

Before

UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

In the matter of:

Application reference No. 584 UPCL/RM/K-32 dated 29.03.2012 filed by Uttarakhand Power Corporation Limited seeking approval for the investment on the project covering installation of capacitor banks on 11 kV at 33/11 kV substations.

AND

In the matter of:

Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun

..... Applicant

Coram

Shri Jag Mohan Lal Chairman

Date of Order: 18th June 2012

ORDER

The Petitioner, UPCL has submitted proposal for capital investment vide their application reference No. 584 UPCL/RM/K-32 dated 29.03.2012 to the Commission for approval under para 11 of the Distribution and Retail Supply License [License No. 2 of 2003].

2. The investment proposal of the Petitioner comprises of installation of capacitor banks on 11 kV at 33/11 kV substations. Total capital outlay for the schemes covered under the proposal submitted by the petitioner works out to ₹35.49 crores. Scheme wise detail of the proposal is presented in the Table given below:

Table-1: Details of Installation of Capacitor Banks under the Scheme

Sl. No.	Name of Circle	Name of Substation	Capacity	Rating of Capacitor Bank (KVAR)	Cost of Capacitor Bank	Total Cost (₹ in Lac)
Garhwal Zone						
1.	EDC (R) D.Dun	33 kV Substation Raiwala	5 MVA	2100	27.91	27.91
2.	Haridwar	33 kV Substation Bhattipur	2x5 MVA	4200	2x27.91	55.82
3.	Srinagar	33 kV Substation Gochar	3 MVA	1500	23.23	23.23
		33 kV Substation Thathur	2x3 MVA	3000	2x23.23	46.46
		33 kV Substation Muni Ki Reti	2x5 MVA	4200	2x27.91	55.82
		33 kV Substation Tapowan	2x3 MVA	3000	2x23.23	46.46
		33 kV Substation Narender Nagar	2x3 MVA	3000	2x23.23	46.46
		33 kV Substation Chamba	2x5 MVA	4200	2x27.91	55.82
		33 kV Substation Kamand	1x3 MVA	1500	23.23	23.23
		33 kV Substation Kirti Nagar	5+3 MVA	3600	27.91+ 23.23	51.24
		33 kV Substation Simarkhal	1x3 MVA	1500	23.23	23.23
		33 kV Substation Syunsi	5 MVA	2100	27.91	27.91
		33 kV Substation Jahrikhal	5+3 MVA	3600	27.91+ 23.23	51.24
		33 kV Substation Kashyali	1x3 MVA	1500	23.23	23.23
		33 kV Substation Rikhnikhal	1x3 MVA	1500	23.23	23.23
		33 kV Substation Siggaddi	2x8 MVA	4800	2x35.69	71.38
		33 kV Substation Jakholi	1x5 MVA	2100	27.91	27.91
		33 kV Substation Bijni	2x3 MVA	3000	2x23.23	46.46
		33 kV Substation Ghandiyal	1x3 MVA	1500	23.23	23.23
		33 kV Substation Chipalghat	1x3 MVA	1500	23.23	23.23
		33 kV Substation Mastkhal	2x3 MVA	3000	2x23.23	46.46
		33 kV Substation IP4	2x5 MVA	4200	2x27.91	55.82
33 kV Substation Druvapur	2x3 MVA	3000	2x23.23	46.46		
4.	UDC Roorkee	33 kV Substation Dada Jalalpur	2x5 MVA	4200	2x27.91	55.82
		33 kV Substation Chudiyala	2x5 MVA	4200	2x27.91	55.82
		33 kV Substation Jhabrera	2x5 MVA	4200	2x27.91	55.82
		33 kV Substation Canal Bank	3x8 MVA	7200	3x35.69	107.07
		Sub Total (A)				1196.77
Kumaon Zone						
5.	EDC Ranikhet	33 kV Substation Kosi	3 MVA	1500	23.26	23.26
		33 kV Substation Lamgara	1.5 MVA	1500	23.26	23.26
		33 kV Substation Someshwar	4.5 (3+1.5) MVA	3000	23.26+ 23.26	46.52
		33 kV Substation Bagwalipokhar	10 MVA	3600	42.70	42.70
		33 kV Substation Dwarahat	3 MVA	1500	23.26	23.26
		33 kV Substation Bhikiyasan	4.5 (3+1.5) MVA	3000	23.26+ 23.26	46.52
		33 kV Substation Salt	3 MVA	1500	23.26	23.26
		33 kV Substation Masi	6 MVA	2400	35.69	35.69

