

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 638/MP/2020

Coram:

**Shri I. S. Jha, Member
Shri Arun Goyal, Member
Shri P. K. Singh, Member**

Date of Order: 15th of December, 2023

In the matter of:

Petition under Section 79 (1) (c) (d) and (f) of the Electricity Act, 2003 seeking adjudication of Reliability Support Charges (RSC) by Respondent No.1 & 2, Central Transmission Utility and Power System Operation Corporation Limited in terms of the Para 33 of the Order dated 16.05.2016 in 9/MP/2016 and Para 24 of the Order dated 04.04.2018 in Petition No. 142/MP/2017.

And in the matter of:

National High Power Test Laboratory Pvt. Ltd.,
First Floor, Core 8, Scope Complex,
7, Area, Lodhi Road

.....Petitioner

Versus

1. Central Transmission Utility Limited,
Power Grid Corporation of India Limited "Saudamini", Plot No. 2,
Sector-29, Gurgaon-122001
2. Power System Operation Corporation Limited,
B-9, Qutub institutional Area Katwaria Sarai,
New Delhi-110016
3. Central Electricity Authority,
Sewa Bhawan, R.K. Puram,
New Delhi-110066
4. Western Regional Load Despatch Centre
F-3, M.I.D.C. Area, Marol,
Andheri (EAST),
Mumbai-400093
5. Central Power Research Institute (CPRI)
PB No. 8066,

Parties Present: Shri Anand Ganesan, Advocate, NHPTL
Ms. Swapna Seshadri, Advocate, NHPTL
Ms. Ritu Apurva, Advocate, NHPTL
Ms. Archita Kashyap, Advocate, NHPTL
Ms. Suparna Srivastava, Advocate, CTUIL
Shri Tushar Mathur, Advocate, CTUIL
Ms. Ashta Jain, Advocate, CTUIL
Ms. Divya Sharma, CTUIL
Shri Debajyoti Majumdar, NLDC
Shri Alok Mishra, NLDC

ORDER

National High Power Test Laboratory Pvt. Ltd. (hereinafter to be referred as “the Petitioner/ NHPTL”) has filed the instant Petition seeking adjudication of Reliability Support Charges (RSC) by Respondent No.1 & 2, Central Transmission Utility and Power System Operation Corporation Limited in terms of the Para 33 of the Order dated 16.05.2016 in the petition 9/MP/2016 and Para 24 of the Order dated 04.04.2018 in Petition No. 142/MP/2017.

The Petitioner has made following prayers in the instant petition:

- (a) *Revise the formula for applicability of Reliability Support charges on NHPTL;*
- (b) *Direct that the RSC should be levied on average monthly drawal by NHPTL during a month or alternately, the maximum drawal by NHPTL during the month;*
- (c) *Direct CTU to refund the charges overcharged for the period from July 2017 onwards till date.*
- (d) *Pass such other further orders which the Hon’ble Commission may deem just in the facts and circumstances of the present case.*
- (e) *RSC charges should not be levied for the month in which SC test is not done.*

Submissions of the Petitioner:

1. The petitioner has mainly submitted as follows:

- (a) The Petitioner, National High Power Test Laboratory Pvt. Ltd. (NHPTL) is a Joint Venture Company of NTPC, NHPC, POWERGRID, DVC and CPRI. NHPTL was incorporated for establishment of a fully independent, standalone, state-of-the art, professionally managed, international class, On-Line High Power Test Laboratory in India with an aim to provide full range of

short circuit testing for the electrical equipment manufacturing industry and power utilities in conformance to Indian and International Standards.

(b) The Financial Breakup of NHPTL joint venture is as follows:

Debt equity ratio: 60:40 {60% debt from PFC @ 11.80% interest rate and 40% Equity from JV partners (20% contribution of Equity from NTPC, NHPC, POWERGRID, DVC & CPRI)}

(c) NHPTL operates a laboratory with 765 kV and 400 kV Bus at ISTS Bina sub-station of POWERGRID for bay charging at No Load initially and further at On Load for short circuit testing of electrical equipment.

(d) NHPTL vide Petition No. 9/MP/2016 requested connectivity of NHPTL's laboratory with 765 kV and 400 kV Bus at ISTS Bina sub-station of POWERGRID for bay charging at No Load initially and further at On Load for short circuit testing of electrical equipment and for approval of Connection Agreement for No Load and On Load conditions under the Central Electricity Regulatory Commission (Grant of Connectivity, Long Term Access and Medium Term Open Access in inter-State Transmission and related matters) Regulations, 2009.

