

**Before
UTTARAKHAND ELECTRICITY REGULATORY COMMISSION**

Petition No. 31 of 2024

In the Matter of:

Investment Approval for Procurement 01 Set of Emergency Restoration System (ERS) for Transmission Lines of PTCUL.

And

In the Matter of:

Power Transmission Corporation of Uttarakhand Limited (PTCUL)
Vidyut Bhawan, Near ISBT Crossing,
Saharanpur Road, Majra,
Dehradun

.....Petitioner

Coram

Shri M.L. Prasad

Member (Technical)/Chairman(I/c)

Shri Anurag Sharma

Member (Law)

Date of Order: August 14, 2024

ORDER

This Order relates to the Petition filed by Power Transmission Corporation of Uttarakhand Ltd. (hereinafter referred to as “PTCUL” or “the Petitioner”) vide letter No. 1048/MD/PTCUL/UERC dated 02.04.2024 seeking Investment Approval for “Procurement 01 Set of Emergency Restoration System (ERS) for Transmission Lines of PTCUL” under Para 11 of Transmission Licence. [Licence No. 1 of 2003].

1. Background

1.1 In the aforesaid Petition, the Petitioner has submitted the following proposal for investment approval:

S. No.	Particulars	Project Cost including IDC as per DPR (in Crore)
(a)	Procurement 01 Set of Emergency Restoration System (ERS) for Transmission Lines of PTCUL	27.52

1.2 The Petitioner has submitted a copy of extract of Minutes of 89th meeting of the Board of Directors (BoD) of PTCUL held on 04.03.2024, wherein the Petitioner's Board has approved the Corporation's aforesaid proposals for change in funding agency from ADB to non-ADB as this proposal had been approved previously under the ADB funded project which could not be taken up due to paucity of funds and hence the said proposal is proposed again under non-ADB funding with a debt-equity ratio of 70:30.

1.3 To justify the need for the "Procurement 01 Set of Emergency Restoration System (ERS) for Transmission Lines of PTCUL", the Petitioner has submitted that:

- PTCUL has a vast transmission network of existing 400kV, 220kV and 132kV transmission lines in Uttarakhand and upcoming evacuation projects across from the major river basin, it is essential to have a suitable and standardized emergency restoration system for transmission lines in the vent of major tower failure to improve transmission system commercial loss to PTCUL.
- At present, PTCUL owns and maintains a total of 3373.73 Circuit KM of Transmission lines exposed to frequent natural calamities such as floods, landslides, foundation erosion, high severe winds, etc.
- In the past, it has been observed that one of the longest lead time components of a damaged Transmission Line is the Tower Structure, which can be minimized with advancement in technology by having a universal and effective ERS for lines ranging from 132 kV to 400 kV.
- In the Central Electricity Authority (Grid Standards) Regulations 2010, it is stipulated that each Transmission Licensee should have an arrangement for the earliest restoration of supply using an Emergency Restoration System (ERS) to minimize outage of Transmission Lines in case of Tower Failure. Also, it was

emphasized in the 150th OCC meeting that the Ministry of Power has directed for the requirement of 01 no. ERS set for 5000 circuit KM.

- e) In the past, PTCUL has observed tower failure instances in past monsoon at 132 kV Bindal – Rishikesh D/C Line dated 07.07.2018 and at 132 kV Bhoopatwala-Jwalapur Line dated 01.09.2019 and at 220 kV Jhajra-Vyasi Line on dated 16.08.2023 which require leasing out ERS Towers from PGCIL for earliest Restoration of supply.

1.4 With regards to above, PTCUL is proposing procurement of 01 set of Emergency Restoration System (ERS) for Transmission lines under PTCUL in Garhwal and Kumaon Zone comprising 132 kV, 220 kV and 400 kV tension and suspension towers suitable for avoiding bulk load shedding and earliest restoration of supply.

1.5 On examination of the proposal submitted by the Petitioner, certain deficiencies/shortcomings were observed as mentioned below, which were communicated to the Petitioner vide Commission's letter No. 332 dated 05.06.2024 and directed the Petitioner to submit its reply latest by 14.06.2024:

Query 1: PTCUL to justify with supporting documents for consideration of Quantity Variation @15% as well as Contingencies @ 3% and Cost of Audit, Establishments and Accounting @ 15% while framing the estimate for the project.

Query 2: PTCUL at Point no. 6 on Page no. 19 of its Petition has mentioned that the rates for the aforesaid work and procurement has been taken from M/s Lindsey Manufacturing Company (U.S. based). In this regard, PTCUL is required to submit the reason for consideration of only 01 company i.e. M/s Lindsey Manufacturing Company (U.S. based) while finalising the rates for the ERS system. Also, PTCUL is required to enquire the other States to explore more companies (preferably India-based) to get the details like specification, price and make of the ERS system. The same is required to be consolidated and submitted to the Commission.

