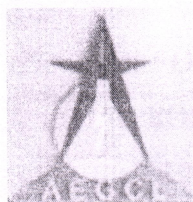


**BEFORE  
THE CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**PETITION FOR  
APPROVAL OF TRANSMISSION TARIFF FOR NATURAL INTER-STATE AND  
INCIDENTAL LINES FOR FY 2019-20 TO FY 2023-24**


**TARIFF BLOCK  
2019-2024**



**ASSAM ELECTRICITY GRID CORPORATION LIMITED  
(AEGCL)**

**April 2023**

Regd. Office: 1st Floor, Bijulee Bhawan,  
Paltan Bazar, Guwahati -781001

  
L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL



**BEFORE**  
**THE CENTRAL ELECTRICITY REGULATORY COMMISSION**  
**NEW DELHI**

FILE No. ....

CASE No. ....

**IN THE MATTER OF:**

Determination of Tariff for the control period FY 2019-20 to FY 2023-24 in respect of Assam Electricity Grid Corporation Limited owned transmission lines/system connecting with other states and intervening transmission lines incidental to inter-State transmission of electricity for inclusion in POC Transmission charges in accordance with CERC (Terms & Conditions of Tariff) Regulations 2019 and CERC (Sharing of Inter-State Transmission Charges and Losses), Regulations, 2020 and its subsequent amendments.

**AND**

**IN THE MATTER OF**

**Assam Electricity Grid Corporation Limited.**

Regd. Office: 1st Floor, Bijulee Bhawan,

Paltan Bazar, Guwahati -781001

.....Petitioner


**Power Grid Corporation of India Limited**

Saudamini Plot No. 2, Sector-29

Gurugoaan-122001, Haryana

.....Respondent

**and others**

  
L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL



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*Lokenath Choudhury*

PETITIONER

Date: 29.04.2023

Place: Guwahati

L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL



# FORM - I

| S. No. | Particulars  |  |
|--------|--|--|
| 1.     | Name of the Petitioner/Applicant   | <b>Assam Electricity Grid Corporation Limited</b>  |
| 2.     | Address of the Petitioner / Applicant  | Regd. Office: 1st Floor, Bijulee Bhawan,<br>Paltan Bazar, Guwahati -781001   |
| 3.     | Subject Matter   | Determination of Tariff for the control period FY 2019-20 to FY 2023-24 in respect of Assam Electricity Grid Corporation Limited owned transmission lines/system connecting with other states and intervening transmission lines incidental to inter-State transmission of electricity for inclusion in POC Transmission charges in accordance with CERC (Terms & Conditions of Tariff) Regulations 2019 and CERC (Sharing of Inter-State Transmission Charges and Losses), Regulations, 2020 and its subsequent amendments. |
| 4.     | Petition No. if any  | NA   |
| 5.     | Details of generation assets<br>(a) Generating Station/units<br>(b) Capacity in MW<br>(c) Date of Commercial Operation<br>(d) Period for which fee paid<br>(e) Amount of fee paid<br>(f) Surcharge, if any | NA   |
| 6.     | Details of transmission assets<br>(a) Transmission line and sub-station<br>(b) Date of commercial operation<br>(c) Period for which fee paid<br>(d) Amount of fee paid<br>(e) Surcharge, if any            | Provided in para 8 of the instant petition<br>Fee: Rs. 5,00,000  |
| 7. 6   | Fee paid for Adoption of tariff for<br>(a) Generation asset<br>(b) Transmission asset  | (b) Transmission asset   |
| 8.     | Application fee for licensee<br>(a) Trading License<br>(b) Transmission License<br>(c) Period for which paid<br>(d) Amount of fee paid   | N/A  |
| 9.     | Fees paid for Miscellaneous Application  | N/A  |
| 10.    | Fees paid for interlocutory Application  | N/A  |
| 11.    | Fee paid for Regulatory Compliance Petition  | N/A  |
| 12.    | Fee paid for Review Application  | N/A  |



