This Inspection Report has been prepared on the basis of information provided by Managing Director, Power Transmission Corporation of Uttarakhand Ltd. (PTCUL), Dehradun. The office of the Accountant General (Audit) Uttarakhand, Dehradun disclaims any responsibility for any misinformation, non- submission or submission of incomplete records.

Audit inspection of accounting records of office of Managing Director, Power Transmission Corporation of Uttarakhand, Dehradun for the period from April 2017 to March 2018 was carried out in exercise of the power conferred by section 19 of the C&AG, DPC Act, 1971 read with section 143 of Companies Act, 2013. Audit inspection was conducted by Shri M.K. Negi and Shri Robince Kirtaj Auditor under the supervision of Shri A. K. Mishra, Audit Officer during the period from 23 April 2018 to 24 May 2018.

Part-I

Introduction: - The last audit of this unit was conducted by Shri Amit Kumar, Assistant Audit Officer, Shri Ashish Nigam, Assistant Audit Officer and Shri Robince Kirtaj, Auditor under the supervision of Shri A. K. Mishra, Audit Officer, in which accounting records for the period April 2016 to March 2017 were examined.

(i) **Functions and geographical jurisdiction of the unit:**

The Power Transmission Corporation of Uttarakhand Ltd. is power transmission utility of the State and main function of PTCUL is to facilitate and promote transmission, wheeling and inter connection arrangements within the State of Uttarakhand for the transmission and supply of electricity.

(ii) **Auditing methodology and scope of audit:**

Managing Director Office of PTCUL was covered in the audit. This inspection report is based on findings of audit and October 2016 was selected for detailed examination.

(iii) (In ₹)

Year	Revenue	Expenditure	Profit/ Loss
2017-18	2646331808.56	1809084121	

(iv) **Organizational structure of the unit and reporting lines.**

Power Transmission Corporation of Uttarakhand Ltd., Dehradun is an electricity transmission utility. The executive powers rests with the Managing Director who is assisted by the Director (Finance), Director (O & M), Director (Project) and Director (HR).

PART II A

Para 1: Poor project management in handling the transmission system

The task force on transmission projects suggested and recommended (February 2005) the following remedial action to accelerate the completion of Transmission systems.

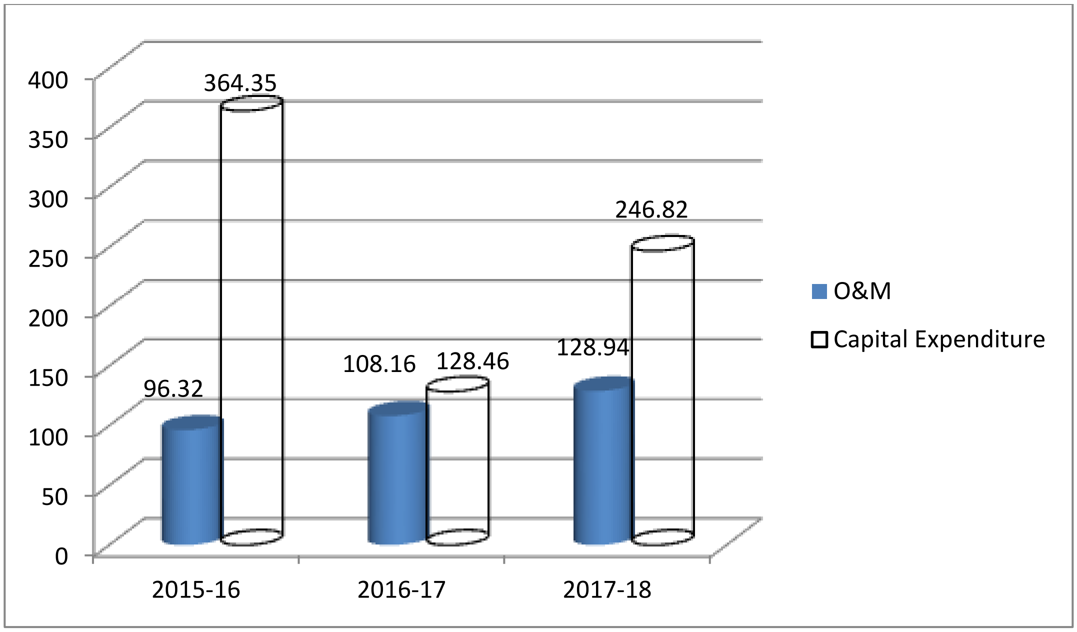
- Undertake various preparatory activities such as surveys, design & testing, processing for forest & other statutory clearances, tendering activities etc. in advance/parallel to project appraisal and go ahead with construction activities once Transmission Line Project sanction/approval is received.
- Break down the transmission projects into clearly defined packages so that the packages can be procured & implemented requiring least coordination & interfacing and at same time it attracts competition facilitating cost effective procurement.

