

**Before**

**UTTARAKHAND ELECTRICITY REGULATORY COMMISSION**

**In the matter of:**

Petition seeking approval for the investment on the SCADA /DMS Project of Dehradun town covered under Part-‘A’ of Restructured-Accelerated Power Development & Reform Program of Ministry of Power, Govt. of India.

**&**

**In the matter of:**

Petition seeking approval for the investment on the Dehradun Project covering the works covered under Part-‘B’ of Restructured-Accelerated Power Development & Reform Program of Ministry of Power, Govt. of India for Reduction of AT&C losses to the extent of 15%.

**And**

**In the matter of:**

Managing Director, Uttarakhand Power Corporation Limited (UPCL) .... Petitioner  
Victoria Cross Vijeta Gabar Singh Bhawan, Kanwali Road, Dehradun

**Coram**

<b>Shri Subhash Kumar</b>	<b>Chairman</b>
<b>Shri C.S. Sharma</b>	<b>Member</b>
<b>Shri K.P. Singh</b>	<b>Member</b>

**Date of Order: February 02, 2015**

**ORDER**

This Order relates to the Petitions filed by Uttarakhand Power Corporation Limited (hereinafter referred to as “UPCL” or “the Petitioner” or “the licensee”) seeking approval for the investment on:-

- (A) The SCADA/DMS Project of Dehradun town covered under Part-'A' of Restructured-Accelerated Power Development & Reform Program (R-APDRP) of Ministry of Power (MoP), Govt. of India (GoI).
- (B) The Dehradun Project covering the works covered under Part-'B' of Restructured-Accelerated Power Development & Reform Program (R-APDRP) of Ministry of Power (MoP), Govt. of India (GoI) for Reduction of AT&C losses to the extent of 15%.

## 1. **Background**

- (1) The Central Government has designated Power Finance Corporation (PFC) as the Nodal Agency vide MoP's Order dated 19.09.2008 for implementation of R-APDRP scheme during XI<sup>th</sup> five year plan as Central Sector Scheme. The Central Government has issued the guidelines and modalities of formulating/implementing projects under the programme from time to time. The project under the present scheme is divided into 2 parts i.e. Part-'A' and Part-'B', the details of programme as per MoP's Order dated 19.09.2008 for implementation of R-APDRP scheme is as follows:-

***"Part-'A':** Preparation of base line data for the project area covering Consumer Indexing, GIS mapping, Metering of Distribution Transformers and Feeders and Automatic Data Logging for all Distribution Transformers and Feeders and **SCADA/DMS System** (only in project areas having a population over 4 Lakhs and annual input energy of 350 MU). It would include Assesst Mapping of the entire distribution network at and below the level of 11 kV transformers and shall include the Distribution Transformers and Feeders, Low Tension lines, poles and other distribution network equipment. It will also include adoption of IT applications for meter reading, billing & collection, energy accounting and auditing, MIS, redressal of consumer grievances, establishment of IT enabled consumers service centers, etc. the base line data and required system shall be verified by an independent agency appointed by the Ministry of Power."*

As per terms and conditions of sanction for loan under Part-'A' SCADA/DMS of R-APDRP scheme:

**" 14.9 Conversion of loan into grant:**

- I. *The Part-'A' loan along with interest thereon shall be converted into grant once the establishment of the required system is achieved and verified by an independent agency appointed by Ministry of Power*

(MoP). No conversion to grant will be made in case projects are not completed within 3 years from the date of sanctioning of the project. In such cases the concerned utility will have to bear full loan and interest repayment. The project will be deemed to be completed and the establishment of the required system duly verified by an independent agency appointed by MoP.

- II. Whenever the loan from GoI and FI's will be converted into grant, interest and other charges paid on the converted amount will also be treated as grant & reimbursed to utility. For the loan and interest which could not be converted into grant on account of not meeting the conditions of conversion, the utility/State will have to bear the balance burden of loan and interest repayment."

**Part-'B':** Renovation, modernization and strengthening of 11 kV level Substations, Transformers/Transformers Centers, Re-conductoring of lines at 11 kV level and below, Load Bifurcation, Feeder Separation, Load Balancing, HVDS (11 kV), Aerial Bunched Conductoring in dense areas, replacement of electromagnetic energy meters with tamper proof electronic meters, installation of capacitor banks and mobile service centers, etc. In exceptional cases, where the sub-transmission system is weak, strengthening at 33 kV or 66 kV levels may be considered."

As per terms and conditions of sanction for loan under Dehradun Project of R-APDRP Part-'B' scheme:

**"14.9 Conversion of loan into grant:**

- I. If the Distribution Utilities achieve the target of 15% AT&C loss on a sustained basis for a period of 5 years in the project area and the project is completed within the time schedule fixed by the Steering Committee, which shall in no case exceed five years from the date of project approval, up-to 50% (90% for special category states) loan against Part-B projects will be convertible into grant in equal tranches, every year for 5 years starting one year after the year in which the base-line data system (Part A) of project area concerned is established and verified by the independent agency appointed by MoP. If the utility fails to achieve or sustain the 15% AT&C loss target in a particular year, that year's tranche of conversion of loan to grant will be reduced in proportion to the shortfall in achieving 15% Aggregate Technical & Commercial (AT&C) loss target from the starting base-line assessed figure. Loan from GoI shall be converted into grant first. Loan from FIs shall be converted into grant only after the conversion of full GoI loan into grant.
- II. Wherever, the loan from GoI and FIs will be converted into grant, interest and other charges paid on the converted amount will also be treated as grant & reimbursed to Utility. For the loan and interest which could not be converted into grant on account of not meeting the conditions of conversion, the utility/state will have to bear the balance burden of loan and interest repayment."

- (2) Under paragraph 11 of the Distribution and Retail Supply License (License No. 02 of 2003, dated 20<sup>th</sup> June, 2003) and Regulation 53 of UERC (Conduct of Business) Regulations, 2004, the Petitioner vide its letter No. 4692/MD/UPCL/C-4 dated 21.06.2014 submitted an application seeking approval of the Commission for the investment on the SCADA /DMS Project of Dehradun town covered under Part-'A' of R-APDRP of MoP, GoI and letter No. 1684/UPCL/Comm/RM-6/MD dated 06.08.2014 submitted an application seeking approval of the Commission for the investment on the Dehradun project covering the works covered under **Part-'B' of R-APDRP** of MoP, GoI for reduction of AT&C losses to the extent of 15%.
2. The Petition-wise details viz. scope of works, cost, observations of the Commission, replies /submissions of the Petitioners, thereof, and other specific provisions related to the schemes for both the projects are as follows:
- (A) The SCADA/DMS Project of Dehradun town covered under Part-'A' of Restructured-Accelerated Power Development & Reform Program (R-APDRP) of Ministry of Power (MoP), Govt. of India (GoI).**
- (1) The Scope of Work for which approval of the Commission for investment under this project has been sought is as follows:-
- Establishment of SCADA/DMS control center at Dehradun and Disaster Recovery center at Haldwani.
  - Setting up of the Local Area Network and Wide Area Network.
  - Procurement and Installation of PCs servers and associated hardware and software applications.
  - Creation of necessary IT infrastructure including LAN for identified 19 substations, divisions, head quarter offices, data center, disaster recovery (DR) center and link to SLDC.