		33 kV Substation Syalde	1.5 MVA	1500	23.26	23.26
		33 kV Substation Kausani	3 MVA	1500	23.26	23.26
		33 kV Substation Garur	6 MVA	2400	35.69	35.69
		33 kV Substation Bageswar	10 MVA	3600	42.7	42.7
		33 kV Substation Kanalichhina	3 MVA	1500	23.26	23.26
		33 kV Substation Didi hat	6 MVA	2400	35.69	35.69
		33 kV Substation Nachni	1.5 MVA	3000	23.26	23.26
		33 kV Substation Jaulijivi	4.5 (3+1.5) MVA	3000	23.26+ 23.26	46.52
		33 kV Substation Dharchula	3 MVA	1500	23.26	23.26
		33 kV Substation Gangolihar	6 MVA	2400	35.69	35.69
		33 kV Substation Berinaag	3 MVA	1500	23.26	23.26
		33 kV Substation Bin	10 MVA	3600	42.7	42.7
		33 kV Substation Khetikhan	3 MVA	1500	23.26	23.26
6.	EDC Rudrapur	33 kV Substation Pipliya	5+5 MVA	4200	27.91+ 27.91	55.82
		33 kV Substation Kilakhera	5+5 MVA	4200	27.91+ 27.91	55.82
		33 kV Substation Danpur	5+5 MVA	4200	27.91+ 27.91	55.82
		33 kV Substation N.D. Nagar	8+5 MVA	4500	35.69+ 27.91	63.60
		33 kV Substation Kundeshwari	5+5 MVA	4200	27.91+ 27.91	55.82
		33 kV Substation Garinegi	5+5 MVA	4200	27.91+ 27.91	55.82
		33 kV Substation Dineshpur	5+5 MVA	4200	27.91+ 27.91	55.82
		33 kV Substation Mahuakhera	8+8 MVA	4800	35.69+ 35.69	71.38
		33 kV Substation pant Nagar (T V Sidcul)	15+15 MVA	12600	60.24+ 60.24	120.48
		33 kV Substation Sector-7 (Pantnagar)	8+8 MVA	4800	35.69+ 35.69	71.38
		33 kV Substation Pulbhatta	3+3 MVA	3000	23.26+ 23.26	46.52
7.	EDC Haldwani	33 kV Substation Dhaulakhera	5+8 MVA	4500	27.91+ 35.69	63.60
		33 kV Substation Kamalwaganja	8+8 MVA	4800	35.69+ 35.69	71.38
		33 kV Substation Kaladhungi	10+10 MVA	7200	42.70+ 42.70	85.40
		33 kV Substation Lalkua	5+5 MVA	4200	27.91+ 27.91	55.82
		33 kV Substation Garampani	1.5+0.9 MVA	3000	23.26+ 23.26	46.52
		33 kV Substation Bhimtal	5+5 MVA	4200	27.91+ 27.91	55.82
		33 kV Substation Sargakhet	3.15 MVA	1500	23.26	23.26
		33 kV Substation Padmpuri	3 MVA	1500	23.26	23.26
		Sub Total (B)				1799.62
		Total (A+B)				2996.39
		Contingency @3%				89.89
		Total				3086.28
		Centage Charges @ 15%				462.94
		Grand Total				3549.22

Say ₹35.49 crores

3. To meet out the requirement of this Capital Investment, the Petitioner has stated to seek loan assistance to the tune of 70% of the capital cost either from Rural Electricity Corporation Limited or any other financial institution. The balance 30%

of the capital cost has been proposed to be funded by way of equity to be infused either from GoU or from internal resources of the Petitioner.

4. The objective of the Petitioner for the proposed Capital Investment has been stated to manage the reactive power in transmission and distribution system for reduction of line losses and providing quality power to the consumers. Moreover, as per directives of NRPC, Uttarakhand has to install a total 300 MVAR capacitors on 11 kV and above voltage upto FY 2012-13. The Petitioner has also submitted that some upcoming EHV substation of PTCUL will have shunt capacitor on 33 kV or above voltage, therefore, installation of shunt capacitors has been considered only for those substations, whose average power factor is 0.9 or below. Hence, the Petitioner in its submission has proposed 216.6 MVAR capacitors to meet out the requirement of its system.
5. The Projects/Schemes stated in the proposal are proposed to be funded wholly or partially through loan assistance and partly through internal resources without giving any concrete proposal on financing and its associated cost. Even the source and nature of internal resource i.e. equity, reserves, grants or depreciation has not been disclosed. Annual financing cost of REC or other Financial Institutions would depend upon the proportion of loan assistance on the total cost of the schemes, the IDC and terms & conditions of such assistance.
6. It would be necessary for the petitioner to arrange at least 70% of the capital cost by way of loans from Bank/Financial Institutions/Other agencies and balance through internal resources/equity in line with the prevailing tariff regulations.
7. Based on the savings in the power purchase costs projected by the Petitioner on account of reduction of line losses, the payback period of the proposed capital expenditure, estimated by the Petitioner, works out to around 02 years.
8. As it was not clear that whether these installations are proposed in the towns covered under R-APDRP scheme for system strengthening and improvement activities, the Petitioner was asked to clarify on the same. The Petitioner vide its reply dated 24.05.2012 has submitted that the proposed projects are not covered in the works of 31 towns identified under R-APDRP scheme for system strengthening and improvement activities.

9. Considering that installation of HV Capacitor Banks in the distribution network would improve voltage regulation thereby resulting in better voltages at the receiving/load end, the Commission, hereby grants “in principle” approval to the Petitioner for going ahead with this capital investment, subject to fulfillment of the following conditions:
- a) The licensee is required to submit techno-economic justification of each scheme within one month of issue of this Order on all the points in para 10 above and shall submit Quarterly progress reports for these works.
 - b) The licensee should plan and arrange for least cost financing from Financial Institutions and submit the approvals/terms of Financial Institutions alongwith complete financing plan finalized by it within 3 months.
 - c) The cost of loan assistance, if any, to be applied by the licensee should be most competitive and all the loan conditions as may be laid down by the Financial Institutions should be strictly complied with.
 - d) The additional cost burden, if any, arising out of the cost or time over runs or variation in the scope of implementation of the project and shortfalls in the revenue estimates or funding the investment beyond the specified limit of equity/internal resources or on any other account shall not be allowed in the Annual Revenue Requirement of the licensee.
 - e) After completion of the project the Petitioner shall submit the statement of power factor improvement of the substations alongwith completed cost of each of the works carried out.

(Jag Mohan Lal)
Chairman