

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No.146/MP/2017**

**Coram:**

**Shri P.K.Pujari, Chairperson**

**Shri A.K.Singhal, Member**

**Shri A.S.Bakshi, Member**

**Dr. M.K. Iyer, Member**

**Date of Order : 28<sup>th</sup> of May, 2018**

**In the matter of**

Approval under Regulation 54 and Regulation 55 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, "Power to Relax' and "Power to remove Difficulty" for one time reimbursement of carrying cost for replacement of porcelain insulators with Polymer Insulators of the assets covered under Petition No. 305/2010 in respect of Northern Region.

**And**

**In the matter of**

Power Grid Corporation of India  
B-9, Qutab Institutional Area,  
Katawaria Sarai, New Delhi-110016

**...Petitioner**

**Vs.**

1. Chairman, Rajasthan Rajya Vidyut Prasaran Nigam Ltd.  
Vidyut Bhawan, Vidyut Marg, Jaipur-302005
2. Managing Director, Ajmer Vidyut Vitran Nigam Limited  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur
3. Managing Director, Jaipur Vidyut Vitran Nigam Limited  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur
4. Managing Director, Jodhpur Vidyut Vitran Nigam Limited  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur
5. Chairman Himachal Pradesh State Electricity Board Limited

- Vidyut Bhawan, Kumar House Complex Building II  
Shimla-171004
6. Chief Engineer, Punjab State Power Corporation Ltd.  
Thermal Shed TIA Near 22 Phatak,  
Patiala-147001
7. S.E. /C & R-1,Haryana Power Purchase Centre,  
Shakti Bhawan, Sector-6,  
Panchkula (Haryana)-134109
8. Commissioner, Power Development Department,  
Government of Jammu & Kashmir  
Mini Secretariat, Jammu
9. Chairman, Uttar Pradesh Power Corporation Limited  
(Formerly Uttar Pradesh State Electricity Board)  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow-226001
10. Chairman, Delhi Transco Ltd.  
Shakti Sadan, Kotla Road,  
New Delhi-110002
11. CEO, BSES Yamuna Power Ltd.  
BSES Bhawan, Nehru Place,  
New Delhi
12. CEO, BSES Rajdhani Power Ltd.  
BSES Bhawan, Nehru Place,  
New Delhi
13. CEO, North Delhi Power Ltd.  
Power Trading & Load Dispatch Group,  
Cennet Building, Adjacent to 66/11 kV Pitampura-3  
Grid Building, Near PP Jewellers, Pitampura,  
New Delhi-110034
14. Chief Engineer, Chandigarh Administration  
Sector-9, Chandigarh.
15. Managing Director, Uttarakhand Power Corporation Limited  
Urja Bhawan, Kanwali Road,  
Dehradun.
16. Chief Electrical Distribution Engineer  
North Central Railway, Allahabad.

17. Chairman  
New Delhi Municipal Council  
Palika Kendra, Sansad Marg,  
New Delhi-110002

...Respondents

**The following were present:**

Shri S.B. Upadhyay, Senior Advocate, PGCIL  
Shri R.P. Padhi, PGCIL  
Shri M.M. Mondal, PGCIL  
Shri S.K. Venkatesh, PGCIL  
Ms. Supriya Singh, PGCIL  
Shri Rajeev Kumar, PGCIL

**ORDER**

The Petitioner, Power Grid Corporation of India Limited, has filed the present petition under Regulations 54 and 55 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulation, 2014 (hereinafter referred to as 'the 2014 Tariff Regulations'), "Power to Relax" and "Power to remove Difficulty" for seeking one time reimbursement of carrying cost for replacement of porcelain insulators with polymer insulators of the assets covered under Petition No. 305/2010 in respect of Northern Region.

2. The Petitioner has submitted that the following facts have led to the filing of the present petition:

(a) Power Grid Corporation of India Limited (PGCIL) has implemented the scheme of replacing the old porcelain insulators as per the direction of the Ministry of Power, Government of India after the meeting with members of Northern Region Power Committee. Under the Scheme, PGCIL replaced around 16,00,000 nos. porcelain insulators with polymer insulators in

Northern Region as decided in 30<sup>th</sup> NRPC meeting and as advised by Ministry of Power in the year 2009-10. Subsequently, the investment approval was accorded by the Board of Directors of the Petitioner Company for making investment in polymer insulator of Rs. 232.07 crore.

