

PREPARATION OF PRELIMINARY FEASIBILITY REPORTS

Under 50,000 MW Hydroelectric Initiative

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**PREPARATION OF PRELIMINARY FEASIBILITY REPORTS (PFRs)
Under 50,000 MW Hydroelectric Initiative**

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PREPARATION OF PRELIMINARY FEASIBILITY REPORTS

Under 50,000 MW Hydroelectric Initiative

1. INTRODUCTION

- 1.1. Hon'ble Prime Minister of India launched a programme for preparation of Preliminary Feasibility Reports (PFRs) of Hydroelectric Schemes on 24.5.2003. The scheme was formulated by CEA and sanctioned by the Ministry of Power on 31st March, 2003 at a cost amounting to Rs. 24.95 crores. The work of preparation of PFRs of 162 schemes was awarded to seven CPSUs/State agencies as Consultants. All the PFRs have already been completed ahead of schedule. The schemes are located in 16 States.
- 1.2. PFRs prepared under the programme would serve useful purpose of fixing the inter-se priority for implementation of the schemes as also as a basis and reference for taking up on Survey & Investigations and preparation of DPRs of Hydroelectric Schemes. With a view to providing scheme specific information of 162 PFR schemes for quick reference as also for the purpose of further consideration for prioritization and implementation, the Executive Summary of 162 PFRs schemes has been prepared to provide information in respect of each scheme on the salient features, layout maps and other information generally required for appreciation of the magnitude of works involved, preliminary cost estimates and financial aspects.

2. PREPARATION OF PFRs

- 2.1. The scheme envisaged preparation of PFRs of Hydroelectric Schemes by the Consultants based on the input data on topography, hydrology, geology, and meteorology collected from the concerned Govt. of India organizations viz. Survey of India, Ministry of Water Resources CWC, Geological Survey of India and Indian Meteorological Department. The work inter-alia included utilization of Satellite Imageries as available from National Remote Sensing Agency for carrying out the studies and preparation of the PFRs.
- 2.2. Central Electricity Authority as a nodal agency for preparation of PFRs, coordinated amongst various associated Govt. of India departments/agencies and Consultants. CEA has also facilitated collection of data required by the Consultants and exercising quality control through vetting of the important studies leading to the selection of the project parameter. The conceptual planning of the project, general project planning including assessment of power benefits for selection of project parameters and evacuation of power from the PFR schemes were vetted in CEA during preparation stage. The Central Water Commission examined the water availability and the project layout. CEA monitored the progress of studies and project

preparation of PFRs to ensure their completion within the scheduled timeframe.

- 2.3. The project planning aspects of each scheme were examined in the CEA in the context of overall development of water resources of the river basin. The analysis of assessment of power benefits from the project was carried out for alternative options. The installed capacity has been proposed based on detailed analysis of benefits considering the water availability, load factor of operation, tribunal awards and other related aspects.
- 2.4. Initially, the Consultants faced difficulties and delays in obtaining the data for the studies mainly on account of procedures/approvals required for supply of the data by the concerned organizations to the Consultants which were sorted out by the efforts of CEA and seeking the intervention of the Ministry of Power. Some of the studies required use of digitized toposheets along with satellite imageries such as study of the environmental aspects
- 2.5. In spite of the initial difficulties/constraints and time taken for data collection, the work progressed very well as team work of CEA and other Central Government agencies and the Consultants as per schedule. The PFRs of all 162 hydroelectric schemes have since been prepared ahead of schedule.
- 2.6. The work of preparation of PFRs of 162 hydroelectric schemes was entrusted to seven consultants viz. National Hydro Power Corporation (NHPC), Water and Power Consultancy services (WAPCOS), Satluj Jal Vidyut Nigam Ltd. (SJVNL), North Eastern Electric Power Corporation (NEEPCO), Karnataka Power Corporation Ltd (KPCL), Himachal Pradesh State Electricity Board (HPSEB), Uttaranchal Jal Vidyut Nigam Ltd (UJVNL). The summary of the PFRs prepared by the Consultants is as under.

Sl No	Consultant	Number of Schemes	Installed Capacity (MW)
1	National Hydroelectric Power Corporation	43	19287
2	Himachal Pradesh State Electricity Board	13	2692
3	North Eastern Electric Power Corporation	18	4660
4	Water and Power Consultancy Services	71	17368
5	Uttranchal Jal Vidyut Nigam Ltd.	10	1427
6	Satluj Jal Vidyut Nigam Ltd.	2	636
7	Karnataka Power Corporation Limited	5	1900
Total		162	47970

The details of PFRs prepared by each Consultant are given in Annex-I.

3. OVERVIEW OF PFR SCHEMES

- 3.1. **State wise Distribution of Schemes:** The 162 hydroelectric schemes for which PFRs have been prepared are located in 16 states as under.

Sl No	State	Number of Schemes	Installed Capacity(MW)
1	Andhra Pradesh	1	81
2	Arunachal Pradesh	42	27293
3	Chhattisgarh	5	848
4	Himachal Pradesh	15	3328
5	Jammu & Kashmir	13	2675
6	Karnataka	5	1900
7	Kerala	2	126
8	Madhya Pradesh	3	205
9	Maharashtra	9	411
10	Manipur	3	362
11	Meghalaya	11	931
12	Mizoram	3	1500
13	Nagaland	3	370
14	Orissa	4	1189
15	Sikkim	10	1469
16	Uttaranchal	33	5282
Total		162	47970

The State wise details of the schemes are given at Annex-II.

- 3.2. **Capacity Wise Distribution:** Among the PFRs of 162 schemes, the Etalin Hydroelectric Project scheme with an installation of 4000 MW is the largest. The scheme is located on the Dibang river in Arunachal. The capacity wise distribution of the 162 PFR schemes is given in the table below.

Sl No	Installed Capacity	Number of Schemes		Installed Capacity (MW)	
		Number	Percent of Total	Capacity (MW)	Percent of Total
1	Below 250.0 MW	109	67.3%	11451	23.9%
2	250.0 MW - 500.0 MW	30	18.5%	10502	21.9%
3	500.0 MW - 1000.0 MW	15	9.3%	9297	19.4%
4	1000.0 MW - 2000.0 MW	4	2.5%	4120	8.6%
5	Above 2000.0 MW	4	2.5%	12600	26.3%
Total		162	100.0%	47970	100.0%

The capacity wise classification of the PFR schemes is given in Annex-III.

- 3.3. **Tariff Wise Distribution:** The tariff wise distribution of the schemes is given in the table below.

Sl No	Tariff	PFR Schemes		Cumulative PFR Schemes	
		Nos. of Schemes	Installed Capacity (MW)	Nos. of Schemes	Installed Capacity (MW)
1	Below Rs.1.50	26	13603	26	13603
2	Rs.1.50 - Rs.2.00	26	13051	52	26654
3	Rs.2.00 - Rs.2.50	26	7366	78	34020
4	Rs.2.50 - Rs.3.00	16	2282	94	36302
5	Rs.3.00 - Rs.3.50	14	3001	108	39303
6	Rs.3.50 - Rs.4.00	10	2589	118	41892
7	Rs.4.00 - Rs.4.50	11	2053	129	43945
8	Rs.4.50 - Rs.5.00	7	1404	136	45349
9	Above Rs.5.00	26	2621	162	47970

The details of the schemes are given at Annex-IV.

- 3.4. **Low Tariff Schemes:** As per the results of the PFR studies 78 hydroelectric schemes with an installation of 34020 MW have tariff below Rs. 2.50 per unit. The PFRs prepared under the programme would serve useful purpose of fixing the inter-se priority for implementation of the schemes on the basis of tariff for taking up of the Survey & Investigation and Preparation of DPRs of hydroelectric schemes. State wise location of such schemes is given as under.

Sl No	State	Number of Schemes	Installed Capacity (MW)
1	Arunachal Pradesh	19	21800
2	Himachal Pradesh	11	2860
3	Jammu & Kashmir	5	1715
4	Karnataka	4	1600
5	Meghalaya	7	651
6	Sikkim	4	835
7	Uttaranchal	28	4559
Total		78	34020

The list of such schemes is given at Annex-V.

- 3.5. **Head Wise Distribution:** The operating head obtaining on the schemes varies from a minimum of 9.84 m at Ghargaon Hydroelectric Scheme (4x13 MW) in Maharashtra to a maximum of 1106.37 m Ringpi Hydroelectric Scheme (2x35 MW) in Sikkim. The distribution of

schemes in the above head range giving the number of schemes in each segment and corresponding number of generating units and aggregate installed capacity is given in the table below.

Sl No	Head Range	Number of Schemes	Number of Units	Installed Capacity (MW)
1	Below 100.0 m	44	154	7821
2	100.0 m - 200.0 m	44	150	18207
3	200.0 m - 300.0 m	27	85	9071
4	300.0 m - 400.0 m	18	63	7057
5	Above 400.0 m	29	73	5814
Total		162	525	47970

The list of schemes arranged in the order of operating head is enclosed as Annex - VI. The type and number of turbines, the selection of which is primarily is guided by the head obtaining at the station are given in the table below.

Type of Turbine/ Operating Head	Number of Units	Installed Capacity (MW)
<u>Kaplan</u>		
Upto 30 m	64	1601
31-100	3	60
Total (Kaplan)	67	1661
<u>Francis</u>		
31-100	89	6390
101-200	148	17977
201-300	85	9071
301-500	74	9694
Total (Francis)	396	43132
<u>Pelton</u>		
301-500	29	1133
Above 500	33	2044
Total(Pelton)	62	3177
Total (All)	525	47970

- 3.6. **Classification based on storage:** The distribution of the schemes based on the storage given as under:

Type	Number of Schemes	Installed Capacity (MW)
I. Run off river schemes	121	31626
II. Storage based Schemes	41	16344
Total	162	47970

The storage based schemes are those schemes which would provide seasonal storage to improve the firm power generation during the lean flow season. The total live storage at the storage based schemes is 36.4 billion cubic meters.

4. SUMMARY OF PFR SCHEMES

The broad Salient features of all the PFR schemes indicating the location, capacity, cost estimates, works involved, construction period are given at Annex-VII.

5. CONCLUSION

- 5.1. The results of the PFR Studies provide basis for prioritization of schemes for their selection for implementation. The low tariff schemes basis selection could be considered most appropriate. The schemes with tariff below Rs. 2.50 per unit could be considered for implementation at the first stage.
- 5.2. The description of the PFR schemes in the Executive Summary would provide useful information on salient features and the layout as also on cost estimates and tariff of the each PFR scheme. This would enable quick references to the information generally required for further consideration of the schemes. For detailed technical and financial references, the PFRs would need to be referred to. One set of each PFRs is available in CEA Library at Sewa Bhavan, R.K. Puram, New Delhi - 110066.

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Consultant Wise List of PFRs Prepared

Sl No	Consultant/Scheme	State	Installed Capacity (MW)
<u>National Hydroelectric Power Corporation (NHPC)</u>			
1	Dikchu	Sikkim	105.00
2	Kurungl&II	Ar. Pradesh	330.00
3	Emini	Ar.Pradesh	500.00
4	Mihumdon	Ar.Pradesh	400.00
5	Agoline	Ar. Pradesh	375.00
6	Basania	Madhya Padesh	90.00
7	Naying	Ar. Pradesh	1000.00
8	Dumkhar	J&K	45.00
9	Kanyunche	J&K	45.00
10	Rongni Storage	Sikkim	195.00
11	Panan	Sikkim	200.00
12	Tato-II	Ar. Pradesh	700.00
13	Hirong	Ar. Pradesh	500.00
14	Khalsi	J&K	60.00
15	Lingza	Sikkim	120.00
16	Takmaching	J&K	30.00
17	Duimukh	Ar.Pradesh	150.00
18	Ringong	Ar.Pradesh	150.00
19	Rukel	Sikkim	33.00
20	Demwe	Ar.Pradesh	3000.00
21	Rangyong	Sikkim	141.00
22	Ringpi	Sikkim	70.00
23	Karkit	J&K	30.00
24	Mirak	Ar.Pradesh	141.00
25	Lachen	Sikkim	210.00
26	Teesta-I	Sikkim	320.00
27	Etalin	Ar.Pradesh	4000.00
28	Naba	Ar.Pradesh	1000.00
29	Bauras	Madhya Pradesh	55.00
30	Hoshangabad	Madhya Pradesh	60.00
31	Amulin	Ar.Pradesh	420.00
32	Talem	Sikkim	75.00
33	Niare	Ar.Pradesh	800.00
34	Oju-II	Ar.Pradesh	1000.00
35	Elango	Ar.Pradesh	150.00
36	Attunli	Ar.Pradesh	500.00
37	Oju-I	Ar.Pradesh	700.00
38	Emra-II	Ar.Pradesh	390.00
39	Nalo	Ar.Pradesh	360.00

Sl No	Consultant/Scheme	State	Installed Capacity (MW)
40	Ashupani	Ar.Pradesh	30.00
41	Dengser	Ar.Pradesh	552.00
42	Simang	Ar.Pradesh	90.00
43	Etabue	Ar.Pradesh	165.00
Total (NHPC) - 43 Schemes			19287.00
<u>Himachal Pradesh State Electricity Board (HPSEB)</u>			
1	Yangthang	HP	261.00
2	Bardang	HP	114.00
3	Gharopa	HP	114.00
4	Jangi Thopan	HP	480.00
5	Gondhala	HP	144.00
6	Khoksar	HP	90.00
7	Chhatru	HP	108.00
8	Chamba	HP	126.00
9	Bajoli Holi	HP	180.00
10	Tidong-II	HP	70.00
11	Luhri	HP	465.00
12	Thopan Powari	HP	480.00
13	Tidong-I	HP	60.00
Total (HPSEB) - 13 Schemes			2692.00
<u>North Eastern Electric Power Corporation (NEEPCO)</u>			
1	Papu	Ar.Pradesh	200.00
2	Kameng Dam	Ar.Pradesh	600.00
3	Talong	Ar.Pradesh	300.00
4	Bhareli-II	Ar.Pradesh	600.00
5	Tenga	Ar.Pradesh	600.00
6	Kapakleyak	Ar.Pradesh	160.00
7	Pakke	Ar.Pradesh	110.00
8	Sebu	Ar.Pradesh	80.00
9	Bhareli-I	Ar.Pradesh	1120.00
10	Chanda	Ar.Pradesh	110.00
11	Utung	Ar.Pradesh	100.00
12	Badao	Ar.Pradesh	120.00
13	Tizu	Nagaland	150.00
14	Yangnyu	Nagaland	80.00
15	Dikhu	Nagaland	140.00
16	Phanchung	Ar.Pradesh	60.00
17	Tarangwarang	Ar.Pradesh	30.00
18	Dibbin	Ar.Pradesh	100.00
Total (NEEPCO) - 18 Schemes			4660.00
<u>Water and Power Consultancy Services (WAPCOS)</u>			
1	Badrinath	Uttaranchal	140.00
2	Bhaironghati	Uttaranchal	65.00
3	Harsil	Uttaranchal	210.00
4	Jelam Tamak	Uttaranchal	60.00
5	Maleri Jelam	Uttaranchal	55.00

Sl No	Consultant/Scheme	State	Installed Capacity (MW)
6	Karmoli	Uttaranchal	140.00
7	Kalika Dantu	Uttaranchal	230.00
8	Sirkari Bhyol Rupsiabagar	Uttaranchal	210.00
9	Jadh Ganga	Uttaranchal	50.00
10	Gangotri	Uttaranchal	55.00
11	Khartoi Lumti Talli	Uttaranchal	55.00
12	Rupsiabagar Khasiyabara	Uttaranchal	260.00
13	Garba Tawaghat	Uttaranchal	630.00
14	Deodi	Uttaranchal	60.00
15	Chhunger - Chal	Uttaranchal	240.00
16	Bogudiyar - Sirkari Bhyal	Uttaranchal	170.00
17	Mapang - Bogidiyar	Uttaranchal	200.00
18	Rishi Ganga - 1	Uttaranchal	70.00
19	Rishi Ganga - II	Uttaranchal	35.00
20	Sela Urthing	Uttaranchal	230.00
21	Gohana Tal	Uttaranchal	60.00
22	Devsari	Uttaranchal	300.00
23	Bokang Baling	Uttaranchal	330.00
24	Kotri	Chhattisgarh	150.00
25	Kasari	Maharashtra	25.00
26	Hiranyakeshi	Maharashtra	18.00
27	Kadvi	Maharashtra	22.00
28	Kumbhi	Maharashtra	17.00
29	Nugur-II	Chhattisgarh	210.00
30	Lower Kolab	Orissa	465.00
31	Nugur-I	Chhattisgarh	170.00
32	Rehar-I	Chhattisgarh	171.00
33	Wainganga	Maharashtra	105.00
34	Pranhita	Maharashtra	48.00
35	Baljori	Orissa	178.00
36	Ghargaon	Maharashtra	52.00
37	Kunghara	Maharashtra	72.00
38	Rehar-II	Chhattisgarh	147.00
39	Samda	Maharashtra	52.00
40	Tikarpara	Orissa	259.00
41	Naraj	Orissa	287.00
42	Shamnot	J&K	370.00
43	Ratle	J&K	560.00
44	Kiru	J&K	430.00
45	Kawar	J&K	320.00
46	Pondugala	Andhra Pradesh	81.00
47	Umjaut	Meghalaya	69.00
48	Umduna	Meghalaya	57.00
49	Bichlari	J&K	35.00
50	Barinium	J&K	240.00
51	Shuas	J&K	230.00
52	Mawhu	Meghalaya	120.00
53	Selim	Meghalaya	170.00

