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ANNEXURES

ANNEXURE A - CONSTRUCTION OF 33/11 KV SUBSTATION & ASSOCIATED 33 KV LINES & 11 KV LINES FOR STRENGTHENING OF DISTRIBUTION SYSTEM AND REDUCTION OF TECHNICAL LOSSES.

FY 2013-14													Amount in lacs			
S. No.	Name of Sub Station	District	Name of Circle	Capacity	Capacity MVA	Length of 33 KV Line	Length of 11 KV Line	Approximate cost of substation	Cost of Civil works	Cost of 33KV Line	Cost of 11 KV Line	Total Cost	Total Cost after escalation	Cost of Land	Final Cost	
1	Nehru Colony (T)	Dehradun	Dehradun (U)	1x10	10.00	3.00	8.00	273.52	80.00	29.70	44.00	427.22	506.26	35.00	541.26	
2	MDDA Complex (T)			2x10	20.00	4.00	16.00	277.04	80.00	39.60	88.00	484.64	574.30	20.00	594.30	
3	LBS Mussoorie (H)			2 x5	10.00	5.00	36.00	200.00	50.00	49.50	198.00	497.50	589.54	20.00	609.54	
4	Selaqui-2 (R)		Dehradun (R)	2x10	20.00	15.00	32.00	277.04	80.00	148.50	176.00	681.54	807.62	20.00	827.62	
5	Jollygrant/Shyamspur (R)			2x5	10.00	16.00	24.00	218.00	48.00	158.40	132.00	556.40	659.33	18.00	677.33	
6	Rudrapur (R)			2x5	10.00	17.00	24.00	200.00	48.00	168.30	132.00	548.30	649.74	18.00	667.74	
7	Coer Roorkee (T)	Haridwar	Roorkee	2x5	10.00	10.00	12.00	200.00	50.00	99.00	66.00	415.00	491.78	20.00	511.78	
8	Shiv Ganga Indl Estate (R)			2x5	10.00	3.00	24.00	235.00	20.00	29.70	132.00	416.70	493.79	10.00	503.79	
9	Sahdevpur (R)		Haridwar	2x5	10.00	15.00	24.00	200.00	50.00	148.50	132.00	530.50	628.64	23.00	651.64	
10	Pipli (R)			2x8	16.00	8.00	32.00	227.04	60.00	79.20	176.00	542.24	642.55	28.00	670.55	
11	Deghat (H)	Almora	Ranikhet	1x3	3.00	25.00	18.00	125.00	45.00	247.50	99.00	516.50	612.05	20.00	632.05	
12	Takula (H)			1x3	3.00	20.00	18.00	125.00	45.00	198.00	99.00	467.00	553.40	20.00	573.40	
13	Karmi (H)			Bageshw	1x3	3.00	25.00	18.00	125.00	45.00	247.50	99.00	516.50	612.05	20.00	632.05

FY 2013-14													Amount in lacs			
S. No.	Name of Sub Station	District	Name of Circle	Capacity	Capacity MVA	Length of 33 KV Line	Length of 11 KV Line	Approximate cost of substation	Cost of Civil works	Cost of 33KV Line	Cost of 11 KV Line	Total Cost	Total Cost after escalation	Cost of Land	Final Cost	
		ar														
Total					135.00	166.00	286.00	2682.64	701.00	1643.40	1573.00	6600.04	7821.05	272.00	8093.05	

FY 2014-15													Amount in lacs			
S. No.	Name of Sub Station	District	Name of Circle	Capacity	Capacity MVA	Length of 33 KV Line	Length of 11 KV Line	Approximate cost of substation	Cost of Civil works	Cost of 33KV Line	Cost of 11 KV Line	Total Cost	Total Cost after escalation	Cost of Land	Final Cost	
1	Dhoran Khas (R)	Dehradun	EDC (Urban)	2x10	20.00	12.00	32.00	288.00	25.00	130.68	193.60	637.28	755.18	21.00	776.18	
2	Daniya (H)	Almora	Ranikhet	1x3	3.00	20.00	18.00	135.00	50.00	217.80	108.90	511.70	606.36	21.00	627.36	
3	Jalali (H)			1x3	3.00	1.00	18.00	130.00	50.00	10.89	108.90	108.90	299.79	355.25	21.00	376.25
4	Jaiti (H)			1x3	3.00	15.00	18.00	115.00	40.00	163.35	108.90	108.90	427.25	506.29	21.00	527.29
5	Sirkot (H)			Bageshwar		2x3	6.00	10.00	36.00	185.00	40.00	108.90	217.80	551.70	653.76	21.00
6	Rima - Banlek (H)	2x3	6.00			30.00	36.00	185.00	40.00	326.70	217.80	217.80	769.50	911.86	21.00	932.86
7	Pratappur (R)	U.S. Nagar	Kashipur	2x5	10.00	0.50	24.00	200.00	30.00	5.45	145.20	380.65	451.06	10.00	461.06	
8	Barhani (R)		Kashipur (Bazpur)	2x5	10.00	20.00	24.00	200.00	30.00	217.80	145.20	593.00	702.71	20.00	722.71	
9	Jhankat (R)		Rudrapur	1x5	5.00	1.00	12.00	140.00	30.00	10.89	72.60	72.60	253.49	300.39	10.00	310.39

FY 2014-15													Amount in lacs			
S. No.	Name of Sub Station	District	Name of Circle	Capacity	Capacity MVA	Length of 33 KV Line	Length of 11 KV Line	Approximate cost of substation	Cost of Civil works	Cost of 33KV Line	Cost of 11 KV Line	Total Cost	Total Cost after escalation	Cost of Land	Final Cost	
			(Sitarganj)													
10	Kiccha Bye Pass, near Ganga Nagar (R)		Rudrapur	2x8	16.00	2.00	32.00	289.18	30.00	21.78	193.60	534.56	633.45	20.00	653.45	
11	Dhudarkhal (H)	Kotdwar	EDC (Srinagar)	1x3	3.00	20.00	18.00	150.00	55.00	217.80	108.90	531.70	630.06	20.00	650.06	
12	Ukhraikhal (H)			2x3	6.00	40.00	36.00	245.00	55.00	435.60	217.80	953.40	1129.78	20.00	1149.78	
13	Jogi Patti (H)	Tehri		2x3	6.00	15.00	36.00	225.00	50.00	163.35	217.80	656.15	777.54	20.00	797.54	
Total					97.00	186.50	340.00	2487.18	525.00	2030.99	2057.00	7100.17	8413.70	246.00	8659.70	

FY 2015-16													Amount in lacs			
S. No.	Name of Sub Station	District	Name of Circle	Capacity	Capacity MVA	Length of 33 KV Line	Length of 11 KV Line	Approximate cost of substation	Cost of Civil works	Cost of 33KV Line	Cost of 11 KV Line	Total Cost	Total Cost after escalation	Cost of Land	Final Cost	
1	Maldhan Chaur (R)	Nainital	Haldwani	1x5	5.00	10.00	12.00	160.00	30.00	119.79	79.86	389.65	461.74	21.00	482.74	
2	Choorgaliya (R)			1x5	5.00	25.00	12.00	140.00	30.00	299.48	79.86	549.34	650.96	21.00	671.96	
3	Patwa Daangar (R)			2x5	10.00	25.00	24.00	220.00	25.00	299.48	159.72	704.20	834.47	21.00	855.47	