- Installation of Remote Terminal Units (RTUs) in all the existing & proposed 33/11 kV substations of Dehradun (16 existing Substation + 3 proposed substations under R-APDRP Part-'B' scheme) for acquiring analog as well as digital data.
  - Installation of Feeder Remote Terminal Units (FRTUs) on Ring Main Units and Sectionalizers.
  - Installation of 3G enabled GSM/CDMA modems on 33 kV as well as 11 kV communicable Fault Passage Indicators (FPIs) & FRTUs.
- (2) The establishment of the above infrastructure would facilitate Petitioner in achieving following SCADA/DMS Functions:
- Data Acquisition from RTUs at S/s, FRTUs at RMUs/sectionalizers & FPIs.
  - Time synchronization of RTUs, FRTUs and FPIs.
  - Data exchange among the SCADA/DMS System, IT system developed under R-APDRP Part-'A' and State load dispatch Center (SLDC).
  - Data processing.
  - Continuous real time data storage and playback.
  - Sequence of event processing.
  - Supervisory control.
  - Failsoft capability.
  - GIS adaptor.
  - Remote database downloading, diagnostics & configuration.
  - Information storage and retrieval (ISR).
  - Data Recovery (DR).
  - Network connectivity analysis (NCA).
  - State estimator (SE).
  - Load flow analysis (LFA).
- (3) The sanctioned cost for SCADA/DMS project under R-APDRP Part-'A' for Dehradun town to be funded by the MoP/GoI through PFC Ltd. as per approved Detailed Project Report (DPR) is as follows:

**Table 1**

Sl. No.	Name of Town	Sanctioned Cost to be borne by MoP/GoI (₹ in Lacs)
1.	Dehradun	1654.51

- (4) The various sub-heads under which the above cost is divided are as follows:

**Table 2**

Sl. No.	Particulars	Sanctioned Cost (₹ in Lacs)
1.	SCADA/DMS consultant (SDC), Deployment Cost	26.18
2.	Contingency Cost	37.07
3.	Project Management Cost	247.17
4.	SCADA/DMS Control Centre Cost at Dehradun	416.23
5.	SCADA/DMS Disaster Recovery Centre at Haldwani	24.52
6.	Remote terminal Units (RTUs) to be installed at 19 Substations of Dehradun	181.49
7.	FRTUs to be installed in the field	367.37
8.	Auxiliary Power Supply Cost	131.55
9.	Network Connectivity Charges (1 Yr.)	114.69
<b>Total setup cost</b>		<b>1546.27</b>
10.	Facility Management Charges (1 Yr.)	108.24
<b>Total PFC Cost</b>		<b>1654.51</b>

- (5) Apart from the funding of sanctioned cost from MoP/GoI, as per specific exclusions mentioned in clause 14 of section 1 'Introduction and General Information of Model Technical Specification' document of Power Finance Corporation for SCADA/DMS System under Part-'A' R-APDRP scheme, the cost of following works would be borne by the Petitioner from its internal resources:

*"a) All civil & architectural works, internal & external rectification, special electronic earthing for Server system, Air conditioning & ventilation, fire fighting system and Access control system required for SCADA/DMS system are outside the scope of the SIA, however, contractor has to indicate the space requirement for SCADA/DMS control centre, DR centre, RTU/FRTU/Auxiliary power supply & communication equipment any other specific requirement, power supply requirement including standby supply requirement, so that the utility can provide the same as per bidder's requirement."*

- (6) In addition to the costs approved by PFC for the project, the details of the cost/expenses proposed to be borne by the Petitioner from its own resources on the works covered at para 5 above are as under:

(a) **SCADA/DMS control center at Dehradun**

**Table 3**

Sl. No.	Particulars	Sanctioned Cost (₹in Lacs)
1.	Civil Work for the Construction of building for SCADA/DMS Control Center at Dehradun in VCV Gabar Singh Bhawan Campus.	55.00
2.	Architectural works including internal and external electrification, special electronic earthing for Server, Air conditioning and ventilation, fire fighting system and Access control system, furniture required for SCADA/DMS Control center.	20.00
<b>Total</b>		<b>75.00</b>

(b) **Development of different Substations covered under SCADA/DMS System**

**Table 4**

(₹in Lacs)

Sl. No.	Particulars	FY 2014-15	FY 2015-16
1.	Providing sufficient infrastructure facilities in different existing 33/11 kV substations of Dehradun town for installation of RTUs, MFTs & other hardware items as per the provision of DPR	15.00	35.00
<b>Total</b>		<b>15.00</b>	<b>35.00</b>

(c) **Cost of Network Connectivity Charges**

As per the guidelines the Network Connectivity Charges considered by PFC for the funding is for 1 year after the system's Operational Acceptance. Thereafter, it shall be borne by the Petitioner as follows:

**Table 5**

(₹in Lacs)

Sl. No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
1.	Provision for MPLS-	114.70	114.70	114.70	114.70

Sl. No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
	VPN Network connectivity charges for the connectivity of different filed offices/substations to SCADA/DMS Control Centre and Disaster Recovery Centre along with the connectivity of different field devices like RTUs, FRTUs, Modems to Control Centre				
	<b>Total</b>	<b>114.70</b>	<b>114.70</b>	<b>114.70</b>	<b>114.70</b>

- (d) The **Payment of Bandwidth Charges** shall be made on the basis of actual usage.
- (e) **Facility Management Charges**

As per the guidelines the Facility Management Charges (FMS) (*which covers the charges for the service to be provided by the SCADA/DMS Implementation Agency for the period of five years after the system Operational Acceptance so as to manage entire system, equipments, installations including hardware, software & networks in order to have maximum availability to enable UPCL to realize its desired business objectives*) shall be covered under the scheme for one year after the system Operational Acceptance i.e. considering the Zero-date as the date of award of work to SIA, the date of Operational Acceptance shall be around March-2016. The FMS charges to be funded from PFC will be tentatively up to March-2017. Thereafter, it shall be borne by the Petitioner tentatively up to March-2021 as under:

**Table 6**

		(₹ in Lac)			
Sl. No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
1.	Facility Management Charges	108.20	108.20	108.20	108.20
	<b>Total</b>	<b>108.20</b>	<b>108.20</b>	<b>108.20</b>	<b>108.20</b>

- (7) Thus, the total expenditure to be incurred for SCADA/DMS Project of Dehradun covered under Part-‘A’ of MoP, GoI is as follows.