|  |   |                               |
|--|---|-------------------------------|
| 13.  | License fee for inter-state Trading<br>(a) Category<br>(b) Period<br>(c) Amount of Fee paid<br>(d) Surcharge, if any  | N/A                           |
| 14.  | Licence fee for inter-state Transmission<br>(a) Expected/Actual transmission charge<br>(b) Period<br>(c) Amount of Fee calculated as a percentage of transmission charge<br>(d) Surcharge, if any | N/A                           |
| 15.  | Annual Registration Charge for Power<br>(a) Period<br>(b) Amount of turnover<br>(c) Amount of Fee paid<br>(d) Surcharge, if any   | N/A                           |
| 16.  | Details of fee remitted<br>(a) Date of remittance<br>(b) Amount remitted  | Attached as <b>Annexure A</b> |
| Note: While Sl. Nos. 1 to 3 and 16 are compulsory, the rest may be filled up as applicable |   |                               |

*Loknath Chowdhury*

Date: 29.04.2023

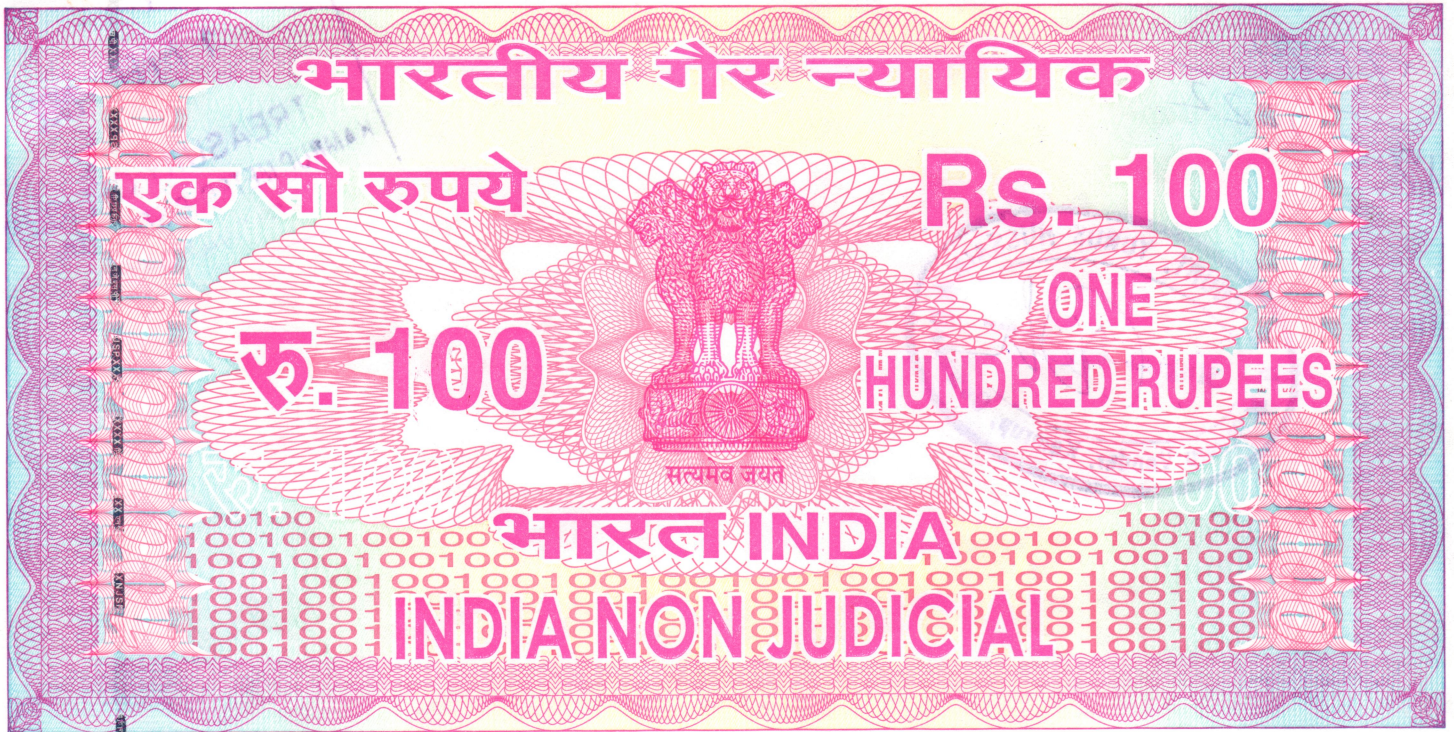
**Petitioner**

Place: Guwahati

**Assam Electricity Grid Corporation Limited**

L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL





असम ASSAM

F 829768

29 APR 2023

**Affidavit verifying the Petition**

1, **Mr. Loknath Choudhury**, S/o Lt. Prasanna Choudhury aged 59 years residing at West Boragaon, NH-37, Guwahati-781033 do solemnly affirm say as follows:

1. I am the **CGM (PP&D)** of Assam Electricity Grid Corporation Limited (AEGCL), the representative of Petitioner in the above matter, and am duly authorized to make this affidavit.
2. I submit that an enclosed petition is being filed for determination of tariff of AEGCL owned transmission lines / systems connecting with other States and intervening transmission lines incidental to inter-state transmission of electricity for inclusion in POC Transmission charges for FY 2019-20 to FY 2023-24 in accordance with CERC (Terms & Conditions of Tariff) Regulations 2019 and CERC (Sharing of Inter-State Transmission Charges and Losses), Regulations, 2020 and subsequent amendments.
3. I submit that no other petition except this petition has been filed directly or indirectly for the approval of tariff for owned transmission lines / systems connecting with other States and



(Mrs. JEUTI KALITA)  
NOTARY, GOVT. OF ASSAM  