Sl No	Consultant/Scheme	State	Installed Capacity (MW)
54	Umngi	Meghalaya	54.00
55	Rangmaw	Meghalaya	65.00
56	Nongnam	Meghalaya	50.00
57	Mawput	Meghalaya	21.00
58	Kalai	Ar. Pradesh	2600.00
59	Nongkolait	Meghalaya	120.00
60	Sushen	Meghalaya	65.00
61	Perianjakully	Kerala	60.00
62	Karappara Kuriarkutty	Kerala	66.00
63	Lungleng	Mizoram	815.00
64	Hutong	Ar. Pradesh	3000.00
65	Nunglieban	Manipur	105.00
66	Tlawng	Mizoram	45.00
67	Khongnum Chakka st.-II	Manipur	67.00
68	Mawblei	Meghalaya	140.00
69	Ujh	J&K	280.00
70	Boinu	Mizoram	640.00
71	Pabaram	Manipur	190.00
Total (WAPCOS) - 71 Schemes			17368.00
<u>Uttranchal Jal Vidyut Nigam Ltd. (UJVNL)</u>			
1	Arakot Tiuni	Uttaranchal	72.00
2	Jakhol Sankri	Uttaranchal	33.00
3	Naitwar-Mori	Uttaranchal	33.00
4	Urthing Sobla	Uttaranchal	280.00
5	Lata Tapovan	Uttaranchal	310.00
6	Tamak Lata	Uttaranchal	280.00
7	Taluka Sankri	Uttaranchal	140.00
8	Bagoli Dam	Uttaranchal	72.00
9	Nand Prayag	Uttaranchal	141.00
10	Ramganga	Uttaranchal	66.00
Total (UJVNL) - 10 Schemes			1427.00
<u>Satluj Jal Vidyut Nigam Ltd. (SJVNL)</u>			
1	Khab-I	Himachal Pradesh	450.00
2	Khab-II	Himachal Pradesh	186.00
Total (SJVNL) - 2 Schemes			636.00
<u>Karnataka Power Corporation Limited (KPCL)</u>			
1	Kalinadi Stage-III	Karnataka	300.00
2	Tamankal	Karnataka	300.00
3	Gundia	Karnataka	300.00
4	Gangavali	Karnataka	400.00
5	Agnashini	Karnataka	600.00
Total (KPCL) - 5 Schemes			1900.00
Total (All Consultants) - 162 Schemes			47970.00

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Statewise List of Schemes

	Scheme	Consultant	Installed Capacity			Head (m)	Annual Energy (GWh)	Tariff (Rs/kWh)
			Nos of Units	Size(MW)	Total (MW)			
Andhra Pradesh								
1	Pondugala	WAPCOS	3	27	81	18.67	399.36	3.48
	Total (Andhra Pradesh) - 1 Nos. schemes		3		81			
Arunachal Pradesh								
2	KurungI&II	NHPC	3	110	330	151.00	1435.40	4.04
3	Emini	NHPC	4	125	500	125.00	1695.45	3.51
4	Mihumdon	NHPC	4	100	400	286.00	1451.75	3.60
5	Agoline	NHPC	3	125	375	163.00	1267.38	3.51
6	Naying	NHPC	4	250	1000	245.00	5077.15	1.18
7	Tato-II	NHPC	4	175	700	168.00	3465.90	1.48
8	Hirong	NHPC	4	125	500	285.00	2535.80	1.62
9	Duimukh	NHPC	3	50	150	65.00	551.48	8.50
10	Ringong	NHPC	3	50	150	166.50	649.58	3.61
11	Demwe	NHPC	12	250	3000	138.00	10823.82	1.97
12	Mirak	NHPC	3	47	141	136.40	748.44	3.42
13	Etain	NHPC	16	250	4000	385.00	16071.60	1.70
14	Naba	NHPC	4	250	1000	221.00	3995.25	2.14
15	Amulin	NHPC	3	140	420	132.00	1716.40	3.37
16	Niare	NHPC	4	200	800	205.00	3356.62	2.02
17	Oju-II	NHPC	4	250	1000	322.00	4629.93	1.46
18	Elango	NHPC	3	50	150	363.00	583.14	5.00
19	Attunli	NHPC	4	125	500	264.00	2247.32	2.35
20	Oju-I	NHPC	4	175	700	257.00	3291.58	2.08
21	Emra-II	NHPC	3	130	390	278.00	1648.09	3.02
22	Nalo	NHPC	4	90	360	221.00	1733.00	3.27
23	Ashupani	NHPC	2	15	30	395.00	126.45	8.75
24	Dengser	NHPC	4	138	552	120.00	2666.71	3.26
25	Simang	NHPC	3	30	90	125.00	417.82	5.43
26	Etabue	NHPC	3	55	165	378.00	683.66	3.43
27	Papu	NEEPCO	2	100	200	238.00	505.00	2.94
28	Kameng Dam	NEEPCO	5	120	600	65.00	2345.55	2.29
29	Talong	NEEPCO	3	100	300	171.67	915.50	2.24
30	Bhareli-II	NEEPCO	5	120	600	51.00	2345.00	1.67
31	Tenga	NEEPCO	4	150	600	875.00	1046.50	3.52
32	Kapakleyak	NEEPCO	4	40	160	245.00	627.95	1.74
33	Pakke	NEEPCO	2	55	110	452.50	335.26	3.33
34	Sebu	NEEPCO	2	40	80	123.00	227.53	3.71
35	Bhareli-I	NEEPCO	8	140	1120	95.33	4112.40	1.85
36	Chanda	NEEPCO	4	27.5	110	175.67	401.91	2.67
37	Utung	NEEPCO	3	33.3	100	291.00	359.13	3.10
38	Badao	NEEPCO	4	30	120	154.50	448.67	2.32
39	Phanchung	NEEPCO	2	30	60	157.13	174.83	3.24
40	Tarangwarang	NEEPCO	2	15	30	185.55	92.88	2.88
41	Dibbin	NEEPCO	2	50	100	151.24	332.00	2.23
42	Kalai	WAPCOS	10	260	2600	193.21	10608.64	1.01
43	Hutong	WAPCOS	12	250	3000	166.77	9901.00	1.28
	Total (Arunachal Pr.) - 42 Nos. schemes		182		27293			

	Scheme	Consultant	Installed Capacity			Head (m)	Annual Energy (GWh)	Tariff (Rs/kWh)	
			Nos of Units	Size(MW)	Total (MW)				
<u>Chhattisgarh</u>									
44	Kotri	WAPCOS	3	50	150	36.99	330.95	5.48	
45	Nugur-II	WAPCOS	5	42	210	16.66	787.78	4.16	
46	Nugur-I	WAPCOS	5	34	170	24.54	316.13	4.89	
47	Rehar-I	WAPCOS	3	57	171	46.84	264.38	8.70	
48	Rehar-II	WAPCOS	3	49	147	38.17	290.32	5.16	
	Total (Chhattisgarh) - 5 Nos. schemes		19		848				
<u>Himachal Pradesh</u>									
49	Yangthang	HPSEB	3	87	261	186.45	938.02	2.08	
50	Bardang	HPSEB	3	38	114	55.00	424.46	2.91	
51	Gharopa	HPSEB	3	38	114	169.00	534.25	2.09	
52	Jangi Thopan	HPSEB	3	160	480	174.14	1779.45	2.00	
53	Gondhala	HPSEB	3	48	144	134.00	570.19	1.92	
54	Khoksar	HPSEB	3	30	90	99.00	351.91	2.46	
55	Chhatru	HPSEB	3	36	108	160.00	455.72	2.89	
56	Chamba	HPSEB	3	42	126	110.00	646.82	1.48	
57	Bajoli Holi	HPSEB	3	60	180	278.00	762.98	2.03	
58	Tidong-II	HPSEB	2	35	70	575.00	256.18	2.02	
59	Luhri	HPSEB	3	155	465	88.00	1825.13	2.41	
60	Thopan Powari	HPSEB	3	160	480	161.14	1786.26	1.81	
61	Tidong-I	HPSEB	2	30	60	511.50	211.65	2.71	
62	Khab-I	SJVNL	3	150	450	170.00	1551.00	2.24	
63	Khab-II	SJVNL	3	62	186	70.00	640.00	3.04	
	Total (Himachal Pr.) - 15 Nos. schemes		43		3328				
<u>Jammu & Kashmir</u>									
64	Dumkhar	NHPC	3	15	45	27.80	219.18	4.66	
65	Kanyunche	NHPC	3	15	45	28.76	223.02	4.71	
66	Khalsi	NHPC	3	20	60	33.00	272.60	4.10	
67	Takmaching	NHPC	3	10	30	18.53	145.52	5.54	
68	Karkit	NHPC	3	10	30	26.90	153.11	5.40	
69	Shamnot	WAPCOS	4	92.5	370	56.33	1650.19	1.69	
70	Ratle	WAPCOS	4	140	560	92.33	2483.37	1.40	
71	Kiru	WAPCOS	4	107.5	430	105.33	1935.77	0.77	
72	Kawar	WAPCOS	4	80	320	74.00	1426.56	1.09	
73	Bichlari	WAPCOS	2	17.5	35	462.60	148.29	1.11	
74	Barinium	WAPCOS	2	120	240	117.77	1170.34	2.54	
75	Shuas	WAPCOS	2	115	230	115.70	1117.87	2.94	
76	Ujh	WAPCOS	4	70	280	143.33	465.06	5.06	
	Total (J & K) - 13 Nos. schemes		41		2675				
<u>Karnataka</u>									
77	Kalinadi Stage-III	KPCL	2	150	300	407.67	610.00	1.67	
78	Tamankal	KPCL	2	150	300	87.29	401.00	3.32	
79	Gundia	KPCL	2	150	300	600.00	616.00	1.41	
80	Gangavali	KPCL	2	200	400	378.30	759.00	1.46	
81	Agnashini	KPCL	4	150	600	427.00	1431.00	1.07	
	Total (Karnataka) - 5 Nos. schemes		12		1900				
<u>Kerala</u>									
82	Perianjakully	WAPCOS	2	30	60	282.90	86.30	6.25	
83	Karappara Kuriarkutty	WAPCOS	PH1	2	18	66	390.00	126.10	7.88
			PH2	2	15		307.00		
	Total (Kerala) - 2 Nos. schemes		6		126				
<u>Madhya Pradesh</u>									
84	Basania	NHPC	3	30	90	38.00	240.00	17.23	
85	Bauras	NHPC	3	18.33	55	17.50	248.43	3.96	
86	Hoshangabad	NHPC	3	20	60	16.50	288.21	4.10	
	Total (Madhya Pradesh) - 3 Nos. schemes		9		205				

	Scheme	Consultant	Installed Capacity			Head (m)	Annual Energy (GWh)	Tariff (Rs/kWh)
			Nos of Units	Size(MW)	Total (MW)			
<u>Maharashtra</u>								
87	Kasari	WAPCOS	2	12.5	25	40.67	33.32	18.16
88	Hiranyakeshi	WAPCOS	2	9	18	36.10	23.76	20.26
89	Kadvi	WAPCOS	2	11	22	36.30	29.59	34.03
90	Kumbhi	WAPCOS	2	8.5	17	37.48	22.93	35.19
91	Wainganga	WAPCOS	5	21	105	19.74	246.15	3.86
92	Pranhita	WAPCOS	2	24	48	25.30	135.96	10.32
93	Ghargaon	WAPCOS	4	13	52	9.84	74.47	15.50
94	Kunghara	WAPCOS	4	18	72	12.77	133.40	11.34
95	Samda	WAPCOS	4	13	52	10.64	83.40	14.11
Total (Maharashtra) - 9 Nos. schemes			27		411			
<u>Manipur</u>								
96	Nunglieban	WAPCOS	2	52.5	105	82.42	268.93	5.16
97	Khongnum Chakka st.-II	WAPCOS	2	33.5	67	281.25	192.84	4.59
98	Pabaram	WAPCOS	2	95	190	116.67	474.77	4.33
Total (Manipur) - 3 Nos. schemes			6		362			
<u>Meghalaya</u>								
99	Umjaut	WAPCOS	3	23	69	375.20	276.70	1.51
100	Umduna	WAPCOS	3	19	57	253.17	231.24	1.68
101	Mawhu	WAPCOS	3	40	120	438.15	482.96	1.40
102	Selim	WAPCOS	2	85	170	433.67	534.68	2.02
103	Umngi	WAPCOS	2	27	54	304.75	89.65	2.86
104	Rangmaw	WAPCOS	2	32.5	65	321.00	229.60	2.32
105	Nongnam	WAPCOS	2	25	50	215.17	212.59	2.44
106	Mawput	WAPCOS	3	7	21	93.42	83.95	4.07
107	Nongkolait	WAPCOS	2	60	120	463	332.87	1.97
108	Sushen	WAPCOS	2	32.5	65	114.58	220.6	3.85
109	Mawblei	WAPCOS	2	70	140	400.33	303.66	4.44
Total (Meghalaya) - 11 Nos. schemes			26		931			
<u>Mizoram</u>								
110	Lungleng	WAPCOS	5	163	815	219.67	1169.06	4.17
111	Tlawng	WAPCOS	2	22.5	45	123.67	151.67	5.84
112	Boinu	WAPCOS	4	160	640	158.67	1118.93	4.83
Total (Mizoram) - 3 Nos. schemes			11		1500			
<u>Nagaland</u>								
113	Tizu	NEEPCO	3	50	150	64.19	568.41	2.56
114	Yangnyu	NEEPCO	2	40	80	115	176.45	4.48
115	Dikhu	NEEPCO	4	35	140	79.44	513.41	2.8
Total (Nagaland) - 3 Nos. schemes			9		370			
<u>Orissa</u>								
116	Lower Kolab	WAPCOS	3	155	465	196.9	845.86	7.1
117	Baljori	WAPCOS	2	89	178	165.75	479.8	5.9
118	Tikarpara	WAPCOS	7	37	259	16.97	828.37	3.69
119	Naraj	WAPCOS	7	41	287	16.14	759.31	4.92
Total (Orissa) - 4 Nos. schemes			19		1189			
<u>Sikkim</u>								
120	Dikchu	NHPC	3	35	105	352	469	2.15
121	Rongni Storage	NHPC	3	65	195	442	522	8.6
122	Panan	NHPC	4	50	200	312	762	2.15
123	Lingza	NHPC	3	40	120	736	477.51	2.85
124	Rukel	NHPC	3	11	33	537.1	149.41	5.48
125	Rangyong	NHPC	3	47	141	723.18	639.52	2.7
126	Ringpi	NHPC	2	35	70	1106.37	317.41	3.17
127	Lachen	NHPC	3	70	210	350	865.94	2.35
128	Teesta-I	NHPC	4	80	320	576.85	1298.12	1.8
129	Talem	NHPC	3	25	75	393.19	305.48	4.34
Total (Sikkim) - 10 Nos. schemes			31		1469			

	Scheme	Consultant	Installed Capacity			Head (m)	Annual Energy (GWh)	Tariff (Rs/kWh)
			Nos of Units	Size(MW)	Total (MW)			
Uttaranchal								
130	Badrinath	WAPCOS	2	70	140	459.67	702.7	0.81
131	Bhaironghati	WAPCOS	2	32.5	65	108.9	293.18	1.8
132	Harsil	WAPCOS	3	70	210	281.33	920.57	1.1
133	Jelam Tamak	WAPCOS	2	30	60	195.58	268.12	1.71
134	Maleri Jelam	WAPCOS	2	27.5	55	200.33	243.07	1.8
135	Karmoli	WAPCOS	2	70	140	420	621	1.3
136	Kalika Dantu	WAPCOS	2	115	230	100	1067.3	2.95
137	Sirkari Bhyol Rupsiabagar	WAPCOS	3	70	210	388.97	967.97	1.55
138	Jadh Ganga	WAPCOS	2	25	50	142.6	220.88	2.19
139	Gangotri	WAPCOS	1	55	55	336.33	264.76	1.62
140	Khartoi Lumti Talli	WAPCOS	2	27.5	55	56.6	241.51	3
141	Rupsiabagar Khasiyabara	WAPCOS	2	130	260	449.47	1195.63	1.59
142	Garba Tawaghat	WAPCOS	3	210	630	470.97	2483.11	0.9
143	Deodi	WAPCOS	2	30	60	560.3	296.76	1.37
144	Chhunger - Chal	WAPCOS	2	120	240	292.83	853.28	1.13
145	Bogudiyar - Sirkari Bhyal	WAPCOS	2	85	170	344.47	744	1.99
146	Mapang - Bogudiyar	WAPCOS	2	100	200	465.07	882.04	1.3
147	Rishi Ganga - 1	WAPCOS	2	35	70	536.17	327.3	1.18
148	Rishi Ganga - II	WAPCOS	1	35	35	236.96	164.64	2.22
149	Sela Urthing	WAPCOS	2	115	230	255.5	816.73	1.4
150	Gohana Tal	WAPCOS	2	30	60	584.52	269.35	1.64
151	Devsari	WAPCOS	3	100	300	227.5	878.5	2.77
152	Bokang Baling	WAPCOS	3	110	330	455.2	1124.62	1.68
153	Arakot Tiuni	UJVNL	3	24	72	250.2	382.9	1
154	Jakhol Sankri	UJVNL	3	11	33	364	144	1.71
155	Naitwar-Mori	UJVNL	3	11	33	76	151	1.85
156	Urthing Sobla	UJVNL	4	70	280	414.96	1350.73	1.49
157	Lata Tapovan	UJVNL	4	77.5	310	265	1123	2.21
158	Tamak Lata	UJVNL	4	70	280	291.4	1040.7	2.3
159	Taluka Sankri	UJVNL	2	70	140	564.9	559.47	1.33
160	Bagoli Dam	UJVNL	3	24	72	139.5	340.7	4.1
161	Nand Prayag	UJVNL	3	47	141	72	794	2.05
162	Ramganga	UJVNL	3	22	66	100.1	327	3.25
Total (Uttaranchal) - 33 Nos. schemes			81		5282			
Grand Total - 162 Nos. schemes			525		47970			