(e) The Central Commission vide Order dated 16.05.2016 in Petition No. 9/MP/2016 held that since NHPTL would not draw any MW from the grid, it would not be required to apply for any type of access. However, NHPTL would be levied Reliability Support Charges (RSC) corresponding to 10,000 MVA multiplied by power factor of 0.005 (works out as 50 MW) as discussed during the meeting held on 11.03.2016 by the Chief (Engg.) of the Central Commission and the NHPTL in terms of the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 (hereinafter '2010 Sharing Regulations') i.e. $10000 \times 0.005 \times \text{Reliability Support rate (Rs./MW/month)}$ for the entire month. It was further stated that the NHPTL is dependent on the strength of the grid for its commercial business and hence should be charged the reliability charges.

(f) This Commission also directed POSOCO to compile pattern of short circuit drawl MVA by NHPTL and file the report in this regard before it for a six month

period beginning from the date of 1st commercial test stating that the charges recovered from NHPTL shall be reimbursed back to long term and medium term open access customers in next month bill.

- (g) A Connection Agreement was signed between NHPTL and CTU on 25.5.2016.
- (h) NHPTL has been functioning commercially from 01.07.2017 onwards and at no stage NHPTL has even reached close to 10,000 MVA or drawn 50 MW in electricity. NHPTL has simply been paying the above excessive RSC. The maximum load was reached in March of 2020 to the extent of 24.27 MW.
- (i) The calculation of the total short circuit power taken from July 2017 till date by NHPTL is mentioned below-

(in MVA)

	HIGHEST TAP	NORMAL TAP	LOWEST TAP
MAXIMUM	4854.37	3971.41	2958.58
MINIMUM	192.75	192.75	192.75
AVERAGE	1770.03	1703.95	1558.08

Out of total number of 38 months starting from July 2017 till date for which CTU has levied the bill on NHPTL, there were 17 months in which NHPTL has not tested any transformers. However, due to the formulation given by this Commission, a bill of RSC Charges of Rs 2,50,57,000 was levied upon NHPTL.

- (j) NHPTL utilizes the grid for few days only in a month and shots last for 250 milliseconds only, therefore charging NHPTL much more than what is being used by them is highly unfair. Further, the RSC is for a purpose, namely, the support drawn by NHPTL from the grid during testing. If such support itself is not taken, it does not stand to any reason that the RSC is to be levied on NHPTL.

Hearing dated 27.04.2021:

2. Petition was admitted during the hearing on 27.04.2021.

Submissions of NLDC, POSOCO & WRLDC vide affidavit dated 24.05.2021:

3. NLDC, POSOCO & WRLDC in their common reply have submitted as under:

- (a) CTU has been raising bills from July,2017 to till December,2020 based on

the Reliability Support Charge as per the 2010 Sharing Regulations and CERC Order.

- (b) The CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020, w.e.f. 1st November, 2020 (hereinafter '2020 Sharing Regulations') has been implemented and there is no such Reliability Support Charges to be levied. In absence of the revised formula for calculation of charges to be levied on NHPTL for 50 MW or any other directions from CERC, Implementing Agency was not able to compute the transmission charges payable by NHPTL since the billing month of Jan'21.
- (c) The Implementing Agency will act as and when directions are received from CERC regarding transmission charges to be levied on NHPTL.

Submissions of CTUIL:

4. CTUIL vide affidavit dated 04.02.2022 has submitted as follows:

- (a) The reliability support charges corresponding to 10000 MVA were decided to be levied on the Petitioner in Petition No. 9/MP/ 2016 on account of being connected with the ISTS and drawing reliability from the grid for its commercial business.
- (b) Under the 2020 Sharing Regulations, there is no longer a provision for levy of reliability support charges under the PoC billing, however, the Petitioner continues its commercial operations owing to its connectivity with the ISTS.
- (c) CTUIL has a limited role in the matter of raising of PoC bills and as such, has no authority to revise/ revoke such bills on its own.

Rejoinder by the petitioner to the reply of CTUIL:

5. The petitioner vide affidavit dated 17.03.2022 has submitted that NHPTL is carrying out Short-circuit Test as other laboratories operated by CPRI and ERDA in the country. NHPTL is paying charges based on Maximum Demand and other Energy Charges to MP DISCOM each month. As such, similar Test facility of CPRI at Bhopal, CPRI at Bengaluru and ERDA at Vadodara are carrying out Transformer Short-circuit test. In said cases also they are paying charges on

basis of Maximum Demand (MD) along with minimum Energy Charges to respective DISCOM in the respective states as such the levy of additional Reliability Support Charges (RSC) is discriminating in nature for NHPTL and the Commission may under Regulation 28 of the 2020 Sharing Regulations 2020 which is the '*Power to Remove Difficulties*', remove the difficulty of Petitioner.