Further, following activities of Project Execution Phase should be completed in time:

i). Route alignment, Detailed survey and soil investigations for transmission lines

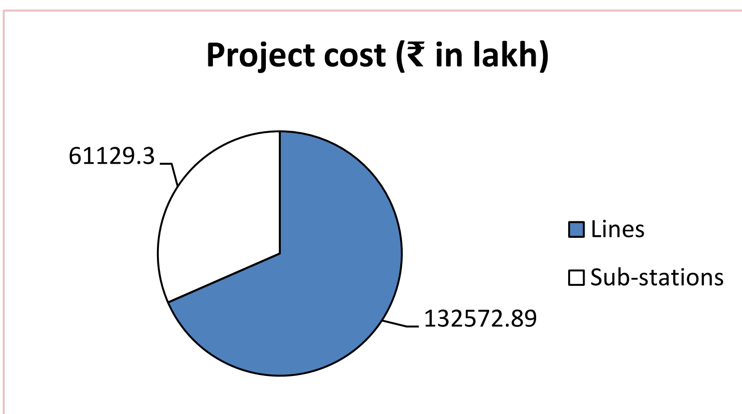
ii). Initiating Forest, Environmental, PTCC, Railway crossings & other statutory clearances
iii). a) Identification of land for Sub Stations and initiation of formalities for land acquisition.
b) Contouring & leveling of substation land and construction of boundary wall.
iv. Basic Engineering & Technical specifications

O&M and Capital Expenditure: During 2015-16 to 2017-18 PTCUL incurred an expenditure of ₹ 1073.04 crore on constructions and maintenance of various types of lines and sub-stations (details in Annexure I&II) in the State. This included expenditure of ₹ 333.41 crore (31.06 *per cent*) on maintenance of projects. Position of year-wise total expenditure and expenditure on maintenance works during 2015-16 to 2017-18 is depicted in bar chart below:



From above it is evident that PTCUL spending on O&M expenditure has remained constant (with slight positive variation) whereas the capital expenditure has decreased substantially in 2016-17 in comparison to 2015-16 which has adversely affected the progress of the projects.

Status of the Projects: In respect of project execution of PTCUL following points were observed. As on March 2018 there were 11 lines and nine sub-stations which were ongoing projects. The percentage of project cost of the lines vis-a-vis sub-stations is given in the above chart.



The major reasons of the delay of projects are discussed below:

1. **Time over run:** Audit noticed that as on March 2018 most of the projects of PTCUL are suffering from time over run. Major factors which adversely affected the completion of project in time are as follow:

(i) ***ROW issue***: Clear Right of way is required for construction of transmission line. ROW is the corridor of a transmission line. This corridor may pass through forest, Govt. land and private land. The company should ensure proper survey of the route and ensure optimum route for the transmission line where the forest reserve, hilly terrains etc. are avoided. Audit noticed that the transmission line details in ***Annexure-I*** were mainly delayed due to non-availability of clear ROW. It was observed in the audit that PTCUL has included the work of detailed survey of route of the line in the scope of contractor. As a result of which even the final route cannot be ascertained before award of work. Only after detailed route survey of a project the designs of the tower and other engineering works can be done. In the absence of the final route all the associated activities get delayed.

(ii) ***Forest clearance***: The OM of the Forest Deptt. clearly stipulates that work on even non-forest area cannot be started till in principal forest approval is received. Audit observed that in respect of the lines detailed in ***Annexure-I,*** all of them were delayed due to non-availability of forest clearance before start of the work. It was further observed that PTCUL has included the work of preparation of forest case in the scope of contractor. In the absence of forest case the work cannot be started even on non-forest land and this usually causes delay. The work of preparation of forest case of a line starts only after award of work to the contractor whereas it should start at the time or before publishing NIT.

Audit observed that due to forest case and ROW issue 11 projects of PTCUL were delayed as detailed in ***Annexure-I.***

(iii) ***Land issue***: Ideally identification of land for Sub Stations and initiation of formalities for land acquisition should be started before NIT and clear title of the land should be ensured before award of work. Audit noticed that PTCUL has awarded work in the case of sub-stations mentioned in annexure-IV without ensuring clear piece of land for the construction of sub-station. This has resulted in undue delay and dispute between contractors and the company. It was also observed that in respect of sub-station PTCUL entered into a fix rate contract and Price Variation is allowed only in the case of transformers. Due to non-inclusion of PV clause and delay in providing land to the contractors many contractors have refused to work despite awarding LoA. The details of delayed sub-stations due to non-availability of land or cancellation of contract as contractor refuse to work due to delay in providing the land by PTCUL is detailed in ***Annexure-II***.

2. Cost over-run: The major effect of time over run of a project is reflected in the cost of the project. The delay of each day results in increase cost of the project due to increase in IDC, expenses on administrative and general issues. Also PTCUL has to pay price variation to the contractors due to delay in execution of project.

(i) *Interest During Construction (IDC)*: PTCUL has financed its projects from loan taken from REC, PFC, ADB and internal resources. The loan provided to PTCUL by these agencies carry an interest rate of 9 to 11.5% and it is charged on the amount withdrawn by PTCUL. Audit noticed that during 2013-14 to 2017-18 PTCUL had to bear IDC amounting to ₹ 47.39 crore on the projects not yet commissioned by PTCUL and are running late in the range of 1 to 8 years.

(ii) *Administrative & General expenses*: Whether a project is commissioned on schedule or delayed it attracts administrative & general expenses in the form of salary, TA/DA and other related expenditure of the staff deployed for the purpose of the project. Whenever a project is delayed the expenditure on this head also gets piled up due to regular deployment of man power for the project. During 2013-14 to 2017-18 PTCUL had to bear Administrative & General expenses amounting to ₹ 23.71 crore on the projects not yet commissioned by PTCUL and are running late in the range of 1 to 8 years.

(iii) *Price variation*: Whenever contract is awarded to bidder it is awarded on a base rate of a base year disclosed in the tender. PV is allowed on the projects running late due to factors beyond control of contractors or which are attributable to the company. Audit noticed that PV amounting to ₹ 27.64 lakh was provided by PTCUL to the contractors in case of PurukulBindal line. Providing PV by PTCUL itself substantiate the fact that the delay was because of the factors attributable to PTCUL and not the contractor.