FY 2015-16													Amount in lacs			
S. No.	Name of Sub Station	District	Name of Circle	Capacity	Capacity MVA	Length of 33 KV Line	Length of 11 KV Line	Approximate cost of substation	Cost of Civil works	Cost of 33KV Line	Cost of 11 KV Line	Total Cost	Total Cost after escalation	Cost of Land	Final Cost	
4	Manpokhra (R)			2x3	6.00	20.00	24.00	185.00	25.00	239.58	159.72	609.30	722.02	21.00	743.02	
5	Jhajhra (R)	Dehradun	EDC (Rural)	2x5	10.00	5.00	24.00	220.00	25.00	59.90	159.72	464.62	550.57	21.00	571.57	
6	Sahastradhara - I (R)			2x8	16.00	10.00	32.00	250.00	25.00	119.79	212.96	607.75	720.18	21.00	741.18	
7	Sahastradhara - II (R)			2x8	16.00	10.00	32.00	250.00	25.00	119.79	212.96	607.75	720.18	21.00	741.18	
8	Mussorie Bye pass Road (R)			2x8	16.00	8.00	32.00	250.00	25.00	95.83	212.96	583.79	691.79	21.00	712.79	
9	Malsi (R)			2x8	16.00	8.00	32.00	250.00	25.00	95.83	212.96	583.79	691.79	21.00	712.79	
10	Anarwala (R)			2x8	16.00	4.00	32.00	250.00	25.00	47.92	212.96	535.88	635.01	21.00	656.01	
11	Kulla (H)	Champawat	Ranikhet	1x3	3.00	20.00	18.00	150.00	55.00	239.58	119.79	564.37	668.78	24.31	693.09	
12	Chandak (H)	Pithoragarh		1x3	3.00	4.00	18.00	125.00	45.00	47.92	119.79	337.71	400.18	20.00	420.18	
13	Harshil (H)	Uttarkashi	Uttarkashi	1x3	3.00	15.00	18.00	150.00	40.00	179.69	119.79	489.48	580.03	21.00	601.03	
Total						125.00	164.00	310.00	2600.00	400.00	1964.56	2063.05	7027.61	8327.71	275.31	8603.02

ANNEXURE B - INCREASING CAPACITY OF 33/11 KV SUBSTATIONS

FY 2013-14						Amount in Lacs	
Sr. No	Division	Name and location of the S/S	Existing Capacity	Capacity proposed	Cost	Total Cost after escalation minus old transformer cost	Increase in Total MVA
1	EDC - Haldwani	Chilikiya - Ramnagar	1x5 + 1x8	2x8	90.20	25.49	3
2		Sukhatal-Naintal	2x5	2x8	90.20	34.29	6
3		Taragakhet - Naintal	1x3	1x5	36.30	15.52	2
4		Dhula kheda - Haldwani	1x5 + 1x8	2x8	90.20	25.49	3
5		Lal Kuwa	2x5	1x5 + 1x8	81.40	15.06	3
6	EDC - Kashipur	Kundeshwari	2x5	2x8	90.20	34.29	6
7		Garhinegi	2x5	2x8	90.20	34.29	6
8		Serwarkheda	2x5	2x8	90.20	34.29	6
9		Mandi	8+5	2x8	90.20	25.49	3
10		Fauzi Colony	8+5	2x8	90.20	25.49	3
11		Pipaliya	5+5	2x8	90.20	34.29	6
12		ND Nagar	5+8	2x8	90.20	25.49	3
13		Manpur	5+8	2x8	90.20	25.49	3

FY 2013-14						Amount in Lacs	
Sr. No	Division	Name and location of the S/S	Existing Capacity	Capacity proposed	Cost	Total Cost after escalation minus old transformer cost	Increase in Total MVA
14		Jaspur	2x5+8	3x8	135.30	42.63	6
15		Kelakhera	5+5	2x8	90.20	34.29	6
16	EDC - Ranikhet	Dharchula	1x3	1x5	36.30	15.52	2
17		Dwarahat	2x3	1x3+1x5	63.80	20.60	2
18		Ranikhet	1x3 + 1x5	2x5	72.60	22.23	2
19		Bhikiyasand	1x1.5 +1x3	2x3	55.00	23.93	1.5
20		Kosi	1x3	1x5	36.30	15.52	2
Total						529.64	74.50

FY 2014-15						Amount in Lacs	
Sr. No	Division	Name and location of the S/S	Existing Capacity	Capacity proposed	Cost	Total Cost after escalation minus old transformer cost	Increase in Total MVA
1	EDC - Ranikhet	Thal	1x3	1x5	39.93	17.07	2
2		Raiagar	2x3	1x3+1x5	70.18	22.66	2
3		Pithorgarh	2x8	1x8 + 1x10	110.11	31.26	2
4	EDC Rudrapur	Danpur	2 x 5	5 + 8	89.54	26.24	3
5		Gadarpur	5 + 10	8 + 10	110.11	30.05	3

FY 2014-15						Amount in Lacs	
Sr. No	Division	Name and location of the S/S	Existing Capacity	Capacity proposed	Cost	Total Cost after escalation minus old transformer cost	Increase in Total MVA
6		Chinimill	5 + 8	2 x 5 + 8	129.47	63.88	5
7	Srinagar	Shrinagar	1x3	1x5	39.93	17.07	2
8		Buvakhal	1x1.5	1x3	30.25	20.72	1.5
9		Chamoli	1x7.5	2x7.5	99.22	67.97	7.5
10		Karnprayag	2x3	1x3+1x5	70.18	22.66	2
11		Rangsi	1x3	1x5	39.93	17.07	2
12		Satpuli	1x3	1x5	39.93	17.07	2
13		Ballabhdrapur	1x5	1x8	49.61	18.86	3
14		Kotdwar	1x5	1x8	49.61	18.86	3
15		Jashodharpur	1x5	1x8	49.61	18.86	3
16		EDC - Haldwani	Subhashnagar-Haldwani	1x8 + 1x10	2x10	121.00	33.28
17	Garampani-Nainital		1x1.5 + 3x0.3	1x3 + 3x0.3	60.50	41.44	1.5
18	Betaal ghat - Nainital		2x1.5	2x3	60.50	41.44	3
19	Padampuri - Nainital		1x3	1x5	39.93	17.07	2
20	Ramnagar		1x5 + 1x8	2x8	99.22	28.04	3
21	Kotabag - Ramanagar		1x3	1x5	39.93	17.07	2
Total						588.62	56.50

