

Hydro Power Projects 2009/10

A. Operational:

I. Major Hydro projects

S.N	Hydro projects	Installed Capacity (kW)	S.N	Hydro projects	Installed Capacity (kW)
1	Kali Gandaki "A"	144000	7	Gandaki	15000
2	Middle Marsyandi	70000	8	Modi Khola	14800
3	Marsyangdi	69000	9	Devighat	14100
4	Kulekhani No. 1	60000	10	Sunkosi	10050
5	Kulekhani No. 2	32000	11	Puwa Khola	6200
6	Trisuli	24000		Total	459150

II. Small Hydro Projects:

a. Grid Connected

S.N	Hydro projects	Installed Capacity (kW)	S.N	Hydro projects	Installed Capacity (kW)
1	Chatara	3,200	9	Khandbari**	250
2	Panauti	2,400	10	Phidim	240
3	Tatopani (Myagdi) (I + II)	2,000	11	Jomsom **	240
4	Seti (Pokhara)	1,500	12	Baglung	200
5	Phewa (Pokhara)	1,000	13	Surnaiyagad (Baitadi)	200
6	Tinau (Butwal)	1,024	14	Doti	200
7	Sundarikal	640	15	Ramechhap	150
8	Pharping***	500	16	Terhathum**	100
Total					13844

b. Isolated

S.N	Hydro projects	Installed Capacity (kW)	S.N	Hydro projects	Installed Capacity (kW)
1	Heldung (Humla)	500	13	Chaurjhari (Rukum) **	150
2	Kalikot	500	14	Aarughat (Gorkha)	150
3	Accham	400	15	Taplejung **	125
4	Jhupra (Surkhet)***	345	16	Okhaldhunga **	125
5	Darchula I and II **	300	17	Rupalgad(Dadeldhura)	100
6	Bhojpur**	250	18	Syangja***	80
7	Dhankuta***	240	19	Manang	80
8	Jumla**	200	20	Gorkhe (Ilam)***	64
9	Syarpudaha (Rukum) **	200	21	Helambu	50
10	Bajura	200	22	Chame	45
11	Bajhang**	200	23	Dhading	32
12	Dolpa	200		Total	4536

III. Private Sector Hydro Projects:

Independent Power producers (IPPs) connected to INPs:

S.N	<u>Hydro projects</u>	<u>Installed Capacity (kW)</u>	S.N	<u>Hydro projects</u>	<u>Installed Capacity (kW)</u>
1.	Khimtikhola (HPL)	60,000	13.	Chaku Khola (APCo)	1,500
2.	Bhotekoshi (BKPC)	36,000	14.	Patikhola	996
3.	Chilime (CPC)	22,000	15.	PHEME Khola (KHP)	995
4.	Jhimruk (BPC)	12,000	16.	Upper Hadi Khola	991
5.	Indrawati III (NHPC)	7,500	17.	Baramchi (UH)	980
6.	Andhikhola (BPC)	5,100	18.	Seti-II	979
7.	Khudi Khola (Khudi HP)	3,450	19.	Sisne Khola (GBHP)	750
8.	Mardi Khola	3,100	20.	Rairang (RHPD)	500
9.	Piluwa Khola (AVHP)	3,000	21.	Salinadi (KSHPS)	232
10.	Sunkoshi Small (SHP)	2,500	22.	Sange Khola (SHP)	183
11.	Ridi Khola	2,400			
12.	Thoppal Khola (THP)	1,650		Total	166806

B. Hydro Power Projects under Construction:

a. Major Hydro Projects:

1.	Upper Tamakoshi	456,000	4.	Gamgadhi	400
2.	Chamelia	30,000			
3.	Kulekhani-III	14,000		Total	500400

b. Independent Power producers (IPPs)

1.	Lower Modi I	9,900	5.	Lower Indrawati (SHP)	4,500
2.	Sipring Khola	9,658	6.	Mai Khola	4,455
3.	Ankhu Khola-I	8,400	7.	Hewa Khola	4,455
4.	Siuri Khola (NGPL)	4,950	8.	Lower Piluwa	990
	Total				47,308

C. Hydro Power Projects with PPA Concluded:

Private Sector Hydro Projects:

S.N	Hydro projects	Installed Capacity (kW)	S.N	Hydro projects	Installed Capacity (kW)
1.	Upper Madi	19,008	16	Jumdi Khola	1,750
2.	Lower Balephi	18,514	17	Theule Khola	1,500
3.	Mai Khola	15,600	18	Jhyadi Khola	998
4.	Namarjun Madi	11,880	19	Dorkhu khola	990
5.	Madkyu Khola	9,968	20	Seti Khola	465
6.	Lower Sunkoshi-III	9,900	PPA Concluded for Capacity Upgradation		
7.	Nau Gad Khola	8,500	1.	Baramchi Khola	3,178
8.	Upper Mailun A	5,000	2.	Hewa Khola	2,055
9.	Tadi khola	5,000	3.	Chaku Khola	1,500
10.	Radhi Khola	4,400	4.	Jiri Khola	1,210
11.	Charanawati Khola	3,520	5.	Bhairab Kunda	1,150
12.	Middle Gaddigad	2,970	6.	Belkhu Khola	198
13.	Upper Hugdi Khola	2,599	7.	Narayani Shankar Biomass	100
14.	Pikhuwa Khola	2,475			
15.	Middle Chaku	1,800		Total	136,228

Under Termination Process

S.N	Hydro projects	Installed Capacity (kW)	S.N	Hydro projects	Installed Capacity (kW)
1.	Upper Modi Khola	14,000	3.	Daram Khola	5,000
2.	Langtang Khola	10,000	4.	Lower Nyadi	4,500
Total					33,500

D. Hydro Power Projects Planned and Proposed:

a. Major Hydro Projects:

1.	Budhi Gandaki	600,000	6.	Upper Modi 'A'	42,000
2.	Nalsyagu Gad (Storage)	400,400	7.	Upper Trisuli 3 'B'	37,000
3.	Upper Seti (Storage)	128,000	8.	Rahughat Khola	27,000
4.	Seti Trishuli (Storage)	128,000			
5.	Upper Trisuli 3 'A'	60,000		Total	14,22,000

iv) Diesel Power Stations

1.	Duhabi Multifuel	39,000	2.	Hetauda	14,410
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v) Solar Power Stations

1.	Simikot	50	2.	Gamgadhi	50
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Transmission Lines

a. Major Lines – Existing-

i. 132 kV Transmission Lines:

<u>S.N</u>	<u>Transmission Lines</u>	<u>Length (KM.)</u>	<u>Type of CKts.</u>	<u>S.N</u>	<u>Transmission Lines</u>	<u>Length (KM.)</u>	<u>Type of CKts.</u>
1.	Anarmani-Duhabi	85.0	Single	2.	Hetauda-Gandak P/S	154.0	Single
3.	Kusha-Katiya (India)	19.0	Single	4.	Bharatpur – Pokhara	97.0	Single
5.	Duhabi- Hetauda	282.0	Double	6.	Bardaghat-Butwal	43.0	Double
7.	Hetauda – KL2 P/S	8.0	Single	8.	Butwal –KGA P/S	58.0	Double
9.	Bharatpur-Marsyangdi P/S	25.0	Single	10.	KGA P/S –Lekhnath	48.0	Single
11.	Marsyangdi P/S –Suichatar	84.0	Single	12.	Pokhara-Modikhola P/S	37.0	Single
13.	Suichatar -KL2 P/S	34.0	Single	14.	Butwal- Tanakpur P/S	407.0	Single
15.	Suichatar –New Bhaktapur	26.9	Single	16.	Pathalaiya –New Parwanipur	17.0	Double
17.	New Bhaktapur – Lamosangu	48.0	Double	18.	Marsyangdi-M. Marsyangdi	44.0	Single
19.	Lamosangu – Khimti P/S	46.0	Single	Total		1562.9	

ii. 66 kV Transmission Lines:

1.	Chilime P/S –Devighat P/S	43.56	Single	2.	Suichatar –New Patan	4.0	Double
3.	Trisuli P/S – Balaju	29.0	Double	4.	Teku – K3 (Underground)	3.5	Single core
5.	Debighat P/S – Balaju	30.0	Single	6.	Suichatar –K3	6.9	Single
7.	Debighat P/S – New Chabel	33.0	Single	8.	New Patan –New Baneshwor	2.8	Single
9.	Balaju-Laincahur	2.3	Single	10.	Bhaktapur – New Chabel	12.0	Single
11.	Balaju –KL1 P/S	36.0	Double	12.	New Baneshwor – Sunkoshi P/S	61.0	Single
13.	KL 1 P/S Birgunj	72.0	Double	14.	Debighat Trisuli	4.56	Single
15.	Suichatar –Teku	4.1	Single	16.	Indrawati-Panchkhal	10.0	Single
				Total		354.72	

b. Under Construction

i. 220 kV Transmission Lines

1.	Khimti-Dhalkebar	75	Single
2.	Hetauda-Bharatpur	72	Double

ii .132 kV Transmission Lines

1.	Thankot-Chapagaon	28.5	Double
2.	Chameliya-Attariya	129	Single

iii. NEA Joint Venture under Public Private Partnership Program

<u>400 kV Transmission Lines</u>	<u>Length (KM.)</u>	<u>Type of CKts.</u>
1. kV Dhalkebar-Muzzaffarpur Cross Border Line	45.00	Double

c. Planned and Proposed

S.N	Transmission Lines	Length (KM.)	Type of CKts.	S.N	Transmission Lines	Length (KM.)	Type of CKts.
1.	220 kV New Marsyangdi-Matatirtha	85	Double	8.	132 kV Hetauda-Kulekhani-II-Siuchatar second circuit	44	D/C Tower
2.	132 kV Sangati-Lamosangu	40	Double	9.	220 kV New Hetauda-Dhalkebar-Duhabi	283	Double
3.	132 kV Kabeli-Damak	90	Double	10.	220 kV New Hetauda-Matatirtha	45	Double
4.	132 kV Middle Marshyangdi - Dumre-Marshyandi	44	Double	11.	220 kV Bardaghat-New Butwal	30	Double
5.	132 kV Dumree-Damauli	18	Single	12.	220 kV Trishuli- Thankot	54	Double
6.	132 kV Butwal-Kohalpur Second circuit	208	D/CTower	13.	132 kV Kohalpur-Attariya second circuit	200	D/C Tower
7.	220 kV Bharatpur-Bardghat	73	Double	Total		1214	

Transmission Lines NEA Joint Venture under Public Private Partnership Program

1.	400 kV Duhabi-Purnia Cross Border Line*	22	Double	3.	66 kV Sanjen-Chilime	12	Double
2.	400 kV New Butwal- Gorakhpur Cross Border Line*	25	Double	Total		59	

Transmission Line Sub-Station

Existing			Planned & Proposed		
S.N	Capacity	Unit MVA	S.N	Capacity	Unit MVA
1.	132/11 kV	186.00	1.	132/33 kV Syangja	15.00
2.	132/66 kV	248.40	2.	132/33 kV Anbukhaireni	15.00
3.	66/11 kV	485.20	3.	132/33 kV Damak	30.00
4.	132/33 kV	470.50	4.	132/11kV Chapali	30.00
5.	66/33 kV	25.00	5.	132/33 kV Kusum	30.00
Total		1415.10	6.	132/33 kV Matatirtha	32.00
Under Construction			7.	132 kV Hapure	30.00
1.	132/11 kV Matatirtha	22.50	8.	132 KV Hetauda (Kamane)	30.00
			9.	132 KV Pathlaiya	22.50
			Total		234.5
			Planned & Proposed		
			1.	New Butwal Switching Station	
			2.	New Bharatpur Switching Station	
			3.	Pathlaiya Switching Station	

Overall Scenario of Power Projects in Nepal

Sectors	Capacity (kW)
Total Major Hydro Grid Connected	472994
Total Small Hydro Isolated	4536
Total Hydro NEA	477530
Total hydro IPP	158315
Total Hydro -Nepal	635845
Total thermal (NEA)	53410
Total Solar (NEA)	100
Total Installed Capacity (including Private and Others)	689355

Note: * Line length within Nepal portion. ** Leased to the Private Sector. *** Not in Normal Operation.
Source: Nepal Electricity Authority.