

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 162/2011

Coram:

Shri V.S. Verma, Member

Shri A.S. Bakshi, Member

Date of Hearing: 11.7.2013

Date of Order : 31.7.2013

In the matter of

Petition under Section 62 read with Section 63 of the Electricity Act, 2003 for determination of transmission charges for additional scope of work and corresponding amendment of transmission charges approved by the Commission through order dated 28.10.2010 for transmission system being established by petitioner as there is a change/addition in the scope of work of the project

And

In the matter of

East North Interconnection Company Limited, New Delhi

.... **Petitioner**

Vs

Punjab State Transmission Corporation Limited and Others

... **Respondents**

Following were present:

Shri Venkatesh, Advocate for the petitioner

Shri T.A.Reddy, ENICL

Shri Pulkit Sharma, ENCIL

Shri S.Krishnan, ENCIL

Shri T.P.S.Bawa, PSPCL

ORDER

The petitioner, East North Interconnection Company Limited (ENICL), is a fully owned subsidiary of Sterlite Technology Limited (STL) which was selected as the successful bidder based on the international tariff based competitive bidding under section 63 of the Electricity Act, 2003 (the 2003 Act) to establish the following transmission system on 'build, own, operate and maintain' basis and to provide transmission service to the Long Term Transmission Customers of the project:



- (a) Bongaigaon-Siliguri 400 kV Quad D/C transmission line
- (b) Purnea-Biharsharif 400 kV Quad D/C transmission line

2. The petitioner has filed this petition seeking the following prayers:

- (a) Allow this petition for increase of transmission charges with respect to the Transmission Project on account of (i) the change in the geographical co-ordinates viz. "start" and "end" points, (ii) additional expenditure towards forest clearance of 1.84 KM (8.46 Ha forest land),
- (b) Pass any other order/ directions this Hon'ble Commission in the facts and circumstances of the present case may deem as fit and proper.

3. The Commission after hearing the petitioner, Long Term Transmission Customers of the project, Power Finance Corporation (Bid Process Coordinator), Central Transmission Utility and Central Electricity Authority decided the prayers of the petitioner in order dated 8.5.2013 as under:

"40. In view of the above discussion, we are of the view that there is a change in the scope of work as the petitioner would be required to construct the transmission lines for more distance than was envisaged on the Survey Report based on which the petitioner has submitted the bid. The distance of both the lines given in the Survey Report was 427 km and the petitioner had also sought and has been granted the transmission licence for 427 km vide our order dated 28.10.2010 in Petition No.131/2010. There is also change in scope of work in so far as the forest clearance is concerned as there was a categorical representation by BPC that there was no forest clearance involved in the route and there is no way that the petitioner can seek interconnection with Bongaigaon sub-station without its line passing through the Satbandh reserve forest. In our view the additional line length beyond 427 km for which transmission licence has been granted and the expenditure involved in obtaining the forest clearance are expenditure which have emerged after the bidding process is over and are outside the scope of work of the project.

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42. The Commission has the statutory responsibility to balance the interest of the consumers with the need for investment. While the petitioner needs to be compensated for the additional scope of work which has been imposed subsequent to the bidding process, it has to be ensured that the petitioner does not unduly gain by virtue of our decision in this order. The expenditure on the construction of the transmission line has to be optimized in the interest of the consumers. Therefore, we direct that the petitioner shall be entitled to claim the transmission charges on pro rata basis for the expenditure incurred on

constructing the transmission lines for the additional scope of work i.e. the difference between the actual length of the transmission lines linking the existing sub-stations of the PGCIL at Bongaigaon, Siliguri, Purnea and Biharsharif and the length of the transmission lines (427 km) for which license has been granted vide our order dated 28.10.2010 in Petition No.131/2010."

4. The Commission also directed the Central Electricity Authority to verify the actual line-length of the Purnea-Bihar Sharif and Bongaigaon-Siliguri 400 kV Quad D/C Transmission Lines as under:

"43. We direct the Central Electricity Authority to verify and certify the additional scope of work to be undertaken by the petitioner over and above 427 kms for which the transmission licence has been granted and report to the Commission by **10.6.2013**. The petitioner is directed to place all relevant documents before the CEA and render assistance as may be required. All concerned namely, the LTTCs, CTU and PFC shall render necessary assistance to CEA as may be required. On receipt of the report, the Commission will decide the modalities of reimbursement of the expenditure incurred by the petitioner for the additional scope of work."