PFRS under 50 000 MW Hydroelectric Initiative
Installed Capacity wise Classification of Schemes

Sl No	Scheme	State	Installed Capacity		Estimated Cost (Rs. Cr.)	Annual Energy (GWh)	Tariff (p/kWh)
			Units x Size(MW)	Total (MW)			
INSTALLED CAPACITY: Below 250.0 MW							
1	Dikchu	Sikkim	3 x 35.0	105	518.5	469	2.15
2	Basania	Madhya Pradesh	3 x 30.0	90	2135.06	240	17.23
3	Dumkhar	J&K	3 x 15.0	45	527.45	219.18	4.66
4	Kanyunche	J&K	3 x 15.0	45	542.29	223.02	4.71
5	Rongni Storage	Sikkim	3 x 65.0	195	2265.14	522	8.6
6	Panan	Sikkim	4 x 50.0	200	846.08	762	2.15
7	Khalsi	J&K	3 x 20.0	60	577.28	272.6	4.1
8	Lingza	Sikkim	3 x 40.0	120	699.8	477.51	2.85
9	Takmaching	J&K	3 x 10.0	30	416.64	145.52	5.54
10	Duimukh	Ar.Pradesh	3 x 50.0	150	2420.46	551.48	8.5
11	Ringong	Ar.Pradesh	3 x 50.0	150	1211.06	649.58	3.61
12	Rukel	Sikkim	3 x 11.0	33	422.01	149.41	5.48
13	Rangyong	Sikkim	3 x 47.0	141	890.82	639.52	2.7
14	Ringpi	Sikkim	2 x 35.0	70	519.27	317.41	3.17
15	Karkit	J&K	3 x 10.0	30	426.92	153.11	5.4
16	Mirak	Ar.Pradesh	3 x 47.0	141	1320.75	748.44	3.42
17	Lachen	Sikkim	3 x 70.0	210	1046.93	865.94	2.35
18	Bauras	Madhya Pradesh	3 x 18.3	55	498.17	248.43	3.96
19	Hoshangabad	Madhya Pradesh	3 x 20.0	60	598.15	288.21	4.1
20	Talem	Sikkim	3 x 25.0	75	683.76	305.48	4.34
21	Elango	Ar.Pradesh	3 x 50.0	150	1503.07	583.14	5
22	Ashupani	Ar.Pradesh	2 x 15.0	30	570.78	126.45	8.75
23	Simang	Ar.Pradesh	3 x 30.0	90	1028.34	417.82	5.43
24	Etabue	Ar.Pradesh	3 x 55.0	165	1208.39	683.66	3.43
25	Bardang	Himachal Pr.	3 x 38.0	114	550.12	424.46	2.91
26	Gharopa	Himachal Pr.	3 x 38.0	114	493.59	534.25	2.09
27	Gondhala	Himachal Pr.	3 x 48.0	144	482.5	570.19	1.92
28	Khoksar	Himachal Pr.	3 x 30.0	90	373.66	351.91	2.46
29	Chhatru	Himachal Pr.	3 x 36.0	108	585.15	455.72	2.89
30	Chamba	Himachal Pr.	3 x 42.0	126	420.9	646.82	1.48
31	Bajoli Holi	Himachal Pr.	3 x 60.0	180	649.22	762.98	2.03
32	Tidong-II	Himachal Pr.	2 x 35.0	70	308.83	256.18	2.02
33	Tidong-I	Himachal Pr.	2 x 30.0	60	298	211.65	2.71
34	Papu	Ar.Pradesh	2 x 100.0	200	646.8	505	2.94
35	Kapakleyak	Ar.Pradesh	4 x 40.0	160	463.52	627.95	1.74
36	Pakke	Ar.Pradesh	2 x 55.0	110	480.45	335.26	3.33
37	Sebu	Ar.Pradesh	2 x 40.0	80	371.4	227.53	3.71
38	Chanda	Ar.Pradesh	4 x 27.5	110	466.06	401.91	2.67
39	Utung	Ar.Pradesh	3 x 33.3	100	488.1	359.13	3.1

Sl No	Scheme	State	Installed Capacity		Estimated Cost (Rs. Cr.)	Annual Energy (GWh)	Tariff (p/kWh)
			Units x Size(MW)	Total (MW)			
40	Badao	Ar.Pradesh	4 x 30.0	120	443.98	448.67	2.32
41	Tizu	Nagaland	3 x 50.0	150	731.7	568.41	2.56
42	Yangnyu	Nagaland	2 x 40.0	80	397.55	176.45	4.48
43	Dikhu	Nagaland	4 x 35.0	140	723.63	513.41	2.8
44	Phanchung	Ar.Pradesh	2 x 30.0	60	282.43	174.83	3.24
45	Tarangwarang	Ar.Pradesh	2 x 15.0	30	134.54	92.88	2.88
46	Dibbin	Ar.Pradesh	2 x 50.0	100	371.52	332	2.23
47	Badrinath	Uttaranchal	2 x 70.0	140	357.33	702.7	0.81
48	Bhaironghati	Uttaranchal	2 x 32.5	65	304.32	293.18	1.8
49	Harsil	Uttaranchal	3 x 70.0	210	578.2	920.57	1.1
50	Jelam Tamak	Uttaranchal	2 x 30.0	60	277.92	268.12	1.71
51	Maleri Jelam	Uttaranchal	2 x 27.5	55	257.85	243.07	1.8
52	Karmoli	Uttaranchal	2 x 70.0	140	465.6	621	1.3
53	Kalika Dantu	Uttaranchal	2 x 115.0	230	1935.43	1067.3	2.95
54	Sirkari Bhyol Rupsiabaga	Uttaranchal	3 x 70.0	210	899.63	967.97	1.55
55	Jadh Ganga	Uttaranchal	2 x 25.0	50	277.48	220.88	2.19
56	Gangotri	Uttaranchal	1 x 55.0	55	252.61	264.76	1.62
57	Khartoi Lumti Talli	Uttaranchal	2 x 27.5	55	433.12	241.51	3
58	Deodi	Uttaranchal	2 x 30.0	60	242.34	296.76	1.37
59	Chhunger - Chal	Uttaranchal	2 x 120.0	240	725.53	853.28	1.13
60	Bogudiyar - Sirkari Bhyal	Uttaranchal	2 x 85.0	170	859.27	744	1.99
61	Mapang - Bogudiyar	Uttaranchal	2 x 100.0	200	667.19	882.04	1.3
62	Rishi Ganga - 1	Uttaranchal	2 x 35.0	70	277.01	327.3	1.18
63	Rishi Ganga - II	Uttaranchal	1 x 35.0	35	212.98	164.64	2.22
64	Sela Urthing	Uttaranchal	2 x 115.0	230	696.73	816.73	1.4
65	Gohana Tal	Uttaranchal	2 x 30.0	60	270.38	269.35	1.64
66	Kotri	Chhattisgarh	3 x 50.0	150	1071.25	330.95	5.48
67	Kasari	Maharashtra	2 x 12.5	25	350.53	33.32	18.16
68	Hiranyakeshi	Maharashtra	2 x 9.0	18	289.03	23.76	20.26
69	Kadvi	Maharashtra	2 x 11.0	22	597.99	29.59	34.03
70	Kumbhi	Maharashtra	2 x 8.5	17	482.14	22.93	35.19
71	Nugur-II	Chhattisgarh	5 x 42.0	210	1252.11	787.78	4.16
72	Nugur-I	Chhattisgarh	5 x 34.0	170	952.52	316.13	4.89
73	Rehar-I	Chhattisgarh	3 x 57.0	171	1441.55	264.38	8.7
74	Wainganga	Maharashtra	5 x 21.0	105	1321.77	246.146	3.86
75	Pranhita	Maharashtra	2 x 24.0	48	845.09	135.96	10.32
76	Baljori	Orissa	2 x 89.0	178	1778.32	479.8	5.9
77	Ghargaon	Maharashtra	4 x 13.0	52	690.14	74.47	15.5
78	Kunghara	Maharashtra	4 x 18.0	72	843.65	133.4	11.34
79	Rehar-II	Chattisgarh	3 x 49.0	147	924.89	290.32	5.16
80	Samda	Maharashtra	4 x 13.0	52	704.37	83.4	14.11
81	Pondugala	Andhra Pradesh	3 x 27.0	81	834.89	399.36	3.48
82	Umjaut	Meghalaya	3 x 23.0	69	276.97	276.7	1.51
83	Umduna	Meghalaya	3 x 19.0	57	226.68	231.24	1.68
84	Bichlari	J&K	2 x 17.5	35	94.4	148.29	1.11

Sl No	Scheme	State	Installed Capacity		Estimated Cost (Rs. Cr.)	Annual Energy (GWh)	Tariff (p/kWh)
			Units x Size(MW)	Total (MW)			
85	Barinium	J&K	2 x 120.0	240	1698.09	1170.34	2.54
86	Shuas	J&K	2 x 115.0	230	1872.57	1117.87	2.94
87	Mawhu	Meghalaya	3 x 40.0	120	434.24	482.96	1.4
88	Selim	Meghalaya	2 x 85.0	170	652.07	534.68	2.02
89	Umngi	Meghalaya	2 x 27.0	54	389.93	89.65	2.86
90	Rangmaw	Meghalaya	2 x 32.5	65	268.37	229.6	2.32
91	Nongnam	Meghalaya	2 x 25.0	50	272.07	212.59	2.44
92	Mawput	Meghalaya	3 x 7.0	21	199.51	83.95	4.07
93	Nongkolait	Meghalaya	2 x 60.0	120	392.8	332.87	1.97
94	Sushen	Meghalaya	2 x 32.5	65	521.53	220.6	3.85
95	Perianjakully	Kerala	2 x 30.0	60	328.5	86.3	6.25
96	Karappara Kuriarkutty	Kerala	2x18+2x15	66	553.57	126.1	7.88
97	Nunglieban	Manipur	2 x 52.5	105	841.99	268.93	5.16
98	Tlawng	Mizoram	2 x 22.5	45	528.1	151.67	5.84
99	Khongnum Chakka st.-II	Manipur	2 x 33.5	67	525.06	192.84	4.59
100	Mawblei	Meghalaya	2 x 70.0	140	807.02	303.66	4.44
101	Pabaram	Manipur	2 x 95.0	190	1256.74	474.77	4.33
102	Arakot Tiuni	Uttaranchal	3 x 24.0	72	310.51	382.9	1
103	Jakhol Sankri	Uttaranchal	3 x 11.0	33	171	144	1.71
104	Naitwar-Mori	Uttaranchal	3 x 11.0	33	202.2	151	1.85
105	Taluka Sankri	Uttaranchal	2 x 70.0	140	378.14	559.47	1.33
106	Bagoli Dam	Uttaranchal	3 x 24.0	72	576.97	340.7	4.1
107	Nand Prayag	Uttaranchal	3 x 47.0	141	670.04	794	2.05
108	Ramganga	Uttaranchal	3 x 22.0	66	441.31	327	3.25
109	Khab-II	Himachal Pr.	3 x 62.0	186	990.52	640	3.04
Total (Below 250.0 MW) - 109Nos.				11451			
INSTALLED CAPACITY: 250.0 MW - 500.0 MW							
110	Kurungl&II	Ar. Pradesh	3 x 110.0	330	2985.04	1435.4	4.04
111	Mihumdon	Ar.Pradesh	4 x 100.0	400	2700.33	1451.75	3.6
112	Agoline	Ar. Pradesh	3 x 125.0	375	2293.62	1267.38	3.51
113	Teesta-I	Sikkim	4 x 80.0	320	1206.59	1298.12	1.8
114	Amulin	Ar.Pradesh	3 x 140.0	420	2979.45	1716.4	3.37
115	Emra-II	Ar.Pradesh	3 x 130.0	390	2564.5	1648.09	3.02
116	Nalo	Ar.Pradesh	4 x 90.0	360	2922.14	1733	3.27
117	Yangthang	Himachal Pr.	3 x 87.0	261	818.85	938.02	2.08
118	Jangi Thopan	Himachal Pr.	3 x 160.0	480	1805.54	1779.45	2
119	Luhri	Himachal Pr.	3 x 155.0	465	2038.5	1825.13	2.41
120	Thopan Powari	Himachal Pr.	3 x 160.0	480	1785.87	1786.26	1.81
121	Talong	Ar.Pradesh	3 x 100.0	300	891.04	915.5	2.24
122	Rupsiabagar Khasiyabara	Uttaranchal	2 x 130.0	260	1101.55	1195.63	1.59
123	Devsari	Uttaranchal	3 x 100.0	300	1532.03	878.5	2.77
124	Bokang Baling	Uttaranchal	3 x 110.0	330	1120.75	1124.62	1.68
125	Lower Kolab	Orissa	3 x 155.0	465	3695.95	845.86	7.1
126	Tikarpara	Orissa	7 x 37.0	259	1904.17	828.37	3.69
127	Naraj	Orissa	7 x 41.0	287	2278.38	759.31	4.92
128	Shamnot	J&K	4 x 92.5	370	1592.91	1650.19	1.69
129	Kiru	J&K	4 x 107.5	430	857.58	1935.77	0.77
130	Kawar	J&K	4 x 80.0	320	891.37	1426.56	1.09

Sl No	Scheme	State	Installed Capacity		Estimated Cost (Rs. Cr.)	Annual Energy (GWh)	Tariff (p/kWh)
			Units x Size(MW)	Total (MW)			
131	Ujh	J&K	4 x 70.0	280	1390.2	465.06	5.06
132	Urthing Sobla	Uttaranchal	4 x 70.0	280	888.45	1350.73	1.49
133	Lata Tapovan	Uttaranchal	4 x 77.5	310	1021.3	1123	2.21
134	Tamak Lata	Uttaranchal	4 x 70.0	280	988.21	1040.7	2.3
135	Khab-I	Himachal Pr.	3 x 150.0	450	1765.89	1551	2.24
136	Kalinadi Stage-III	Karanataka	2 x 150.0	300	590.05	610	1.67
137	Tamankal	Karanataka	2 x 150.0	300	771.25	401	3.32
138	Gundia	Karanataka	2 x 150.0	300	531.68	616	1.41
139	Gangavali	Karanataka	2 x 200.0	400	709.68	759	1.46
	Total (250.0 MW - 500.0 MW) - 30Nos.			10502			
INSTALLED CAPACITY: 500.0 MW - 1000.0 MW							
140	Emini	Ar.Pradesh	4 x 125.0	500	3067.2	1695.45	3.51
141	Tato-II	Ar. Pradesh	4 x 175.0	700	2608.6	3465.9	1.48
142	Hirong	Ar. Pradesh	4 x 125.0	500	2072.78	2535.8	1.62
143	Niare	Ar.Pradesh	4 x 200.0	800	3498.55	3356.62	2.02
144	Attunli	Ar.Pradesh	4 x 125.0	500	2725.26	2247.32	2.35
145	Oju-I	Ar.Pradesh	4 x 175.0	700	3526.28	3291.58	2.08
146	Dengser	Ar.Pradesh	4 x 138.0	552	3945.09	2666.71	3.26
147	Kameng Dam	Ar.Pradesh	5 x 120.0	600	2264	2345.55	2.29
148	Bhareli-II	Ar.Pradesh	5 x 120.0	600	1698.35	2345	1.67
149	Tenga	Ar.Pradesh	4 x 150.0	600	1602.3	1046.5	3.52
150	Garba Tawaghat	Uttaranchal	3 x 210.0	630	1447.77	2483.11	0.9
151	Ratle	J&K	4 x 140.0	560	1987.92	2483.37	1.4
152	Lungleng	Mizoram	5 x 163.0	815	2913.14	1169.06	4.17
153	Boinu	Mizoram	4 x 160.0	640	3243.3	1118.93	4.83
154	Agnashini	Karanataka	4 x 150.0	600	910.71	1431	1.07
	Total (500.0 MW - 1000.0 MW) - 15Nos.			9297			
INSTALLED CAPACITY: 1000.0 MW - 2000.0 MW							
155	Naying	Ar. Pradesh	4 x 250.0	1000	3016.96	5077.15	1.18
156	Naba	Ar.Pradesh	4 x 250.0	1000	4399.89	3995.25	2.14
157	Oju-II	Ar.Pradesh	4 x 250.0	1000	3492.99	4629.93	1.46
158	Bhareli-I	Ar.Pradesh	8 x 140.0	1120	3372.45	4112.4	1.85
	Total (1000.0 MW - 2000.0 MW) - 4Nos.			4120			
INSTALLED CAPACITY: Above 2000.0 MW							
159	Demwe	Ar.Pradesh	12 x 250.0	3000	9539.4	10823.8	1.97
160	Etalin	Ar.Pradesh	16 x 250.0	4000	14069.14	16071.6	1.7
161	Kalai	Ar. Pradesh	10 x 260.0	2600	6637.67	10608.6	1.01
162	Hutong	Ar. Pradesh	12 x 250.0	3000	7792.29	9901	1.28
	Total (Above 2000.0 MW) - 4Nos.			12600			
Total				47970			

