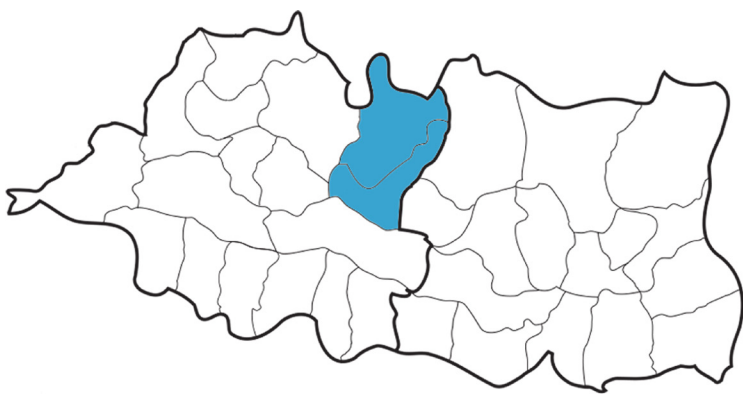


TAMAKOSHI 3 HYDROPOWER PROJECT (650MW)



Geographical Location (Districts)	Dolakha and Ramechhap
Lead Government Agency	Ministry of Energy, Office of the Investment Board Nepal

PROJECT DESCRIPTION AND RELEVANCE/ OBJECTIVES

Tamakoshi-3 project is a 650 MW hydropower plant with an annual generation of 2340 GWh. It is located in Dolakha and Ramechhap districts. Feasibility study was carried out by the consultant SWECO which had recommended 880MW power plant based on highest net present value. The geological risks have been reduced significantly by reducing the size and realignment of tunnels and including additional adits for concluding construction in 5 years. The access roads to the project site and within the project facilities are well developed and needs minor upgradation. The planned transmission line of 400kV is already under construction which is due to finish construction by 2018.



PROJECT DETAILS

Project Cost (In USD)	1,000 Million
Project Land Required (in Ha.)	Total land required: 929 1. Private : 318 2. Forests : 454 3. Others (river bed, river banks, wastelands): 157
Progress	Feasibility study completed on February 2010 Technical update study conducted by Statkraft on August 2011
Planned Start Date	Award of project by May 2017
Expected Commencement Year	TBA
Project Documents Available	Feasibility Study report 2010 (SWECO Norge AS) Technical Update study 2011 (SN Power)
Form of Investment (PPP/Private Investment)	Public Private Partnership
Expected Fiscal Benefits to GoN	<ul style="list-style-type: none"> • Taxes • Royalty • VAT and Customs • Payment for Ecosystem Services • Free Electricity/Dividends

SALIENT FEATURES OF THE PROJECT

Project coordinates	"Longitude -86° 4' 34" E to 86° 06' 48" E Latitude -27° 39' 50" N to 27° 34' 36" N Longitude -86° 05' 00" E to 86° 07' 09" E Latitude -27° 34' 36" N to 27° 29' 34" N
Project Location	Dolkha District: Laduk, Jhyaku, Jugu, Lamidada, Sunkhani, Chhetrapa, Namdu, Phaski, Garimudi, Powati, Bhurkot, Jhule, Japhe, Ghyang Sukathokar, Bhedpu, Melung, Shahare, Malu VDCs and Bhimeshwor Municipality Ramechhap District: Phulase VDC
HYDROLOGY AT INTAKE	
Catchment Area	2,932 km ²
Annual mean discharge	152.5 m ³ /s
Mean annual runoff	4790 million m ³
Maximum recorded discharge	1313.8 m ³ /s
Minimum recorded discharge	17.7 m ³ /s
RESERVOIR	
Highest regulated water level	940 masl
Lowest regulated water level	890 masl
Sediment flushing level	855 masl
Live storage	137 million m ³
Dead storage (& sediment flushing)	20 million m ³
Tailwater elevation	606.5 masl
Maximum gross head from full supply level	333.5 m
Design turbine discharge	222 m ³ /s
Minimum environmental release	2.51 m ³ /s
Length of reservoir	15.7 km

INSTALLED CAPACITY AND ENERGY PRODUCTION	
Turbine number and type	4 units vertical axis Francis turbine
Rated unit output	162.5 MW
Energy dry season, peak	477 GWh
Energy wet season, peak	946 GWh
Energy dry season, off-peak	-
Energy wet season, off-peak	921 GWh
Energy, total annual	2,340 GWh
HEADWORKS	
Dam Location	Latitude: 27° 38' 37" N Longitude: 86° 05' 11" E
Dam height (from river bed)	96 m
Dam height (above deepest foundation level)	120-135 m
Dam type	Modified RCC
Crest length	350 m
HEADRACE TUNNEL	
Type	Pressure tunnel, concrete lined
Tunnel inlet elevation (after dam intake shafts)	860 masl
Adit tunnels, length	3,045 m
Tunnel length	17,306 m
Excavated Span of tunnel	9.0 m, horse-shoe shape with higher curvature Invert
Powerhouse complex	"Underground cavern for transformer, switchgear, machine hall and draft tube gates"
TAILRACE TUNNEL	
Type	Low pressure tunnel, concrete lined
Length	4500 m
Diameter (Inverted D shaped)	9.0 m

CONTACTS



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