5. Central Electricity Authority (CEA) constituted a team of four officers who conducted site visit from 3.6.2013 to 19.6.2013 to measure the route length Purnea-Bihar Sharif 400 kV Quad D/C Transmission Line and Bongaigaon-Siliguri 400 kV Quad D/C Transmission Line. CEA vide its letter dated 25.6.2013 has submitted the report regarding additional scope of work undertaken by the petitioner over and above 427 km for which the transmission licence has been granted. The relevant portion of the report is extracted as under:

"The route length between angle towers were measured considering the straight line between angle towers (deviation angle of suspension tower is 0 to 2°). All the towers of Purnea-Biharsharif line have been erected and stringing of conductor is in progress line. In Bongaigaon-Siliguri line, foundation for 29 angle towers are yet to be constructed, the length between next existing angle tower was measured since check survey mark (pillar) for the location was not available at site. The details of line length for both the line is as under:

1. Purnea-Biharsharif 400 kV D/C line

As per tower schedule submitted by M/s ENCIL

Total no. of locations	625
Total no. of angle towers	145
Total length of line (A1)	233.364 Km

As per measurement taken by CEA officers



Total no. of locations	625
Total no. of angle towers erected	145
Total length of line (A2)	232.789 Km

Copy of tower schedule and section length measured between angle towers is attached Annexure-I

2. Bongaigaon-Siliguri 400 kV D/C line

Total no. of locations	610
Total no. of angle towers	305
Total length of line (B-1)	221.273 Km

As per measurement taken by CEA officers

Total no. of locations	610
Total no. of angle towers	305
Total no. of angle towers erected	241
Total no. of angle tower foundations completed	276
Total length of line (B2)	220.918 Km

Copy of tower schedule and section length measured between angle towers is attached at **Annexure-II**

Total length of both lines:	
As per tower schedule submitted by ENCIL (A1+B1)	454.637 Km
As per measurement taken by CEA officers (A2+B2)	453.714 Km

Additional length of line over and above 427 km 26.714 Km"

6. The report of the CEA was submitted on 26.6.2013. Copies of the report were supplied to the petitioner and the Long Term Transmission Customers. The petition was listed for hearing on 11.7.2013. During the hearing, the representative of Punjab State Power Corporation Limited (PSPCL) sought time to convene a meeting of Long Term Transmission Customers and file consolidated views which was allowed. PSPCL has filed its reply vide affidavit dated 18.7.2013. PSPCL has submitted that the meeting was attended by the representatives of PSPCL and BSES Rajdhani Power Limited and after discussion of various aspects of the CEA report, the consensus regarding the representation on CEA report emerged on the following broad points:

(a) Measurement of the transmission line routes by CEA team through GPS instruments;

(b) Measurement of line length of Bongaigaon-Siliguri line in the absence of some tower foundations;

(c) Need for document verification by CEA team; and

(d) Comment on the Commission's order on the modalities of reimbursement.

7. The petitioner has filed its rejoinder vide affidavit dated 24.7.2013 refuting the contentions of PSPCL in its reply.

8. We have considered the submissions of the petitioner and PSPCL on the report of CEA and other aspects. Our observations/decisions on the various issues raised by PSPCL are as under:

(a) Measurement of line length by GPS instruments: As per the report the petitioner made available the tower schedule of both the transmission lines and GPS instruments to CEA team, the route length between the angle towers was measured by CEA team considering the straight line between angle towers (deviation angle of suspension tower is 0 to 2°). PSPCL has submitted that CEA report does not state whether the line length was measured by GPS instrument or whether the measurement of length/verification was done physically by CEA team by measuring actual length between various towers. PSPCL has also submitted that if the distance between the towers was measured through GPS instrument, then cross checking by physical measurement should have been done at least for some percentage of towers (say 10-20%) to verify the correctness of GPS instrument and the procedure. The petitioner in its rejoinder has submitted that the methods adopted by CEA are more accurate and

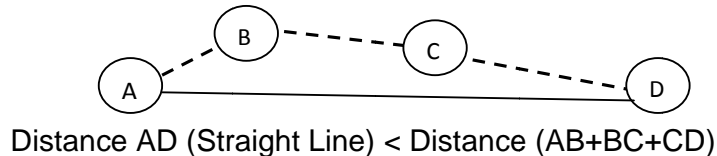
reliable i.e. the lengths were measured by GPS instruments on the ground physically.