PFRS under 50 000 MW Hydroelectric Initiative
Tariff wise Classification of Schemes

	Scheme	State	Installed Capacity		Estimated Cost (Rs. Cr.)	Annual Energy (GWh)	Tariff (Rs/kWh)
			Units x Size(MW)	Total (MW)			
<u>Tariff : Below Rs.1.50</u>							
1	Naying	Ar. Pradesh	4 x 250.00	1000	3016.96	5077.15	1.18
2	Tato-II	Ar. Pradesh	4 x 175.00	700	2608.60	3465.90	1.48
3	Oju-II	Ar.Pradesh	4 x 250.00	1000	3492.99	4629.93	1.46
4	Chamba	Himachal Pr.	3 x 42.00	126	420.90	646.82	1.48
5	Badrinath	Uttaranchal	2 x 70.00	140	357.33	702.70	0.81
6	Harsil	Uttaranchal	3 x 70.00	210	578.20	920.57	1.10
7	Karmoli	Uttaranchal	2 x 70.00	140	465.60	621.00	1.30
8	Garba Tawaghat	Uttaranchal	3 x 210.00	630	1447.77	2483.11	0.90
9	Deodi	Uttaranchal	2 x 30.00	60	242.34	296.76	1.37
10	Chhunger - Chal	Uttaranchal	2 x 120.00	240	725.53	853.28	1.13
11	Mapang - Bogidiyar	Uttaranchal	2 x 100.00	200	667.19	882.04	1.30
12	Rishi Ganga - 1	Uttaranchal	2 x 35.00	70	277.01	327.30	1.18
13	Sela Urthing	Uttaranchal	2 x 115.00	230	696.73	816.73	1.40
14	Ratle	J&K	4 x 140.00	560	1987.92	2483.37	1.40
15	Kiru	J&K	4 x 107.50	430	857.58	1935.77	0.77
16	Kawar	J&K	4 x 80.00	320	891.37	1426.56	1.09
17	Bichlari	J&K	2 x 17.50	35	94.40	148.29	1.11
18	Mawhu	Meghalaya	3 x 40.00	120	434.24	482.96	1.40
19	Kalai	Ar. Pradesh	10 x 260.00	2600	6637.67	10608.64	1.01
20	Hutong	Ar. Pradesh	12 x 250.00	3000	7792.29	9901.00	1.28
21	Arakot Tiuni	Uttaranchal	3 x 24.00	72	310.51	382.90	1.00
22	Urthing Sobla	Uttaranchal	4 x 70.00	280	888.45	1350.73	1.49
23	Taluka Sankri	Uttaranchal	2 x 70.00	140	378.14	559.47	1.33
24	Gundia	Karnataka	2 x 150.00	300	531.68	616.00	1.41
25	Gangavali	Karnataka	2 x 200.00	400	709.68	759.00	1.46
26	Agnashini	Karnataka	4 x 150.00	600	910.71	1431.00	1.07
	Total (Below Rs.1.50) - 26Nos.			13603			
<u>Tariff : Rs.1.50 - Rs.2.00</u>							
27	Hirong	Ar. Pradesh	4 x 125.00	500	2072.78	2535.80	1.62
28	Demwe	Ar.Pradesh	12 x 250.00	3000	9539.40	10823.82	1.97
29	Teesta-I	Sikkim	4 x 80.00	320	1206.59	1298.12	1.80
30	Etalin	Ar.Pradesh	16 x 250.00	4000	14069.14	16071.60	1.70
31	Jangi Thopan	Himachal Pr.	3 x 160.00	480	1805.54	1779.45	2.00
32	Gondhala	Himachal Pr.	3 x 48.00	144	482.50	570.19	1.92
33	Thopan Powari	Himachal Pr.	3 x 160.00	480	1785.87	1786.26	1.81
34	Bhareli-II	Ar.Pradesh	5 x 120.00	600	1698.35	2345.00	1.67
35	Kapakleyak	Ar.Pradesh	4 x 40.00	160	463.52	627.95	1.74
36	Bhareli-I	Ar.Pradesh	8 x 140.00	1120	3372.45	4112.40	1.85
37	Bhaironghati	Uttaranchal	2 x 32.50	65	304.32	293.18	1.80
38	Jelam Tamak	Uttaranchal	2 x 30.00	60	277.92	268.12	1.71
39	Maleri Jelam	Uttaranchal	2 x 27.50	55	257.85	243.07	1.80
40	Sirkari Bhyol Rupsiabagar	Uttaranchal	3 x 70.00	210	899.63	967.97	1.55
41	Gangotri	Uttaranchal	1 x 55.00	55	252.61	264.76	1.62
42	Rupsiabagar Khasiyabara	Uttaranchal	2 x 130.00	260	1101.55	1195.63	1.59
43	Bogudiyar - Sirkari Bhyal	Uttaranchal	2 x 85.00	170	859.27	744.00	1.99
44	Gohana Tal	Uttaranchal	2 x 30.00	60	270.38	269.35	1.64
45	Bokang Baling	Uttaranchal	3 x 110.00	330	1120.75	1124.62	1.68
46	Shamnot	J&K	4 x 92.50	370	1592.91	1650.19	1.69
47	Umjaut	Meghalaya	3 x 23.00	69	276.97	276.70	1.51
48	Umduna	Meghalaya	3 x 19.00	57	226.68	231.24	1.68

	Scheme	State	Installed Capacity		Estimated Cost (Rs. Cr.)	Annual Energy (GWh)	Tariff (Rs/kWh)
			Units x Size(MW)	Total (MW)			
49	Nongkolait	Meghalaya	2 x 60.00	120	392.80	332.87	1.97
50	Jakhol Sankri	Uttaranchal	3 x 11.00	33	171.00	144.00	1.71
51	Naitwar-Mori	Uttaranchal	3 x 11.00	33	202.20	151.00	1.85
52	Kalinadi Stage-III	Karnataka	2 x 150.00	300	590.05	610.00	1.67
Total (Rs.1.50 - Rs.2.00) - 26Nos.				13051			
<u>Tariff : Rs.2.00 - Rs.2.50</u>							
53	Dikchu	Sikkim	3 x 35.00	105	518.50	469.00	2.15
54	Panan	Sikkim	4 x 50.00	200	846.08	762.00	2.15
55	Lachen	Sikkim	3 x 70.00	210	1046.93	865.94	2.35
56	Naba	Ar.Pradesh	4 x 250.00	1000	4399.89	3995.25	2.14
57	Niare	Ar.Pradesh	4 x 200.00	800	3498.55	3356.62	2.02
58	Attunli	Ar.Pradesh	4 x 125.00	500	2725.26	2247.32	2.35
59	Oju-I	Ar.Pradesh	4 x 175.00	700	3526.28	3291.58	2.08
60	Yangthang	Himachal Pr.	3 x 87.00	261	818.85	938.02	2.08
61	Gharopa	Himachal Pr.	3 x 38.00	114	493.59	534.25	2.09
62	Khoksar	Himachal Pr.	3 x 30.00	90	373.66	351.91	2.46
63	Bajoli Holi	Himachal Pr.	3 x 60.00	180	649.22	762.98	2.03
64	Tidong-II	Himachal Pr.	2 x 35.00	70	308.83	256.18	2.02
65	Luhri	Himachal Pr.	3 x 155.00	465	2038.50	1825.13	2.41
66	Kameng Dam	Ar.Pradesh	5 x 120.00	600	2264.00	2345.55	2.29
67	Talong	Ar.Pradesh	3 x 100.00	300	891.04	915.50	2.24
68	Badao	Ar.Pradesh	4 x 30.00	120	443.98	448.67	2.32
69	Dibbin	Ar.Pradesh	2 x 50.00	100	371.52	332.00	2.23
70	Jadh Ganga	Uttaranchal	2 x 25.00	50	277.48	220.88	2.19
71	Rishi Ganga - II	Uttaranchal	1 x 35.00	35	212.98	164.64	2.22
72	Selim	Meghalaya	2 x 85.00	170	652.07	534.68	2.02
73	Rangmaw	Meghalaya	2 x 32.50	65	268.37	229.60	2.32
74	Nongnam	Meghalaya	2 x 25.00	50	272.07	212.59	2.44
75	Lata Tapovan	Uttaranchal	4 x 77.50	310	1021.30	1123.00	2.21
76	Tamak Lata	Uttaranchal	4 x 70.00	280	988.21	1040.70	2.30
77	Nand Prayag	Uttaranchal	3 x 47.00	141	670.04	794.00	2.05
78	Khab-I	Himachal Pr.	3 x 150.00	450	1765.89	1551.00	2.24
Total (Rs.2.00 - Rs.2.50) - 26Nos.				7366			
<u>Tariff : Rs.2.50 - Rs.3.00</u>							
79	Lingza	Sikkim	3 x 40.00	120	699.80	477.51	2.85
80	Rangyong	Sikkim	3 x 47.00	141	890.82	639.52	2.70
81	Bardang	Himachal Pr.	3 x 38.00	114	550.12	424.46	2.91
82	Chhatru	Himachal Pr.	3 x 36.00	108	585.15	455.72	2.89
83	Tidong-I	Himachal Pr.	2 x 30.00	60	298.00	211.65	2.71
84	Papu	Ar.Pradesh	2 x 100.00	200	646.80	505.00	2.94
85	Chanda	Ar.Pradesh	4 x 27.50	110	466.06	401.91	2.67
86	Tizu	Nagaland	3 x 50.00	150	731.70	568.41	2.56
87	Dikhu	Nagaland	4 x 35.00	140	723.63	513.41	2.80
88	Tarangwarang	Ar.Pradesh	2 x 15.00	30	134.54	92.88	2.88
89	Kalika Dantu	Uttaranchal	2 x 115.00	230	1935.43	1067.30	2.95
90	Khartoi Lumti Talli	Uttaranchal	2 x 27.50	55	433.12	241.51	3.00
91	Devsari	Uttaranchal	3 x 100.00	300	1532.03	878.50	2.77
92	Barinium	J&K	2 x 120.00	240	1698.09	1170.34	2.54
93	Shuas	J&K	2 x 115.00	230	1872.57	1117.87	2.94
94	Umngi	Meghalaya	2 x 27.00	54	389.93	89.65	2.86
Total (Rs.2.50 - Rs.3.00) - 16Nos.				2282			
<u>Tariff : Rs.3.00 - Rs.3.50</u>							
95	Ringpi	Sikkim	2 x 35.00	70	519.27	317.41	3.17
96	Mirak	Ar.Pradesh	3 x 47.00	141	1320.75	748.44	3.42

	Scheme	State	Installed Capacity		Estimated Cost (Rs. Cr.)	Annual Energy (GWh)	Tariff (Rs/kWh)
			Units x Size(MW)	Total (MW)			
97	Amulin	Ar.Pradesh	3 x 140.00	420	2979.45	1716.40	3.37
98	Emra-II	Ar.Pradesh	3 x 130.00	390	2564.50	1648.09	3.02
99	Nalo	Ar.Pradesh	4 x 90.00	360	2922.14	1733.00	3.27
100	Dengser	Ar.Pradesh	4 x 138.00	552	3945.09	2666.71	3.26
101	Etabue	Ar.Pradesh	3 x 55.00	165	1208.39	683.66	3.43
102	Pakke	Ar.Pradesh	2 x 55.00	110	480.45	335.26	3.33
103	Utung	Ar.Pradesh	3 x 33.30	100	488.10	359.13	3.10
104	Phanchung	Ar.Pradesh	2 x 30.00	60	282.43	174.83	3.24
105	Pondugala	Andhra Pr.	3 x 27.00	81	834.89	399.36	3.48
106	Ramganga	Uttaranchal	3 x 22.00	66	441.31	327.00	3.25
107	Khab-II	Himachal Pr.	3 x 62.00	186	990.52	640.00	3.04
108	Tamankal	Karnataka	2 x 150.00	300	771.25	401.00	3.32
	Total (Rs.3.00 - Rs.3.50) - 14Nos.			3001			
	Tariff : Rs.3.50 - Rs.4.00						
109	Emini	Ar.Pradesh	4 x 125.00	500	3067.20	1695.45	3.51
110	Mihumdon	Ar.Pradesh	4 x 100.00	400	2700.33	1451.75	3.60
111	Agoline	Ar. Pradesh	3 x 125.00	375	2293.62	1267.38	3.51
112	Ringong	Ar.Pradesh	3 x 50.00	150	1211.06	649.58	3.61
113	Bauras	Madhya Pr.	3 x 18.33	55	498.17	248.43	3.96
114	Tenga	Ar.Pradesh	4 x 150.00	600	1602.30	1046.50	3.52
115	Sebu	Ar.Pradesh	2 x 40.00	80	371.40	227.53	3.71
116	Wainganga	Maharashtra	5 x 21.00	105	1321.77	246.15	3.86
117	Tikarpara	Orissa	7 x 37.00	259	1904.17	828.37	3.69
118	Sushen	Meghalaya	2 x 32.50	65	521.53	220.60	3.85
	Total (Rs.3.50 - Rs.4.00) - 10Nos.			2589			
	Tariff : Rs.4.00 - Rs.4.50						
119	Kurungl&II	Ar. Pradesh	3 x 110.00	330	2985.04	1435.40	4.04
120	Khalsi	J&K	3 x 20.00	60	577.28	272.60	4.10
121	Hoshangabad	Madhya Pr.	3 x 20.00	60	598.15	288.21	4.10
122	Talem	Sikkim	3 x 25.00	75	683.76	305.48	4.34
123	Yangnyu	Nagaland	2 x 40.00	80	397.55	176.45	4.48
124	Nugur-II	Chhattisgarh	5 x 42.00	210	1252.11	787.78	4.16
125	Mawput	Meghalaya	3 x 7.00	21	199.51	83.95	4.07
126	Lungleng	Mizoram	5 x 163.00	815	2913.14	1169.06	4.17
127	Mawblei	Meghalaya	2 x 70.00	140	807.02	303.66	4.44
128	Pabaram	Manipur	2 x 95.00	190	1256.74	474.77	4.33
129	Bagoli Dam	Uttaranchal	3 x 24.00	72	576.97	340.70	4.10
	Total (Rs.4.00 - Rs.4.50) - 11Nos.			2053			
	Tariff : Rs.4.50 - Rs.5.00						
130	Dumkhar	J&K	3 x 15.00	45	527.45	219.18	4.66
131	Kanyunche	J&K	3 x 15.00	45	542.29	223.02	4.71
132	Elango	Ar.Pradesh	3 x 50.00	150	1503.07	583.14	5.00
133	Nugur-I	Chhattisgarh	5 x 34.00	170	952.52	316.13	4.89
134	Naraj	Orissa	7 x 41.00	287	2278.38	759.31	4.92
135	Khongnum Chakka st.-II	Manipur	2 x 33.50	67	525.06	192.84	4.59
136	Boinu	Mizoram	4 x 160.00	640	3243.30	1118.93	4.83
	Total (Rs.4.50 - Rs.5.00) - 7Nos.			1404			
	Tariff : Above Rs.5.00						
137	Basania	Madhya Pr.	3 x 30.00	90	2135.06	240.00	17.23
138	Rongni Storage	Sikkim	3 x 65.00	195	2265.14	522.00	8.60
139	Takmaching	J&K	3 x 10.00	30	416.64	145.52	5.54
140	Duimukh	Ar.Pradesh	3 x 50.00	150	2420.46	551.48	8.50
141	Rukel	Sikkim	3 x 11.00	33	422.01	149.41	5.48
142	Karkit	J&K	3 x 10.00	30	426.92	153.11	5.40