**Table 7**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Amount (₹in Lacs)</b>	<b>Source of Funding</b>
1	Capital Expenditure to be borne by MoP/GoI excluding 1 year Network Connectivity Charges & 1 year Facility Management Charges.(from above Table 2)	1431.50	Loan assistance from Power Finance Corporation
2	Capital Expenditure to be borne from Internal resources by UPCL excluding 4 year Network Connectivity Charges & 4 year Facility Management Charges. (from above Table 3 & 4)	125	UPCL own resources.
<b>Sub Total (Capital Expenditure)</b>		<b>1556.5</b>	
3	Recurring expenditure to be borne by MoP/GoI for 1 year Network Connectivity Charges & 1 year Facility Management Charges. (from above Table 2)	222.93	Loan assistance from Power Finance Corporation
4	Recurring expenditure to be borne from Internal resources by UPCL excluding 4 year Network Connectivity Charges & 4 year Facility Management Charges. (from above Table 5 & 6)	891.72	UPCL own resources.
<b>Sub Total (Recurring Expenditure)</b>		<b>1114.65</b>	
<b>Grand Total</b>		<b>2671.15</b>	

- (8) On preliminary examination of the Petition dated 21.06.2014 the Commission vide its letter No. 759 dated 18.07.2014 directed UPCL to submit the DPR of the project clearly mentioning the amount for which the investment approval is being sought and also issued following/deficiencies vide its letter No. 1182 dated 19.09.2014:

“

1. *The sum of the amount sanctioned by PFC (₹1654.51 lac) and the amount to be borne by UPCL from internal resources, (₹1016.60 lac) comes as ₹2671.11 lac, while the proposal has been submitted for the amount ₹2671.15 lac. UPCL is required to clarify the difference.*
2. *PFC has sanctioned a loan of ₹16.55 crore for the project on 27<sup>th</sup> March 2012, @9% interest w.e.f. 01.04.2011. In clause 13.3 i.e. 'Utilization of Loan and Completion of Project'(page no. 72 of the submission), it is mentioned that borrower shall take all necessary steps to ensure that the*

project is completed as envisaged i.e. by 26<sup>th</sup> March, 2015 (3 years from the date of sanction letter i.e. 27.03.2012)

UPCL is required to submit a project plan to ensure the completion of works by the above date. As the terms and conditions for loan of GoI/Ministry of Finance clause (3) - Conversion of Loan into Grant (page-28), stipulates that: "No conversion to grant will be made in case projects are not completed within 3 years from the date of sanctioning of the project."

3. In clause A(vi) of the Petition under 'Facts of the Case' it has been submitted by the Petitioner that 'if time synch is supported in FPI' time synchronization of RTUs, FRTUs & FPIs would be achieved. UPCL is required to explain the impact on SCADA/DMS Project if time synch is not supported in FPI.
4. UPCL is required to submit the source for financing of the project from internal resources."

(9) In response to this the Petitioner vide its letter No. 2184 dated 10.10.2014 submitted point-wise reply to the deficiencies pointed out by the Commission as mentioned below:

"

1. The difference between totals of investment amount as calculated by Hon'ble Commission and as put up by UPCL in consolidated form in table: 8 has raised due to rounding off of decimal places. For example Network Connectivity charges (1 Yr.) at S.No. 9 of table: 2 is Rs. 114.69 Lacs has been rounded off to Rs. 114.70 Lacs in table: 5 and table: 7 while Facility Management Charges (1 Yr.) at S.No. 12 of the table: 2 is Rs. 108.24 Lacs has been rounded off to RS. 108.20 Lacs in table: 6 and table: 7. similarly figure at S.No. 1 of the table: 8 actually comes to Rs. 1431.58 Lacs has benn rounded off to Rs. 1431.50 Lacs. Hence table: 8 for total investment amount with figures drawn exactly from table: 2 without further rounding off of decimal places is produced below for kind perusal of Hon'ble Commission:

SI. No.	Particulars	Amount (₹in Lacs)
1	Capital Expenditure to be borne by MoP/GoI excluding 1 year Network Connectivity Charges & 1 year Facility Management Charges as elaborated in Table No. 2.	1431.58
2	Capital Expenditure to be borne from Internal resources by UPCL excluding 4 year Network Connectivity Charges & 4 year Facility Management Charges as elaborated in Table No. 3 & 4.	125
<b>Sub Total (Capital Expenditure)</b>		<b>1556.58</b>
3	Recurring expenditure to be borne by MoP/GoI for 1 year Network Connectivity Charges & 1 year Facility Management Charges as elaborated in Table No. 2.	222.93

4	Recurring expenditure to be borne from Internal resources by UPCL excluding 4 year Network Connectivity Charges & 4 year Facility Management Charges as elaborated in Table No. 5 & 6.	891.72
<b>Sub Total (Recurring Expenditure)</b>		<b>1114.65</b>
<b>Grand Total</b>		<b>2671.23</b>

2. *The completion of this project is dependent on the installation of RMUs, Automated sectionalisers, FPIs, numerical relays etc. which are to be installed under the project of R-APDRP, Part-'B' of Dehradun Town, the work for which has already been awarded and is expected to start soon. UPCL is planning to complete this project in 24 months from now. As it is not possible to complete this project by 26th March, 2015, UPCL shall put up a request to M/s PFC Ltd. for the time extension of the deadline of the project.*
3. *Time synchronization of RTUs, FRTUs shall be achieved as this facility is supported in these equipments and also time synchronization at all FPI locations via GSM/CDMA modems shall be ensured by SCADA/DMS Implementation Agency under this project hence, whether FPI supports time synchronization or not will not have any impact on SCADA/DMS Project.*
4. *The amount of Rs. 125 Lacs and Rs. 891.72 Lacs are to be borne by UPCL as capital expenditure and recurring expenditure (in 4 years) by internal resources through running cash flows and will be recovered later once Hon'ble Commission allow the same."*

(10) Further, on examination of the above reply of Petitioner, the Commission vide its letter No. 1666 dated 04.12.2014 issued following anomalies/deficiencies:

"

1. *It was informed that the date of completion of the project depends on installation of RMUs, Automated sectionalisers, FPIs and numerical relays etc., being carried out under projects of R-APDRP, Part-B.*

*UPCL is required to submit a bar chart of the proposed works with appropriate linking to the works being carried out through other projects viz. R-APDRP, Part-B.*

2. *It was informed by UPCL that ₹1016.72 lac would be borne by it as Capital Expenditure in 4 years, through internal resources/running cashflows. However, recovery of the expenditure has not been elaborated/explained.*

*UPCL is required to submit the details of proposed financing and recovery of the said expenditures.*

3. *UPCL in its submission had informed that since the proposed works would not be completed by 26.03.2015, therefore, time extension for completion of the project would be required from PFC.*

UPCL is required to submit the documents related to the time extension allowed by PFC, if any or status in the matter.