FY 2015-16						Amount in Lacs	
Sr. No	Division	Name and location of the S/S	Existing Capacity	Capacity proposed	Cost	Total Cost after escalation minus old transformer cost	Increase in Total MVA
1	EDC - Kashipur	Patrapur	2x5	2x8	109.14	41.49	6
2		Mahuwakheraganj	2x5 + 1x8	3x8	163.71	51.58	6
3		Pakaakot	5+8	2x8	109.14	30.84	3
4	EDC - Rudrapur	Bara	1 x 5	2 x 5	87.85	60.17	5
5		Sitarganj	8 + 10	5 + 8 + 10	165.04	74.46	5
6		Jail camp	2 X 5	8 + 5	98.49	28.87	3
7	EDC - Ranikhet	Bagwalipokhar	2x3	1x3 + 1x5	77.20	24.93	2
8		Tadikhet	1x1.5+1x3	1x1.5+1x5	60.56	21.85	2
9		Siyalde	2x1.5	1x1.5+1x3	49.9125	25.87	1.5
10		Salt	2x1.5	1x1.5+1x3	49.9125	25.87	1.5
11		Lakshmeshwar	1x3+1x5	2x5	87.85	26.90	2
12		Khatyadi	2x3	1x5+1x3	77.20	24.93	2
13		Someshwar	1x1.5+1x3	2x3	66.55	12.98	1.5
14		Kapkot	1x3	1x5	43.92	18.77	2
15	Loahaghat	2x3	1x3+1x5	77.20	24.93	2	
16	EDC - Srinagar	Ballabhdrapur	1x5	1x8	54.57	20.74	3
17		Dugadda	1x3	1x5	43.92	18.77	2
18		Jayharikhal	1x3	1x5	43.92	18.77	2
Total						552.73	51.50

ANNEXURE C - INSTALLATION OF COMPACT SUBSTATIONS (CSS) (11 KV/0.44 KV)

Sr. No	FY	Distribution Circle	Distribution Division	Name of CSS	Capacity (KVA)	Cost (Rs Crores)	LT ABC cost	Total cost (Rs. Cr)	Final cost after escalation (Rs. Cr)	
1	2013-14	Dehradun (Urban)	Dehradun (Central)	Gandhi Park	990	0.28	0.12	0.39	0.46	
2				Dhobal wala	990	0.28	0.12	0.39	0.46	
3				P.S. Arhat Bazar	990	0.28	0.12	0.39	0.46	
4				Pashu Chikitsalya (Dispensary Road)	990	0.28	0.12	0.39	0.46	
5				Devki Complex	990	0.28	0.12	0.39	0.46	
6				Krishna Place	990	0.28	0.12	0.39	0.46	
7			Dehradun(South)	Saharanpur Chowk	990	0.28	0.12	0.39	0.46	
8				Ballupur Chowk	990	0.28	0.12	0.39	0.46	
9				Sabji Mandi, Mazra	990	0.28	0.12	0.39	0.46	
10				Tibetan Colony, Turner Road	990	0.28	0.12	0.39	0.46	
11			Dehradun(North)	Hotel Shaleen, Mussoorie.	990	0.28	0.12	0.39	0.46	
12				Shishu Mandir, Mussoorie	990	0.28	0.12	0.39	0.46	
13				Landour, Mussoorie	990	0.28	0.12	0.39	0.46	
14				Krickland, Mussoorie	990	0.28	0.12	0.39	0.46	
15				Strawberry Bank, Mussoorie	990	0.28	0.12	0.39	0.46	
16			Dehradun(Rural):-	Dehradun(Rural)	Doiwala Tiraha	990	0.28	0.12	0.39	0.46
17					Prem nagar Town	990	0.28	0.12	0.39	0.46
18					Vidhan Sabha	990	0.28	0.12	0.39	0.46
19				Rishikesh	Nagar Palika Rishikesh	990	0.28	0.12	0.39	0.46
20					Rishikesh Town	990	0.28	0.12	0.39	0.46
21			Roorkee	Roorkee	Ram Nagar Chowk	990	0.28	0.12	0.39	0.46

Sr. No	FY	Distribution Circle	Distribution Division	Name of CSS	Capacity (KVA)	Cost (Rs Crores)	LT ABC cost	Total cost (Rs. Cr)	Final cost after escalation (Rs. Cr)
22				Behind Jail Ramnagar	990	0.28	0.12	0.39	0.46
23				Near Garhwal Sabha	990	0.28	0.12	0.39	0.46
24				Near GIC	990	0.28	0.12	0.39	0.46
25				Near Neelam S/s	990	0.28	0.12	0.39	0.46
26				Near Ganeshpur S/o	990	0.28	0.12	0.39	0.46
27				Malviya Chowk	990	0.28	0.12	0.39	0.46
28				Avas Vikas	990	0.28	0.12	0.39	0.46
29				Purani Tehsil	990	0.28	0.12	0.39	0.46
30				Dwarika Dheesh	990	0.28	0.12	0.39	0.46
Total					29700	8.25	3.51	11.76	13.93

Sr. No	FY	Distribution Circle	Distribution Division	Name of CSS	Capacity (KVA)	Cost (Rs Crores)	LT ABC cost	Total cost (Rs. Cr)	Final cost after escalation (Rs. Cr)
1	2014-15	Rudrapur	Rudrapur	Bhagat singh Chowk	990	0.30	0.13	0.43	0.51
2				Transit Camp	990	0.30	0.13	0.43	0.51
3				Khera	990	0.30	0.13	0.43	0.51
4				Rampura	990	0.30	0.13	0.43	0.51
5				Badhaipura	990	0.30	0.13	0.43	0.51
6				Jagatpura	990	0.30	0.13	0.43	0.51
7			Sitarganj	Shakti Farm	990	0.30	0.13	0.43	0.51
8				Main Choraha, Sitarganj	990	0.30	0.13	0.43	0.51
9				Bizti Choraha	990	0.30	0.13	0.43	0.51
10			Bazpur	Anaaj Mandi	990	0.30	0.13	0.43	0.51
11				Chakarpur Choraha	990	0.30	0.13	0.43	0.51
12				Mundia	990	0.30	0.13	0.43	0.51

Sr. No	FY	Distribution Circle	Distribution Division	Name of CSS	Capacity (KVA)	Cost (Rs Crores)	LT ABC cost	Total cost (Rs. Cr)	Final cost after escalation (Rs. Cr)	
13			Kashipur	Main Choraha	990	0.30	0.13	0.43	0.51	
14		Munsiram		990	0.30	0.13	0.43	0.51		
15		Nagar Palika		990	0.30	0.13	0.43	0.51		
16		Haldwani	Haldwani (Town).	Sargam Cinema, Rampur Road	990	0.30	0.13	0.43	0.51	
17				Saurav Hotel, Nainital Raod	990	0.30	0.13	0.43	0.51	
18			Haldwani(Rural)	Panchayat Ghar	990	0.30	0.13	0.43	0.51	
19				Koli Colony	990	0.30	0.13	0.43	0.51	
20				Choti Mukhani	990	0.30	0.13	0.43	0.51	
21			Nainital	Dharamshala	990	0.30	0.13	0.43	0.51	
22				Nainital Club Choraha	990	0.30	0.13	0.43	0.51	
23			Ramnagar	LIC, Ramnagar	990	0.30	0.13	0.43	0.51	
24			Roorkee	Haridwar	Brick market, Jwalapur	990	0.30	0.13	0.43	0.51
25					Kassawan, Jwalapur	990	0.30	0.13	0.43	0.51
26					Tapovan nagar, Jwalapur	990	0.30	0.13	0.43	0.51
27					Ramleela ground, Jwalapur	990	0.30	0.13	0.43	0.51
28		Seetapur, Jwalapur			990	0.30	0.13	0.43	0.51	
29		Chowk bazaar, Kankhal			990	0.30	0.13	0.43	0.51	
30		Sanyasi Road, Kankhal			990	0.30	0.13	0.43	0.51	
Total					29700.00	9.07	3.86	12.93	15.32	