(b) PGCIL has utilized major portion of the old porcelain insulators either in O & M of its transmission lines or in the construction of a number of new transmission lines at the Written Down Value (WDV). However, since the quantity of dismantled insulators was huge, certain amount of it are still unused. The Petitioner has submitted the details of the old porcelain insulators out of the total dismantled insulators as under:

						(In nos.)
Quantity dismantled insulators	of	Break damage	Good insulators	Used within company	Supplied to Powerlinks	Balance quantity in stock
1644154		214325	1429829	983984	59548	386297

(c) Pursuant to the Commission's direction in order dated 7.2.2013 in Petition No. 305/2010 regarding calculation of carrying cost and weighted average rate of interest for the respective project, carrying cost has been calculated by applying interest rate for the period from dismantling date till the date of utilization or 31.3.2017 whichever is earlier.

(d) Due to time gap of de-capitalization and its re-utilization, the carrying cost works out to Rs.1714.64 lakh and the same may allowed to be recovered as one time claim as POC.

(e) The Petitioner has submitted the details of carrying cost for re-utilised insulators, WDV of damaged insulators and WDV of un-utilized insulators duly supported by Auditor Certificate dated 9.4.2018 as under:

(Rupees in Lakh)

Carrying cost of insulators	WDV of insulators damaged during replacement	WDV of un-utilized insulators	Total carrying cost and WDV claimed
1764.63*	945.64	2021.06	4731.33

\* Carrying cost of insulators calculated upto 31.3.2017 for utilized, un-utilized and sold to M/s PTL.

(f) No carrying cost of insulators has been claimed beyond 31.3.2017. However, further utilization of these un-utilised insulators has become uncertain as the stock of insulators have become very old and gradually becoming defective and unusable. In number of new transmission lines porcelain insulators are being avoided as a measure of safety check due to growing level of pollutions. In the meetings of 30<sup>th</sup> NRPC, 30<sup>th</sup> EPRC and 15<sup>th</sup> NERPC, it has been decided that in future all new transmission lines would be built with polymer insulators only and also disc insulators of existing lines would be replaced with polymer insulators in phased manner for betterment of the system. Depending upon the pollution level, replacement of disc insulators with polymer insulators on existing lines are also being carried out in Western Region on case to case basis after discussion in WRPC forum. Therefore, utilization of removed insulators would be very difficult and removed disc insulators would be of no use in future. Therefore, there will be no other option but to scrap the removed insulators.

(g) Approximately 386297 nos. insulators are still remaining unused and these may take a longer time for utilization.

In this regard, the Petitioner has proposed the following alternatives:

(a) Carrying cost be allowed to be claimed till these insulators are put to use beyond 31.3.2017.

(b) One time reimbursement of the WDV of Rs. 2021.06 lakh be allowed to be claimed from the beneficiaries of the NR. If at any time in future, the old insulators are utilised in the Petitioner's lines, the same would be done at zero cost.

(h) Sharing of carrying cost would be done as per the Commission's order dated 7.2.2013 in Petition No. 305/2010.

3. The Petitioner has based its claim on Regulations 54 and 55 of the 2014 Tariff Regulations which empowers the Commission to relax the provisions on its own motion or on an application made by an interested person and to remove the difficulty in giving effect to the objectives of the regulations along with the following prayers:

“(i) Approve the carrying cost on insulators of Rs. 1714.64 lakh;

(ii) Approve the loss on damaged insulators of Rs. 945.64 lakh; and

(iii) Approve the cost on unused insulators beyond 31.3.2017 or Rs. 2021.06 lakh as one time recovery of the WDV.”

4. Notices were issued to the Respondents to file their replies. No reply has been filed by the Respondents. None was present during the hearing despite notice.

5. The Petitioner, vide Record of Proceedings for the hearing dated 6.3.2018, was directed to submit the following information/clarification:

(a) Auditor`s certificate on the expenditure incurred on carrying cost, WDV of damaged insulators as per PSL (Price Stores Ledger) and WDV of un-utilized old porcelain insulators as per Audited Balance Sheet.

(b) Details as directed by the Commission vide Para 43 of the order dated 7.2.2013 in Petition No. 305/2010.