3. Forging of equity: UERC provide return on equity on the commissioned project to PTCUL @ 15.5% of the equity portion invested and recognized by it. Audit observed that due to delay in commissioning of projects than its scheduled commissioning date, PTCUL is losing on its return on equity. Further, it was observed that PTCUL failed to recover equity amounting to ₹ 51.67 crore from Govt. in respect of the projects under progress and ₹ 13.28 crore in respect of the projects completed as on March 2018. It was also observed that PTCUL initiated its projects on borrowed funds without getting any equity assurance from the Govt.

Conclusion: The practice of PTCUL to award contract without actual line survey, forest approval, soil testing etc. has resulted in undue delay in completion of the project. The delay has resulted in cost overrun in form of IDC, Administrative & General expenses and price variation. No steps have been taken by PTCUL to avoid cost overrun and time overrun.

Reply not furnished by management and matter was brought to the notice.

Annexure-I

Sl. No.	Name of work	Project cost (in lakh)	Revised project cost (in lakh)	Expenditure upto March 2018 (in lakh)	Reason of delay
1	132 KV Purkul Bindal line	367.00	524.03	435.36	Undue delay due to ROW issue and forest case. Further, it was also observed that the in principal forest approval was accorded in 2012 but PTCUL failed to comply the conditions associated with in principal approval. Therefore, final approval was accorded in September, 2017. Also, when PTCUL survey the line it must be aware that there is an orchard and the necessary approval in respect of tree cutting of the same should have been taken in advance.
2.	132 KV KichhaSitarganj LILO	381.37	899.69	681.73	Undue delay due to ROW issue.
3.	220 KV Roshnabad - Puhana LILO	583.00	583.00	402.20	Delay due to ROW issue, hence, villagers have filed litigation against PTCUL
4.	132 KV DC Pithoragarh Lohaghat	4807.64	4807.64	1068.46	Undue delay due to ROW issue.
5.	220 KV DC Lakhwad-Byasi LILO	9845.00	6518.55	1314.82	Undue delay as forest approval was not received till date despite awarding contract on 11-05-2015. Awarding contract without approval of forest case and ROW result in delay.
6.	220 KV Dhauliganga Pithoragarh LILO	2609.10	2609.10	Nil	PTCUL awarded the work of line on 14-10-2015 and the schedule completion date was 13-01-2017 but no progress was recorded in absence of forest approval and actual line survey.
7.	132 KV SC RanikhetBageshwar	9845.00	6018.00	949.17	PTCUL awarded the work of line on 16-02-2015 and the schedule completion date was 15-05-2016 but the work could not be completed because of the ROW problem.

8.	220 KV DC Rudrapur Bramwari	15655.00	--	--	Undue delay due to delay deposit of the mandatory forest compensation.
9.	220 KV Kashipur-Pantnagar LILO at Jafarpur	833.88	--	--	PTCUL had awarded the LoA for the work on 15-11-2016 but the progress of the work is very slow because of delay survey and ROW issue
10.	400 KV Tapovan Pipalkoti LILO	10314.00	--	4911.00	PTCUL entered into contract on 23-04-2011 schedule completion date of 29-07-2013 but only 11 percent of the work could be completed till date as the detailed survey of rout and forest case could not be completed till date (May 2018).
11.	400 KV DC Shrinagar-Kashipur line	83810.00	--	2.66	Line was proposed in 2007 and till date the detailed route survey and forest clearances have not been obtained also after termination of the contract M/s Cobra no contract has been awarded on this line till date (May 2018). PTCUL encashed the bank guarantee of M/s Cobra against Mobilization Advance and Performance Bank Guarantee. Under clause 44 the agreement has detailed dispute and arbitration process and instead of appointing a dispute board or amicable settlement both PTCUL and Cobra directly went for arbitration. Currently, the matter is in arbitration.

Annexure-II

Sl. No.	Name of work	Project cost (in lakh)	Revised project cost (in lakh)	Expenditure upto March 2018 (in lakh)	Reason of delay
1	220 KV sub-station Pirankaliyar	4949.79	4949.79	1001.32	The land which was selected for sub-station was prone to flooding and the level of land was much below than the road level. The slow execution of work especially civil work and earth filling work resulted in undue delay.
2.	132 KV Lohaghat	6740.81	6740.81	0.94	The land was provided by the Govt. for S/s in July 2015. However, the main reason for delay is publishing NIT by PTCUL.
3.	220 KV Ghansali sub-station	14050.00	12265.19	0.34	PTCUL awarded work of construction of the S/s to M/s CGL on 06-11-2013 but failed to provide land to the contractor till December 2014 due to delay in handing over of land the project did not remain viable for M/s CGL and therefore, M/s CGL went for arbitration in 2015. PTCUL failed to award another contract for the work till date.
5.	220 KV sub-station GIS Baram	12084.51	12084.51	2.23	The LOI for was issued to M/s Capital Electech Pvt. Ltd (Lead Partner) on 05 November 2016 which was accepted by M/s Capital as well as work was awarded on 15 November 2016Audit noticed that in respect of the substation till date only 60 percent work has been completed whereas the schedule completion date (April 2018) has already expired.
6.	220 KV GIS Rudrapur	11887.00	--	--	PTCUL awarded the work to M/s Siemens on 14-12-2011 but failed to provide clear land to the contractor. As a resultantly contractor showed his unwillingness to work in 2016 and the contract was cancelled on 20-07-2017.

7.	220 KV S/s Jafarpur	7460.58	6107.00	101.76	PTCUL entered into agreement for the construction of S/s on 15-04-2014 with the schedule completion date of 14-04-2015. The work could not be completed till date because of the slow progress and delay providing approvals of the drawings, completion of boundary walls etc. to the contractor by the PTCUL.
8.	132 KV S/s Bageshwar	9278.00	7095.00	1862.02	The land which was selected for the construction of S/s had only one access road (private land) and the same was obstructed. As the access to the site was not possible the work was delay.
9.	400 KV S/s Landhoura	--	--	--	PTCUL failed to occupy the land as it has not made the necessary payments for acquiring the land.