ANNEXURE D - INSTALLATION OF METERS FOR GIVING NEW CONNECTIONS

Sr. No	FY	No. of installation of single phase meters	Per meter Cost	No. of installation of three phase meters	Per meter Cost	Total Cost (Rs. Cr)	Final cost after escalation (Rs. Cr)
1	2013-14	104820	1650	20000	4400	26.10	30.92
2	2014-15	108798	1815	25000	4840	31.85	37.74
3	2015-16	113426	1997	30000	5324	38.62	45.76

ANNEXURE E - INSTALLATION OF CAPACITOR BANK AT 33/11 KV SUBSTATIONS

S. N.	Name of Circle	Name of Sub-Station	Capacity	Rating of Capacitor Bank (KVAR)
1	EDC Ranikhet	33KV Kosi:	3 MVA	1500
		33KV Lamgara	1.5 MVA	1500
		33KV Someshwar :	4.5 (3+1.5)MVA	3000
		33KV Bagwalipokhar :	10 MVA	3600
		33KV Dwarahat :	3 MVA	1500
		33KV Bhikiyasen:	4.5 (3+1.5)MVA	3000
		33KV Salt	3 MVA	1500
		33KV Masi	6 MVA	2400
		33KV Syalde:	1.5 MVA	1500
		33KV Kausani	3 MVA	1500
		33KV Garur	6 MVA	2400
		33KV Bageswar	10 MVA	3600
		33KV Kanalichhina	3 MVA	1500
		33KV Didi hat	6 MVA	2400
		33KV Nachni	1.5 MVA	3000
		33KV Jaulijivi	4.5 (3+1.5)MVA	3000
		33KV Dharchula	3 MVA	1500
		33KV Gangolihat	6 MVA	2400
		33KV Berinaag	3 MVA	1500
		33KV Bin	10 MVA	3600
33KV Khetikhan	3 MVA	1500		
Sub Total				47400
2	EDC Rudrapur	33KV Pipliya	5+5 MVA	4200
		33KV Kilakhera:	5+5 MVA	4200

S. N.	Name of Circle	Name of Sub-Station	Capacity	Rating of Capacitor Bank (KVAR)
		33KV Danpur :	5+5 MVA	4200
		33KV N.D Nagar :	8+5 MVA	4500
		33KV Kundeshwari:	5+5 MVA	4200
		33KV Garinegi :	5+5 MVA	4200
		33KV Dineshpur :	5+5 MVA	4200
		33KV Mahuakhera	8+8 MVA	4800
		33KV Pant Nagar(T V Sidcul)	15+15 MVA	12600
		33KV Sector-7(Pantnagar)	8+8 MVA	4800
		33KV Pulbhatta	3+3 MVA	3000
Sub Total				54900
3	EDC Haldwani	33KV Dhaulakhera	5+8 MVA	4500
		33KV Kamalwaganja	8+8 MVA	4800
		33KV Kaladhungi	10+10 MVA	7200
		33KV Lalkua	5+5 MVA	4200
		33KV Garampani	1.5+0.9 MVA	3000
		33KV Bhimtal	5+5 MVA	4200
		33KV Sargakhet	3.15 MVA	1500
		33KV Padmpuri	3 MVA	1500
Sub Total				30900
Total Kumaon Zone				133200

S.No.	Name of Circle	Name of Sub-Station	Capacity	Rating of Capacitor Bank (KVAR)
1	EDC (R) D.Dun	33KV_SS_Raiwala	5MVA	2100

S.No.	Name of Circle	Name of Sub-Station	Capacity	Rating of Capacitor Bank (KVAR)
Sub Total				2100
2	Haridwar	33KV_SS_Bhattipur	2x5 MVA	4200
		33KV_SS_IP4	2x5 MVA	4200
Sub Total				8400
3	Srinagar	33KV_SS_Gochar	3MVA	1500
		33KV_SS_Thathur	2x3MVA	3000
		33KV_SS_Muni Ki Reti	2x5MVA	4200
		33KV_SS_Tapowan	2x3MVA	3000
		33KV_SS_Narender Nagar	2x3MVA	3000
		33KV_SS_Chamba	2x5MVA	4200
		33KV_SS_Kamand	1x3MVA	1500
		33KV_SS_Kirti Nagar	5+3 MVA	3600
		33KV_SS_Simarkhal	1x3MVA	1500
		33KV_SS_Syunsi	5 MVA	2100
		33KV_SS_Jahrikhal	5+3 MVA	3600
		33KV_SS_Kashyali	1x3MVA	1500
		33KV_SS_Rikhnikhal	1x3MVA	1500
		33KV_SS_Siggaddi	2x8 MVA	4800
		33KV_SS_Jakholi	1x5 MVA	2100
		33KV_SS_Bijni	2x3 MVA	3000
		33KV_SS_Ghandiyal	1x3MVA	1500
		33KV_SS_Chipalghat	1x3MVA	1500
		33KV_SS_Mastkhal	2x3 MVA	3000
33KV_SS_Druvpur	2x3 MVA	3000		
Sub Total				53100

S.No.	Name of Circle	Name of Sub-Station	Capacity	Rating of Capacitor Bank (KVAR)
4	EDC Roorkee	33KV_SS_Dada Jalalpur	2x5 MVA	4200
		33KV_SS_Chudiyala	2x5 MVA	4200
		33KV_SS_Jhabrera	2x5 MVA	4200
		33KV_SS_Canal Bank	3x8 MVA	7200
Sub Total				19800
Total (Garhwal Zone)				83400

ANNEXURE F - R-APDRP, PART-A (SPILL OVER WORKS TO FY 2013-14)

Schematic Provisions of R-APDRP Part-A Sanctioned Schemes

(Rs. In Crore)

SL.No.	Particulars	Sanctioned Cost (As per PFC Sanctioned Letter dated:11th Sep-2009)	Awarded Cost				Total
			IT Consultant (M/s TCIL in consortium with M/s Vayam Tech Ltd.)	IT IA (M/s Infinite Computer Solutions (India) Ltd.)	NBSP (M/s Tulip Telecom Ltd.)	UPCL ** (Works funded from PFC but to be carried out by UPCL)	
1	2	3	4	5	6	7	8=4+5+6+7
PFC Sanctioned Component							
A	IT Consultant deployment Cost	4.58	0.30				0.30
B	Ring Fencing Cost	2.95				2.95	2.95
C	Project Management Cost	18.33		4.78			4.78
D	Data Center Cost	26.37		63.53			63.53
E	Disaster Recovery Center Cost	22.42		25.86			25.86
F	Customer Care Center Cost	2.02		3.07			3.07
G	Sub-division Office Cost	10.17		10.97			10.97
H	Other Office Cost	13.56		7.21			7.21
I	GIS Survey Cost	8.70		2.29			2.29
J	System Metering Cost	3.26				3.26	3.26
K	Facility Management Cost (Initial 1 Yr after Go-Live)	8.23		1.13			1.13
L	Network Connectivity Charges (Tentatively 1 Yr after Go-Live)	5.22			4.07		4.07

Schematic Provisions of R-APDRP Part-A Sanctioned Schemes

(Rs. In Crore)