	Scheme	State	Installed Capacity		Estimated Cost (Rs. Cr.)	Annual Energy (GWh)	Tariff (Rs/kWh)
			Units x Size(MW)	Total (MW)			
143	Ashupani	Ar.Pradesh	2 x 15.00	30	570.78	126.45	8.75
144	Simang	Ar.Pradesh	3 x 30.00	90	1028.34	417.82	5.43
145	Kotri	Chhattisgarh	3 x 50.00	150	1071.25	330.95	5.48
146	Kasari	Maharashtra	2 x 12.50	25	350.53	33.32	18.16
147	Hiranyakeshi	Maharashtra	2 x 9.00	18	289.03	23.76	20.26
148	Kadvi	Maharashtra	2 x 11.00	22	597.99	29.59	34.03
149	Kumbhi	Maharashtra	2 x 8.50	17	482.14	22.93	35.19
150	Lower Kolab	Orissa	3 x 155.00	465	3695.95	845.86	7.10
151	Rehar-I	Chhattisgarh	3 x 57.00	171	1441.55	264.38	8.70
152	Pranhita	Maharashtra	2 x 24.00	48	845.09	135.96	10.32
153	Baljori	Orissa	2 x 89.00	178	1778.32	479.80	5.90
154	Ghargaon	Maharashtra	4 x 13.00	52	690.14	74.47	15.50
155	Kunghara	Maharashtra	4 x 18.00	72	843.65	133.40	11.34
156	Rehar-II	Chattisgarh	3 x 49.00	147	924.89	290.32	5.16
157	Samda	Maharashtra	4 x 13.00	52	704.37	83.40	14.11
158	Perianjakully	Kerala	2 x 30.00	60	328.50	86.30	6.25
159	Karappara Kuriarkutty	Kerala	4 x 16.50	66	553.57	126.10	7.88
160	Nunglieban	Manipur	2 x 52.50	105	841.99	268.93	5.16
161	Tlawng	Mizoram	2 x 22.50	45	528.10	151.67	5.84
162	Ujh	J&K	4 x 70.00	280	1390.20	465.06	5.06
	Total (Above Rs.5.00) - 26Nos.				2621		
Total				47970			

PFRS under 50 000 MW Hydroelectric Initiative

Low Tariff PFR Schemes

Tariff: Below Rs.2.50

	Scheme	Installed Capacity		Estimated Cost (Rs. Cr.)	Annual Energy (GWh)	Tariff (Rs/kWh)
		Units x Size(MW)	Total (MW)			
<u>Arunachal Pradesh</u>						
1	Naying	4 x 250.00	1000	3016.96	5077.15	1.18
2	Tato-II	4 x 175.00	700	2608.60	3465.90	1.48
3	Hirong	4 x 125.00	500	2072.78	2535.80	1.62
4	Demwe	12 x 250.00	3000	9539.40	10823.82	1.97
5	Etalin	16 x 250.00	4000	14069.14	16071.60	1.70
6	Naba	4 x 250.00	1000	4399.89	3995.25	2.14
7	Niare	4 x 200.00	800	3498.55	3356.62	2.02
8	Oju-II	4 x 250.00	1000	3492.99	4629.93	1.46
9	Attunli	4 x 125.00	500	2725.26	2247.32	2.35
10	Oju-I	4 x 175.00	700	3526.28	3291.58	2.08
11	Kameng Dam	5 x 120.00	600	2264.00	2345.55	2.29
12	Talong	3 x 100.00	300	891.04	915.50	2.24
13	Bhareli-II	5 x 120.00	600	1698.35	2345.00	1.67
14	Kapakleyak	4 x 40.00	160	463.52	627.95	1.74
15	Bhareli-I	8 x 140.00	1120	3372.45	4112.40	1.85
16	Badao	4 x 30.00	120	443.98	448.67	2.32
17	Dibbin	2 x 50.00	100	371.52	332.00	2.23
18	Kalai	10 x 260.00	2600	6637.67	10608.64	1.01
19	Hutong	12 x 250.00	3000	7792.29	9901.00	1.28
Total (19 Schemes)			21800			
<u>Himachal Pradesh</u>						
20	Yangthang	3 x 87.00	261	818.85	938.02	2.08
21	Gharopa	3 x 38.00	114	493.59	534.25	2.09
22	Jangi Thopan	3 x 160.00	480	1805.54	1779.45	2.00
23	Gondhala	3 x 48.00	144	482.50	570.19	1.92
24	Khoksar	3 x 30.00	90	373.66	351.91	2.46
25	Chamba	3 x 42.00	126	420.90	646.82	1.48
26	Bajoli Holi	3 x 60.00	180	649.22	762.98	2.03
27	Tidong-II	2 x 35.00	70	308.83	256.18	2.02
28	Luhri	3 x 155.00	465	2038.50	1825.13	2.41
29	Thopan Powari	3 x 160.00	480	1785.87	1786.26	1.81
30	Khab-I	3 x 150.00	450	1765.89	1551.00	2.24
Total (11 Schemes)			2860			
<u>Jammu & Kashmir</u>						
31	Shamnot	4 x 92.50	370	1592.91	1650.19	1.69
32	Ratle	4 x 140.00	560	1987.92	2483.37	1.40
33	Kiru	4 x 107.50	430	857.58	1935.77	0.77
34	Kawar	4 x 80.00	320	891.37	1426.56	1.09
35	Bichlari	2 x 17.50	35	94.40	148.29	1.11
Total (5 Schemes)			1715			
<u>Karnataka</u>						
36	Kalinadi Stage-III	2 x 150.00	300	590.05	610.00	1.67
37	Gundia	2 x 150.00	300	531.68	616.00	1.41
38	Gangavali	2 x 200.00	400	709.68	759.00	1.46
39	Agnashini	4 x 150.00	600	910.71	1431.00	1.07
Total (4 Schemes)			1600			
<u>Meghalaya</u>						
40	Umjaut @	3 x 23.00	69	276.97	276.70	1.51
41	Umduna	3 x 19.00	57	226.68	231.24	1.68
42	Mawhu	3 x 40.00	120	434.24	482.96	1.40
43	Selim	2 x 85.00	170	652.07	534.68	2.02
44	Rangmaw	2 x 32.50	65	268.37	229.60	2.32
45	Nongnam	2 x 25.00	50	272.07	212.59	2.44
46	Nongkolait	2 x 60.00	120	392.80	332.87	1.97
Total (7 Schemes)			651			

	Scheme	Installed Capacity		Estimated Cost (Rs. Cr.)	Annual Energy (GWh)	Tariff (Rs/kWh)
		Units x Size(MW)	Total (MW)			
Sikkim						
47	Dikchu	3 x 35.00	105	518.50	469.00	2.15
48	Panan	4 x 50.00	200	846.08	762.00	2.15
49	Lachen	3 x 70.00	210	1046.93	865.94	2.35
50	Teesta-I	4 x 80.00	320	1206.59	1298.12	1.80
Total (4 Schemes)			835			
Uttaranchal						
51	Badrinath	2 x 70.00	140	357.33	702.70	0.81
52	Bhaironghati	2 x 32.50	65	304.32	293.18	1.80
53	Harsil	3 x 70.00	210	578.20	920.57	1.10
54	Jelam Tamak	2 x 30.00	60	277.92	268.12	1.71
55	Maleri Jelam	2 x 27.50	55	257.85	243.07	1.80
56	Karmoli	2 x 70.00	140	465.60	621.00	1.30
57	Sirkari Bhyol Rupsiabagar	3 x 70.00	210	899.63	967.97	1.55
58	Jadh Ganga	2 x 25.00	50	277.48	220.88	2.19
59	Gangotri	1 x 55.00	55	252.61	264.76	1.62
60	Rupsiabagar Khasiyabara	2 x 130.00	260	1101.55	1195.63	1.59
61	Garba Tawaghat @@	3 x 210.00	630	1447.77	2483.11	0.90
62	Deodi	2 x 30.00	60	242.34	296.76	1.37
63	Chhunger - Chal	2 x 120.00	240	725.53	853.28	1.13
64	Bogudiyar - Sirkari Bhyal	2 x 85.00	170	859.27	744.00	1.99
65	Mapang - Bogidiyar	2 x 100.00	200	667.19	882.04	1.30
66	Rishi Ganga - I \$	2 x 35.00	70	277.01	327.30	1.18
67	Rishi Ganga - II \$	1 x 35.00	35	212.98	164.64	2.22
68	Sela Urthing	2 x 115.00	230	696.73	816.73	1.40
69	Gohana Tal	2 x 30.00	60	270.38	269.35	1.64
70	Bokang Baling	3 x 110.00	330	1120.75	1124.62	1.68
71	Arakot Tiuni	3 x 24.00	72	310.51	382.90	1.00
72	Jakhol Sankri	3 x 11.00	33	171.00	144.00	1.71
73	Naitwar-Mori	3 x 11.00	33	202.20	151.00	1.85
74	Urthing Sobla @\$	4 x 70.00	280	888.45	1350.73	1.49
75	Lata Tapovan	4 x 77.50	310	1021.30	1123.00	2.21
76	Tamak Lata	4 x 70.00	280	988.21	1040.70	2.30
77	Taluka Sankri	2 x 70.00	140	378.14	559.47	1.33
78	Nand Prayag	3 x 47.00	141	670.04	794.00	2.05
Total (28 Schemes)			4559			
Total (Below Rs.2.50) - 78Nos.			34020			

Note: 5 hydroelectric Schemes with total installation of 1084 MW can not be taken up for S&I and preparation
 @ Associated with water supply scheme
 @@ Scheme involves inter-national aspects
 \$ Environmental aspects
 @\$ allotted to IPP by State Government

Schemes for S&I and preparation of DPRs

Number of Schemes 73
Aggregate Installed Capacity(MW) 34020

PFRS under 50 000 MW Hydroelectric Initiative
Operating Head wise Classification of Schemes

Sl No	Scheme	State	Installed Capacity			Head (m)	Annual Energy (GWh)	Tariff (Rs/kWh)
			Nos of Units	Size(MW)	Total (MW)			
<u>Head : Below 100.0 m</u>								
1	Ghargaon	Maharashtra	4	13	52	9.84	74.47	15.50
2	Samda	Maharashtra	4	13	52	10.64	83.40	14.11
3	Kunghara	Maharashtra	4	18	72	12.77	133.40	11.34
4	Naraj	Orissa	7	41	287	16.14	759.31	4.92
5	Hoshangabad	Madhya Pradesh	3	20	60	16.50	288.21	4.10
6	Nugur-II	Chhattisgarh	5	42	210	16.66	787.78	4.16
7	Tikarpara	Orissa	7	37	259	16.97	828.37	3.69
8	Bauras	Madhya Pradesh	3	18.33	55	17.50	248.43	3.96
9	Takmaching	J&K	3	10	30	18.53	145.52	5.54
10	Pondugala	Andhra Pradesh	3	27	81	18.67	399.36	3.48
11	Wainganga	Maharashtra	5	21	105	19.74	246.15	3.86
12	Nugur-I	Chhattisgarh	5	34	170	24.54	316.13	4.89
13	Pranhita	Maharashtra	2	24	48	25.30	135.96	10.32
14	Karkit	J&K	3	10	30	26.90	153.11	5.40
15	Dumkhar	J&K	3	15	45	27.80	219.18	4.66
16	Kanyunche	J&K	3	15	45	28.76	223.02	4.71
17	Khalsi	J&K	3	20	60	33.00	272.60	4.10
18	Hiranyakeshi	Maharashtra	2	9	18	36.10	23.76	20.26
19	Kadvi	Maharashtra	2	11	22	36.30	29.59	34.03
20	Kotri	Chhattisgarh	3	50	150	36.99	330.95	5.48
21	Kumbhi	Maharashtra	2	8.5	17	37.48	22.93	35.19
22	Basania	Madhya Pradesh	3	30	90	38.00	240.00	17.23
23	Rehar-II	Chattisgarh	3	49	147	38.17	290.32	5.16
24	Kasari	Maharashtra	2	12.5	25	40.67	33.32	18.16
25	Rehar-I	Chhattisgarh	3	57	171	46.84	264.38	8.70
26	Bhareli-II	Ar.Pradesh	5	120	600	51.00	2345.00	1.67
27	Bardang	HP	3	38	114	55.00	424.46	2.91
28	Shamnot	J&K	4	92.5	370	56.33	1650.19	1.69
29	Khartoi Lumti Talli	Uttaranchal	2	27.5	55	56.60	241.51	3.00
30	Tizu	Nagaland	3	50	150	64.19	568.41	2.56
31	Duimukh	Ar.Pradesh	3	50	150	65.00	551.48	8.50
32	Kameng Dam	Ar.Pradesh	5	120	600	65.00	2345.55	2.29
33	Khab-II	Himachal Pradesh	3	62	186	70.00	640.00	3.04
34	Nand Prayag	Uttaranchal	3	47	141	72.00	794.00	2.05
35	Kawar	J&K	4	80	320	74.00	1426.56	1.09
36	Naitwar-Mori	Uttaranchal	3	11	33	76.00	151.00	1.85
37	Dikhu	Nagaland	4	35	140	79.44	513.41	2.80
38	Nunglieban	Manipur	2	52.5	105	82.42	268.93	5.16
39	Tamankal	Karnataka	2	150	300	87.29	401.00	3.32
40	Luhri	HP	3	155	465	88.00	1825.13	2.41
41	Ratle	J&K	4	140	560	92.33	2483.37	1.40
42	Mawput	Meghalaya	3	7	21	93.42	83.95	4.07
43	Bhareli-I	Ar.Pradesh	8	140	1120	95.33	4112.40	1.85
44	Khoksar	HP	3	30	90	99.00	351.91	2.46
Total (Below 100.0 m) - 44Nos.			154		7821			

Sl No	Scheme	State	Installed Capacity			Head (m)	Annual Energy (GWh)	Tariff (Rs/kWh)
			Nos of Units	Size(MW)	Total (MW)			
Head : 100.0 m - 200.0 m								
45	Kalika Dantu	Uttaranchal	2	115	230	100.00	1067.30	2.95
46	Ramganga	Uttaranchal	3	22	66	100.10	327.00	3.25
47	Kiru	J&K	4	107.5	430	105.33	1935.77	0.77
48	Bhaironghati	Uttaranchal	2	32.5	65	108.90	293.18	1.80
49	Chamba	HP	3	42	126	110.00	646.82	1.48
50	Sushen	Meghalaya	2	32.5	65	114.58	220.60	3.85
51	Yangnyu	Nagaland	2	40	80	115.00	176.45	4.48
52	Shuas	J&K	2	115	230	115.70	1117.87	2.94
53	Pabaram	Manipur	2	95	190	116.67	474.77	4.33
54	Barinium	J&K	2	120	240	117.77	1170.34	2.54
55	Dengser	Ar.Pradesh	4	138	552	120.00	2666.71	3.26
56	Sebu	Ar.Pradesh	2	40	80	123.00	227.53	3.71
57	Tlawng	Mizoram	2	22.5	45	123.67	151.67	5.84
58	Emini	Ar.Pradesh	4	125	500	125.00	1695.45	3.51
59	Simang	Ar.Pradesh	3	30	90	125.00	417.82	5.43
60	Amulin	Ar.Pradesh	3	140	420	132.00	1716.40	3.37
61	Gondhala	HP	3	48	144	134.00	570.19	1.92
62	Mirak	Ar.Pradesh	3	47	141	136.40	748.44	3.42
63	Demwe	Ar.Pradesh	12	250	3000	138.00	10823.82	1.97
64	Bagoli Dam	Uttaranchal	3	24	72	139.50	340.70	4.10
65	Jadh Ganga	Uttaranchal	2	25	50	142.60	220.88	2.19
66	Ujh	J&K	4	70	280	143.33	465.06	5.06
67	KurungI&II	Ar. Pradesh	3	110	330	151.00	1435.40	4.04
68	Dibbin	Ar.Pradesh	2	50	100	151.24	332.00	2.23
69	Badao	Ar.Pradesh	4	30	120	154.50	448.67	2.32
70	Phanchung	Ar.Pradesh	2	30	60	157.13	174.83	3.24
71	Boinu	Mizoram	4	160	640	158.67	1118.93	4.83
72	Chhatru	HP	3	36	108	160.00	455.72	2.89
73	Thopan Powari	HP	3	160	480	161.14	1786.26	1.81
74	Agoline	Ar. Pradesh	3	125	375	163.00	1267.38	3.51
75	Baljori	Orissa	2	89	178	165.75	479.80	5.90
76	Ringong	Ar.Pradesh	3	50	150	166.50	649.58	3.61
77	Hutong	Ar. Pradesh	12	250	3000	166.77	9901.00	1.28
78	Tato-II	Ar. Pradesh	4	175	700	168.00	3465.90	1.48
79	Gharopa	HP	3	38	114	169.00	534.25	2.09
80	Khab-I	Himachal Prad	3	150	450	170.00	1551.00	2.24
81	Talong	Ar.Pradesh	3	100	300	171.67	915.50	2.24
82	Jangi Thopan	HP	3	160	480	174.14	1779.45	2.00
83	Chanda	Ar.Pradesh	4	27.5	110	175.67	401.91	2.67
84	Tarangwarang	Ar.Pradesh	2	15	30	185.55	92.88	2.88
85	Yangthang	HP	3	87	261	186.45	938.02	2.08
86	Kalai	Ar. Pradesh	10	260	2600	193.21	10608.64	1.01
87	Jelam Tamak	Uttaranchal	2	30	60	195.58	268.12	1.71
88	Lower Kolab	Orissa	3	155	465	196.90	845.86	7.10
	Total (100.0 m - 200.0 m) - 44Nos.		150		18207			
Head : 200.0 m - 300.0 m								
89	Maleri Jelam	Uttaranchal	2	27.5	55	200.33	243.07	1.80
90	Niare	Ar.Pradesh	4	200	800	205.00	3356.62	2.02
91	Nongnam	Meghalaya	2	25	50	215.17	212.59	2.44