Para 2: Inventory Management

Inventory is tangible property held for sale in the ordinary course of business, or in the process of production for such sale, or for consumption in the production of goods or services for sale, including maintenance supplies and consumable stores and spare parts meant for replacement in the normal course. Inventory normally comprises of raw materials, work-in-process, finished goods including by-products, stores and spare parts and loose tools. Inventory constitutes a major element of working capital which needs efficient management. Inventory management covers fixation of minimum and maximum levels, determining the size of inventory to be carried, deciding about the issues, receipts and inspection procedures, determining the economic order quantity, proper storage facilities, keeping check over obsolescence and ensuring control over movement of inventories. Thus, it is important that inventory is properly controlled.

In respect of Inventory Management of the PTCUL audit noticed the following

1. **Non creation of working central store**

   PTCUL was created in the year 2004 and is the only transmission utility of the State but even after passage of more than 14 years since its creation, it failed to establish a working central store for managing its inventory. In the absence of a working capital store, PTCUL could not use spare materials of one O&M division efficiently in other O&M division. The inefficiency of store management leads to extra and avoidable expenditure on procuring same and similar supply items. Management stated in its reply that they are in the process of creating store division. Reply of the management affirms the fact that despite creation of the company in 2004 the company has not created any central store.

2. **Non classification of inventory in ABC**

   In material management, the **ABC analysis** (or **Selective Inventory Control**) is an inventory categorization technique. ABC analysis divides an inventory into three categories- "A items" with very tight control and accurate records, "B items" with less tightly controlled and good records, and "C items" with the simplest controls possible and minimal records.

The ABC analysis provides a mechanism for identifying items that will have a significant impact on overall inventory cost, while also providing a mechanism for identifying different categories of stock that will require different management and controls.

The ABC analysis suggests that inventories of an organization are not of equal value. Thus, the inventory is grouped into three categories (**A, B, and C**) in order of their estimated importance.

'A' items are very important for an organization. Because of the high value of these 'A' items, frequent value analysis is required. In addition to that, an organization needs to choose an appropriate order pattern (e.g. 'Just- in- time') to avoid excess capacity. 'B' items are important, but of course less important than 'A' items and more important than 'C' items. Therefore, 'B' items are intergroup items. 'C' items are marginally important.

Audit noticed that inventory is being maintained by each O&M division of the PTCUL individually.

Management replied that the classification of material under A,B,C category is under process . However, the facts remains that at present the inventory maintained is not analyzed as per the ABC analysis.

3. Improper maintenance and storage of inventory.

Audit noticed that in the absence of working stores for the management of inventory, respective O&M division maintained their inventory on their own. However, as informed by the management, in most of the O&M divisions, there are no facilities of proper storage and maintenance of inventory. Oil drums, insulators, conductors and other items of bays and tower parts are either kept in open or are not maintained properly.

Management replied that O& M stores are maintained for proper stacking of supply.

Reply is not satisfactory as the stores at O&M divisions do not have covered area for proper stacking of supply .

4. Non-coding of Materials.

In 2012-13, PTCUL received material management module from UPCL along with financial modules for online maintenance of accounts as well as material. Audit noticed that PTCUL has been using the Financial Accounting Module of the software for managing its accounts and as a result of which PTCUL is able to provide financial accounting data of its accounting units form the Head Quarter on month end basis whereas PTCUL could not use the material management module of the same software because it failed to codify the items/supplies used in the construction and maintenance of lines and substation of the utility. Management replied that coding has been completed. However, the facts remains that same could not be used till the material management module is implemented by PTCUL.

5. Non disposal of scrape leading to blockage of fund.

As per inventory management, inventory in the store of any project or division should be reviewed every year. During review, if any, store/inventory is found surplus/obsolete/non-moving / scrape/unserviceable should be disposed off immediately by way of auction through proper system to avoid carrying cost by the origination on such type of inventory.

Scrutiny of record of PTCUL revealed that inventory were accumulated during the period since 2004 to 2018 and all are lying in Divisions of PTCUL as per details given below :

(₹ In Crore)

Type	As on March 2018
Stock-Serviceable	48.61
Stock-Non-moving	0.81
Stock- Obsolete/Scrap	0.11
Total	**49.53**

It can be seen from the above table that the amount of ₹ 0.81 crore Non-moving and 0.10 crore of scrap material were lying pending to be disposed of in different divisions resulting in blockage of ₹ 0.91 crore

Management replied that the scrap disposal policy of the company is under process. Reply affirms the audit observation.

6. Possibility of surplus purchase in absence of information sharing.

In the absence of central store, each O&M division procures its own inventory which may result in surplus procurement as items procured in one O&M division is generally not known to other O&M division as there is no information sharing mechanism among division in respect of inventory/stores. Also as most of the divisions in PTCUL are located in hilly terrain buying small quantity of supply also restricts the benefit of economic order quantity which may be availed in bulk purchase.

Matter was brought to the notice of management.

Para 3: Avoidable loss of ₹ 57.46 crore due to delayed execution of project.

For the construction of 132 KV double circuit Srinagar-Simli line and LILO on 132 KV Substation Srinagar, PTCUL entered into an agreement with M/s Ranjit Singh on 26.10.2005. The work was scheduled to be completed within six months from the date of the approval of forest department. Though the work was started on 26.10.2005, the line could be energized as late as on 28.04.2016 after delay of 34 months from scheduled date of completion. Due to the delayed execution of the work and faulty DPR the project cost increased exponentially from originally envisaged ₹ 22.26 crore to ₹ 122.15 crore.