Sl.No.	Particulars	Sanctioned Cost (As per PFC Sanctioned Letter dated:11th Sep-2009)	Awarded Cost				UPCL ** (Works funded from PFC but to be carried out by UPCL)	Total
			IT Consultant (M/s TCIL in consortium with M/s Vayam Tech Ltd.)	IT IA (M/s Infinite Computer Solutions (India) Ltd.)	NBSP (M/s Tulip Telecom Ltd.)			
	Sub-Total (PFC Component)	125.82	0.30	118.84	4.07	6.21	129.12	
UPCL Sanctioned Component								
A	Facility Management Cost (For 4 Yrs after 1 Yr of Go-Live)	32.92		4.52			4.52	
B	Consumer Survey Cost to be borne by UPCL (For approx 209661 consumers)	0.31		1.08			1.08	
C	Other costs to be borne by UPCL (DT-Metering)	4.39						
	Sub-Total (UPCL Component)	163.42	0.30	124.44	4.07	6.21	134.72	

**** Complete Works Yet to be awarded by field Units of UPCL**

ITIA : IT Implementation Agency

ANNEXURE G - R-APDRP, PART-B

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.	
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.
1	Gadarpur	-	-	6.991 Km. New Line for New DT, Reconductoring of 3.022 Km line	58 No. New DT's	14.799Km. LT ABC 95 sqm.	58 No. for new DT	40 New DT and conversion of 3.57 Km. LT line To HT using HT ABC	249 No. 3phase meters	997 No. 1phase meters	2000 Nos.		383.06
	Cost in Rs. Lac.			42.39	100.66	44.61	4.29	69.7	23	15	69	14.41	
2	Haldwani	two .no 11New KV &VCB New TERA BEEG -HA INDER NAGAS /R S WITH MV8*2 A CAPA	2.50 Km. New line for New S/S	5 New feeders of total length 3.90 km. & 29.62 km. new line for new DT, Reconductoring of 10 km. line	285 no. New DT's & capacity enhancement of 1 no DT	129.60 Km. LT ABC 95 sqm.	285 for new DTs , 56 for existing DT & 7 nos. for S/s	53 New DT and conversion of 6.81 Km. LT line To HT using HT ABC	109 4 No. 3phase meters	503 2 No. 1phase meters	9846 nos		2631.07

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.	
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter	Shifting of Meter to outside the consumer Premise	Cost for Miscellaneous Items in Rs. Lac.		
		CITY											
	Cost in Rs. Lac.	242.68	25.9	343.44	703.14	392.34	101.45	117.17	102.37	75.4	377.41	149.77	
3	Haridwar	4 New S/s with 8MVA x2 capacity & Renovation & Modernisation of S/s & 15 nos. new 11 KV	10 km new line for S/s & 8 km. new line for link line	15 nos. New feeders of total length 21.7 km. , 2.92 km. new line for load shift & 67.03 km. new line for new DT, Reconductoring of 67.35 km. line	619 nos. New DT's & capacity enhancement of 10 nos. DT	227.945 Km. LT ABC 95 sqm.	619 nos. for new DTs , 280 nos. for existing DT & 21 nos. for S/s	91 nos. New DT and conversion of 11.56 Km. LT line To HT using HT ABC	5629 No. 3phase meters	14072 No. 1phase meters	45030 nos & replacement of 8443 nos. (10 sqmm. Service cable)		8671.78

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.		
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.	
		VCB												
	Cost in Rs. Lac.	1321.39	186.5	715.11	1532.74	688	270.11	189.52	526.72	210.85	2177.81	853.03		
4	Jaspur	New S/s with 8MVA x2 capacity & Renovation & Modernisation of S/s, 2 no. new 11 KV VCB	2 km. new line for new S/s	Two New feeders of total length 3.90 km. & 12.42 km. new line for new DT, Reconductoring of 4.45 km. line	85 nos. New DT	44.41Km. LT ABC 95 sqm.	85 nos. for new DTs , 16 nos. for existing DT & 3 nos. for S/s	-	615 No. 3phase meters	1537 No. 1phase meters	4610 nos & replacement of 615 no. 10 sqmm. Service line		1123.89	
	Cost in Rs. Lac.	247.7	20.72	140.74	210.74	122.9	40.52		57.52	23.03	210.44	49.58		

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.	
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.
5	Kashipur	Augmentation of one no. power T/f 5MVA to 8MVA at Kashipur S/s	-	6 nos. New feeders of total length 10.512 km. & 15.695 km. new line for new DT, Reconductoring of 17.657 km. line	142 nos. New DT's	11.659 Km. LT ABC 95 sqm.	142 nos. for new DTs , 53 nos. for existing DTs & 5 nos. for S/s	2030 nos. New DT and conversion of 65.43 Km. LT line To HT using HT ABC	115 No. 3phase meters	577 No. 1phase meters	14225 nos		4937.19
	Cost in Rs. Lac.	70.63		127.92	313.95	32.69	63.86	3604.21	108.15	86.59	505.86	23.33	
6	Khatima	4 nos New 11 KV VCB	-	4 nos. New feeders of total length 2.651 km. & Reconductoring of 2.11 km. line	capacity enhancement of one number DT	1.06 Km.LT ABC 95 sqm.	2 nos HT Capacitor bank at Kanza bag S/s	436 nos. New DT and conversion of 24.69 Km. LT line To HT using HT ABC	625 No. 3phase meters	182 No. 1phase meters	2210 nos		1000.2
	Cost in Rs. Lac.	20.09		26.53	1.27	3.21	17.16	756.18	58.45	27.03	71.62	18.66	

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.	
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.
7	Kichha	-	-	2 nos. New feeders of total length 3.70 km. & 5.00 km. new line for new DT, Reconductoring of 6.586 km. line	45 nos. New DT's	22.69 Km. LT ABC 95 sqm.	45 nos. for new DTs , 97 nos. for existing DTs & 2 nos. for S/s	-	685 No. 3phase meters	1712 No. 1phase meters	1712 nos		488.01
	Cost in Rs. Lac.			87.02	100.44	65	45.76		64.1	25.65	59.12	40.92	
8	Laksar	-	-	2 nos. New feeders of total length 2.2 km. & Reconductoring of 10.57 km. line	-	12.7 Km. LT ABC 95 sqm.	2 nos. HT Capacitor bank at existing S/s	223 nos. New DT and conversion of 15.20 Km. LT line To HT using HT ABC	202 No. 3phase meters	1011 No. 1phase meters	690 nos		609.008
	Cost in Rs. Lac.			30.91		38.608	19.69	440.54	18.93	15.15	40.25	4.93	

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.	
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.
9	Landhora	one no. new 11 KV VCB	-	1 nos. New feeders of total length 4.00 km. & Reconductoring of 6.251 km. line	-	3.17 Km. LT ABC 95 sqm.	1 nos. HT Capacitor bank at existing S/s	145 nos. New DT and conversion of 11.82 Km. LT line To HT using HT ABC	70 No. 3phase meters	1050 No. 1phase meters	1120 nos & 140 nos. (10 sqmm service cable)		430.00
	Cost in Rs. Lac.	5.02		29.42		9.542	9.84	287.93	6.55	15.73	51.69	14.28	
10	Manglore	33kV New Manglore of 2x5 MVA Capacity & 4 nos new 11 KV VCB	4 km. new line for new S/s	4 nos. New feeders of total length 1.92 km. & Reconductoring of 2.67 km. line	-	1.32 Km. LT ABC 95 sqm.	3 nos. HT Capacitor bank at S/s	437 nos. New DT and conversion of 26.712 Km. LT line To HT using HT ABC	345 No. 3phase meters	1726 No. 1phase meters	4833 nos		1402.52
	Cost in Rs. Lac.	236.09	41.44	13.08		4	29.53	835.34	32.3	25.9	176.84	8	