Sl No	Scheme	State	Installed Capacity			Head (m)	Annual Energy (GWh)	Tariff (Rs/kWh)
			Nos of Units	Size(MW)	Total (MW)			
92	Lungleng	Mizoram	5	163	815	219.67	1169.06	4.17
93	Naba	Ar.Pradesh	4	250	1000	221.00	3995.25	2.14
94	Nalo	Ar.Pradesh	4	90	360	221.00	1733.00	3.27
95	Devsari	Uttaranchal	3	100	300	227.50	878.50	2.77
96	Rishi Ganga - II	Uttaranchal	1	35	35	236.96	164.64	2.22
97	Papu	Ar.Pradesh	2	100	200	238.00	505.00	2.94
98	Naying	Ar. Pradesh	4	250	1000	245.00	5077.15	1.18
99	Kapakleyak	Ar.Pradesh	4	40	160	245.00	627.95	1.74
100	Arakot Tiuni	Uttaranchal	3	24	72	250.20	382.90	1.00
101	Umduna	Meghalaya	3	19	57	253.17	231.24	1.68
102	Sela Urthing	Uttaranchal	2	115	230	255.50	816.73	1.40
103	Oju-I	Ar.Pradesh	4	175	700	257.00	3291.58	2.08
104	Attunli	Ar.Pradesh	4	125	500	264.00	2247.32	2.35
105	Lata Tapovan	Uttaranchal	4	77.5	310	265.00	1123.00	2.21
106	Emra-II	Ar.Pradesh	3	130	390	278.00	1648.09	3.02
107	Bajoli Holi	HP	3	60	180	278.00	762.98	2.03
108	Khongnum Chakka st.-II	Manipur	2	33.5	67	281.25	192.84	4.59
109	Harsil	Uttaranchal	3	70	210	281.33	920.57	1.10
110	Perianjakully	Kerala	2	30	60	282.90	86.30	6.25
111	Hirong	Ar. Pradesh	4	125	500	285.00	2535.80	1.62
112	Mihumdon	Ar.Pradesh	4	100	400	286.00	1451.75	3.60
113	Utung	Ar.Pradesh	3	33.3	100	291.00	359.13	3.10
114	Tamak Lata	Uttaranchal	4	70	280	291.40	1040.70	2.30
115	Chhunger - Chal	Uttaranchal	2	120	240	292.83	853.28	1.13
	Total (200.0 m - 300.0 m) - 27Nos.		85		9071			
Head : 300.0 m - 400.0 m								
116	Umngi	Meghalaya	2	27	54	304.75	89.65	2.86
117	Panan	Sikkim	4	50	200	312.00	762.00	2.15
118	Rangmaw	Meghalaya	2	32.5	65	321.00	229.60	2.32
119	Oju-II	Ar.Pradesh	4	250	1000	322.00	4629.93	1.46
120	Gangotri	Uttaranchal	1	55	55	336.33	264.76	1.62
121	Bogudiyar - Sirkari Bhyal	Uttaranchal	2	85	170	344.47	744	1.99
122	Lachen	Sikkim	3	70	210	350.00	865.94	2.35
123	Dikchu	Sikkim	3	35	105	352.00	469	2.15
124	Elango	Ar.Pradesh	3	50	150	363.00	583.14	5
125	Jakhol Sankri	Uttaranchal	3	11	33	364.00	144	1.71
126	Umjaut	Meghalaya	3	23	69	375.20	276.7	1.51
127	Etabue	Ar.Pradesh	3	55	165	378.00	683.66	3.43
128	Gangavali	Karanataka	2	200	400	378.30	759	1.46
129	Etaln	Ar.Pradesh	16	250	4000	385.00	16071.6	1.7
130	Sirkari Bhyol Rupsiabagar	Uttaranchal	3	70	210	388.97	967.97	1.55
131	Karappara Kuriarkutty	Kerala	4	16.5	66	390.00	126	7.88
132	Talem	Sikkim	3	25	75	393.19	305.48	4.34
133	Ashupani	Ar.Pradesh	2	15	30	395.00	126.45	8.75
	Total (300.0 m - 400.0 m) - 18Nos.		63		7057			
Head : Above 400.0 m								
134	Mawblei	Meghalaya	2	70	140	400.33	303.66	4.44
135	Kalinadi Stage-III	Karanataka	2	150	300	407.67	610	1.67
136	Urthing Sobla	Uttaranchal	4	70	280	414.96	1350.73	1.49
137	Karmoli	Uttaranchal	2	70	140	420.00	621	1.3
138	Agnashini	Karanataka	4	150	600	427.00	1431	1.07
139	Selim	Meghalaya	2	85	170	433.67	534.68	2.02

Sl No	Scheme	State	Installed Capacity			Head (m)	Annual Energy (GWh)	Tariff (Rs/kWh)
			Nos of Units	Size(MW)	Total (MW)			
140	Mawhu	Meghalaya	3	40	120	438.15	482.96	1.4
141	Rongni Storage	Sikkim	3	65	195	442.00	522	8.6
142	Rupsiabagar Khasiyabara	Uttaranchal	2	130	260	449.47	1195.63	1.59
143	Pakke	Ar.Pradesh	2	55	110	452.50	335.26	3.33
144	Bokang Baling	Uttaranchal	3	110	330	455.20	1124.62	1.68
145	Badrinath	Uttaranchal	2	70	140	459.67	702.7	0.81
146	Bichlari	J&K	2	17.5	35	462.60	148.29	1.11
147	Nongkolait	Meghalaya	2	60	120	463.00	332.87	1.97
148	Mapang - Bogidiyar	Uttaranchal	2	100	200	465.07	882.04	1.3
149	Garba Tawaghat	Uttaranchal	3	210	630	470.97	2483.11	0.9
150	Tidong-I	HP	2	30	60	511.50	211.65	2.71
151	Rishi Ganga - 1	Uttaranchal	2	35	70	536.17	327.3	1.18
152	Rukel	Sikkim	3	11	33	537.10	149.41	5.48
153	Deodi	Uttaranchal	2	30	60	560.30	296.76	1.37
154	Taluka Sankri	Uttaranchal	2	70	140	564.90	559.47	1.33
155	Tidong-II	HP	2	35	70	575.00	256.18	2.02
156	Teesta-I	Sikkim	4	80	320	576.85	1298.12	1.8
157	Gohana Tal	Uttaranchal	2	30	60	584.52	269.35	1.64
158	Gundia	Karanataka	2	150	300	600.00	616	1.41
159	Rangyong	Sikkim	3	47	141	723.18	639.52	2.7
160	Lingza	Sikkim	3	40	120	736.00	477.51	2.85
161	Tenga	Ar.Pradesh	4	150	600	875.00	1046.5	3.52
162	Ringpi	Sikkim	2	35	70	1106.37	317.41	3.17
	Total (Above 400.0 m) - 29Nos.		73		5814			
Total			525		47970			

PFRs under 5000MW Hydroelectric Initiative

Salient Features of the PFR Schemes

ANNEX - VII

Sl No	Scheme	District	Number of Units	Unit Size (MW)	Installed Capacity (MW)	Storage/ROR Type	Live Storage (Mcum)	Rated Head (m)	Annual Energy (GWh)	Annual Load Factor (%)	Estimated Cost (Rs. Crores)	Levelised Tariff (Rs./kWh)	First Year Tariff (Rs./kWh)	Dam Height (m)	Dam Type	Full Reservoir Level (m)	MDDL (m)	Tail Water Level (m)	Head Race WCS Length (m)	HRWCS size (m)	HRWCS Type	Tail Race WCS Length (m)	TRWCS size (m)	TRWCS Type	Power House Type	Turbine Type	Construction Period (Years)	Submergence area (Ha)	Villages submerged		
Andhra Pradesh																															
1	Pondugala	Guntur	3	27	81	ROR	133.9	18.67	399.36	56.3	834.89	3.04	3.48	32	Concrete	67	60	45.5	-	-	-	100	41	Channel	Surface	Kaplan	5	2700	-		
Total (Andhra Pradesh) - 1 No. Scheme					81																										
Arunachal Pradesh																															
2	Agoline	Dibang	3	125	375	ROR	12	163	1267.38	38.6	2293.62	2.85	3.51	95	Concrete	1250	1240	1066	3200	8.4	Horse Shoe	250	8.4	Horse Shoe	UG	Francis	6.5	93.84	Negligible		
3	Amulin	Dibang	3	140	420	ROR	5.91	132	1716.4	46.7	2979.45	2.73	3.37	75	Concrete	1440	1430	1290	7000	10.4	Horse Shoe	500	10.4	Horse Shoe	UG	Francis	7.5	69.56	Negligible		
4	Ashupani	Dibang Valley	2	15	30	ROR	1.09	395	126.45	48.1	570.78	7.1	8.75	25	Rock Fill	640	637	220	1800	3.3	Horse Shoe	1000	5	Horse Shoe	UG	Francis	5.5	25.5	Negligible		
5	Attunli	Dibang Valley	4	125	500	ROR	7.86	264	2247.32	51.3	2725.26	1.91	2.35	105	Concrete	1360	1340	1060	7500	8	Horse Shoe	325	8	Horse Shoe	UG	Francis	7.5	50.75	Negligible		
6	Badao	West Kameng	4	30	120	ROR	0.43	154.5	441	42.0	443.98	1.87	2.32	19.5	Concrete	767.5	763.4	605	4800	5.4	Horse Shoe	-	-	-	Surface	Francis	4.5	11.2	Negligible		
7	Bhareli-I	West Kameng	8	140	1120	ROR	34.75	97	4112.4	41.9	3372.45	1.49	1.85	123	Concrete	355	-	255	-	-	Horse Shoe	-	-	-	Surface	Francis	6	715.53	Negligible		
8	Bhareli-II	West Kameng	5	120	600	ROR	-	51	2345	44.6	1698.35	1.34	1.67	77	Concrete	214	-	160	-	-	-	-	-	-	Surface	Francis	6	357	1		
9	Chanda	West Kameng	4	27.5	110	ROR	0.356	175.67	401.91	41.7	466.06	2.15	2.67	44.5	Concrete	1192.5	1187	1005	2200	4.9	Horse Shoe	-	-	-	Surface	Francis	4.5	8.33	Negligible		
10	Denwe	Lohit	12	250	3000	Storage	1120	138	10823.8	41.2	9539.4	1.53	1.97	200	Concrete	490	430	325	500	8	Horse Shoe	600	8	-	UG	Francis	8.5	2500	Negligible		
11	Dengser	Upper Subansiri	4	138	552	ROR	39.66	120	2666.71	55.1	3945.09	2.65	3.26	100	Concrete	630	610	490	8000	8.7	Horse Shoe	200	8.7	Horse Shoe	UG	Francis	7	231.56	Negligible		
12	Dibbin	West Kameng	2	50	100	ROR	-	151.24	335.72	38.3	371.52	1.79	2.23	27	Concrete	1185	1179	1020	4430	5	Horse Shoe	-	-	-	Surface	Francis	4.5	6.4	Negligible		
13	Duimukh	Papumpare	3	50	150	Storage	67.21	65	551.48	42.0	2420.46	6.9	8.5	63	Rock Fill	165	150	92	1300	8.8	Horse Shoe	700	-	Channel	Surface	Francis	7.5	565	4		
14	Elango	Dibang Valley	3	50	150	ROR	8.5	363	583.14	44.4	1503.07	4.06	5	80	Concrete	1130	1110	720	4700	3.7	Horse Shoe	2300	3.7	Horse Shoe	UG	Francis	7	54	Negligible		
15	Emini	Dibang Valley	4	125	500	ROR	12.56	125	1695.45	38.7	3067.2	2.85	3.51	85	Concrete	1270	1260	1128	5000	8	Horse Shoe	250	8	Horse Shoe	UG	Francis	7.5	166	Negligible		
16	Emra-II	Dibang Valley	3	130	390	ROR	21.8	278	1648.09	48.2	2564.5	2.45	3.02	120	Concrete	860	840	560	4100	6.9	Horse Shoe	150	6.9	Horse Shoe	UG	Francis	7.5	109.5	Negligible		
17	Etabue	Dibang Valley	3	55	165	ROR	0.78	378	683.66	47.3	1208.39	2.78	3.43	78	Concrete	1690	1670	1260	10000	3.9	Horse Shoe	1300	5	Horse Shoe	UG	Pelton	6.5	5.2	Negligible		
18	Etalain	Dibang Valley	16	250	4000	ROR	18.84 & 16.28	385	16071.6	45.9	14069.14	1.38	1.7	155 & 90	Concrete	1045 & 1050	1030 & 1025	600	12000 & 9700	8 & 10.5	Horse Shoe	365	8 & 10.5	Horse Shoe	UG	Francis	9.5	104 & 98	Negligible		
19	Hirong	West Siang	4	125	500	ROR	17.8	285	2535.8	57.9	2072.78	1.31	1.62	90	Concrete	1355	1315	1025	8000	8	Horse Shoe	400	-	Horse Shoe	UG	Francis	6	70	Negligible		
20	Hutong	Lohit	12	250	3000	Storage	908.57	166.77	9901	37.7	7792.29	1.12	1.28	210	Earth & Rockfill	920	828	719	5700	10	Horse Shoe	3000	10	Horse Shoe	UG	Francis	7	1519.76	14		
21	Kalai	Lohit	10	260	2600	Storage	909.739	193.21	10608.6	46.6	6637.67	0.88	1.01	241	Earth & Rockfill	1160	1054	928	1100	10	Horse Shoe	1760	10	Horse Shoe	UG	Francis	7	1296.7	8		
22	Kameng Dam	East Kameng	5	120	600	Storage	1177.3	65	2345.55	44.6	2264	1.83	2.29	108	Concrete	440	400	355	-	-	-	-	-	-	Surface	Francis	6	3764	2		
23	Kapakleyak	East Kameng	4	40	160	ROR	-	245	627.95	44.8	463.52	1.39	1.74	18	Gate weir	740	-	480	2700	5.6	Horse Shoe	-	-	-	Surface	Francis	4.33	544	Negligible		
24	Kurung&II	Kurung Kumey	3	110	330	Storage	574	151	1435.4	49.7	2985.04	3.2	4.04	140	Concrete	745	710	565	8000	8.5	Horse Shoe	300	8.5	Horse Shoe	UG	Francis	5	2025	1		
25	Mihumdon	Dibang Valley	4	100	400	ROR	7	286	1451.75	41.4	2700.33	2.92	3.6	55	Rock Fill	1670	1660	1340	7500	7	Horse Shoe	100	6.5	Channel	Surface	Francis	7.5	132	Negligible		
26	Mirak	Upper Siang	3	47	141	ROR	7	136.4	748.44	60.6	1320.75	2.78	3.42	75	Concrete	695	675	538	4500	6	Horse Shoe	750	6	Horse Shoe	UG	Francis	6.5	42	Negligible		
27	Naba	Upper Subansiri	4	250	1000	ROR	8	221	3995.25	45.6	4399.89	1.73	2.14	110	Concrete	1035	1022	780	9750	8.7	Horse Shoe	100	8.7	Horse Shoe	UG	Francis	7.5	81.28	Negligible		
28	Nalo	Upper Subansiri	4	90	360	ROR	50.37	221	1733	55.0	2922.14	2.65	3.27	125	Concrete	765	745	645	2500	7.5	Horse Shoe	-	-	-	Surface	Francis	6	283.8	Negligible		
29	Naying	West Siang	4	250	1000	ROR	57.9	245	5077.15	58.0	3016.96	0.96	1.18	125	Concrete	805	765	520	6500	8.5	Horse Shoe	500	8.5	Horse Shoe	UG	Francis	7	200	Negligible		
30	Niare	Upper Subansiri	4	200	800	ROR	7.94	205	3356.62	47.9	3498.55	1.64	2.02	100	Concrete	1280	1260	1055	2600	8	Horse Shoe	320	8	Horse Shoe	UG	Francis	6	48.25	Negligible		
31	Oju-I	Upper Subansiri	4	175	700	ROR	12.1	257	3291.58	53.7	3526.28	1.69	2.08	110	Concrete	1950	1930	1670	5250	9.6	Horse Shoe	200	9.6	Horse Shoe	UG	Francis	7.5	72.3	Negligible		
32	Oju-II	Upper Subansiri	4	250	1000	ROR	6.35	322	4629.93	52.9	3492.99	1.19	1.46	90	Concrete	1650	1630	1300	5000	10.25	Horse Shoe	200	10.25	Horse Shoe	UG	Francis	6.5	37.3	Negligible		
33	Pakke	East Kameng	2	55	110	ROR	0.115	452.5	335.26	34.8	480.45	2.68	3.33	17	Concrete	865	860.3	392	2900	3.1	Horse Shoe	-	-	-	Surface	Pelton	4.5	2.08	Negligible		
34	Papu	East Kameng	2	100	200	ROR	18.52	238	505	28.8	646.8	2.35	2.94	48	Concrete	695	685	440	6500	6.5	Horse Shoe	Short	-	-	Surface	Francis	5	127	Negligible		
35	Phanchung	East Kameng	2	30	60	ROR	0.89	157.13	174.83	33.3	282.43	2.61	3.24	22	Concrete	600	595	418	4800	3.6	Horse Shoe	-	-	-	Surface	Francis	4.5	21.56	Negligible		
36	Ringong	Upper Siang	3	50	150	ROR	-	166.5	659.07	50.2	1211.06	2.93	3.61	70	Concrete	-	-	535	2000	5.5	Horse Shoe	45	5.5	D. Shaped	Surface	Francis	5	NA	Negligible		
37	Sebu	East Kameng	2	40	80	ROR	1.97	123	227.53	32.5	371.4	2.98	3.71	19	Concrete	367	363.5	230	5850	5.5	Horse Shoe	-	-	-	Surface	Francis	4.5	31	Negligible		
38	Simang	East Siang	3	30	90	ROR	24.36	125	417.82	53.0	1028.34	4.4	5.43	60	Concrete	473.5	450	330	6000	5	Horse Shoe	300	5	Horse Shoe	UG	Francis	5	139.22	Negligible		
39	Talong	East Kameng	3	100	300	Storage	203	171.67	915.5	34.8	891.04	1.79	2.24	50	Concrete	640	615	445	5950	8.7	Horse Shoe	Short	-	-	Surface	Francis	5	1006	Negligible		
40	Tarangwarang	East Kameng	2	15	30	ROR	0.07	185.55	93.81	35.7	134.54	2.32	2.88	19	Concrete	822	816	623	1120	2.4	D. Shape	-	-	-	Surface	Francis	3	1.7	Negligible		
41	Tato-II	West Siang	4	175	700	ROR	37	168	3465.9	56.5	2608.6	1.2	1.48	125	Concrete	1020	980	820	4000	8.5	Horse Shoe	200	8.5	Horse Shoe	UG	Francis	5	125	Negligible		
42	Tenga	West Kameng	4	150	600	Storage	96.55	875	1046.5	19.9	1602.3	2.81	3.52	113	Concrete	1130	1070	-	3600	5.2	Horse Shoe	-	-	-	Surface	Pelton	5	281.96	1		
43	Utung	West Kameng	3	33.3	100	ROR	0.108	291	359.13	41.0	488.1	2.5	3.1	19	Concrete	1637	1631														

