

Hydro Power Projects 2008/09

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	Sundarjal	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	Hydro projects	Installed Capacity (kW)	S.N	Hydro projects	Installed Capacity (kW)
1.	Khimtikhola (HPL)	60,000	11.	Chaku Khola (APCo)	1,500
2.	Bhotekoshi (BKPC)	36,000	12.	Patikhola	996
3.	Chilime (CPC)	20,000	13.	PHEME Khola (KHP)	995
4.	Jhimruk (BPC)	12,000	14.	Baramchi (UH)	980
5.	Indrawati III (NHPC)	7,500	15.	Seti-II	979
6.	Andhikhola (BPC)	5,100	16.	Sisne Khola (GBHP)	750
7.	Khudi Khola (Khudi HP)	3,450	17.	Rairang (RHPD)	500
8.	Piluwa Khola (AVHP)	3,000	18.	Salinadi (KSHPS)	232
9.	Sunkoshi Small (SHP)	2,500	19.	Sange Khola (SHP)	183
10.	Thoppal Khola (THP)	1,650		Total	158315

B. Hydro Power Projects under Construction

a. Major Hydro Projects:

1.	Upper Tamakoshi	456,000	4.	Kulekhani-III	14,000
2.	Middle Marsyangdi	70,000	5.	Gamgadhi	400
3.	Chamelia	30,000		Total	500400

b. Independent Power producers (IPPs)

1.	Lower Indrawati (SHP)	4,500	4.	Ridi Khola (RHPD)	2,400
2.	Mai Khola	4,455	5.	Upper Handi Khola (CPDS)	991
3.	Mardi Khola (GHP)	3,100	6.	Lower Piluwa	990
	Total				16436

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.	Madi-I (AGPLtd.)	10,000	14.	Mai Khola (HDHC), Ilam	2,400
2.	Lower Modi I	9,900	15.	Bairab Kunda	1,850
3.	Sipring Khola	9,658	16.	Lower Chaku Khola (LBPN)	1,765
4.	Ankhu-I	6930	17.	Jiri Khola	990
5.	Mailung Khola (MKPC)	5,000	18.	Chake Khola	990
6.	Daram Khola (GHP)	5,000	19.	Tinaukhola Small (Namabuddha HP)	990
7.	Dapcha-Roshi	5,000	20.	Upper Puwa-I	985
8.	Phawa Khola	4,950	21.	Charanawati	980
9.	Siuri Khola (NGPL)	4950	22.	Tadikhola (Adishakti Power)	970
10.	Lower Nyadi (BHP)	4,500	23.	Ladku Khola	700
11.	Bijayapur-I	4,500	24.	Narayani Shankar Biomass (TMB)	500
12.	Upper Mai Khola (ENDE)	3,100	25.	Belkhu Khola (MFIC), Dhading	320
13.	Hewa Khola (Barun HPD)	2,400		Total	87,508
<u>Under Termination Process</u>					
S. N	<u>Hydro project</u>				
1.	Upper Modi Khola	14,000			

D. Hydro Power Projects Planned and Proposed:

a. Major Hydro Projects:

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

ii .132 kV Transmission Lines

1.	Khimti-Dhalkebar	75	Single	1.	Thankot-Chapagaon	28.5	Double
2.	Hetauda-Bharatpur	72	Double	2.	Chamaliya-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/C Tower	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	4.	132/33 kV Damak	30.00
4.	132/33 kV	470.50	5.	132/11kV Chapali	30.00
5.	66/33 kV	25.00	6.	132/33 kV Kusum	30.00
Total		1415.10	7.	132/33 kV Matatirtha	32.00
Under Construction			8.	132 KV Hetauda (Kamane)	30.00
1.	132/11 kV Matatirtha	22.50	9.	132 KV Pathlaiya	22.5
			10.	New Butwal Switching Station	30.00
			11.	New Bharatpur Switching Station	30.00
			Total		294.50

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.