4. Earlier UPCL was directed to submit the cost benefit analysis of the project, however, the same has not been submitted yet.

UPCL is required to submit the cost benefit analysis of the project.”

Besides above, the Commission also directed the Petitioner to make a Power Point presentation before the Commission covering the above points.

- (11) In response, the Petitioner vide its letter No. 2805 dated 29.12.2014 submitted reply to the deficiencies pointed out by the Commission as mentioned below:

“

1. The bar chart for the proposed works linking the same to, the works to be carried out under part-B project of Dehradun town can be submitted after finalization of bar chart for part-B works so it is requested to seek time upto 10<sup>th</sup> January 2014 for reply of this point as this date is also the deadline for reply of queries of Hon'ble UERC on investment petition of RAPDRP part-B project of Dehradun town.
2. The amount of capital expenditure to be borne by the internal resources/running cash flows is Rs. 125 Lacs and recurring expenditure for (4years communication charges & 4 years FMS charges) is Rs. 891.72 Lacs. Regarding source for proposed financing and recovery of the said expenditure, the same needs to be incorporated in the ARR at your end to Hon'ble UERC and needs to be communicated accordingly at your end.
3. Regarding time extension for the completion of the project, MoP, GoI vide ORDER No. 14/01/2011-APDRP (copy enclosed as Annexure-1) has extended the deadline for completion of part-A projects for further 2 years for all states as per point 3 of this order. Point 3 is reproduced below for kind perusal of Hon'ble Commission:-  
**“the deadline for completion of Part-A projects under R-APDRP is extended by another two years for all states for conversion of loan into grant i.e. Part-A projects shall be required to be completed within a period of 5 years from the date of the sanction instead of present period of 3 years”**
4. Regarding cost benefit analysis of the project, it is to be bring to kind notice of the Hon'ble Commission that following tangible and non-tangible benefits shall be derived from the projects:-
  - **Tangible Benefits**
    - Accurate information of data (load) and comprehensive distribution network monitoring & control.

- *Efficient monitoring of active and reactive power ensuring improved revenues.*
- *Faster fault location/isolation and service restoration*
- *Lower downtime and increased uptime thereby improvement of revenues*
- *Protection from overloading thereby prolonged equipment life.*
- *Better utilization of network capacity, Network Planning*
- *Support for enterprise-wide information system integration with exchange of data between IT and SCADA systems.*
- *Effective and optimised load shedding*
- *Effective load forecasting resulting in savings from the UI (unscheduled interchange) pool*
- *Availability of re-deployed manpower*
- **Non-Tangible Benefits**
  - *Customer satisfaction through uninterrupted Power supply and better services.*
  - *Effective monitoring and control over the reliability indices (SAIDI, SAIFI)*
  - *Effective monitoring of ageing equipments*
  - *Efficient customer complaint handling"*

(12) The Petitioner submitted bar chart for the proposed works linking the same to the works to be carried out under Part-'B' project of Dehradun as directed and made a Power Point presentation on SCADA/DMS project on 08.01.2015 and submitted its reply to the issues pointed out during presentation vide its letter No. 89 dated 12.01.2015 as follows:

- (a) The Petitioner submitted that the bar chart for installation and integration works under Part-A SCADA/DMS Project will be submitted within a week.
- (b) The extension of time for completing the Part-A of the R-APDRP Project has been revised by the MoP vide its order dated 08.07.2013 upto 26.03.2017.

(13) The Petitioner vide its letter No. 120 dated 14.01.2015 has submitted the bar chart for the activities of SCADA/DMS project under R-APDRP Part-A linking the same with Part-B activities as per revised bar chart of R-APDRP Part-B.

**(B) The Dehradun Project covering the works covered under Part-'B' of Restructured-Accelerated Power Development & Reform Program (R-APDRP) of Ministry of Power (MoP), Govt. of India (GoI) for Reduction of AT&C losses to the extent of 15%.**

(1) The Scope of Work for which the Petitioner is seeking approval of the Commission for investment under this project is as follows:-

- New 11 kV Lines
- Reconductoring of lines at 11 kV level and below.
- Load Bifurcation.
- Feeder Separation.
- Load Balancing.
- Aerial Bunched Conducing (ABC) in dense area.
- Replacement of electromagnetic energy meters with Tamper proof electronic meter.
- Installation of Capacitor Bank and mobile service centres.
- Installation of Intelligent Ring Main Unit, Fault Passage Indicator (FPI) and Sectionalizer, etc. for SCADA implementation.
- Strengthening of 33 kV levels.

(2) The various sub-heads of approved DPR of ₹191.46 Crore covered under the sanctioned loan to be funded by MoP/GoI through PFC and approved project cost by R-APDRP Steering Committee is as per Table given below:

Sl. No.	Particulars	Project Cost (₹in Lac)
<b>A</b>	<b>Sub Transmission System Improvement Work</b>	
1.	33/11 kV or 66/11 kV S/s: New	713.15
2.	33/11 kV or 66/11 kV S/s: Additional Transformer	0
3.	33/11 kV or 66/11 kV S/s: Transformer capacity enhancement	808.47
4.	New 33 kV New feeders	1424.52
5.	33 kV feeders Reconductoring/ Augmentation	335.79

Sl. No.	Particulars	Project Cost (₹in Lac)
6.	33/11 kV: APFC Panel at Substation	669.09
7.	33 kV or 66 kV Line: Installation of remote switchable breaker/switches*	104.80
8.	33 kV or 66 kV Line KV Line: Installation of remote communicable FPIs (O/C&E/F)*	26.95
9.	33 kV or 66 kV Line Bay Extension at EHV station	154.95
10.	11 kV Line: New Feeder/Feeder Bifurcation	1542.71
11.	11 kV Line: Reconductoring/ Augmentation	463.27
12.	11 kV Line: Installation of automated RMUs along with aux power supply to operate sw/breaker - *	3122.31
13.	11 kV Line: Installation of remote communicable FPIs (O/C, E/F)*	134.46
14.	11 kV Line: Installation of remote switchable breakers alongwith aux power supply to operate sw/breaker *	0
15.	11 kV Bay Extension	29.55
16.	Renovation & Modernization of 33/11 kV S/s	362.97
17.	Installation of Distribution Transformer	2955.98
18.	Capacity enhancement of LT S/s	0
19.	Installation of remote operable switches for breaker/switches operation for Distribution Transformer along with aux power supply to operate sw/breaker *	0
20.	11 kV: New VCB	464.77
21.	LT Line: Augmentation	0
22.	Capacitor Bank	0
23.	Installation of remote operable switches for breaker/switches operation for cap bank along with aux power supply to operate sw/breaker *	0
24.	Aerial Bunched Cables	3852.18
B	HVDS	0
C	Metering	375.33
D	Mobile Service Centre	69.81
E	Others	1534.73
	<b>Grand Total</b>	<b>19145.79</b>
	<b>Say</b>	<b>191.46 Crore</b>

\* For project area envisaged for SCADA/DMS scheme as per the criteria, town with population  $\geq$  4 Lac & Input Energy  $\geq$  350 MUs & other potential towns

- (3) Apart from the loan from MoP/GoI, the balance 10% of the total project cost is to be borne by the Petitioner either from its internal resources or would be raised from PFC/REC/or other financial institutions.