Sl No	Scheme	District	Number of Units	Unit Size (MW)	Installed Capacity (MW)	Storage/ROR Type	Live Storage (Mcum)	Rated Head (m)	Annual Energy (GWh)	Annual Load Factor (%)	Estimated Cost (Rs. Crores)	Levelised Tariff (Rs./kWh)	First Year Tariff (Rs./kWh)	Dam Height (m)	Dam Type	Full Reservoir Level (m)	MDDL (m)	Tail Water Level (m)	Head Race WCS Length (m)	HRWCS size (m)	HRWCS Type	Tail Race WCS Length (m)	TRWCS size (m)	TRWCS Type	Power House Type	Turbine Type	Construction Period (Years)	Submergence area (Ha)	Villages submerged		
Himachal Pradesh																															
49	Bajoli Holi	Chamba	3	60	180	ROR	0.8	278	762.98	48.4	649.22	1.6	2.03	33	Barrage	2015	1994	1700	14600	5	Horse Shoe	450	5	D Shaped	UG	Francis	4.5	11.79	-		
50	Bardang	Lahaul & Spiti	3	38	114	ROR	2.17	55	438.41	43.9	550.12	2.3	2.91	23	Barrage	2684.5	2675.5	2614.5	8130	8.6	Circular	220	45	Rect	Surface	Francis	4.5	32.5	Negligible		
51	Chamba	Chamba	3	42	126	ROR	-	110	646.82	58.6	420.9	1.17	1.48	-	-	-	-	765	10320	6.5	Circular	230	-	Rect.	Surface	Francis	4.5	-	-		
52	Chhatru	Lahaul & Spiti	3	36	108	ROR	0.88	160	455.72	48.2	585.15	2.28	2.89	19	Barrage	3421	3413.5	3240	6500	5.1	Horse Shoe	1150	6	D Shaped	UG	Francis	4.5	16.75	-		
53	Gharopa	Kulu	3	38	114	ROR	0.6784	169	534.25	53.5	493.59	1.65	2.09	26	Barrage	1653.5	1638.5	1467	5700	5.25	Horse Shoe	1150	6	D Shaped	UG	Francis	4.5	11.98	-		
54	Gondhala	Lahaul & Spiti	3	48	144	ROR	1.43	134	586.08	46.5	482.5	1.52	1.92	16	Barrage	3007.7	3007	2854	10870	6.5	Circular	190	35	Rect.	Surface	Francis	4.5	200	Negligible		
55	Jangi Thopan	Kinnaur	3	160	480	ROR	8	174.14	1779.45	42.3	1805.54	1.55	2	64	Concrete	2320	2276	2130	7050	9.45	Circular	100	9.45	Circular	UG	Francis	6	100	-		
56	Khab-I	Kinnaur	3	150	450	ROR	36.4	170	1551	39.3	1765.89	1.76	2.24	69	Concrete	2592	2568	2403	8400	9	Circular	318	9	Circular	UG	Francis	6	-	Negligible		
57	Khab-II	Kinnaur	3	62	186	ROR	-	70	640	39.3	990.52	2.39	3.04	-	-	2403	2399	2320	11950	9	Circular	128	9	Circular	UG	Francis	6	-	Negligible		
58	Khoksar	Lahaul & Spiti	3	30	90	ROR	0.9531	99	351.91	44.6	373.66	1.94	2.46	21	Barrage	3212	3206	3097.9	10055	6.3	Circular	193	6.3	Rect.	UG	Francis	4.5	18.51	Negligible		
59	Luhri	Shimla	3	155	465	ROR	12.45	88	1825.13	44.8	2039.98	1.89	2.41	80	Concrete	770	728	642	15500	11	Horse Shoe	150	11	Horse Shoe	UG	Francis	6	200	-		
60	Thopan Powari	Kinnaur	3	160	480	ROR	0.8	161.14	1786.26	42.5	1796.98	1.44	1.81	53	Concrete	2130	2120	1954.75	5840	9.35	Circular	100	9.35	Circular	UG	Francis	6	70	Negligible		
61	Tidong-I	Kinnaur	2	30	60	ROR	-	511.5	211.65	40.3	299.12	2.04	2.71	65	Concrete	3435	3390	-	5036	2.6	Circular	100	2.6	Circular	UG	Pelton	5	100	-		
62	Tidong-II	Kinnaur	2	35	70	ROR	-	575	256.18	41.8	309.84	1.61	2.02	-	weir	-	-	-	8250	2.6	Circular	100	2.6	Circular	UG	Pelton	5	-	-		
63	Yangthang	Kinnaur	3	87	261	ROR	1.1	186.45	934.68	40.9	1120.2	1.9	2.39	57	Concrete	2805	2775	2600	9050	7	Circular	100	7	Circular	UG	Francis	6	57	Negligible		
Total (Himachal Pradesh) - 15 Nos. Schemes					3328																										
Jammu & Kashmir																															
64	Barinium	Doda	2	120	240	ROR	2.07	117.77	1170.34	55.7	1698.09	2.22	2.54	143	Concrete	1992	1934	1845	2500	8.7	-	85	4.5	Trapezoidal	Surface	Francis	5	300	Negligible		
65	Bichlari	Doda	2	17.5	35	ROR	-	462.6	148.29	48.4	94.4	0.97	1.11	-	-	-	-	813	8760	3 x 3	D shape	150	4	Channel	Surface	Pelton	4	-	Negligible		
66	Dumkhar	Leh	3	15	45	ROR	3.4	27.8	219.18	55.6	527.45	3.78	4.66	42	Concrete	2856	2853	2825	Dam toe PH	-	-	-	-	-	Surface	Kaplan	6	285	Negligible		
67	Kanyunche	Leh	3	15	45	ROR	4.25	28.76	223.02	56.6	542.29	3.82	4.71	40	Concrete	2798	2795	2766	Dam toe PH	-	-	-	-	-	Surface	Kaplan	6	81	Negligible		
68	Karkit	Kargil	3	10	30	ROR	1.65	26.9	153.11	58.3	426.92	4.38	5.4	33	Concrete	2715	2712	2685	Dam toe PH	-	-	-	-	-	Surface	Kaplan	6	66	Negligible		
69	Kawar	Doda	4	80	320	ROR	2.6	74	1426.56	50.9	891.37	0.95	1.09	68	Concrete	1362	1350	1275	4300	12	Horse Shoe	75	40	Channel	Surface	Francis	5	35.89	4		
70	Khalsi	Leh	3	20	60	ROR	4.28	33	272.6	51.9	577.28	3.33	4.1	44	Concrete	3025	3022	2988	Dam toe PH	-	-	-	-	-	Surface	Kaplan	6	200	Negligible		
71	Kiru	Doda	4	107.5	430	ROR	5.6	105.33	1935.77	51.4	857.58	0.68	0.77	83	Concrete	1475	1467	1365	980	12	Horse Shoe	150	40	Channel	Surface	Francis	5	55.18	Negligible		
72	Ratle	Doda	4	140	560	ROR	10	92.33	2483.37	50.6	1987.92	1.22	1.4	58	Concrete	1025	1014	917	22160	2 x 9.8	Horse Shoe	300	12	D Shape	UG	Francis	5	24.2	Negligible		
73	Shamnot	Doda	4	92.5	370	ROR	7.3	56.33	1650.19	50.9	1592.91	1.48	1.69	50	Concrete	912	904	845	16120	2 x 10.5	Horse Shoe	350	14	D Shape	UG	Francis	5	129.08	6		
74	Shuas	Doda	2	115	230	ROR	4.72	115.7	1117.87	55.5	1872.57	2.57	2.94	163	Concrete	2135	2080	1996	-	-	-	350	10	Horse Shoe	UG	Francis	6	550	Negligible		
75	Takmaching	Leh	3	10	30	ROR	1.5	18.53	145.52	55.4	416.64	4.5	5.54	29	Concrete	2912	2909	-	Dam toe PH	-	-	-	-	-	Surface	Kaplan	6	123.71	Negligible		
76	Ujh	Kathua	4	70	280	Storage	593	143.33	465.06	19.0	1390.2	4.42	5.06	125	Rock Fill	614	594	458	2500	8.5	Horse Shoe	300	-	-	Surface	Francis	6	10050	19		
Total (Jammu & Kashmir) - 13 Nos Schemes					2675																										
Karnataka																															
77	Agnashini	North Canara	4	150	600	ROR	40.69	427	1431	27.2	910.71	0.97	1.07	-	3 Dams	470	458	-	10500	8.3	Circular	2700	9 x 7	D- shaped	UG	Francis	4	472	200 persons		
78	Gangavali	North Canara	2	200	400	ROR	11.04	378.3	759	21.7	709.68	1.39	1.46	27,33,35	3 Dams	440	420	52	4650	7	Circular	1000	8	Circular	UG	Francis	4.5	612	Negligible		
79	Gundia	Hassan & Dashina	2	150	300	ROR	14.66	600	616	23.4	531.68	1.35	1.41	-	3 weir & 1 Dam	740	720	115	7685	6.5	Circular	3100	6.5 x 5	D- shaped	UG	Pelton	3	133	Negligible		
80	Kalinadi Stage-III	UttaraKannada	2	150	300	ROR	9.8,4.18, 18.06	407.67	610	23.2	590.05	1.52	1.67	-	7 Dams	443	429	34.5	1610	7.5	Circular	-	7 x 7.5	D- shaped	UG	Francis	3	533	Negligible		
81	Tamankal	Raichur	2	150	300	ROR	-	87.29	401	15.3	771.25	3.01	3.32	29.72	-	492.25	485.55	402.12	6825	-	Channel	3900	8	Circular	UG	Francis	3	105	Negligible		
Total (Karnataka) - 5 Nos Schemes					1900																										
Kerala																															
82	Karappara Kuriarkutty	Plaghat	2 & 2	18 & 15	66	Storage	28.81 & 2.65	390 & 309.5	126.14	21.8	284.4 & 269.17	7.81 & 5.34	8.93 & 6.11	45.5 & 18.5	Concrete & Barrage	939 & 519	918 & 516	519 & 189.5	2000 & 12100	3&3	D shape	70 & 100	6.5& 6.5	Trapezoidal	Surface	Pelton	5	445.5	Negligible		
83	Perianjakutty	Idukki	2	30	60	Storage	38.48	282.9	86.3	16.4	328.5	5.46	6.25	60	Concrete	562	540	256	3600	3.5	D shape	50	7	Trapezoidal	Surface	Francis	5	280	Negligible		
Total (Kerala) - 2 Nos. Schemes					126																										
Madhya Pradesh																															
84	Basania	Mandla	3	30	90	Storage	1219.23	38	240	30.4	2135.06	13.98	17.23	50	Concrete	482	471	437.08	Dam toe PH	-	-	100	-	Channel	Surface	Francis	5	17893	50		
85	Bauras	Raisen	3	18.33	55	ROR	-	17.5	248.43	51.6	498.17	4.9	3.96	24	Barrage	316	313	298	147	60x19	Channel	108	60x19	Channel	Surface	Kaplan	4	7181.5	15		
86	Hoshangabad	Hoshangabad	3	20	60	ROR	-	16.5	288.21	54.8	598.15	4.86	4.1	24	Barrage	298	296	280.25	147	60x19	Channel	108	60x19	Channel	Surface	Kaplan	4	10601.74	23		
Total (Madhya Pradesh) - 3 Nos. Schemes					205																										
Maharashtra																															
87	Gharghaon	Garhchroli	4	13	52	Storage	169.62	9.84	74.47	16.3	690.14	13.55	15.5	18	Concrete	186.5	182.25	175	Dam toe PH	-	-	250	85	Trapezoidal	Surface	Kaplan	5	5713/ 8.35	10		
88	Hiranyakeshi	Kolhapur	2	9	18	Storage	384.72	36.1	23.76	15.1	289.03	17.71	20.26	48	Concrete& Rockfill	605	590	564	Dam toe PH	-	-	150	20	Trapezoidal	Surface	Francis	5	3510	9		
89	K																														