It was observed that the major reason of the delay was delay in obtaining approval of forest department. PTCUL submitted the forest case to nodal officer on 22.04.2009 (After elapse of 3 years and 5 months from the date of start of the work) and the principal approval was received on 21.04.2010. Therefore, scheduled completion date was 21.10.2010. There was inordinate delay in FRA compliance by PTCUL resulting into delayed final approval from forest department. The final approval was accorded on 14.06.2013.

It was also noticed that the DPR for the work was also prepared erroneously as the original BOQ envisaged 100 "A" type towers and 110 "B" and "C" type towers, whereas only 4 "A" type towers and 226"B" and "C" type towers were used in the construction of 64.45 KM line. It was also observed that the total number of towers also increased from 210 to 230.

As a result of change in the tower requirement, there was also upward change in the hard ware, land excavation and other civil work. The work of Srinagar-Simli line is predominantly done in the hilly terrain but the initial project cost was not as per the actual requirement of the work. Due to delay in execution of the work, PTCUL was also forced to bear the interest during construction to the tune of ₹ 5.54 crore and had to pay price variation of ₹ 13.67crore to the contractor. The huge variation in the requirements of the materials actually used and the materials projected in the original BOQ illustrates that the DPR of the project was not prepared with due diligence.

After energized the line on 28.04.2016, PTCUL filed a petition (petition no. 51 of 2017) in Uttarakhand Electricity Regulatory Commission (UERC) on 29-11-2017 and revised petition on 19-12-2017 for capitalization of the project. In the petition PTCUL claimed for the total cost of Srninagar-Simli line of ₹ 122.15 crore and the UERC approved only ₹ 64.69 crore against the total cost of the project. Hence, the PTCUL suffered an avoidable loss of ₹ 57.46 crore. In the previous audit, audit had raised this point and stated that “The actual total loss can be ascertained only after approval of the final capitalisation of the project cost by UERC.

Had PTCUL prepared the DPR with proper route survey and with due diligence, it may be aware of the actual cost of the work and related forest issues including presence of forest route in the line. Due to delay in execution of the project an avoidable loss of amounting to ₹ 57.46 crore could have been avoided by the PTCUL.
Management reply not received.

The matter is brought to the notice of Management.

Part-II B

Para 1:- Deficiencies in the contract management of PTCUL

A comprehensive and well-defined framework of rules and procedures for tendering and contract management is essential for execution of works in an economic, efficient, effective and transparent manner. The rules and procedures for tendering and execution of works in the PTCUL are detailed in the Contract & Procurement Manual of orders and subsequent instructions issued from time to time.

Tender stage in public procurement includes preparation of tender documents inviting and opening a tender, pre-qualification and evaluation of bids and award of work. The time between publication of NIT and award of work should not be very long to avoid undue delay in start of work.

A tender after acceptance and signing becomes the “contract”- a legal document. An ambiguous agreement leads to poor contract performance and litigation. It also gives an opportunity to a contractor to make profit out of ambiguous condition. In respect of contract management of PTCUL audit observed the following:

1. **Standard bidding document**: Scrutiny of standard bidding document revealed several deficiencies which adversely affected the interest of the company or execution of works as detailed below:

   Payment and recovery of advances: SBD included provision for payment of interest-bearing Mobilization advance and Equipment advance to the contractor against submission of an unconditional bank guarantee by the contractor issued by a Commercial bank, for an amount equal to the advance payment. Further, circular No. 02/02/11 of CVC in this respect, provides that the bank guarantee taken towards security of mobilization advance should at least the 110 percent of the advance so as to enable recovery of not only principal amount but also the interest portion, if so required. It was observed that in respect of contract awarded to M/s Hitro, M/s Lanco and M/s Cobra PTCUL provided mobilization advance amounting to ₹ 72.70 crore[1] and due to non-performance by the contractors PTCUL encashed their bank guarantees. However, the loss of interest on these agreements could not be made good as contractors failed to provide sufficient running bills or execute work equivalent to interest on mobilization advance. Thus, PTCUL should make necessary precautions for recovery of interest on mobilization advance.

[1] Hitro ₹ 7.17 crore; Cobra- ₹ 53.00 crore; Lanco- ₹ 12.46 crore = ₹72.70 crore

No time limit for recovery of mobilization advance: Similarly, audit observed that no time limit was fixed in the SBD for recovery of these advances. Due to lack of this provision recoveries from contractors were awaited even after expiry of scheduled completion periods as the progress of works for which advances were granted was very slow. Thus, the department indirectly benefitted the contractors who were free to utilize the amount of advance payments at their will. The circular No. 02/02/11 of CVC provide that the mobilization advance should not be paid in less than two installments except in special circumstances for the reasons to be recorded. Audit observed that PTCUL has provided mobilization advance to vendor in one single installment and also the reason for the same was not recorded (Annexure-I).

2. **Assessment of MAAT of the contractors**: SBD prescribed that MAAT of the contractors would be assessed on the basis of a formula
   (a) Domestic Funding: (Cost Estimate in ₹) x (1.5) ÷ (Completion Period In Years).
   (b) ADB Funding: (Cost Estimate in ₹) x (2) ÷ (Completion Period In Years)
   (c) World Bank Funding: (Cost Estimate in ₹) x (2.5) ÷ (Completion Period In Years).
   Audit observed that the PTCUL adopted liberal criteria for assessing the MAAT of contractors and for assessment of MAAT existing commitment and ongoing works of the contractor were not considered whereas each contract reduces the bid capacity of contractor. This has the risk of awarding large value contracts to contractors who are already overburdened with existing works.
   Also the SBD does not ask for positive net worth of the contractor which is required in other PSUs.