- (4) On examination of the Petition, the Commission observed following deficiencies, which were communicated to the Petitioner vide letter no. 1177 dated 19.09.2014 for submitting the desired information/clarification:-

“

1. From the submission of UPCL, it has been observed that the tender for the work was invited on 01.04.2013 and the work was awarded on 12.02.2014 for the amount ₹240.90 crore, while, the application for investment approval was filed before the Commission on 06.08.2014, which is violation of the Regulation 53(1) of UERC (Conduct of Business) Regulations, 2004 and clause 11.3 of Distribution and Retail Supply Licence dated 20.06.2003.

UPCL is required to explain this inordinate delay in filing of the application for the investment approval.

2. The amount sanctioned for the scheme is ₹191.46 crore while the contract was awarded for ₹240.90 crore, which shows that there is a gap of ₹48.54 crore.

UPCL is required to clarify the means of finance for bridging this gap.

3. The AT&C loss level for the base year i.e. 2011-12 have been shown as 31.6%, with a loss reduction trajectory to bring it to 14.92% in three years. However, the AT&C losses verified by TPIEA have not been provided.

UPCL is required to submit the verified AT&C loss data for the same.

4. Since Dehradun town is covered in SCADA/DMS Project, UPCL is required to submit its comments on the preparedness and the status for making the distribution system compatible to it.

5. UPCL is required to submit the load survey and system studies for voltage profile for the said feeders, where augmentation/reduction is proposed.

6. In 'Asset Information' (page 127) AT&C losses for various years have been provided as under:

Year	2006-07	2007-08	2011-12
AT&C Losses	29.86%	24.14%	31.6%

UPCL is required to submit the reason for increase in AT&C losses.

7. At page no. 153 of the submission (Annexure-C of the DPR), it has been written that Single Line Diagram (SLD) of the Feeder with the Proposed DT will be attached, however, the SLDs have not been provided.

UPCL is required to furnish the same.

8. In Annexure-G of DPR (page no. 158-232 of the submission) most of the Transformers proposed for the capacity of 100 & 250 kVA, whereas, to enable a better HVDS, lower capacities of Transformers could have been



proposed. UPCL is required to explain proposing the 100 & 250 kVA Transformer.

9. With proposed installation of additional DTs in 11 kV feeders, the overall loading capacity in these feeders increases from existing 2 MVA to 10 MVA. Few of such feeders have found as given below:

<u>Name of the Feeder</u>		<u>Transformer Capacity</u>
11 kV Dhamawala	-	6.3 MVA
11 kV Lakhibagh	-	9.3 MVA
11 kV Race Course	-	9.59 MVA
11 kV Parade Ground	-	4.6 MVA
11 kV Ajabpur	-	6.15 MVA
11 kV Survey E.C. Road	-	7.7 MVA
11 kV Vijay Colony	-	6.4 MVA
11 kV Rajpur Road	-	10.6 MVA
11 kV Engineers Enclave	-	8.4 MVA
11 kV Brahmanwala	-	9.14 MVA

Assuming 70 to 80% loading on DTs, the current on these feeders will be very high. UPCL is required to justify the loading of such 11 kV feeders and also required to submit the norms being adopted/practiced in the Corporation."

- (5) In response to the deficiencies pointed out by the Commission, the Petitioner vide its letter No. 2190 dated 13.10.2014, submitted its reply as follows:

"

1. Earlier it was decided to send the investment approval of R-APDRP, Part-'B' works in Dehradun town alongwith investment approval of 30 towns which was already submitted before Hon'ble commission. Keeping in view of separate loan and only SCADA town it was decided to send the investment approval for Dehradun town separately, which attributed the delay in this regard. Licensee humbly submits that such type of delay in cases of investment approval will not happen in future.
2. In its 31st meeting on 09.07.2014 Steering Committee for implementation of R-APDRP under Ministry of Power decided to allow a variation upto + 20% of overall BOQ of Part-A and Part-B in respective state restricted to a maximum of 10% of overall sanction cost (MoM of 31st Steering Committee dated 09.07.2014 (Agenda Item no.-9) is enclosed as Annexure-1). In the light of above it is to submit that agreement amount of 31 towns of Uttarakhand state is Rs. 601.83 Crore against the sanction DPR cost of rs. 584.10 Crore. In this way the total variation of agreement amount is within 10% of overall sanction amount which is likely to be adjusted again as executed estimate during the time of closure.
3. This is to inform you that base line AT&C loss level verified by TPIEA for Dehradun town is 35.49%.

4. *Installation of SCADA Hardware i.e. installation of 11 kv and 33 kV RMU, Fault Passage Indicator's (FPI's), sectionalizers and motorized VCB at substation etc. is in the scope of this agreement for which the investment approval is sought for. Integration of these above mention SCADA components is in the scope of R-APDRP (Part-A) unit for which tendering process is in progress. A separate investment approval for such integration/implementation of SCADA has already been submitted to the Hon'ble commission.*
5. *This is to inform you that for preparation of DPR, a consultant was appointed for the purpose. Consultant used the CYMDIST platform for load survey and system studies for voltage profile of feeders where augmentation/reduction is proposed. Copy of output reports which formed the basis for proposed augmentation/reduction is enclosed herewith for ready reference. (Annexure-2).*
6. *The AT&C losses figures taken in the DPR is as per guidelines of PFC which excludes arrears realization. Variation in AT&C losses for various years is mainly attributable to variation in realization of government dues. AT&C losses including arrears for Dehradun town against reference years is given below:-*

<b>Year</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2011-12</b>
AT&C losses	30.78%	29.90%	27.17%

7. *Single line diagram (SLD) of the feeder with the proposed DT's is enclosed.*
8. *While preparing the DPR for Dehradun town due to concentration of load and problem of right of way, implementation of HVDS was not considered. In almost every area of Dehradun town there is a concentrated load and load growth is also high therefore, 100 kVA & 250 KVA transformers with appropriate no. of circuits have been propose.*
9. *To cater the overall loading capacity of the feeders following proposal have been proposed in the DPR:*