Sl No	Scheme	District	Number of Units	Unit Size (MW)	Installed Capacity (MW)	Storage/ROR Type	Live Storage (Mcum)	Rated Head (m)	Annual Energy (GWh)	Annual Load Factor (%)	Estimated Cost (Rs. Crores)	Levelised Tariff (Rs./kWh)	First Year Tariff (Rs./kWh)	Dam Height (m)	Dam Type	Full Reservoir Level (m)	MDDL (m)	Tail Water Level (m)	Head Race WCS Length (m)	HRWCS size (m)	HRWCS Type	Tail Race WCS Length (m)	TRWCS size (m)	TRWCS Type	Power House Type	Turbine Type	Construction Period (Years)	Submergence area (Ha)	Villages submerged		
Manipur																															
96	Nunglieban	Bishnupur	2	52.5	105	Storage	21.8	82.42	268.93	29.2	841.99	4.51	5.16	61	Concrete	454	439.5	345	7500	7	Horse Shoe	100	50	Channel	Surface	Francis	5	174.35	1		
97	Khongnum Chakka st.-II	Senapati	2	33.5	67	Storage	30.19	281.25	192.84	32.9	525.06	4.01	4.59	52	Concrete	985	970	669	15000	3.5	Horse Shoe	50	15x1.5	Trapezoidal	Surface	Francis	5	270	1		
98	Pabaram	Tanenglong	2	95	190	Storage	777.11	116.67	474.77	28.5	1256.74	3.78	4.33	122	Concrete	320	262	167.5	6500	7.5	Horse Shoe	100	30 x 2.5	Trapezoidal	Surface	Francis	5	2328.3	3		
Total (Manipur) - 3 Nos. Schemes					362																										
Meghalaya																															
99	Mawblei	East Khasi Hill	2	70	140	Storage	156	400.33	303.66	24.8	807.02	3.88	4.44	90	Earth & Rockfill	818	759	372	3300	3.5	Horse Shoe	3900	4.75	Horse Shoe	UG	Pelton	5	503.33	-		
100	Mawhu	East Khasi Hill	3	40	120	ROR	0.3	438.15	482.96	45.9	434.24	1.23	1.4	38	Concrete	684	678	211	10000	3.25	Horse Shoe	1020	3.75	D Shape	UG	Pelton	5	5.71	-		
101	Mawput	East Khasi Hill	3	7	21	ROR	1.49	93.42	83.95	45.6	199.51	3.56	4.07	33	Concrete	160	154.5	62	2470	3.5	D shape	75	18	Trapezoidal	Surface	Francis	5	1	-		
102	Nongkolait	East Khasi Hill	2	60	120	ROR	0.46	463	332.87	31.7	392.8	1.72	1.97	43	Concrete	880	871	391	5320	3.5	D shape	923	4.5	D Shape	UG	Pelton	5	2.75	-		
103	Nongnam	East Khasi Hill	2	25	50	ROR	0.45	215.17	212.59	48.5	272.07	2.14	2.44	22	Concrete	386	385	160	3500	3.25	Horse Shoe	50	25x1.5	Trapezoidal	Surface	Francis	5	47	-		
104	Rangmaw	East Khasi Hill	2	32.5	65	ROR	0.1285	321	229.6	40.3	268.37	2.02	2.32	34	Concrete	1217	1209.5	881	2500	3	Horse Shoe	250	3	D Shape	UG	Francis	5	2.08	-		
105	Selim	Jaintia Hill	2	85	170	Storage	99.47	433.67	534.68	35.9	652.07	1.76	2.02	77	Concrete	1210	1191	748	4400	3	D shape	100	12.5x1.5	Channel	Surface	Pelton	5.5	940	NA		
106	Sushen	Jaintia Hill	2	32.5	65	ROR	28.5	114.58	220.6	38.7	521.53	3.36	3.85	75	Concrete	748	722	619	1230	4.5	D shape	105	12 x 2	Channel	Surface	Francis	5	500	NA		
107	Umduna	East Khasi Hill	3	19	57	ROR	0.218	253.17	231.24	46.3	226.68	1.47	1.68	24	Concrete	950	947	689	3700	3	Horse Shoe	200	3.25	D Shape	UG	Francis	5	7.75	-		
108	Umjaut	East Khasi Hill	3	23	69	ROR	0.22	375.2	276.7	45.8	276.97	1.32	1.51	33	Concrete	1346	1334	954	1890	3	Horse Shoe	450	3.5	Horse Shoe	UG	Pelton	5	2.6	-		
109	Umngi	East Khasi Hill	2	27	54	Storage	59.51	304.75	89.65	19.0	389.93	2.5	2.86	74	Concrete	1547	1526	1219	5360	2.8	D shape	1030	3	D Shape	UG	Francis	5	495	6		
Total (Meghalaya) - 11 Nos. Schemes					931																										
Mizoram																															
110	Boinu	Chhimituipui	4	160	640	Storage	1500	158.67	1118.93	20.0	3243.3	4.22	4.83	142	Rockfill	438	332	230	2 x 17250	9	Horse Shoe	200	36	Trapezoidal	Surface	Francis	6	4150	Negligible		
111	Lungleng	Aizawl	5	163	815	Storage	989.67	219.67	1169.06	16.4	2913.14	3.64	4.17	116	Rockfill	493	405	230	2 x 17730	9.5 & 7.8	Horse Shoe	100	56	Trapezoidal	Surface	Francis	6	2260	Negligible		
112	Tlawng	Aizawl	2	22.5	45	Storage	22.68	123.67	151.67	38.5	528.1	5.11	5.84	119	Rockfill	240	215	103	2400	3.5	D shape	100	12	Trapezoidal	Surface	Francis	5	130	Negligible		
Total (Mizoram) - 3 Nos. Schemes					1500																										
Nagaland																															
113	Dikhu	Mon	4	35	140	Storage	322.64	79.44	513.41	41.9	723.63	2.26	2.8	98	Concrete	261	230	170	-	-	-	-	-	-	Surface	Francis	5	1302.46	Negligible		
114	Tizu	Kiphire	3	50	150	Storage	569.42	64.19	568.41	43.3	731.7	2.06	2.56	88	Concrete	525	480	445	-	-	-	-	-	-	Surface	Francis	5	1625.66	Negligible		
115	Yangnyu	Longteng	2	20	40	Storage	159.83	115	176.45	50.4	397.55	3.61	4.48	93	Rockfill	445	395	310	4000	5	Horse Shoe	-	-	-	Surface	Francis	4.5	499.4	Negligible		
Total (Nagaland) - 3 Nos. Schemes					330																										
Orissa																															
116	Baljori	Keonjhar	2	89	178	Storage	265	165.75	479.8	30.8	1778.32	5.07	5.9	130		261	225	76.49	4200	6.7	Horse Shoe	50	20 x 23	Open Channel	Surface	Francis	5.5	1240	6		
117	Lower Kolab	Koraput	3	155	465	Storage	1947.42	196.9	845.86	20.8	3695.95	6.1	7.1	81.2	& earth rockfill	506.9	456	257.2	12400	8.5	Horse Shoe	510	30x3	Open Channel	Surface	Francis	5.5	10400	14		
118	Naraj	Cuttack	7	41	287	Storage	3924	16.14	759.31	30.2	2278.38	4.23	4.92	32	& earth rockfill	45.7	40.5	29.1	-	-	-	330	50	Trapezoidal	Surface	Kaplan	5.5	85000	113		
119	Tikarpara	Angul	7	37	259	Storage	1233	16.97	828.37	36.5	1904.17	3.17	3.69	25	Barrage	84	80	64.2	-	-	-	450	132	Trapezoidal	Surface	Kaplan	4.75	23700	13		
Total (Orissa) - 4 Nos. Schemes					1189																										
Sikkim																															
120	Dikchu	East Sikkim	3	35	105	ROR	1.7	352	469	51.0	518.5	1.74	2.15	55	Concrete	945	935	580	6500	4	Horse Shoe	500	4	Horse Shoe	UG	Francis	4	20.25	Negligible		
121	Lachen	North Sikkim	3	70	210	ROR	1.66	350	865.94	47.1	1046.93	1.9	2.35	85	Concrete	2650	2635	2290	4500	6	Horse Shoe	400	6	Horse Shoe	UG	Francis	5	11.23	Negligible		
122	Lingza	North Sikkim	3	40	120	ROR	1.71	736	477.51	45.4	699.8	2.31	2.85	75	Concrete	1850	1830	1095	4000	3.3	Horse Shoe	250	3.3	Horse Shoe	UG	Pelton	4	10.75	Negligible		
123	Panan	North Sikkim	4	50	200	ROR	1.69	312	762	43.5	846.08	1.75	2.15	55	Concrete	1095	1085	770	8500	6	Horse Shoe	500	6	Horse Shoe	UG	Francis	5	15.6	Negligible		
124	Rangyong	North Sikkim	3	47	141	ROR	1.67, 0.30	723.18	639.52	51.8	890.82	2.19	2.7	65, 65	Concrete	1845	1825	1098	7500	3.3	Horse Shoe	300	3.3	Horse Shoe	UG	Pelton	4	18.12	Negligible		
125	Ringpi	North Sikkim	2	35	70	ROR	0.57	1106.37	317.41	51.8	519.27	2.58	3.17	40	Concrete	2966	2963	1853	7000	3.3	Horse Shoe	250	3.3	Horse Shoe	UG	Pelton	4	12.7	Negligible		
126	Rongni Storage	East Sikkim	3	65	195	Storage	90.64	442	510.35	29.9	2265.14	6.97	8.6	170	Concrete	840	780	360	7500	5	Horse Shoe	100	100	-	Surface	Francis	7	253	1		
127	Rukel	North Sikkim	3	11	33	ROR	0.9	537.1	149.41	51.7	422.01	4.45	5.48	47	Concrete	2395	2385	1845	5000	3.3	Horse Shoe	200	3.3	Horse Shoe	UG	Pelton	4	12.87	Negligible		
128	Talem	North Sikkim	3	25	75	ROR	1.15	393.19	305.48	46.5	683.76	3.52	4.34	50	Rock Fill	3675	3670	3268	4500	3.3	Horse Shoe	500	3.3	Horse Shoe	UG	Pelton	4.5	24.47	1		
129	Teesta-I	North Sikkim	4	80	320	ROR	1.78, 1.04	576.85	1298.12	46.3	1206.59	1.46	1.8	45 & 60	Concrete	3265	3258	2675	3500 & 4250	4	Horse Shoe	1000	5	Horse Shoe	UG	Pelton	5	63.32	Negligible		
Total (Sikkim) - 10 Nos. Schemes					1469																										
Uttaranchal																															
130	Arakot Tiuni	Uttarkashi	3	24	72	ROR	-	250.2	382.9	60.7	310.51	0.83	1		Barrage	1206	NA	928	10500	3.5	Horse Shoe	-	3.5	-	UG	Francis	5	-	-		
131	Badrinath	Chamoli	2	70	140	ROR	0.45	459.67	702.7	57.3	357.33	0.66	0.81	36	Concrete	2812	2790	2334	2840	3.5	Horse Shoe	340	4	D Shape	UG	Francis	5	3.74	-		
132	Bagoli Dam	Chamoli	3	24	72	ROR	-	139.5	340.7	54.0	576.97	2.84	4.1	120	Concrete	980	-	825	5500	4.3	Horse Shoe	50	2	Channel	surface	Francis	6	-	2		
133	Bhaironghati	Uttarkashi	2	32.5	65	ROR	0.853	108.9	293.18	51.5	304.32	1.57	1.8	34	Concrete	2642	2630	2514	5100	4.5	Horse Shoe	190	5	D Shape	UG	Francis	5	13.27	-		
134	Bogudiyar - Sirkari Bhyal	Pithoragarh	2	85	170	ROR	1.73	344.47	744	50.0	859.27	1.74	1.99	98	Concrete	2480	2470	2123	2350	4.2	Horse Shoe	280	4.5	D shape	UG	Francis	5.5	19.43	Negligible		
135																															

Sl No	Scheme	District	Number of Units	Unit Size (MW)	Installed Capacity (MW)	Storage/ROR Type	Live Storage (Mcum)	Rated Head (m)	Annual Energy (GWh)	Annual Load Factor (%)	Estimated Cost (Rs. Crores)	Levelised Tariff (Rs./kWh)	First Year Tariff (Rs./kWh)	Dam Height (m)	Dam Type	Full Reservoir Level (m)	MDDL (m)	Tail Water Level (m)	Head Race WCS Length (m)	HRWCS size (m)	HRWCS Type	Tail Race WCS Length (m)	TRWCS size (m)	TRWCS Type	Power House Type	Turbine Type	Construction Period (Years)	Submergence area (Ha)	Villages submerged		
138	Devsari	Chamoli	3	100	300	Storage	83.5	227.5	878.5	33.4	1532.03	2.42	2.77	90	Concrete	1370	1355	1120	7370	6.75	Horse Shoe	1080	7	Horse Shoe	UG	Francis	5	522	Negligible		
139	Gangotri	Uttarkashi	1	55	55	ROR	0.91	336.33	264.76	55.0	252.61	1.42	1.62	26	Concrete	2989	2984	2642	5200	2.5	D shape	450	3	D Shape	UG	Francis	5	24.96	Negligible		
140	Garba Tawaghat	Pithoragarh	3	210	630	ROR	3.26	470.97	2483.11	45.0	1447.77	0.85	0.9	93	Concrete	1615	1590	1103	13150	6.75	Horse Shoe	268	6.75	D Shape	UG	Francis	5.75	14.6	Negligible		
141	Gohana Tal	Chamoli	2	30	60	ROR	0.58	584.52	269.35	51.2	270.38	1.48	1.64	-	Barrage	1614	1612	995	9000	2.5	D shape	940	2.5	D Shape	UG	Pelton	5	24.64	Negligible		
142	Harsil	Uttarkashi	3	70	210	ROR	2.29	281.33	920.57	50.0	578.2	0.96	1.1	24.5	Barrage	2447.5	2445.5	2148.5	5060	5	Horse Shoe	280	5.5	D Shape	UG	Francis	5	91.56	1		
143	Jadh Ganga	Uttarkashi	2	25	50	ROR	1.1	142.6	220.88	50.4	277.48	1.91	2.19	45	Concrete	2802.5	2785.5	2649	1100	3.8	Horse Shoe	290	4	D Shape	UG	Francis	5	8.35	Negligible		
144	Jakhol Sankri	Uttarkashi	3	11	33	ROR	-	364	144.24	49.9	171	1.5	1.71	-	Barrage	1886	NA	1516	5500	3	Horse Shoe	-	4m x5m	D- shape	UG	Pelton	5	-	-		
145	Jelam Tamak	Chamoli	2	30	60	ROR	0.9	195.58	268.12	51.0	277.92	1.5	1.71	24.5	Concrete	2642.5	2632	2424	5700	3.5	Horse Shoe	320	4	D Shape	UG	Francis	5	13.9	Negligible		
146	Kalika Dantu	Pithoragarh	2	115	230	ROR	2.5	99.75	1067.3	53.0	1935.43	2.58	2.95	26	Concrete	798	791	691.5	5200	9.3	Horse Shoe	130	40	Channel	Surface	Francis	5	46	Negligible		
147	Karmoli	Uttarkashi	2	70	140	ROR	0.816	419.67	621.31	50.7	465.6	1.05	1.3	56	Concrete	3268.5	3254	2820	8600	3.5	Horse Shoe	600	3.5	D Shape	UG	Francis	5	9.94	Negligible		
148	Khartoi Lumti Tali	Pithoragarh	2	27.5	55	ROR	4.69	56.6	241.51	50.1	433.12	2.62	3	60	Concrete	976	970	913	1000	5.75	Horse Shoe	220	15x3	Trapezoidal	Surface	Francis	4.5	80	Negligible		
149	Lata Tapovan	Chamoli	4	77.5	310	ROR	-	265	1123	41.4	1021.3	1.54	2.21	-	Barrage	2098	-	1804	10000	6.4	Circular	500	-	-	UG	Francis	6	-	-		
150	Maleri Jelam	Chamoli	2	27.5	55	ROR	0.9	200.33	243.07	50.5	257.85	1.58	1.8	24.5	Concrete	2864.5	2854	2650	4500	3.5	Horse Shoe	816	4	D Shape	UG	Francis	5	10.45	1		
151	Mapang - Bogudiyar	Pithoragarh	2	100	200	ROR	1.54	465.07	882.04	50.3	667.19	1.13	1.3	83	Concrete	2960	2953	2483	3520	3.9	Horse Shoe	300	4.5	D shape	UG	Francis	5.5	24.2	Negligible		
152	Naitwar-Mori	Uttarkashi	3	11	33	ROR	-	76	151	52.2	202.2	1.58	1.85	-	Barrage	1242	NA	1157	5500	4	Horse Shoe	-	8m x	open channel	surface	Francis	5	-	-		
153	Nand Prayag	Chamoli	3	47	141	ROR	-	72	794	64.3	670.04	1.44	2.05	-	Barrage	887	-	807	5000	8.35	Circular	50	-	Channel	surface	Francis	6	-	-		
154	Ramganga	Pithoragarh	3	22	66	ROR	-	100.1	327	56.6	441.31	2.28	3.25	85	Concrete	790	-	680	6000	5	Circular	200	6	Circular	UG	Francis	6	-	2		
155	Rishi Ganga - I	Chamoli	2	35	70	ROR	0.4	536.17	327.3	53.4	277.01	1.03	1.18	29	Concrete	2872	2865	2323	3310	2.5	D shape	706	3.25	D shape	UG	Pelton	5	6.2	-		
156	Rishi Ganga - II	Chamoli	1	35	35	ROR	0.5	236.96	164.64	53.7	212.98	1.94	2.22	29	Concrete	2306.7	2303	2060	3240	2.6	D shape	300	3	D shape	UG	Francis	5	1.65	-		
157	Rupsiabagar Khasiyabara	Pithoragarh	2	130	260	ROR	1.48	449.47	1195.63	52.5	1101.55	1.39	1.59	103	Concrete	1720	1713	1240	7220	4.5	Horse Shoe	45	12	D Shape	Surface	Francis	5	22.4	1		
158	Sela Urthing	Pithoragarh	2	115	230	ROR	1.71	255.5	816.73	40.5	696.73	1.22	1.4	73	Concrete	2470	2455	2203	2010	5.5	Horse Shoe	30	12.75	Open	Surface	Francis	5.5	15.723	Negligible		
159	Sirkari Bhyol Rupsiabagar	Pithoragarh	3	70	210	ROR	1.17	388.97	967.97	52.6	899.63	1.25	1.55	103	Concrete	2120	2110	1720	800	4.5	Horse Shoe	370	4.5	D Shape	UG	Francis	5.75	12.8	Negligible		
160	Taluka Sankri	-	2	70	140	ROR	0.2	564.9	559.47	45.6	378.14	1.07	1.33	20	Concrete	2113	2105.8	-	6340	3.2	Horse Shoe	-	-	-	UG	Pelton	5	3.26	-		
161	Tamak Lata	Chamoli	4	70	280	ROR	-	291.4	1040.7	42.4	988.21	1.62	2.3	-	Barrage	2422	-	2098	12000	6	Circular	50	-	-	UG	Francis	6	-	-		
162	Urthing Sobla	Pithoragarh	4	70	280	ROR	8.49	414.96	1360.2	55.5	888.45	1.2	1.49	42	Concrete	2200	2195	1762	4150	4.9	Horse Shoe	-	-	-	surface	Pelton	5	36	-		
Total (Uttaranchal) - 33 Nos. Schemes					5282																										

UG : Under Ground