3. **Integrity Pact not included in NITs of big contracts**
   For promoting integrity, transparency, equity and competitiveness in Government transactions, many departments of Central Government have adopted Integrity Pact in major contracts relating to procurement of goods as well as construction works. Central Vigilance Commission, New Delhi (CVC) also recommended (May 2009) the inclusion of Integrity Pact in big contracts and that the same be stipulated in NIT itself. Under this pact, bidders/contractors commit themselves to take all measures necessary to prevent corruption. Audit noticed that in the NIT published by or the contracts entered into by PTCUL there were no provision of integrity pact.

4. **Obsolescence of Manual:** The original C&P manual of the PTCUL was prepared in 2007 and the MAAT and other financial qualifying requirements were revised in 2014. The manual should be revised holistically as per the changing requirements of transmission projects.

5. **Planning**
   A comprehensive planning for expansion and up-gradation of transmission network is essential for speedy development of transmission infrastructure and for providing

connectivity to all sub-stations. It stipulates assessment of future requirement of power in the State keeping in view the growth of load and existing status of different categories of consumers/loads.

Absence of Planning: For providing adequate transmission infrastructure in the State especially in hilly region and industrial area, it was imperative that the department prepares long term, medium and short term plans to achieve the goals of providing quality power to all the residents as per declared policy of the government. Scrutiny of records revealed the absence of systematic and comprehensive planning for construction of transmission lines and sub-stations. Neither any long, medium or short term plans were prepared nor any Core Network developed to comprehensively identify load requirement and up-gradation requirements. PTCUL is solely dependent on the assessment of UPCL for load and does not carry out any independent study for requirement of sub-stations and lines in next 20 years and envisaged the problems of ROW which may arrives due to lack of available path for transmission network due to lack of availability of land in near future.

6. **Deficiency in government sanction**: Audit examined the issue and noticed following deficiencies in the entire system of planning, sanction of works and release of funds by the government.

● the government sanctions never mentioned the time-schedules for completion of works.
● the sanctions also did not indicate the proposed fund flow matching with the project completion schedule.
In the absence of any time-schedule approved by the government for the specific works, engineering authorities decided project completion schedule after issue of government sanction, at the time of award of work.

7. **Revision of Schedule of Rates**

Schedule of Rates (SoR) is a basic document which provides rates of different material and items of works for construction of lines and buildings, for preparation of estimates. PTCUL did revise the SoRs regularly, however, they did not maintain any documentation to justify increase in the rates of various items.

8. **Cost Estimation and Sanction of Works**

Preparation of cost estimates and issue of sanctions has a direct bearing on the total project cost, quality of works executed and timeliness of completion of lines and sub-station works. It is essential that laid down provisions of rules and standards/norms prescribed are strictly adhered to in preparing cost estimates and according administrative and technical sanctions. Audit noticed that the cost estimation process of a project in PTCUL is not realistic as in case of lines it is observed that the work related to soil testing, actual route of the line i.e. route survey, the work related to forest clearance etc. are included in the scope of the work of the bidder. Thus, in most of the cases bidder is included in doing the preliminary work and PTCUL ends up awarding a line or a sub-station to a bidder without knowing the final route, the length of the line and the site of the sub-station.

9. **Poor participation and pre-bid meeting** Pre-bid meeting is held to clear the doubt of the bidder and to increase participation. Audit noticed that during 2017-18, 14 projects were awarded and in respect of three projects pre-bid meeting were not held. Further, it was also observed that in four cases only three or less bidders had submitted their bid (Annexure-II).

10. **Deployment of man power:** Audit noticed that the SBD of the C&P does not explicitly define the requirement of trained man power in the contract and it is on the will of the contractor to hire trained engineers or untrained man power for execution of the works.

11. **Delay in award of work:** PTCUL entered into 17 agreements in 2017-18. Out of these 17 agreements in nine cases PTCUL took more than six months in issue of LoA from the date of NIT and in respect of six cases the delay was more than one year (Annexure-III).

12. **Termination of contracts**: During 2015-16 to 2017-18 PTCUL terminated six contracts out of which five were terminated because of contractors default. The value of the terminated contracts stands upto ₹ 764.03 crore in comparison to ₹ 643.85 crore values of contracts awarded during 2017-18 (Annexure -IV).

Management reply not received.

The matter is brought to the notice of Management.

Para 2 : Blockade of fund ₹ 98.40 crore

Government of India (GoI) in January, 2014 approved Ministry of Power proposal of Power System Development Fund (PSDF) to improve, renovate and augment their power transmission assets of strategic importance. National Load Dispatch Centre (NLDC) was nodal agency for implementation of the scheme.

Government of India circulated information of this scheme to States in January,2014. Subsequently in April,2015, DPR of seven crore was proposed by PTCUL. The DPR was revised as per the condition of the Nodal Agency and in March,2016 and DPR of ₹ 127 crore was proposed against which projects of ₹ 125 crore was approved by GoI. Thus, more than one year was consumed in DPR preparation and approval. One of the conditions of the scheme was that the project should be completed in 18 months from the DPR approval date.

The work of PSDF was awarded to M/s Sales & Service Corp. ₹ 20.99 crore; M/s Raj Shyama Construction Pvt. Ltd. ₹ 42.92 crore; M/s Madan Contractors & Co. ₹ 17.99 crore and M/s Ishaan Enterprises ₹ 31.17 crore.