**Name of the Feeder**

11 kV Dhamawala  
 11 kV Lakhibagh  
 11 kV Race Course  
 11 kV Parade Ground  
 11 kV Survey E.C Road  
 11 kV Ajabpur  
 11 kV Vijay Colony  
 11 kV Rajpur Road  
 11 kV Engineer Enclave  
 11 kV Brahmanwala

**Proposal**

Feeder Bifurcation and Reconductoring  
 Feeder Bifurcation and Reconductoring  
 Feeder Bifurcation and Reconductoring  
 Feeder Bifurcation and Reconductoring  
 Reconductoring  
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 Feeder Bifurcation and Reconductoring

*For e.g. to cater the overall loading capacity of 11 kV Engineers Enclave feeder reconductoring have been proposed and 11 kV New Engineers Enclave feeder have been proposed from New 33/11 kV Engineers Enclave S/s to share the load of existing feeder."*

(6) Further, on examination of the said submission of the Petitioner, the Commission vide its letter No. 1726 dated 12.12.2014 issued following anomalies/deficiencies, directing the Petitioner to make a Power Point Presentation before the Commission:-

“

1. *Regarding cost variation in loan sanctioned and contract awarded, UPCL has informed that steering committee of MoP on 9<sup>th</sup> July 2014 has sanctioned a cost variation of + 20% of overall BoQ of Part-A and Part-B of the R-APDRP Scheme to a maximum of 10% of overall sanctions. Further, in this matter, it was directed to PFC (MoM of 31st meeting dated 09.07.2014) to formulate a comprehensive guidelines for sanction of cost estimation. UPCL is required to submit the documents issued/approved by PFC, if any.*
2. *UPCL had reported AT&C loss level for the year 2011-12 as 31.6% (page no. 127 of the Petition). Earlier, UPCL was directed to provide AT&C losses verified by TPIEA. In response, UPCL submitted that the AT&C loss verified by TPIEA were 35.49% for Dehradun Town for the year 2011-12. The same has been submitted without any supporting document/letter of TPIEA. This needs clarification, as any change in base figure of AT&C losses will affect the trajectory of loss reduction.*
3. *Earlier, UPCL was directed to submit the status of procurement, erection & commissioning of RMU, FPIs, motorized VCBs etc. for their integration in Part-A. However, the same has not been provided. UPCL is required to submit the up-to-date activities-wise bar-chart for execution of the project alongwith the present status.*
4. *Earlier, UPCL was directed to submit load surveys and voltage profile study of the feeders on which the works have been proposed. In response, UPCL submitted 'Volumes' of these reports. UPCL is required to submit a comprehensive summary of the same, for ready reference of the Commission.*
5. *Further, the attachment mentioned in the letter No. 2190 dated 13.10.2014 as Annexure-2 is not enclosed. UPCL is required to submit the same.*
6. *To protect over loading, Feeder Bifurcation/reconductoring/New Feeders have been proposed by UPCL. UPCL is directed to illustrate the same with expected reduction in losses, improvement in HT/LT ratio, reduction in DT failure rates and other indices. “*

(7) In response, the Petitioner vide its letter No. 2804 dated 29.12.2014 submitted the replies to the deficiencies as mentioned below and made a Power Point Presentation before the Commission on 08.01.2015:

“

1. *Regarding cost variation in loan sanction and contract awarded, PFC has not formulated comprehensive guidelines for sanction of cost estimation till date.*
2. *Activity wise bar-chart for execution of the project is enclosed (Copy enclosed). Presently contractor has started the procurement of materials.*
3. *Certificate of AT&C loss verified by TPIEA is enclosed (Copy enclosed) the AT&C loss (35.49%) of Dehradun town verified by TPIEA is for the period of Apr-2011 to June-2011 (i.e. three billing cycle) but the AT&C loss (31.6%) reported in the DPR is for F.Y. 2011-12. The trajectory of loss reduction is based on base figure 31.6%.*
4. *Loss calculation of each feeder was done by CYMDIST software for the preparation of DPR and load survey & voltage profile report of each feeder were generated by this software. On the basis of loss calculation different proposal like reconductoring, new feeder, feeder bifurcation, new DT, LT AB cable etc., have been made on the each feeder. The comprehensive load survey report of feeder is enclosed (Copy enclosed).*
5.
  - a) *To protect overloading of feeder, feeder bifurcation/reconductoring/new feeders have been proposed, with the proposal of the same technical loss of feeder shall be reduced.*
  - b) *With the proposal of the New DT, overloading of old DT and DT failure rate shall be reduced and also HT/LT ratio improved.*
  - c) *With the proposed of LT AB cable technical loss and commercial loss shall be reduced.*

*For example:-*

1. *In 11 kV Clementon feeder peak demand of feeder is 194 A and existing conductor of feeder is rabbit, weasel & raccoon, so to protect overloading of feeder reconductoring with dog and feeder bifurcation has been proposed.*
  2. *To protect overloading of existing transformers, 30 no. new transformers have been proposed and due to this HT/LT ratio also improved.*
  3. *To reduce the theft and commercial losses on the said feeder total 25.27 Km. LT AB Cable also required in 12 no. DT."*
- (8) Further, the Petitioner vide its letter No. 89 dated 12.01.2015, submitted the clarification/replies on the issues raised during presentation, as follows:

*"*

1. *Under R-APDRP, Part-B works, an investment approval of Rs. 240.90 Crore is sought for, against agreement amount for execution of works instead of DPR sanction of Rs. 191.46 Crore. Prayer in this regard has already being made at Para 9 of the petition submitted for the purpose (Annexure-1).*

*For the difference of the amount between Rs. 240.90 Crore and Rs. 191.46 Crore, this is to submit that, in its 31st meeting on 09.07.2014, Steering Committee (MoP) for implementation of R-APDRP decided to allow a variation upto + 20% of overall BOQ of Part-A and Part-B in respective state restricted to a maximum of 10% of overall sanctioned cost (Agenda Item No. 9, Annexure-2). In light of above it is submit that agreement amount for execution of R-APDRP, Part-B works in all qualified 31 towns of Uttarakhand State is Rs. 601.83 Crore against the sanctioned DPR of 584.10 Crore. In this way the total variation of agreement amount is within 10% of overall sanction amount which is likely to be adjusted against as executed estimated during the closure of the scheme.*

*UPCL till date didn't receive any guidelines from M/s PFC (Nodal Agency) in this regard as directed by Steering Committee to formulate a comprehensive guidelines for sanction of cost estimation.*

2. *The base line AT&C loss figure of 35.49%, verified by Third Party Independent Evaluation Agency (TPIEA) corresponds to the period of April 2011 to June 2011 and is under the aegis of clause 9.1 (a) of the Quadpartite agreement (Annexure-3) which states that, "Three billing cycles data of energy inflow and outflow and corresponding revenue collected for the project area shall be furnished to the independent agency for verifying the base (starting) figure of AT&C loss of the project area".*