(c) How many dismantled insulators have been used and in which transmission lines they have been used, dates of their utilization, weighted average rate of interest on loans corresponding to the assets (as per Commission`s order in Petition No. 305/2010) and asset-wise breakup of handling charges.

(d) Detailed calculations for arriving at the carrying cost; and

(e) To ensure that there is no dual charging for transportation costs in the present petition as well as in the corresponding transmission lines, where these old porcelain insulators are installed.

6. The Petitioner, vide its affidavit dated 10.4.2018, has submitted the information called for as under:

(a) With regard to (a) above, the Petitioner has placed on record the Auditor Certificate dated 9.4.2018.

(b) With regard to (b) above, the Petitioner has submitted that it has already submitted the information in different petitions while truing-up of the corresponding assets for tariff period 2009-2014 as under:

Asset No.	Project/Transmission Line (DOCO)	True up Petition No.	Order dated
1.	Rihand Transmission System (HVDC) 1988-92)	133/TT/2015	28.1.2016
2.	Tehri Transmission System (1.2.2007)	446/TT/2014	17.12.2015
3.	Rihand-II Transmission System (1.11.2006)	561/TT/2014	29.1.2016
4.	Auriya Transmission System (1989-91)	537/TT/2014	11.12.2015
5.	Singrauli Transmission System (1982-87)	513/TT/2014	31.12.2015
6.	Faridabad Gas Project Transmission (1.2.2000)	494/TT/2014	18.2.2016
7.	NRSSS-I (LILO of Bareilly-Moradabad TL) 1.6.2008)	361/TT/2014	29.1.2016
8.	NRSSS-V (Agra-Bhiwadi TL) (1.4.2010)	101/TT/2015	9.2.2016
9.	NRSSS-VI (LILO of Ballabgarh-Bhiwadi) (1.7.2010)	101/TT/2015	25.2.2016
10.	Moga-Hissar TL (1.7.1995) Hissar-Bhiwani TL (1.2.1998)	536/TT/2014	7.6.2016
11.	Nathpa-Jhakri Transmission System A-1: (i) 400 kV Hissar-Jaipur TL with bays (ii) Bawana-Bhiwani Ckt 1 & 11 with bays (1.2.1998) A-2 : 400 kV Abdullapur-Bawana and Nalagarh-Hissar TL with associated bays (1.3.2001) A-3: Nathpa-Jhakri-Abdullapur TL (1.4.2003)	26/TT/2015	3.6.2016
12.	NRSSS-III (1.6.2008)	02/TT/2015	29.2.2016
13.	NRSSS-II (1.4.2008)	500/TT/2014	11.2.2016

(c) With regard to (c), the Petitioner has submitted that there are no separate handling charges in respect of the porcelain insulators as the scope for the contract for replacement of insulators includes also the handling charges of dismantled Porcelain insulators.



(d) With regard to (d), the Petitioner has placed on record the detailed calculations for arriving at the carrying cost at Annexure II of the affidavit.

(e) With regard to (e), the Petitioner has submitted that no dual charging for transportation cost is done with regard to subject matter in the present petition.

### **Analysis and Decision:**

7. We have considered the submission of the Petitioner. The Petitioner had filed the present Petition for seeking approval of transmission tariff in respect of the Polymer Insulators installed by it in place of the porcelain insulators on the 400 kV transmission lines in and around the National Capital Region. The Commission after hearing the parties, vide its order dated 7.2.2013 in Petition No.305/2010 had held that the de-capitalized porcelain insulators shall be allowed only carrying cost on the Written Down Value of assets at weighted average rate of interest on loan availed by the Petitioner till the insulators are put to use and capitalised. The Relevant portion of the said order dated 7.2.2013 is extracted as under:

“23. We have considered the submission of the petitioner and the respondents on the formula suggested by the Commission during the hearing on 30.8.2012. In our view, the formula suggested will protect the interest of the petitioner as well as the beneficiaries. While the polymer insulators shall be capitalized as they have been put to use and are rendering services to the beneficiaries, the porcelain insulators which have been taken out of the service shall be kept as spares to be used in the other lines of the petitioner. The porcelain insulators shall be de-capitalized from the date of their replacement and shall be capitalized when they are put to use in new lines. During the period between de-capitalization and subsequent capitalization of the porcelain insulators, there will be no depreciation. The de-capitalized porcelain insulators shall be allowed only carrying cost on the written down value of the assets at weighted average rate of interest on loans availed by the petitioner till the insulators are put to use and capitalized.