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.	
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.
11	Nainital	Augmentation of one no. power T/f 5MVA to 8MVA at Sukhatal S/s	9.20 km. new line for interconnection of S/s	5.259 km. new line for new DT& Reconductoring of 7.00 km. line	29 nos. New DT's	67.616 Km. LT ABC 95 sqm.	29 nos. for new DTs , 24 nos. for existing DTs & 4 nos. for S/s	-	50 No. 3phase meters	500 No. 1phase meters	3200 nos & 200 nos. (10.0 sqmm service cable)		688.29
	Cost in Rs. Lac.	40.53	91	96.51	63.72	171.17	9.86		4.68	74.92	111.87	24.03	
12	Ramnagar	Augmentation of one no. power T/f 5MVA to 8MVA & 8MVA to 10 MVA at ghasma	-	2 nos. New feeders of total length 3.14 km., 0.145 km. new line for interconnection & 17.613 km. new line for new DT, Reconductoring of 3.03 km. Line	157 nos. New DT's	32.74 Km. LT ABC 95 sqm.	157 nos. for new DTs & 3 nos. for S/s	155 nos. New DT and conversion of 8.38 Km. LT line To HT using HT ABC	577 No. 3phase meters	2310 No. 1phase meters	5000 nos and replacement of 1800 (4.0 sqmm)& 1200 (6.0sqmm) service cable		1165.82

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.		
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.	
		ndi S/s & 2 nos. new 11 KV VCB												
	Cost in Rs. Lac.	92.54		122	269	98.69	46.15	250	54	35	194.64	3.8		
13	Rishikesh	Renovation & Modernisation , Augmentation of one no. power T/f 8MVA to 10 MVA at	-	4 nos. New feeders of total length 3.63 km. , 1.8 km. new line for loadshift & 15.69 km. new line for new DT, Reconductoring of 30.94 km. line	136 nos. New DT	74.49 Km. LT ABC 95 sqm.	136 for new DTs & 2 HT capacitor bank at S/s	-	1592 No. 3phase meters	2388 No. 1phase meters	3981 nos		1434.93	

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.		
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.	
		Nagarpalika S/s& 4 nos new 11 KV VCB												
	Cost in Rs. Lac.	82.2		408.17	331.45	217.53	30.27		149	35.79	156.54	23.98		
14	Sitarganj	–	–	4.87 km. new line for new DT & Reconductoring of 2.7 km. line	41 nos. New DT	21.22 Km. LT ABC 95 sqm.	41 nos. for new DTs & 18 nos. for existing DT	36 nos. New DT and conversion of 3.00 Km. LT line To HT using HT ABC	300 No. 3phase meters	1157 No. 1phase meters	1643 nos & 329 (10sqr)		423.77	
	Cost in Rs. Lac.			49.59	98.83	58.73	4.82	65.9	28.07	17.34	78.85	21.64		

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.	
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.
15	Tehri	Renovation & modernisation of 33/11kv S/s	-	13.785 km. new line for new DT	109 nos. New DT	34.27 Km. LT ABC 95 sqm.	109 nos. for new DT, 20 nos. for existing DT & 1 HT capacitor bank at S/s	-	50 No. 3phase meters	750 No. 1phase meters	825 nos		485.84
	Cost in Rs. Lac.	22.33		72.1	223.57	101.79	20.05		4.68	11.24	25.15	4.93	
16	Roorkee	2 New S/s with 2x8 MVA capacity & 10 nos. new 11KV VCB	22 km. new line for new S/s & 4.3 km. underground line by 300 XLPE	10 nos. New feeders of total length 13.008 km. , 2 km. underground line & Reconductoring of 12.331 km. line	-	2.90 Km. LT ABC 95 sqm.	45 nos. for Existing DTs & 10 nos. HT capacitor bank at S/s	1099 nos. New DT and conversion of 79.99 Km. LT line To HT using HT ABC	173 No. 3phase meters	445 No. 1phase meters	4466 nos		3319.51
	Cost in Rs. Lac.	515.24	296	106.52		8	93.3	1891.76	162.	66.7	162.1	17.75	

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.	
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.
	Lac.								07	7			
17	Almora	Renovation & modernisation Augmentation of one no. power T/f 3MVA to 5MVA & 5MVA to 8 MVA at luxmeshwar S/s	-	12.817 km. new line for new DT & Reconductoring of 3.8 km. line	67 nos. New DT	67.68 Km. LT ABC 95 sqm.	67 for new DTs & 75 for existing ,6 nos. HT capacitor bank at S/s	-	1260 No. 3phase meters	3150 No. 1phase meters	3630 nos		
	Cost in Rs. Lac.	152.26		81.9	162.51	211.73	61.53		117.91	47.2	123.08	14.64	972.76

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.	
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.
18	Mussoorie	Renovation & modernisation, capacity enhancement of power T/f, 2 nos new 11 KV VCB	-	2 nos. New feeders of total length 2.69 km. , spare feeder of length 2.16 km. , 23.63 km. new line for new DT & Reconductoring of 53.44 km. line	178 nos. New DTs	51.11 Km. LT ABC 95 sqm.	178 for new DTs & 48 nos. for existing DT ,6 nos. HT capacitor bank at S/s	-	330 No. 3phase meters	1319 No. 1phase meters	1648 nos		1757.48
	Cost in Rs. Lac.	254.4		510.91	416.86	299.2	73.45	30.85	19.76	88.48	63.57		
19	Uttarkashi	Capacity enhancement of S/s 2X5M VA to 2X8M VA & one No. New 11 KV	-	1 nos. New feeders of total length 2.5 km. , 16.84 km. new line for new DT & Reconductoring of 22.80 km. Line	69 nos. New DT & capacity enhancement of 10 nos DT	28.18 Km. LT ABC 95 sqm.	81 nos LT capacitor bank & 3 nos. HT capacitor bank	-	45 No. 3phase meters	1700 No. 1phase meters	1765 nos		646.01

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.		
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.	
		VCB												
	Cost in Rs. Lac.	86.08		117.59	175.6	84.11	35.71		4.21	25.47	69.42	47.82		
20	Gopeshwar	Additional Transformer of capacity 5 MVA at Chamoli S/s	-	2 feeder of length 10 km. & 2km. New line for new DT	8 nos. New DT	6.919 Km. LT ABC 95 sqm.	8 nos LT capacitor bank & 2 nos. HT capacitor bank	-	50 No. 3phase meters	850 No. 1phase meters	1025 nos		222.46	
	Cost in Rs. Lac.	76.14		33.04	19.6	20.83	18.32		5	13	31.1	5.43		
21	Joshimath	Additional Transformer of capacity 5 MVA	-	4.324 km. new line for new DT & Reconductoring of 15 km. line	21 nos. New DTs	13.715 Km. LT ABC 95 sqm.	No Proposal	-	124 No. 3phase meters	620 No. 1phase meters	1625 nos		277.84	