Query 3: The rates of the items mentioned in the estimate on page no. 14 of the Petition do not match the budgetary offer provided by the M/s Lindsey Manufacturing Company placed on page no. 21 of the Petition. In this regard, PTCUL is required to justify the variation in the cost with the supporting documents.

Query 4: PTCUL is required to provide the details of manpower required for the operation of the ERS system and also confirm whether PTCUL has sufficient skilled manpower to operate and maintain the ERS system.

1.6 In compliance to the direction, the Petitioner through its letter dated 14.06.2024 submitted the reply to the queries as follows:

Reply 1: PTCUL has prepared cost estimate and Detailed Project report of procurement of 1 set of Emergency Restoration System (ERS) as per prevailing practice of corporation. Provision of 15 % cost variation was made in DPR as per decision made in 74th BoD meeting of PTCUL. Also, the provision of contingencies @ 3% and cost of Cost of Audit, Establishments and Accounting @ 15% were made while framing cost estimate as per corporation order no. 196/D(O)/UPCL/T-10 dated 30.01.2002.

Reply 2: PTCUL requested two world best leading ERS manufacturing company M/ s Lindsey Manufacturing Company (U.S. based) and authorized dealer of M/ s SBB Ltd. (Canada based) for providing budgetary offer for procurement of 1 set of ERS tower but we found budgetary offer/ quotation of M/s Lindsey Manufacturing Company most suitable as it includes detailed specification and voltage wise ERS Tower rates.

So in view of above cost estimate was prepared on the basis of rates provided by M/ s Lindsey Manufacturing Company (U.S. Based)

Reply 3: M/s Lindsey Manufacturing Company provided budgetary offer consists of rates of both 400kV D/C suspension and tension tower and 220KV D/C suspension and tension towers but PTCUL considered only rates of 400kV D/C tension tower and 220kV D/C tension tower while framing cost estimate as provision of 400KV D/C tension tower and 220kV D/C tower fulfils our requirement. So, difference of amount in sanctioned cost estimate and budgetary offer is evident due to non-consideration of some of their rates.

Reply 4: ERS manufacturer/ contractor will provide adequate training to PTCUL engineers, junior engineer and O & M staff for proper installation of ERS towers. Also, PTCUL will outsource skilled manpower for the erection of ERS.

1.7 Further, the Commission vide its letter dated 15.07.2024 directed the Petitioner to make a PowerPoint Presentation before the Commission in the matter on 24.07.2024 in the Commission's office.

1.8 On the scheduled date & time, Petitioner presented the PowerPoint presentation in the matter. During the discussion in the presentation, the Commission's queries and reply submitted by the Petitioner are as follows:

- a) **Query 1:** From where the ERS was arranged in the past and how much time it take to arrange.

Reply: In past cases, PTCUL requested the PGCIL to provide the ERS Tower under emergency conditions. In most cases, in a week, PTCUL was able to get the ERS tower but in some cases, like a condition of tower damage in Satpuli, it was unable to get the tower from PGCIL because of which DISCOM managed the load by way of roasting.

- b) **Query 2:** Whether the same ERS is compatible with different voltage levels/tower designs (132/220/400).

Reply: As presented in the meeting, the proposed 01 set of ERS towers will be designed for the restoration of supply for 400 kV, 220 kV and 132 kV lines.

- c) **Query 3:** Explain the mode of transportation to different sites and whether it is universally installable in all terrains.

Reply: ERS structure will be easily transported from one place to another including hilly terrain with the help of a medium-sized trailer truck due to its compact structural components, which can be assembled as per the requirement of the site/terrain and the proposed ERS tower is suitable to install in all kinds of terrains like hilly, marshy, rocky, riverbed etc.

- d) **Query 4:** Item-wise price offered in budgetary offer and basis of consideration of prices of different parts/accessories of ERS system as submitted in the estimate.

Reply: The budgetary offer provided by the company is the lumpsum amount as per the requirement of the towers provided by the PTCUL.

Based on the budgetary offer, PTCUL prepared the item-wise prices of different parts of the ERS system for the preparation of the final Estimate.

- e) **Query 5:** Explain the planning for the constitution of a dedicated team/gang for the erection and commissioning of the ERS system.