Hearing dated 23.03.2023:

6. During hearing dated 23.03.2023, the Commission directed the CTUIL to convene a meeting and to carry out necessary consultative process and pattern studies with the involvement of all the stakeholders, Petitioner and respondents, within a month and to file minutes/outcome thereof. The Petitioner may also file its comments thereon.

Submissions of CTUIL:

6. CTUIL vide affidavit dated 26.06.2023 has submitted as follows:

- (a) A meeting was held on 06.06.2023 amongst representatives of CEA, CTU, GRID INDIA, MPPTCL and NHPTL wherein matter of applicability of Reliability Support Charges ('RSC') on NHPTL was deliberated and following decisions were taken:

“

- (i) *NHPTL is liable to pay Grid Support Charges (GSC) for the entire year irrespective of the months in which testing is carried out.*
- (ii) *NHPTL may be charged based on the maximum MVA drawal in the past year. Data corresponding to drawal of NHPTL shall be furnished by GRID-India as per PMU data installed at NHPTL end.*
- (iii) *The methodology for computation of GSC may be as follows:*

GSC= Maximum MVA drawal in the past year x pf (0.005) x Grid Support Rate (Rs./MW/month) for the month.

The Grid Support Rate may be prescribed by the Hon'ble Commission. “

(b) The SCMVA drawal observed from PMU during SC tests in 2022 & 2023 is as under:

1. Maximum SCMVA drawal observed: **2339 MVA**
2. Minimum SCMVA drawal observed: **410 MVA**
3. Average SCMVA drawal observed: **1317 MVA**

Analysis and decision:

7. We have considered the submissions of the Petitioner, Respondents, and the facts on record. The petitioner has basically prayed for revision of the formula for calculation of Reliability Support charges to be based on maximum or average drawal during the month and refund of the RSC charged beyond their actual drawal during the month for the period from July 2017 till date. Further, the 2020 Sharing Regulations effective from 1st November, 2020 does not have any component namely Reliability Support Charges and hence no computation of transmission charges payable by NHPTL has been done since the billing month of Jan'21 by NLDC.

Accordingly, the following issues arise for our consideration:

Issue No. 1: What should be the short circuit drawl MVA to be considered for calculation of Charges?

Issue No. 2: What should be the rate at which Petitioner NHPTL should be levied charges under the 2020 Sharing Regulations for purpose of being connected to ISTS and carry out the test?

These issues are dealt in subsequent paragraphs.

Issue No. 1: What should be the short circuit drawl MVA to be considered for calculation of Charges?

8. Petitioner NHPTL is a Laboratory with 765 kV and 400 kV Bus at ISTS Bina sub-station of PGCIL for On-Line Short Circuit Testing of electrical equipment.

9. Vide order dated 16.05.2016 in Petition No.9/MP/2016 held that the Petitioner shall be levied Reliability Support Charge corresponding to 10,000 MVA multiplied by power factor of 0.005 (works out as 50 MW). The relevant extract of the said order is as follows:

“...It is noted that although the petitioner would not draw any MW from the grid, the petitioner is connected to the national grid and drawing reliability from the grid by virtue of being connected to the grid for its commercial business. Since, the petitioner would not draw any MW from the grid, it shall not be required to apply for any type of access. However, the petitioner shall be levied Reliability Support Charges corresponding to 10,000 MVA multiplied by pf of 0.005) as discussed during the meeting held on 11.3.2016 in terms of Sharing Regulations [i.e. 10,000x0.005xReliability Support rate (Rs./MW/month)] for the entire month. POSOCO is directed to compile pattern of short circuit drawl MVA by the petitioner and file the report in this regard to the Commission for a six month period beginning from the date of 1st commercial test. The charges recovered from NHPTL shall be reimbursed back to long term + medium term open access customers in next month bill.”

10. The Petitioner has submitted that since Maximum MVA drawl from Feb’ 22 till May’ 23 is about 2400 MVA, charges should be revised to that extent instead of 10,000MVA. It was also mentioned that SC test is carried out in some months only and charges shall be levied only for those months.

11. CTUIL has convened the meeting with stakeholders on 06.06.2023 wherein following has been suggested:

“NHPTL is liable to pay Grid Support Charges (GSC) for the entire year irrespective of the months in which testing is carried out.

- (i) NHPTL may be charged based on the maximum MVA drawal in the past year. Data corresponding to drawal of NHPTL shall be furnished by GRID-India as per PMU data installed at NHPTL end.*
- (ii) The methodology for computation of GSC may be as follows:*

GSC= Maximum MVA drawal in the past year x pf (0.005) x Grid Support Rate (Rs./MW/month) for the month.