We have considered the rival contention of the parties. Even though it is not categorically stated that measurement was through GPS instrument, a reading of the report reveals that GPS instruments were used to measure the length. CEA is a statutory body and apex technical organisation in the matters concerning electricity in the country and is mandated to advise the Commission on all technical matters relating to generation and transmission of electricity under section 73(n) of the Act. We are of the view that the methodology and tools used by CEA team must have been appropriate and are as per standard practices. GPS being a modern technology has been rightly used by the CEA team for measurement of the length of the transmission lines. Like any other engineering measurements including the physical measurement, the error, if any, is averaged out across the large number of observations. The Commission is of the view that the line length verified by the CEA team needs to be accepted as accurate and reliable.

(b) Measurement of the line length of Bongaigaon-Siliguri Line: CEA report says that in Bongaigaon-siliguri line, out of 305 angle towers, total number of angle tower erected is 241 and total number of angle tower foundations completed is 276. Hence, the length between next existing angle tower was measured since the check survey mark (pillar) for the location was not available. PSPCL has submitted that since foundations are missing in 29 locations, it is not possible to correctly measure the line length. It has been suggested that the measurement or checking of line length of Bongaigaon-

Siliguri line should be carried out again after ENCIL certifies that the foundation of all the towers have been constructed and the towers have been erected. The petitioner in its rejoinder has submitted that CEA report has categorically stated that wherever the foundations are not made, the route length between next existing angle towers have been measured. The petitioner has submitted that in actual, the line length is more as it is common practice that the transmission line cannot be constructed on the basis of B-LINE.

We are of the view that the methodology adopted by CEA has clearly brought out that the team has used the straight line method for measurement of distance between next existing angle towers. This method is called Bee Line Method. This corresponds to the minimum length of the line between locations of towers and is explained graphically as under:



We are in agreement with the measurement carried out by CEA and accordingly, we accept that there is an additional line length of 26.714 km over and above 427 km in both the transmission lines. However, in order to address the apprehension of PSPCL, we direct that after completion of the Bongaigaon-Siliguri line, CEA team shall again measure the distance between the angle towers in these 29 locations and variation, if any, shall be adjusted.

(c) Document Verification by CEA: PSPCL has submitted that in compliance with the directions of the Commission to “verify and satisfy”, CEA team should have verified the two documents supplied by the petitioner, namely, tower

schedule of Biharsharif-Purnea line as prepared by contractor, Bajaj Electrical Ltd. And tower schedule of Bonaigaon-Siliguri line as prepared by contractor Simplex Infrastructure Ltd. According to PSPCL, it was necessary to verify the dates as it would have been known whether the contractors had given the dates prior to the filing of the petition for adoption of tariff and whether the petitioner despite prior knowledge about the additional scope of work did not raise the issue at the time of adoption of tariff. PSPCL has further submitted that the other document which should have been verified relating to additional scope of work are the documents of purchase order or contract issued by the petitioner on the suppliers for purchase of tower and ASCR conductor as the order can be placed after the tower schedule is finalised. The petitioner in its rejoinder has submitted that the only activity which was required to be accomplished by CEA has been completed and PSPCL cannot be permitted to go into the merits of the case all over again after the similar averments made by PSPCL have been considered by the Commission in the order dated 8.5.2013.

In our view, the requirement of verification of the particular documents and the purpose of verification as stated by PSPCL are outside the scope of the directions to CEA in our order dated 8.5.2013 which were limited to physical verification of the line length of the transmission lines. Moreover, the Commission after considering the submission of PSPCL and other respondents has come to the conclusion in order dated 8.5.2013 that there is additional line length which the petitioner is required to construct over and above the line length for which licence was granted and accordingly directed CEA to verify the

exact scope of additional work. The said decision cannot be revisited by the Commission.

(d) PSPCL has further commented that the observations of the Commission in the order dated 8.5.2013 that “the Commission will decide the modalities of reimbursement of the expenditure incurred by the petitioner for additional scope of work” amount to pre-judging the matter and assuming that there will be increased length of line. PSPCL has further submitted that there is no provision in RfP or RfQ or TSA for reimbursement of expenditure for claimed additional scope of work. PSPCL has further submitted that the claim of the petitioner for pro-rata increase in line length is not agreed to by the Long Term Transmission Customers since it was due to negligence or lack of due diligence on the part of the petitioner while submitting the bid for which the Long Term Transmission Customers should not be penalised.