On the basis of the documents provided by the management, audit observed that the agreement of M/s Sales & Service Corp, M/s Raj Shyam and M/s Ishaan were turnkey agreements which comprised of supply as well as erection.

The supply of ₹ 97.95 crore were received to PTCUL by 31st March 2018 against which no erection work was done till that date. Due to non-erection of material in time the guarantee of the items may become void and also the intended objective of the work is not achieved. This has also resulted in blockade of fund to the tune of ₹ 98.40 crore. Also, the scheme has already expired in April 2018. The reason for the non-utilisation of the supply items may be provided to audit along with the details of grant received from GoI and payment made.

Management reply not received.

The matter is brought to the notice of Management.

Para 3 : Deficiency in the internal control of PTCUL

Internal control is an important management tool and comprises all the methods and procedures adopted by the management of an entity to assist in achieving management's objective or ensuring orderly and efficient conduct of its business, including adherence to policies, the safeguarding of assets, prevention and detection of fraud and error, the accuracy and completeness of the accounting records and the timely preparation of reliable financial information. A well-defined monitoring mechanism and Management Information System (MIS), reflect the existence of systems to make available timely, adequate and accurate information to the relevant authority in the organization.

<u>Deficiency in the internal control:</u>

1. ***<u>Operational control : Deficiencies in the monitoring mechanism</u>***

In a transmission company like PTCUL strong operational controls, including periodical review of annual accounts of borrowers updating of basic data of loanee units, periodical physical inspections, etc., are necessary.

Audit observed that there is not MIS system regarding approval of status of project-wise outstanding dues and recovery positions was not appraisal to the BOD to enable monitoring of the outstanding dues at the highest level. Also, the following deficiencies in the monitoring mechanisms were notices:

PTCUL's operational controls were not fully implemented as there was instances where projects not physically inspected before first disbursement and subsequently to ascertain the safety and security of the assets and to monitor and follow up financial health of contractor with a view to avoid default and its assets. Loose operational control was one of the reasons for high levels of delay of projects.

- BOD was not monitoring implementation of its Corporate Plan.

- The functional manuals provide guidelines to the personnel concerned to discharge their duties more effectively. Division/section specific manuals including accounting manuals were not prepared, which would have strengthened the Internal Control Systems in important areas of activities.

2. ***Internal Audit***:Internal Audit is one of the constituents of the internal control mechanism. It is an independent and objective assurance designed to add value and improve an organisation's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes.

   PTCUL was created in June 2004 after unbundling from UPCL. UPCL has its own Internal Audit Wing which is headed by GM(Internal Audit),whereas, PTCUL had outsourced the Internal Audit activity to a chartered Accountant firm. At BOD level there is an Audit Committee which meets quarterly to discuss the Internal Audit reports. The scope of Internal Audit as communicated to the Chartered Accountant firm included audit of operations, policies, plans and procedures, as well as economy and efficiency audit. Audit however observed during examination of the Internal Audit reports for the quarters ending June 2016, September 2016, December 2016, March 2017 and June 2017 that the Internal Auditor had not commented these systemic aspects in their reports. It was further observed that PTCUL had not framed an Internal Audit Manual.

   The Chartered Accountant firm was not conducting a thorough audit of PTCUL which could have brought many a weakness in the internal controls to the notice of the management.

3. ***Quality Assurance & Quality Control*****:** Audit noticed that PTCUL has quality assurance & quality control wing but no equipment for quality testing of supplies/services/works. All the quality testing of supplies/services/works is being witnessed by PTCUL authorized inspecting engineer at the works of manufacturer. In this respect it was also noticed that PTCUL received the requirement of augmentation of Jhajhra substation from Uttarakhand Power Corporation Ltd. Accordingly, PTCUL proposed to increase the capacity of the transformers which was approved in June 2015. PTCUL entered in to an agreement (13 October 2015) with IMP powers Ltd. for supply, erection and supervision of Testing and commission of four transformers (one 50 MVA, two 80 MVA and one 160 MVA). Both the transformer of 80 MVA were to be installed at 220 KV Jhajhra sub-station by replacing two 40 MVA transformers. The contractor delivered the transformer on 22 March 2016 and the payment to the same was released on April 2016. Both the transformers were installed in May 2016. The one transformer which was put to use on 12 May 2016 (Time 16:41) on no load was tripped on

Buchholz relay when put on commercial use on 14 May 2016 (23.29 hrs.). The transformer was taken back for repairing by the M/s IMP (June 2016) after obtaining the Bank Guarantee of ₹ 5.45 crore valid up to 30 September 2016. M/s IMP after repair of said transformer made an inspection call (August 2016) and accordingly physical inspection (August 2016) was done by PTCUL and M/s Moody International (third party). Based on inspection report, the dispatch instruction was issued to M/s IMP in September 2016. The transformer was received at 220 KV Jhajhra sub-station in October 2016 and the performance bank guarantee was released by the PTCUL on 30 September 2016. The pre-commissioning activities and erection work was started by the M/s IMP from February 2017. PTCUL intimated (March 2017) M/s IMP about unbalance results of magnetic balance test and Magnetizing current test. However, the transformer was charged at 18:50 hrs on 15 March 2017 by the representative of the M/s IMP and the transformer tripped again.

4. ***Enterprise Resource Planning (ERP)***: ERP software applications help businesses to manage and connect information from all core areas of the organization with the aim of improving effective decision making. ERP software solutions promote visibility throughout the entire organization, allowing decision makers to improve business operations such as; inventory management, accounting, order management, human resources, etc. ERP software serves as the focal point for managing all important aspects of a business. Audit noticed that PTCUL has no ERP system, due to this the correct and complete information regarding the real time monitoring of projects, human resources, inventory management and transmission lines is not being achieved immediately by the PITCUL.