The Grid Support Rate may be prescribed by the Hon’ble Commission. “

As per the above it has been suggested that NHPTL may be charged based on the maximum MVA drawal in the past year.

12. We have considered the submissions of Petitioner and Respondents. We observe that no bills have been raised subsequent to effectiveness of the 2020 Sharing Regulations, in absence of Reliability Support Charge rate, for the period starting from 1.11.2020.

13. We are of the considered view that charges for the grid support starting 1.11.2020, shall be levied corresponding to the maximum MVA drawal in the previous quarter. GRID-India (erstwhile 'POSOCO') shall provide the data for such MVA drawal based on PMU. For example, if maximum 3000 MVA has been achieved (even once) in quarter 2 (July- Sep) of FY 2020-2021, the bills for November 2020 shall be raised on the basis of 3000 MVA for period starting November 2020 till December 2020. For bills to be raised for period starting January 2021, the maximum MVA achieved in Quarter 3 of FY 2020-21 shall be used.

Issue No. 2: What should be the rate at which Petitioner NHPTL should be levied charges under the 2020 Sharing Regulations for purpose of being connected to ISTS and carry out the test?

14. CTU has been raising bills from July, 2017 to till December, 2020 based on the Reliability Support Charge as per the 2010 Sharing Regulations.

15. The 2020 Sharing Regulations effective from 1st November, 2020 provides for National component, Regional component, transformer component and AC component. There is no such provision for Reliability Support Charges/Rate in the 2020 Sharing Regulations. In absence of Reliability Support Charges/Rate, Implementing Agency has not been computing the transmission charges payable by NHPTL since the billing month of Jan'21. Accordingly, the rate at which Petitioner should be billed from 1.11.2020 needs to be determined.

16. The petitioner draws Short Circuit testing power about 250 milliseconds.

Therefore, in order to handle abrupt changes and disturbances associated with such type of testing, NHPTL is dependent on the strength of the Grid for its commercial operations. The charges payable by NHPTL should be commensurate with the Grid Support/Reliability provided by the Grid enabling it to draw Short Circuit (SC) test power.

17. Regional Component (RC) of Transmission Charges computed under the 2020 Sharing Regulations provides as under:

“a) Regional Component of HVDC (RC-HVDC) comprising of 70% of Yearly Transmission Charges of HVDC transmission systems planned to supply power to the concerned region, except HVDC transmission systems covered under National HVDC Component.

b) Yearly Transmission Charges for static compensators (STATCOMs), static VAR compensators (SVCs), bus reactors, spare transformers, spare reactors and any other transmission element(s) located in the concerned region and identified by the Central Transmission Utility as being critical for providing stability, reliability and resilience in the grid.”

As per above, the Regional component comprises of HVDC transmission system and static compensators (STATCOMs), static VAR compensators (SVCs), etc.

18. We are of the view that the Regional component comprising of STATCOMs and SVCs which are reactive power compensation devices or other transmission element(s) located in the concerned region are critical for providing stability, reliability and resilience to the grid and the same can be considered for purpose of levying grid charges. Further the short circuit power can be drawn only if grid is available, hence petitioner should be liable to pay a portion of transmission charges for transmission lines also. We are of the considered view that Petitioner should be charged at the rate equal to Regional Component rate for the State in which NHPTL is located for the corresponding billing period. The charges shall be levied to the Petitioner as follows:

Charge = Maximum MVA drawal achieved in previous quarter x pf (0.005) x Regional Component rate for Madhya Pradesh for the corresponding billing period

where: Regional component rate for Madhya Pradesh = Regional component charges for the month for Madhya Pradesh / (LTA +MTOA or GNA) for Madhya Pradesh

The rates as decided above shall be applicable from 01.11.2020. The charges recovered from NHPTL shall be reimbursed back to Designated ISTS customers in the next month bill.

19. Petitioner has requested for waiving of Reliability charges for past period prior to 1.11.2020 stating that it has not utilised the grid for 17 months as it did not carry out any test. We are not inclined to give any waiver of charges for the period covered under the 2010 Sharing Regulations, where billing has been already been done in terms of our previous Orders. Accordingly, the Petitioner shall be liable to pay charges till 31.10.2020 in terms of our previous Orders and from 1.11.2020 in terms of the instant Order.

20. The petition No. 638/MP/2020 is disposed of in terms of the above.

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

**Sd/
(Arun Goyal)
Member**

**Sd/
(I. S. Jha)
Member**