We have considered the objections of PSPCL. In order dated 8.5.2013, the Commission had come to the conclusion on the basis of the data produced by PFC and CTU that there is additional line length involved in these two lines over and above the line lengths for which transmission licence was issued. In this connection, para 36 of the order dated 8.5.2013 is relevant which is extracted as under:

“36. It is evident from the above submission of BPC that there is discrepancy between the length of the transmission lines for which bids were invited and the length as per the actual locations of the sub-stations of PGCIL. The above information has also been confirmed by PGCIL in its affidavit dated 29.3.2012. In our view, it stands established on the basis of the submissions of PGCIL and BPC that the coordinates given in the Survey Report as part of the RfP document are substantially different from the coordinates of the sub-stations of PGCIL. There is no rational explanation for the discrepancy between the coordinates in the Survey Report and the actual coordinates of PGCIL sub-stations. In the absence of any provision in the Bid documents or any

clarifications during the bid process that the exact coordinates of the sub-stations of PGCIL should be checked by the bidders with PGCIL before submitting the bids, we cannot hold that the bid submitted by the petitioner was not in accordance with the bid documents and the petitioner has submitted the bid on wrong assumption that the sub-stations would be at the start and end points as given in the Survey Report. In our view, the disclaimer cannot cover a wrong presentation in the Survey Report about the start and end points of the coordinates.”

Therefore, the contention of PSPCL that the Commission has pre-judged the issue regarding increased line length is not correct. As regards PSPCL's contention regarding its disagreement for reimbursement of transmission charges for additional line length on pro-rata basis, it is clarified that the Commission has already decided to allow the transmission charges for additional scope of work on pro-rata basis as is evident from para 45 of the order dated 8.5.2013 which is extracted as under:

“41. The next question arises as to what relief can be granted to the petitioner for the additional scope of work. The case of the petitioner has resulted in additional scope of work which can be addressed in two ways. Firstly, bidding can be carried out for the additional scope of work and based on the outcome, the work can be executed. This is time consuming and will not conform to the time line fixed for operationalisation of the transmission system. The other alternative is to direct the petitioner to execute the additional scope of work and to allow the petitioner the transmission tariff on pro-rata basis. In our view, the second option is more practicable and is in the interest of the completion of the project.”

In view of the clear-cut decision of the Commission as regards the reimbursement of transmission charges for additional scope of work, we reject the contention of PSPCL in this regard.

9. In para 43 of order dated 8.5.2013, the Commission had observed as under:

“On receipt of the report, the Commission will decide the modalities of reimbursement of the expenditure incurred by the petitioner for the additional scope of work.”

CEA has submitted its report in which it has been clearly indicated that there is additional line length of 26.714 km in both the transmission lines over

and above 427 km for which transmission licence was granted. Keeping in view the decision to allow the transmission charges on pro-rata basis in para 41 of the order dated 8.5.2013, the transmission charges in percentage term for the additional scope of work have been computed as under:

Length of Line as per Transmission license (in KM)	Length of line as certified by CEA (in KM)	Difference (in KM)	% Increase over the line length in Transmission Licence
427.310 KMS	453.714	26.404	6.179%

Accordingly, we direct that the petitioner shall be entitled for reimbursement of additional transmission charges @ 6.179% of the transmission charges computed every month in accordance with schedule of levelized tariff in the Transmission Service Agreement which has been adopted in our order dated 28.10.2010 in Petition No.130/2010. The petitioner shall be treated as a transmission licensee for the additional length of transmission lines as brought out in the above table.

10. The petitioner has to incur additional liability in so far as the forest clearance as Bongaigaon sub-station is located in Satbandh reserve forest and the Bongaigaon-Siliguri transmission line will have to pass through 1.84 km of forest area. PSPCL has not submitted any comments with regard to the expenditure involved in forest clearance. In our view, the expenditure on forest clearance is in the nature of Change in Law. Article 12.1.1 of the Transmission Service Agreement is extracted as under:

"12.1 Change in Law

12.1.1 Change in Law means the occurrence of any of the following after the date, which is seven (7) days prior to the Bid Deadline resulting into any additional recurring/ non-recurring expenditure by the TSP or any income to the TSP:

- The enactment, coming into effect, adoption, promulgation, amendment, modification or repeal (without re-enactment or consolidation) in India, of any Law, including rules and regulations framed pursuant to such Law;
- A change in the interpretation or application of any Law by any Indian Governmental Instrumentality having the legal power to interpret or apply such Law, or any Competent Court of Law;
- The imposition of a requirement for obtaining any Consents, Clearances and Permits which was not required earlier;
- A change in the terms and conditions prescribed for obtaining any Consents, Clearances and Permits or the inclusion of any new terms or conditions for obtaining such Consents, Clearances and Permits;
- Any change in the licensing regulations of the Appropriate Commission, under which the Transmission License for the Project was granted if made applicable by such Appropriate Commission to the TSP;
- Any change in the Acquisition Price; or
- Any change in tax or introduction of any tax made applicable for providing Transmission Service by the TSP as per the terms of this Agreement."

The expenditure on forest clearance is covered under "imposition of a requirement for obtaining any Consents, Clearances and Permits which was not required earlier". The expenditure has emerged after the award of the project as there was a categorical denial in the RfP document that there was no forest clearance involved. Accordingly the expenditure on forest clearance shall have to be reimbursed under Change in Law. The expenditure shall be incurred during the construction period of the transmission line. Relief under Change in Law during the construction period is provided in Article 12.2.1, 12.2.3 and 12.2.4 of the Transmission Service agreement which is extracted as under:

"12.2. Relief for Change in Law

12.2.1 During Construction Period:

During the Construction Period, the impact of increase/ decrease in the cost of the Project in the Transmission Charges shall be governed by the formula given below:

For every cumulative increase/ decrease of each Rupees Four Crores (Rs. 4,00,00,000) in the cost of the Project up to the Scheduled COD of the Project, the increase/ decrease in non-escalable Transmission Charges shall be an amount equal to 0.32 percent (0.32) of the Non-Escalable Transmission Charges.

12.2.2 XXXX

12.2.3 For any claims made under Article 12.2.1 and 12.2.2 above, the TSP shall provide to the Long Term Transmission Customers and the Appropriate Commission documentary proof of such increase/ decrease in cost of the Project/ revenue for establishing the impact of such Change in Law.

12.2.4 The decision of the Appropriate Commission, with regards to the determination of the compensation mentioned above in Articles 12.2.1 and 12.2.2, and the date from which such compensation shall become effective, shall be final and binding on both the Parties subject to rights of appeal provided under applicable law."

In accordance with this provision, amount equal to 0.32 percent of the Non-Escalable Transmission Charges shall be allowed for every cumulative increase/decrease of each Rupees Four Crores (Rs. 4,00,00,000) in the cost of the Project. Since actual expenditure towards forest claim is not known, relief on account of forest stretch area cannot be worked out at this stage. The petitioner is directed to approach the Long Term Transmission Customers with the proof of the expenditure on forest clearance with copy to this Commission in accordance with Article 12.2.3 of the Transmission Service Agreement and the actual expenditure on forest clearance shall be included in the transmission charges in accordance with Article 12.2.1 and shall be payable from the date of commercial operation of Bongaigaon-Siliguri Transmission Line.

11. The petitioner during the course of hearing and also in its rejoinder has submitted that as the scope of work has increased due to which the scheduled COD has been delayed and the reasons are beyond the control of the petitioner, the Commission may consider to allow IDC from the date of scheduled COD and to grant permission to the petitioner for provisionally billing the tariff to the Long Term Transmission Customers from the date of scheduled COD to ensure that the project remains financially viable. In our view, these submissions are beyond the scope of the pleadings and prayers in the petition

and cannot be considered at this stage. The petitioner is at liberty to pursue appropriate remedy in accordance with law.

12. We direct the Secretary of the Commission to issue necessary modification to the transmission licence to account for the additional line length of the transmission lines.

13. PSPCL has submitted that after the petitioner has filed its response to the reply of PSPCL filed vide affidavit dated 18.7.2013, PSPCL may be given an opportunity to give reply to the petitioner's response and further hearing. In our view, no new point has been raised by the petitioner in its rejoinder to PSPCL's reply and therefore, there is no need for further reply and hearing which will delay the disposal of the case.

14. The petition is disposed of in terms of the above.

sd/-
(A.S. Bakshi)
Member

sd/-
(V.S. Verma)
Member