5. ***Non maintenance of database***: Audit noticed that PTCUL does not have any defined mechanism for capturing the technical data and maintaining proper backup of the same. They were no records to show that the backups of financial data which were taken were retrieved to check the accuracy of the data bank. PTCUL also does not have any test server to check or run the data backup on real time.

   Management reply not received.

The matter is brought to the notice of Management.

Para 4 : Loss of return on investment in case of Srinagar Substation and Srinagar-Srinagar PH line.

As per the best practices of transmission utility, the feasibility of the any project shall be clearly established and the investment plan should be approved by the compliant authority.

PTCUL proposed UITP network in 2007 and the network was approved by CEA. Under this network PTCUL proposed construction of 400 KV Srinagar Substation and 400 KV D/c Srinagar-Srinagar PH line. The purpose of 400 KV Srinagar sub-station was to evacuate the power of NTPC project of 171 MW, Vishnugad project 520 MW, Pipalkoti project 444 MW, Devsari project 252 MW, Badrinath project 300 MW, Singoli-Bhatwari project 99 MW, Rambara project 76 MW and Phatavyung Project 76 MW. 400 KV D/c Srinagar-Srinagar PH line was constructed to evacuate 300 MW power of M/s GVK.

PTCUL awarded the contract of construction of 400 KV Srinagar sub-station to M/s ABB on 29 May 2009 and the schedule date of completion was December 2009. The project was completed in March 2016. The estimated cost of the project was ₹172.08 crore where as it was completed after incurring an expenditure of ₹ 187.86 crore.

Similarly, in respect of 400 KV D/c Srinagar-Srinagar PH line, the agreement was awarded to M/s TATA in April 2011, with scheduled completion date as July 2013. The said line was actually energized in July 2016.

Further, the Srinagar-Srinagar PH line was constructed exclusively for evacuation of 330 MW of M/s GVK and it is now underutilized as the said line is being used for evacuation of only 12 *per cent* royalty share of the State i.e. 39.60 MW. Thus, in the absence of investment approval, the expenditure on 400 KV Srinagar substation failed to earn any return on investment till date and the expenditure on Srinagar-Srinagar PH line is also not fruitful as the said line is used for 12 *per cent* royalty share of the State i.e. 39.60 MW and no tariff on the same is awarded. In the absence of any return on investment made by the PTCUL in Srinagar Substation and Srinagar-Srinagar PH line, PTCUL is incurring loss in form of recurring expenditure on the maintenance and upkeep of line and Substation.

Management reply not received.

The matter is brought to the notice of Management.

Para 5 : Excess person in position against the sanctioned strength.

Scrutiny of the records related to person in position against the sanctioned strength in PTCUL, it was noticed (May 2018) that the deployment of the following Officers/officials was excess against the sanctioned strength of respective cadre.

Sl. No.	Post	Person in position	Sanctioned strength	Excess
1.	S.E. (O&M)	12	06	6
2.	Executive Engineer (O&M)	22	18	4
3.	Executive Engineer (Civil)	1	0	1
4.	AE (E&M)	25	18	7
5.	AE (Civil)	5	1	4
6.	Asstt. Accounts Officer	7	2	5
7.	Accountant	12	9	3
8.	Office Superintendent Gr.-II	1	0	1

Management reply not received.

The matter is brought to the notice of Management.

Part III

(In this part, detail of unsettled paras of previous inspection reports to be reported in below given format.)

Detail of unsettled paras of previous inspection reports:-

Sl. No.	AIR for the period	Part-II-A	Part-II-B	Total
1.	Since Inception to 3/07	1 to 9	1	10
2.	04/2007 to 09/2008	1 to 6	1 & 2	08
3.	10/2008 to 12/2009	1 to 5	1 to 5	10
4.	01/2009 to 09/2010	1 to 2	1 to 4	06
5.	10/2010 to 03/2015	1 to 2	1 to 4	06
6.	04/2015 to 03/2016	1 to 4	1 to 8	12
7.	04/2016to 03/2017	1 to 5	1 to 8	13

Compliance report of unsettled paras of previous inspection report-

Inspection report period and number	Para No. Audit observation	Compliance report	Comments of Audit Party	Remarks
-	-	-	-	-

Part IV

Best practices of the unit

-----NIL----

Part V

Acknowledgement

1. Office of The Accountant General (Audit) Uttarakhand, Dehradun expresses gratitude towards Managing Director, Uttarakhand Power Transmission Corporation Ltd., Dehradun and their officers and employees for promptly providing desired documents and information including infrastructure related co-operation during the course of audit.

2. Though following documents were not produced during audit: NIL
3. Persistent irregularities.

   NIL
4. The following officers held the charge of head of the office during the audit period:

Sl No	Name	Designation	Period
1	Shri. S.N.Verma	Managing Director	April 2017 to 02 August 2017
2	Shri. Atul Kumar Agrawal	Managing Director	From 02 August 2017 to 06 October 2017
3	Shri. R.S. Chauhan	Managing Director	From 06 October 2017 to 31 March 2018
4.	ShriA.Maitra	Director (F)	April 2017 to 31 March 2018
3	Shri. S.K. Tomer	GM (F) I/C	April 2017 to 31 March 2018
4	Shri. Manoj Kumar	DGM (F)	April 2017 to 31 March 2018

Minor and operational irregularities which could not be resolved at the time of audit and have been included in Temporary Audit Note with the request that the compliance report on the same may be sent to Sr. DAG/DAG (concerned sector) within one month of receipt of the letter.

Sr. AO/ES-I