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.		
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.	
		at Marwadi S/s												
	Cost in Rs. Lac.	76		47.78	35.15	41.34			12	9	49	7.57		
22	Tanakpur	one no. new 11 KV VCB	–	1 nos. new feeder of length 0.22 km. , 1.157 km. new line for new DT & Reconductoring of 5.87 km. line	13 nos. New DTs & 4km LT line for new DTS	7.33 Km. LT ABC 95 sqm.	13 for new DTs & 28 nos. for existing DT , 1 nos. HT capacitor bank at S/s	–	75 No. 3phase meters	750 No. 1phase meters	772 nos			242.21
	Cost in Rs. Lac.	5.02		55.18	52.36	22.27	17.41		7.02	11.24	23.74	47.97		

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.		
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.	
23	Rudrapur	New Substation of 10x2 MVA Capacity	-	7 nos. new feeder of length 6.24 km. , 16.192 km. new line for new DT & Reconductoring of 22.291 km. line	146 nos New DTs	46.184 Km. LT ABC 95 sqm.	146 for new DTs & 13 HT capacitor bank at S/s	591 nos. New DT and conversion of 29.90 Km. LT line To HT using HT ABC	875 No. 3phase meters	2626 No. 1phase meters	1751 nos			2157.85
	Cost in Rs. Lac.	259.88		129.57	357.44	140.4	118.4	964.11	81.9	39.34	59.52	7.29		
24	Pithoragarh	Additional Transformer of capacity 8 MVA at S/s & one no. New 11 KV VCB	-	new feeder of length 3 km. , 7.67 km. new line for new DT & Reconductoring of 9.50 km. line	21 nos New DTs	42.64 Km. LT ABC 95 sqm.	21 for new DTs & 51 nos. for existing DT , 3 nos. HT capacitor bank at S/s	-	950 No. 3phase meters	2500 No. 1phase meters	5500 nos & 1711 (10 sqr)			872.97
	Cost in Rs. Lac.	89.02		90.45	49.98	126.28	36.96		88.9	37.46	305.89	48.03		

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.	
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.
25	Pauri	Capacity enhancement of S/s (3+5)MVA to 2X5MVA	-	new feeder of length 1.5 km. , 3.29 km. new line for new DT & Reconductoring of 40.363 km. line	22 nos. New DTs	21.654 Km. LT ABC 95 sqm.	22 nos. for new DTs & 4 nos. HT capacitor bank at S/s	-	30 No. 3phase meters	500 No. 1phase meters	520 nos		378.3
	Cost in Rs. Lac.	56.81		112.51	53.22	65.79	36.29		2.81	7.49	15.95	27.43	
26	Ranikhet	Capacity enhancement of Power T/f 3.15 MVA to 5 MVA at Ranikhet S/s & 2 nos new 11 KV VCB	-	two new feeder of length 6.95 km. , 2.956 km. new line for new DT & Reconductoring of 22.29 km. line	15 nos. New DT	21.275 Km. LT ABC 95 sqm.	15 nos. for new DTs & 3 nos. HT capacitor bank at S/s	-	10 No. 3phase meters	1540 No. 1phase meters	600 nos & 48 nos (10sqr)		359.082

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.	
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.
	Cost in Rs. Lac.	66.81		87.77	37.68	71.79	27.042		0.94	23.08	35.06	8.91	
27	Kotdwar	Capacity enhancement of Power T/f 5 MVA to 8 MVA at kotdwar S/s & Additional T/F of 5MVA at sidhabli S/s	-	3.284 km. new line for new DT & Reconductoring of 6.243 km. line	13 nos. New DTs	10.342 Km. LT ABC 95 sqm.	-	300 nos. New DT and conversion of 20.045 Km. LT line To HT using HT ABC	245 No. 3phase meters	734 No. 1phase meters	900 nos		747.16
	Cost in Rs. Lac.	116.66		29	20.29	31.73		472.98	22.89	11	27.98	14.63	

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.	
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.
28	Bazpur	-	-	new line of length 0.08 km. & Reconductoring of 3.47 km. line	3 nos. New DTs	3.88 Km. LT ABC 95 sqm.	3 nos. HT capacitor bank at S/s	359 nos. New DT and conversion of 28.35 Km. LT line To HT using HT ABC	50 No. 3phase meters	1225 No. 1phase meters	768 nos		766.71
	Cost in Rs. Lac.			6.64	5.7	11.59	25.73	636.58	4.68	18	42.39	15.40	
29	Srinagar	Capacity enhancement of Power T/f 3 MVA to 5 MVA at srinagar S/s	-	3.631 km. new line for new DT & Reconductoring of 9.60 km. line	14 nos. New DTs	10.02 Km. LT ABC 95 sqm.	14 for new DTs & 41 nos. for existing DT, 2 nos. HT capacitor bank at S/s	-	267 No. 3phase meters	765 No. 1phase meters	1750 nos		275.34
	Cost in Rs. Lac.	56.8		33.6	28.52	27.72	31.65		25	11.5	58.05	2.5	

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.	
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.
30	Vikas Nagar	Capacity enhancement of Power T/f 5 MVA to 8 MVA at S/s & one no. new 11 KV VCB	-	new line of length 1.43 km. , 10.48 km. new line for new DT & Reconductoring of 4.92 km. line	72 nos. New DTs	17.30 Km. LT ABC 95 sqm.	75 nos. LT capacitor bank & 2 nos. HT capacitor bank at S/s	-	40 No. 3phase meters	350 No. 1phase meters	450 nos		393.37
	Cost in Rs. Lac.	45.55		87.87	155.58	52.47	23.4		3.74	5.24	14.59	4.93	

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.	
		33 /11KV S/s	33KV Line	11KV Line	Distribution T/F	Bare LT Conductor replace by ABC	Capacitor Bank	HVDS	Replacement of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.
31	Dehradun (Proposal of SCADA)	one New S/s with 5MVA x2 capacity, two S/s of Capacity 2X10 MVA each, capacity enhancement, additional T/F 5MVA & Renovation & Modernisation of S/s, 32 nos. new 11 KV	40.50 Km. New line for New S/S, 0.1 km. line for interconnection & reconductoring of 90.55 km. line	29 nos. new feeder of length 44.52 km., 175.85 km. new line for new DT & Reconductoring of 279.03 km. 11 KV line and 40.43 km. 6.6 KV line	1231 nos. New DTs	639.84 Km. LT ABC 95 sqm.	1231 nos for new DTs & 215 nos. for existing DT	1881 nos. New DT and conversion of 173.37 Km. LT line To HT using HT ABC	586 No. 3phase meters	880 No. 1phase meters	100000 nos	#	23886.57

Major works proposal & Costing under R-APDRP Part-B for Reduction of AT&C Loss

S.No	Project Area	Proposed Measure										Total Cost in Rs Lac.		
		33 /11KV S/s	33KV Line	11KV Line	Distribu tion T/F	Bare LT Conduc tor replace by ABC	Capaci tor Bank	HVDS	Replaceme nt of Meter		Shifting of Meter to outside the consumer Premise		Cost for Miscellaneous Items in Rs. Lac.	
		VCB												
	Cost in Rs. Lac.	2761.29	985.4	2283.21	2872.41	2711.6	170.52	2908.7	549.07	131.88	3454	5058.49		
	Total Cost in Rs. Lac	6999.16	1646.96	6118.47	8392.41	5975.66	1483.072	13490.62	2357.51	1172.05	8867.44	6647.648	63151	