24. Accordingly, the polymer insulators have been capitalized and the transmission charges of these insulators have been determined in this order. Since the polymer

insulators have been installed on various transmission lines, the cost of the insulators need to be capitalized in the capital cost of the respective transmission lines. Accordingly, line-wise capitalization and de-capitalization has been made in this order. The annual transmission charges of the respective line shall stand modified in accordance with Annexure-II to this order. Further adjustment of the expenditure will be made in the transmission tariff of the respective transmission lines at the time of truing up.”

8. The Petitioner had further requested to include the carrying cost like handling charges, storage charges and insurance charges incurred during storage of the porcelain insulators as a part of capital cost. The Commission in its order dated 7.2.2013 directed the Petitioner to approach the Commission along with the details of gross block of dismantled insulators, etc. and to provide cost details of remaining porcelain insulators. Relevant portion of the said order dated 7.2.2013 is extracted as under:

“43. The petitioner has requested to include the carrying cost like handling charges, storage charges and insurance charges incurred during storage of the porcelain insulators as a part of capital cost. Carrying cost refers to the total cost of holding inventory which includes storage as well as insurance. Adding carrying cost to the capital cost would burden the beneficiaries and hence the carrying cost is not included in the capital cost. Handling charges shall be considered as a part of transportation charges and shall be allowed as one time charges after they have been incurred. The carrying cost shall be separately worked out once the removed porcelain insulators have been put to use and capitalized and the carrying period is known. The petitioner is directed to approach the Commission alongwith the details of Gross Block of dismantled insulators, their accumulated depreciation, dates of removal from the original transmission lines and dates on which they are capitalized at other places/regions. The petitioner is also directed to provide cost details of remaining porcelain insulators.”

9. Pursuant to the said order dated 7.2.2013, the Petitioner has filed the present petition. The Petitioner in the first prayer has prayed to approve the carrying cost on insulators which as per Auditor’s Certificate dated 9.4.2018 is Rs. 1764.63 lakh. The Petitioner vide Record of Proceedings for the hearing dated 6.3.2018 was directed to submit Auditors` Certificate towards expenditure incurred

on the carrying cost as well as WDV of damaged insulators and WDV of un-used porcelain insulators. According to the Petitioner, WDV value, as on 1.1.2010 of all the porcelain insulators which were removed from the transmission lines is Rs. 6384.85 lakh and these transmission lines have been segregated as per the numbers (quantity) of insulators dismantled. It is noticed that out of total 1644154 nos. insulators removed from 204 transmission lines segments, 214325 nos. insulators got damaged, 59548 nos. insulators have been sold to Powerlinks Transmission Limited, 983984 insulators have been re-utilized between December 2009 and March, 2016 and 386297 nos. insulators have remained unutilized till 31.3.2017. The Commission in its order dated 7.2.2013 had clarified that the de-capitalized porcelain insulators shall be allowed only carrying cost on the Written Down Value of the assets at weighted average rate of interest on loan availed by the Petitioner till the insulators are put to use and capitalised. It is noticed that for working out the carrying cost, the Petitioner has considered the same rates of interest on loans as considered for the loan portfolios of the respective transmission projects from where the porcelain insulators were removed. For the re-utilized insulators and the un-utilized insulators, the Petitioner has worked out the carrying cost upto the date of utilization and till 31.3.2017 respectively.

10. In the 27<sup>th</sup> TCC and 30<sup>th</sup> NRPC meetings held on 27.2.2014 and 28.2.2014 respectively, it was agreed to replace all porcelain insulators with polymer insulators for all upcoming lines in view of better reliability and other advantages. Further, in the 15<sup>th</sup> TCC and 15<sup>th</sup> NRPC meetings held on 20.8.2015 and 21.8.2015 respectively, it was agreed by the OCC members that in future all new