Reply: An explanation on this regard has already been submitted to the Commission vide reply to the queries of the Commission. Further, PTCUL is planning to train the 15-20 nos. officials of the PTCUL to form a team/gang for the ERS system, for which the provision of training is already included in the

proposal. If necessary, PTCUL may explore the possibility of hiring an expert external agency for the installation of the ERS system.

- f) **Query 6:** Explain the possibility of exploration of Funding from other agencies viz. State Disaster Management Department and PSDF as mentioned in the guidelines.

Reply: PTCUL has proposed the aforesaid work under the Special Assistant Scheme of the State i.e. SASCI for which they have to submit the utilisation certificate by 31.03.2025 to the State Government.

1.9 Further, the Commission vide its letter dated 01.08.2024 raised the additional queries w.r.t. presentation held on 24.07.2024 as follows:

Query 1: PTCUL is required to submit the detailed specification of the ERS system proposed to be procured and provide the details of application Indian and international standards based on which BOQ of the bid document will be prepared.

Query 2: PTCUL is required to submit the study or analysis made by it regarding the availability of ERS in the market both in India/abroad specifying the different types of ERS with their distinctions, advantage and disadvantage along with price. Further, PTCUL is required to submit the cost comparison of the ERS systems of similar specification available in India vis-à-vis foreign-based companies with the specification finalized for procurement.

Query 3: PTCUL is required to submit the details of efforts made by it to explore the possibilities for getting the budgetary offer from the Indian manufacturers/suppliers to promote the Make in India initiative of Govt. of India

Query 4 As informed by pertaining to the efforts made by it for financial assistance from the state Government or the letters/correspondences in this regard.[Ref.: "Guidelines for planning, procurement and Deployment of Emergency Restoration System" at page no. 32 of the Petition].

1.10 In response to the aforesaid queries, the Petitioner vide its letter dated 09.08.2024 has submitted the reply as follows:

Reply 1: *Detailed Technical Specifications of ERS system proposed to be procured in PTCUL is hereby enclosed. Also, applicable guidelines IEEE-1070 is being provided. At present, no Indian Standards for ERS System is available.*

Reply 2: *PTCUL had sought budgetary offers from standard reputed firms and only M/s Lindsey Manufacturing Company and M/s SBB Ltd. (through its authorized dealer*

M/s Madhav engineering) have responded and cost estimate was prepared on the basis of budgetary offer obtained from lowest quote from M/s Lindsey manufacturing. No Indian manufacturer of ERS with adequate experience/performance was available then in the market so PTCUL could not carryout cost comparison of ERS system of similar specification available in Indian vis-a-vis foreign-based companies.

Reply 3: *It is to kindly apprise that PTCUL did not seek budgetary offer from Indian manufacturer of ERS as no Indian manufacturer had supplied ERS as per our information till we invited tenders. It is pertinent to mention here that ERS is very important and valuable commodity. So, in the interest of the State PTCUL sought budgetary offer only from worldwide reputed OEM/suppliers.*

Reply 4: *PTCUL is arranging Funding tie up for procurement of ERS from SASCI (special assistance to states for capital investment) FY 2024-25 through planning department of state government. Under SASCI 70% is interest free loan and 30% is state government equity is under consideration. Proposal of financing for procurement of 01 set ERS for PTCUL transmission lines under SASCI (2024-25) was uploaded on PM Gati Shakti Portal Uttarakhand. PTCUL has to submit utilisation certificate after completion of work under SASCI latest by 31.03.2025 positively.*

2. Commission's Observations, Views and Directions:

2.1. On examination of the Petition and subsequent submissions made by the Petitioner, Observation and views of the Commission are as follows:

2.1.1 With regards to the consideration of rates of only one company for the preparation of the estimate, the Petitioner obtained the budgetary offer from two leading ERS manufacturing companies i.e. M/s Lindsey Manufacturing Company (U.S. based) and M/s SBB Ltd. (Canada based) to provide a budgetary offer but after review, Petitioner found the budgetary offer/quotation of M/s Lindsey Manufacturing Company most suitable for preparation of estimate for the ERS system.

Furthermore, on the Commission's queries regarding the cost comparison of the ERS system between foreign and Indian-based companies, Petitioner submitted that no Indian manufacturer of ERS with adequate experience/performance was available in the market, therefore, PTCUL could not carry out a cost comparison of ERS system of similar specification available in India vis-à-vis foreign-based companies.