** In Dehradun town for Scada purpose 44 nos. APFC panel, 2nos. 3way & 2 nos. 4way RMU at 33KV, 44 sets 33 KV FPI ,29 nos. 3way & 10 nos. 4way RMU at 11KV,312 nos Sectionalizer, 258 sets 11 KV FPI,14 nos. new motorized 33 KV VCB, # include the cost of items for SCADA

ANNEXURE H - SHIFTING OF 1 PHASE & 3 PHASE METER OUTSIDE THE PREMISES OF THE CONSUMERS

Sr. No	FY	No. of single phase meter shifting	Cost	No. of three phase whole current meter shifting	Cost	Total Cost (Rs. Cr)	Final cost after escalation (Rs. Cr)
1	2013-14	17500	770	2500	1320	1.68	1.99
2	2014-15	17500	847	2500	1452	1.85	2.19
3	2015-16	17500	932	2500	1597	2.03	2.41

**ANNEXURE I - REPLACEMENT OF MECHANICAL METERS WITH ELECTRONIC METERS AND
INSTALLATION OF ELECTRONIC METERS IN UN-METERED CONNECTIONS**

Sr. No	FY	No. of replacement of single phase meters	Per meter Cost	No. of replacement of three phase meters	Per meter Cost	Total Cost (Rs. Cr)	Final cost after escalation (Rs. Cr)
1	2013-14	25000	1650	1000	4400	4.57	5.41
2	2014-15	25000	1815	0	0	4.54	5.38
3	2015-16	25000	1997	0	0	4.99	5.91

ANNEXURE J - DT METERING IN INDUSTRIAL AND COMMERCIAL HUBS

Sr. No	FY	Rating (KVA)	No. of meters to be installed	Per meter Cost	Total Cost (Rs. Cr)	Final cost after escalation (Rs. Cr)
1	2013-14	100	150	27500	0.41	0.49
		250	150	27500	0.41	0.49
		400	50	27500	0.14	0.16
	Total		350		0.96	1.14
2	2014-15	100	150	30250	0.45	0.54
		250	150	30250	0.45	0.54
		400	50	30250	0.15	0.18
	Total		350		1.06	1.25
3	2015-16	100	150	33275	0.50	0.59
		250	150	33275	0.50	0.59
		400	50	33275	0.17	0.20
	Total		350		1.16	1.38

ANNEXURE K - REPLACEMENT OF DEFECTIVE SINGLE PHASE AND THREE PHASE METERS

Sr. No	FY	No. of replacement of single phase meters	Per meter Cost	No. of replacement of three phase meters	Per meter Cost	Total Cost (Rs. Cr)	Final cost after escalation (Rs. Cr)
1	2013-14	70000	1650	700	4400	11.86	14.05
2	2014-15	60000	1815	700	4840	11.23	13.31
3	2015-16	50000	1997	700	5324	10.36	12.27

ANNEXURE L - ADDITIONAL TRANSFORMERS INSTALLATION

Sr. No	FY	No. of additional transformers	Rating of additional transformers (KVA)	Per unit Cost	11 KV line length (km)	Per unit Cost	LT line length (km)	Per unit Cost	Total Cost (Rs. Cr)	Final cost after escalation (Rs. Cr)
1	2013-14	200	16	0.88	40.0	5.25	20	3.30	4.52	5.36
		2000	25	1.43	400.0	5.25	200	3.30	56.20	66.60
		850	63	2.057	170.0	5.25	85	3.30	29.21	34.62
		1000	100	2.541	200.0	5.25	600	3.30	55.71	66.02
		350	250	5.5	70.0	5.25	350	3.30	34.48	40.85
		195	400	7.15	39.0	5.25	234	3.30	23.71	28.10
	Total	4595								241.54
2	2014-15	200	16	1	40.0	5.51	20	3.63	4.87	5.77
		2000	25	2	400.0	5.51	200	3.63	60.77	72.01
		850	63	2	170.0	5.51	85	3.63	31.69	37.55
		800	100	3	160.0	5.51	480	3.63	48.60	57.60
		300	250	6	60.0	5.51	300	3.63	32.35	38.33
		150	400	8	30.0	5.51	180	3.63	19.99	23.68
	Total	4300								234.94

Sr. No	FY	No. of additional transformers	Rating of additional transformers (KVA)	Per unit Cost	11 KV line length (km)	Per unit Cost	LT line length (km)	Per unit Cost	Total Cost (Rs. Cr)	Final cost after escalation (Rs. Cr)
3	2015-16	200	16	1	40.0	5.79	20	3.99	5.24	6.21
		2000	25	2	400.0	5.79	200	3.99	65.74	77.91
		850	63	2	170.0	5.79	85	3.99	34.39	40.75
		700	100	3	140.0	5.79	420	3.99	46.40	54.98
		250	250	7	50.0	5.79	250	3.99	29.51	34.97
		150	400	9	30.0	5.79	180	3.99	21.90	25.95
	Total	4150								240.78

ANNEXURE M - SAFETY & PROTECTION RELATED – INSTALLATION OF POLES AND GUARD WIRES, RECONDUCTORING OF LINES, ETC

Sr. No	FY	Replacement of old poles with high length poles	Per unit Cost	Total Cost	Final cost after escalation (Rs. Cr)
1	2013-14	500	44000.00	2.20	2.61
2	2014-15	500	48400.00	2.42	2.87

Sr. No	FY	Installation of additional poles (type)	Installation of additional poles (numbers)	Per unit Cost	Total Cost	Final cost after escalation (Rs. Cr)
1	2013-14					
		SP-10 (LT lines)	2000	11000.00	2.20	2.61
		PCC	2000	13200.00	2.64	3.13
		SP-23 (11 KV)	2000	16500.00	3.30	3.91
		SP-33 (33 KV)	500	27500.00	1.38	1.63
	Total				9.52	11.28

2	2014-15					
		SP-10 (LT lines)	2000	12100.00	2.42	2.87
		PCC	2000	14520.00	2.90	3.44
		SP-23 (11 KV)	2000	18150.00	3.63	4.30
		SP-33 (33 KV)	500	30250.00	1.51	1.79
		Total			10.47	12.40

Sr. No	FY	Provision of guard wires under HT lines at crossings and over residential buildings (KM)	Per unit Cost	Total Cost	Final cost after escalation (Rs. Cr)
1	2013-14	200	1.65	3.30	3.91
2	2014-15	200	1.82	3.63	4.30

Sr. No	FY	Strengthening of lines/ Re-conductoring of lines (type)	Strengthening of lines/ Re-conductoring of lines (km)	Per unit Cost	Total Cost	Final cost after escalation (Rs. Cr)
1	2013-14					
		LT line	400	3.30	13.20	15.64

		11 KV line	100	5.50	5.50	6.52
	Total				18.70	22.16
2	2014-15					
		LT line	200	3.63	7.26	8.60
		11 KV line	50	6.05	3.03	3.58
	Total				10.29	12.19

ANNEXURE N - PRE-PAID METERING

Sr. No	FY	No. of replacement of single phase meters	Per meter Cost	No. of replacement of three phase meters	Per meter Cost	Total Cost (Rs. Cr)	Final cost after escalation (Rs. Cr)
1	2013-14	3000	5500	2000	8800	3.41	4.04
2	2014-15	3000	6050	2000	9680	3.75	4.44