transmission lines would be built with polymer insulators and also existing disc insulators would be replaced with polymer insulators in phased manner as is being done in the Northern Region for betterment of the system. The Petitioner has requested to allow either the carrying cost on unused insulators beyond 31.3.2017 or to allow one time recovery of its WDV of Rs. 2021.06 lakh. It is noted that in Petition No. 305/2010, the Petitioner had not envisaged the date(s) of utilization of the dismantled insulators. Therefore, the same could not be dealt with while issuing the order dated 7.2.2013. It is further noticed that despite the decision taken in 27<sup>th</sup> TCC and 30<sup>th</sup> NRPC meetings dated 27.2.2014 and 28.2.2014 respectively to the effect that the Petitioner would not utilise the porcelain insulators in future, the Petitioner has utilized the same beyond 2013-14 i.e. till 31.3.2016. The Petitioner has orally clarified that the actual implementation of TCC and NRPC meeting`s decision could not take place till March, 2016. The Petitioner has contended that further utilization of the dismantled insulators have become uncertain, as the stocks of insulators have become very old and are gradually becoming defective and unusable. Considering the fact that the above TCC and NRPC meetings had not taken place at the time of issuing of order in Petition No. 305/2010, with the purpose of maintaining a proper balance between the interest of the beneficiaries and the Petitioner, and keeping in view the TCC/NRPC meetings and to avoid complexities, we allow the carrying cost of the dismantled insulators only till 31.3.2014, which includes the re-utilised as well as the un-utilised insulators.

11. The Petitioner in the second prayer has prayed for approval for the compensation for loss on damaged insulators. According to the Petitioner, 214325 nos. insulators got damaged during dismantling and are not usable, which is a permanent loss. The Petitioner has submitted that it had no other alternative but to charge the same against profit. Therefore, the Petitioner needs to be compensated by allowing one time reimbursement of the loss incurred by it. We have considered the submission of the Petitioner. In our view, since, loss on account of damaged insulators is a risk associated with the handling of the insulators, the same cannot be passed on to the consumers. The loss in this regard should be absorbed by the Petitioner. Therefore, the Petitioner's prayer on this aspect is rejected. However, if any claim received from insurance company needs to be adjusted from the above cost.

12. In the third prayer, the Petitioner has prayed to allow carrying cost on unused insulators beyond 31.3.2017 till they are put to use or one time recovery of WDV of Rs. 2021.06 lakh. The Commission in its order dated 7.2.2013 in Petition No. 305/2010 had observed as under

*'the porcelain insulators shall be de-capitalized from the date of their replacement and shall be capitalized when they are put to use in new lines. During the period between de-capitalization and subsequent capitalization of these porcelain insulators, there will be no depreciation'.*

The Commission in the said order had clarified that no depreciation would be applicable on insulators till their subsequent capitalization. It is noticed that approximately 3.86 lakh porcelain insulators have remained unused till March, 2017 i.e. there has been no subsequent capitalization of the porcelain insulators.

Considering these facts and the deliberations in the 27<sup>th</sup> TCC and 30<sup>th</sup> NRPC meetings, we are of the view that depreciation would be applied on the unutilized insulators and WDV would be worked out till 31.3.2014. The Petitioner has argued that further utilization of the dismantled insulators have become uncertain, as the stock of insulators has become very old and gradually becoming defective and unusable. In our view, these stocks of insulators may have a scrap value of 5% of the WDV as on 31.3.2014. Accordingly, we allow the WDV (less 5% scrap value) on unused insulators till 31.3.2014.

13. The carrying cost and WDV claimed and allowed are summarized as under:

(Rs. in lakh)

S.No.	Particulars	Claimed	Allowed
1.	Carrying cost of utilized and unutilized insulators	1764.63#	1282.01*
2.	WDV of damaged insulators	945.64	0.00
3.	WDV of unutilized insulators (Less 5% Scrap Value)	2021.06**	1525.37*
	<b>Total</b>	<b>4731.33</b>	<b>2807.38</b>

\*As on 31.3.2014, \*\*As on 1.1.2010, # As on date of utilization or 31.3.2017, whichever is earlier.

14. Carrying cost and WDV allowed shall be shared in accordance with the provisions of the Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010 as amended from time to time.

15. The Petition No. 146/MP/2017 is disposed of with the above.

**Sd/-**  
**(Dr. M.K. Iyer)**  
**Member**

**sd/-**  
**(A.S. Bakshi)**  
**Member**

**sd/-**  
**(A.K.Singhal)**  
**Member**

**sd/-**  
**(P.K.Pujari)**  
**Chairperson**