*M/s PFC is being asked for the verification of year-wise AT&C loss figure of TPIEA, as suggested by Hon'ble Commission and the same will be communicated to Hon'ble Commission as soon as it is available.*

*The baseline figure as verified by TPIEA for AT&C loss is 35.49% and AT&C loss reduction will targeted to bring down from 31.6% (ending base year 201-12), which is less than the loss verified by TPIEA. Therefore, it will not effect the loss reduction trajectory as given in the DPR.*

3. ...
4. *This to submit that Feeder Bifurcation/ Reconductoring/New Feeders are proposed in line with the guidelines issued under R-APDRP i.e. the proposals are made with consideration of Distribution System Planning for five years.*

*The Technical Loss Reduction and Network Optimization was carried out using Distribution Network Planning Software (CYMDIST). An output report for a representative 11 kV feeder (11 kV Clementown) with existing and proposed situation is annexed herewith as Annexure-5. The over loading condition of feeder and associated 11/0.4 kV Distribution Transformers is taken care of by proposing Feeder Bifurcation and installation of additional transformers in order to avoid overloading and also to cater future load. A report summary is annexed as Annexure-6 for ready reference. The provision of LT Aerial Bunched Cable is also proposed in theft prone areas of the above feeder."*

- (9) *As per Terms & Conditions for R-APDRP Part-'B' scheme, up-to 90% of the approved cost shall be provided as loan from GoI, for special category States namely all North-Eastern States, Sikkim, Uttarakhand, Himachal Pradesh and Jammu & Kashmir. The balance funds shall be*

raised from Financial Institutions (FIs) viz. PFC/Rural Electrification Corporation (REC)/multilateral institutions and/or own resources.

- (10) The Project Cost of Part-‘B’ of R-APDRP scheme for Dehradun project approved by the R-APDRP Steering Committee was ₹191.46 Crore. UPCL had signed the loan agreement with M/s Power Finance Corporation (PFC) Limited on 16.04.2014 vide which a total loan of ₹172.31 Crore, i.e. 90% of the total project cost was sanctioned by PFC.

### 3. Commission’s view

- (1) Regulation 53(3) of UERC (Conduct of Business) Regulations, 2004 specifies as under:

*“In the application for investment approval, the licensee shall furnish the following information or particulars:*

- (a) A detailed project report containing examination of an economic technical system and environmental aspects of the investment together with the outline of the working to be undertaken, the salient features and particulars demonstrating the need for investment;*
- (b) The project cost together with the cost benefit analysis;*
- (c) Whether the investment is in a new project or for expansion or upgradation of an existing system;*
- (d) Sanctions and statutory clearances required for execution of the project and status of such sanctions and statutory clearances;*
- (e) Phasing of investment over the financial years and Commissioning schedule;*
- (f) The manner in which investments will be capitalized for the purposes of inclusion in the revenue requirements of the Licensee;*
- (g) Constraints which the Licensee may face in making the investments or in the implementing the project including constraints on information available;*
- (h) Resource mobilization and financial plans for meeting the investment;*
- (i) Process for inviting and finalizing tenders for procurement of equipment, material and /or services relating to investment, in accordance with a transparent tendering procedure as may be approved by the Commission; and*
- (j) Such other particulars as the Commission may from time to time”*

- (2) Moreover, Regulation 55(1) of UERC (Conduct of Business) Regulations, 2004 specifies as under:

*“The licensee and other applicants seeking investment approval shall furnish information, particulars, documents as may be required by the Commission staff, consultants and experts appointed by the Commission for the purpose and allow them access to the records and documents in the power, possession or custody of the licensee. “*

- (3) Thus, it is clear that Regulations explicitly provide for the information that is required to be submitted by the licensee alongwith the Petition for investment approval. As discussed in above Paras of this Order, contrary to the above provisions of the Regulations and conditions of licence, the Petitioner did not submit the requisite information along with its Petition leading to unnecessary delay in processing of the Application for reasons attributable entirely to the Petitioner. The Commission reprimands the lackadaisical approach of the licensee in fulfilling these requirements of the Regulation while filing the Petition.
- (4) The Commission is of the view that any slackness in implementation of the R-APDRP projects (Part-'A' & Part-'B') will have a huge impact on the Petitioner's financial position as the conversion of loans into grant is linked to completion of Part-'A' works within deadline approved by MoP, GoI while in respect of Part-'B' works it is linked to achievement of 15% AT&C loss in designated project areas, i.e. Dehradun, failing which the same will not be converted into grant.
- (5) Further, the Commission is of the view that with the above linkage of cost of funding with the AT&C loss achievement, this program can be construed as a double edged sword, which might cause adverse financial impact in case the Petitioner fails to implement the program, both Part-'A' & Part-'B', in the right earnest with meticulous planning and monitoring of its execution within the stipulated period.
- (6) The Commission observed that UPCL has approval of only ₹16.55 Crore from PFC as total loan approved for Dehradun Town towards SCADA/DMS project under Part-'A' of R-APDRP scheme. With regard to other expenses (₹1016.64 Lacs) namely expenses incurred on SCADA/DMS Control Center at Dehradun (₹75 Lacs), development of different substations covered under SCADA/DMS system (₹50 Lacs), cost of Network Connectivity Charges for 4 years (₹458.8 Lacs) and cost of Facility Management Charges for 4 years (₹432.8 Lacs), UPCL did not approach any financial institution for funding the

same and infact had proposed to utilize its internal resources for the works under the said Project.

However, the Commission recognizes the need for implementation of the SCADA/DMS Project in Dehradun town considering the various tangible and intangible benefits derived from it including improvement & strengthening works in the distribution system which are to be covered under Part-'A' of R-APDRP scheme.