In this regard, the Commission observed that the budgetary offer considered by the Petitioner for the preparation of the estimate for the ERS system is due to the

unavailability of rates of the ERS system in the SoR of PTCUL. **In light of the aforesaid circumstances, the Commission deems it necessary that Petitioner must ensure to publicise the tender/bid document of the ERS system in such a way through all major national newspapers (Hindi and English) that every possible Indian manufacturer of the ERS system can participate in the tender process.**

2.1.2 Further, in response to the query of the Commission regarding the requirement of manpower for the operation of the ERS system, the Petitioner submitted that the manufacturer/contractor of ERS system will provide adequate training to PTCUL engineers and O&M staff for proper installation of ERS towers and if required PTCUL will outsource skilled manpower for the erection of ERS system. In this regard, the Commission observes that the Petitioner has considered the cost of field and software training of the ERS system in the estimate which includes the 05 days of training for erection and 03 days of training for ERS design software amounting to Rs.15 lakh, which substantiate the claim of the Petitioner.

2.1.3 With regards to the financial assistance from the State Government, the Petitioner submitted that PTCUL is making its endeavour for arranging fund from SASCI (Special Assistance to State for Capital Investment) for FY 2024-25. Under SASCI, 70% is an interest-free loan and 30% is State Government equity, to avail this assistance PTCUL would have to submit the utilisation certificate after completion of work by 31.03.2025. In this regard, the Commission is of the view that it would be better for the Petitioner as well as for the consumer of the State if PTCUL gets financial assistance from the SASCI for the ERS system.

2.1.4 With regards to the consideration of Quantity Variation @ 15%, Contingency @ 3% and Cost of Audit & Establishment @ 15% in the estimate, the Petitioner has considered the provision of 15% cost variation as decided in the 74th BOD meeting of PTCUL and considered the Contingency @ 3% and Cost of audit & establishment @ 15% as per the UPCL's Office Memorandum dated 30.01.2002. In this regard, the Commission has noted that the Petitioner in similar kind of investment approvals has considered the Project overhead @ 5%, Contingencies @ 3% and Price Contingencies @ 6.8% over the base cost. Hence, to maintain uniformity among the investment approvals the Commission has considered the

Project Overhead @ 5% and Contingency @ 3% to derive the final cost of the project as per the past practice of the Commission.

2.2. Based on the above, the Commission is of the view that as mentioned in Regulation 22 of the Central Electricity Authority (Grid Standards) Regulations, 2010 and Guideline for Planning, Procurement and Deployment of ERS system (NRPC), the Emergency Restoration System (ERS) system found to be necessary and mandatory for the transmission licensee for the 400 kV and 220 kV transmission lines to minimise the outage time in case of tower failures in the State. In the past, as submitted, the Petitioner has faced many cases of tower failure due to natural calamities for which it has to outsource the ERS system for restoration of supply in the State, which is time-consuming and many a time not available to the Petitioner.

2.3. In this regard, the Commission hereby grants in-principle approval for the expenditure of Rs. 21.82 Crore only as per the table given below with the direction that the Petitioner should go ahead with the aforesaid works subject to fulfilment of the terms & conditions mentioned in Para 2.4 below:

S. No.	Particulars	Project Cost including IDC as per DPR (in Crore)	Cost considered by the Commission including IDC (in Crore)
(a)	Procurement 01 Set of Emergency Restoration System (ERS) for Transmission Lines of PTCUL.	27.52	21.82

2.4. Terms and Conditions subject to which in-principle approval granted by the Commission are as follows:

- (i) The Petitioner should go for the competitive bidding for obtaining most economical prices from the bidders. Considering facts of the case, the Commission deems it necessary that Petitioner must ensure to publicise the tender/bid document of the ERS system in such a way through all major national newspapers (Hindi and English) that every possible Indian manufacturer of the ERS system can participate in the tender process.
- (ii) All the loan conditions as may be laid down by the funding agency in their detailed sanction letter are strictly complied with.
- (iii) The Petitioner shall, within one month of the Order, submit letter from the State Government or any such documentary evidence in support of its claim for

funding agreed by the State Government or any other source in respect of the proposed projects.

(iv) After completion of the aforesaid projects, the Petitioner shall submit the completed cost and financing of the projects.

(v) The cost of servicing the project cost shall be allowed in the Annual Revenue Requirement of the petitioner after the assets are capitalized and subject to prudence check of cost incurred.

2.5. The approval is given subject to the above conditions and on the basis of submissions and statement of facts made by the Petitioner in the Petition under affidavit, therefore, violations of the condition and in case any information provided, if at any time, later on, is found to be incorrect, incomplete or relevant information was not disclosed, and which materially affects the basis for granting the approvals, in such cases the Commission may cancel the approval or refuse to allow the expenses incurred in the ARR/True-up apart from initiating plenary action.

Ordered accordingly.

(Anurag Sharma)
Member (Law)

(M.L. Prasad)
Member (Technical)/Chairman(I/c)