Length	270.31 m
Clear Opening Size	2.0 m ×2.0 m
Steel Lined Culvert Section	22.0 m
Penstock encased with shotcreting	
Inside culvert including bellmouth	172.00 m
Diameter of Pipe	1.80 m
██████████	
Length of penstock pipe	1770.00 m
Internal diameter	1.9 m
Thickness	8mm, 10 mm , and 12 mm
██████████	
Type	Surface
Dimension	25.80mm×16.20 m×16.20 m
Turbine setting level	EI 727.0 masl
Nimber of units	Two
██████████	
Type	Horizontal Axis Francis Turbine
Rated flow	4.45 m ³ /s
Rated Net Head	65.84 m
Rated Power	2.621 KW
Rated speed	750 rpm
Runway speed	1246.80 rpm
██████████	
Rated Power	2500KW
Rated Voltage	6600 V
Rated Current	273.4 A
Rated Frequency	50 Hz
Rated Power Factor	0.80
Rated Efficiency	95.48 %
Excitation Voltage	67 V
Excitation Current	350 A
Rated Speed	750 rpm
██████████	
Type	PLC Governer
Rated pressure	6.3 MPa
Power Supply	220 V
██████████	

Type Phase Rated Capacity Rated Voltage and Tapping Range Rated Frequency Connection System Cooling Type Altitude Application Condition	S 9-6, 250/33 3 Phase 6,250 KVA (33±2×2.5%)/6.6 KV 50 Hz YNd11 ONAN ≤1000 m Outdoor
[REDACTED]	
Type Length Material Clear Opening Size Tailrace Normal water level	Concrete Conduit 69 m. RCC 2.9m×1.80 m 724.38 masl
[REDACTED]	
Outer Dimension Switchyard Type	14.0 m ×28.0 m 33/6.6 KV
[REDACTED]	
Type Length Sub-station Connection	33 KV ACSR- Dogged Conductors. 8.50 Km Chaughada Sub-station