- (7) In accordance with the Quadripartite Agreement dated 26.03.2009, PFC vide its letter No. 02:10:R-APDRP (SCADA):2011:UPCL dated 27.03.2012 approved a total loan amount of ₹16.55 Crore for Dehradun Town towards SCADA/DMS project under Part-'A' of R-APDRP scheme. Considering the aforesaid agreement/approval and based on the views expressed by the Commission in the above paragraphs of the Order, the Commission hereby grants in principle approval to the Petitioner for going ahead with this investment of ₹26.71 Crore subject to the conditions mentioned at para (10):

**Table 8**

<b>SI. No.</b>	<b>Particulars</b>	<b>Amount (₹in Lacs)</b>
1	Capital Expenditure to be borne by MoP/GoI excluding 1 year Network Connectivity Charges & 1 year Facility Management Charges as elaborated in Table No. 2.	1431.50
2	Capital Expenditure to be borne from Internal resources by UPCL excluding 4 year Network Connectivity Charges & 4 year Facility Management Charges as elaborated in Table No. 3 & 4.	125
<b>Sub Total (Capital Expenditure)</b>		<b>1556.5</b>
3	Recurring expenditure to be borne by MoP/GoI for 1 year Network Connectivity Charges & 1 year Facility Management Charges as elaborated in Table No. 2.	222.93
4	Recurring expenditure to be borne from Internal resources by UPCL excluding 4 year Network Connectivity Charges & 4 year Facility Management Charges as elaborated in Table No. 3 & 4.	891.72
<b>Sub Total (Recurring Expenditure)</b>		<b>1114.65</b>
<b>Grand Total</b>		<b>2671.15</b>



(8) Further, the Commission observed that the cost for the proposed works covered under Dehradun Project of R-APDRP Part-B scheme submitted by the Petitioner was ₹240.90 Crore against ₹191.46 Crore approved by the Steering Committee and the Nodal Agency namely PFC. In this regard, the Petitioner was asked to submit the source of funding of balance approx. ₹49.00 Crore not considered by PFC. In response, the Petitioner submitted that in the 31<sup>st</sup> meeting of Steering Committee (MoP) held on 09.07.2014 for implementation of R-APDRP scheme, it was decided to allow a variation upto +20% of overall BoQ of Part-A and Part-B in respective state restricted to a maximum of 10% of overall sanctioned cost. The Petitioner further submitted that Agreement Amount entered with the Agencies for execution of R-APDRP, Part-B works in all qualified 31 towns of Uttarakhand is ₹601.83 Crore against the sanctioned amount as per DPR of ₹584.10 Crore by the steering Committee/Nodal Agency, this variation of 3% is well within 10% of overall sanctioned amount and hence, the balance amount of ₹49.00 Crore would likely be adjusted against 'as executed cost' during the closure of the scheme.

However, the cost proposed by the Petitioner of ₹240.90 Crore for Dehradun Project of R-APDRP, Part-B scheme is not substantiated with the requisite details and as per details available with the Commission in DPR approved by PFC is ₹191.46 Crore.

(9) The Commission, however, recognizes the need considering various tangible and intangible benefits derived from it including improvement and strengthening works in the distribution system, which are to be covered under Part-B of R-APDRP scheme and in accordance with MoA dated 16.04.2014 signed between PFC & UPCL for implementation of Dehradun Town project of Part-'B' under R-APDRP scheme for reduction of AT&C losses to the extent of 15% involving total estimated cost of ₹191.46 Crore to be utilized for executing the project. The Commission hereby grants in principle approval to the Petitioner for going ahead with this capital investment of ₹191.46 Crore as approved by R-APDRP Steering Committee

given in Table below subject to conditions mentioned at Para (10) of this Order:

Sl. No.	Particulars	Project Cost (₹in Lac)
<b>A</b>	<b>Sub Transmission System Improvement Work</b>	
A1	33/11 kV or 66/11 kV S/s: New	713.15
A2	33/11 kV or 66/11 kV S/s: Additional Transformer	0
A3	33/11 kV or 66/11 kV S/s: Transformer capacity enhancement	808.47
A4	New 33 kV New feeders	1424.52
A5	33 kV feeders Reconductoring/ Augmentation	335.79
A6	33/11 kV: APFC Panel at Substation	669.09
A7	33 kV or 66 kV Line: Installation of remote switchable breaker/ switches	104.80
A8	33 kV or 66 kV Line KV Line: Installation of remote communicable FPIs (O/C&E/F)	26.95
A9	33 kV or 66 kV Line Bay Extension at EHV station	154.95
A10	11 kV Line: New Feeder/Feeder Bifurcation	1542.71
A11	11 kV Line: Reconductoring/ Augmentation	463.27
A12	11 kV Line: Installation of automated RMUs along with aux power supply to operate sw/breaker	3122.31
A13	11 kV Line: Installation of remote communicable FPIs (O/C, E/F)	134.46
A14	11 kV Line: Installation of remote switchable breakers alongwith aux power supply to operate sw/breaker	0
A15	11 kV Bay Extension	29.55
A16	Renovation & Modernization of 33/11 kV S/s	362.97
A17	Installation of Distribution Transformer	2955.98
A18	Capacity enhancement of LT S/s	0
A19	Installation of remote operable switches for breaker/switches operation for Distribution Transformer along with aux power supply to operate sw/breaker	0
A20	11 kV: New VCB	464.77
A21	LT Line: Augmentation	0
A22	Capacitor Bank	0
A23	Installation of remote operable switches for breaker/switches operation for cap bank along with aux power supply to operate sw/breaker	0
A24	Aerial Bunched Cables	3852.18
B	HVDS	0
C	Metering	375.33
D	Mobile Service Centre	69.81

Sl. No.	Particulars	Project Cost (₹in Lac)
E	Others	1534.73
	<b>Grand Total</b>	<b>19145.79</b>
	<b>Say</b>	<b>191.46 Crore</b>

(10) The Commission directs the Petitioner that the above in-principle approvals are contingent to the following conditions:

- (i) The Petitioner is required to submit the Petition in future complying with the requirements of the Regulations/Licence Conditions and ensure timely actions in responding the queries/deficiencies sought by the Commission in such matters in order to expedite disposal of the matters in a reasonable time frame.
- (ii) The Petitioner shall ensure compliance of all provisions of Indian Electricity Rule, 1956 and Electricity Act, 2003, pertaining to protection, security and safety of line and substations including issuance of certificate by Electrical Inspector before energisation of these electrical systems.
- (iii) The Petitioner shall ensure completion of the R-APDRP works within the specified time lines and also of achieving the specified target for reduction of AT&C losses to the extent of 15% within the stipulated timeframe for availing the benefits of conversion of loan into grant. In case the petitioner fails to do so, the servicing cost/cost of the loan in whole or part may not be allowed as pass through in the ARR.
- (iv) All the terms and conditions of sanction of loans as laid down by PFC in their detailed sanction letters should be strictly complied with.
- (v) After completion of the project the Petitioner shall submit the completed cost of each of the works.

- (vi) The additional cost burden of the works which fail to meet the prudence check, if any, arising out of the cost or time over runs or variation in the scope of implementation of the project or on any other account may not be allowed in the Annual Revenue Requirement of the licensee.
- (vii) The Petitioner shall, for portion of the works not covered under loan assistance from PFC for both the Projects namely SCADA/DMS project Dehradun Town covered under Part-'A' of R-APDRP scheme and Dehradun Project of R-APDRP Part-'B' scheme, plan and arrange for least cost financing from Financial Institutions.

**(K.P. Singh)**  
Member

**(C.S. Sharma)**  
Member

**(Subhash Kumar)**  
Chairman