KAMRUP (METRO) GUWAHATI



17 FEB 2022  
TREASURY OFFICER  
KAMRUP METRO. DISTRICT TREASURY  
GUWAHATI

(MRS. JELTI KALLA)  
NOTARY GOV. OF ASSAM  
KAMRU (MIRZO) GURMATA





intervening transmission lines incidental to inter-state transmission of electricity for inclusion in POC Transmission charges for FY 2019-20 to FY 2023-24. The documents attached with the petition are legible copies and duly attested by me.

4. The proof of publication in newspapers in both languages i.e., Hindi and English, proof of publication on department website and proof of delivery will be submitted by affidavit within 15 days of e-filing of petition on e-CERC portal.
5. The statements made in the petition herein are based on petitioner company's official records maintained in the ordinary course of business and I believe them to be true and correct.

*Lohrath Choudhury*

.....

(DEPONENT)

L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL

#### VERIFICATION

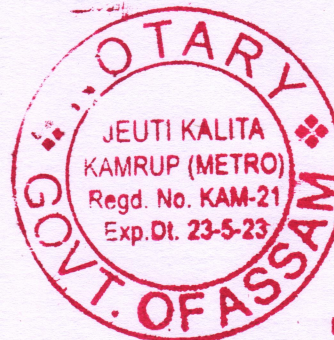
Solemnly affirmed at Guwahati on this 29th day of April, 2023 that the contents of the above affidavit are true to my knowledge and belief and no part of it is false and nothing material has been concealed there from.

*Lohrath Choudhury*

.....

(DEPONENT)

L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL



(Mrs. JEUTI KALITA)  
NOTARY, GOVT. OF ASSAM  
KAMRUP (METRO) GUWAHATI

IDENTIFIED BY ME  
*Anjan K. Roy*  
Advocate/Advocate Clerk  
Enrol No. 223/94

29 APR 2023



To,

**The Secretary,**

Central Electricity Regulatory Commission

New Delhi

Sir,

The application filed for Determination of Tariff for the year 2019-20 to FY 2023-24 in respect of AEGCL owned transmission lines/system connecting with other states and intervening transmission lines incidental to inter-State transmission of electricity for inclusion in POC Transmission charges in accordance with CERC (Terms & Conditions of Tariff) Regulations 2019 and CERC (Sharing of Inter-State Transmission Charges and Losses), Regulations, 2020 and its subsequent amendments may please be registered.

*Loknath Choudhury*

L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL

PETITIONER

Assam Electricity Grid Corporation Limited (AEGCL)

On behalf of AEGCL

*Loknath Choudhury*

**Mr. Loknath Choudhury**  
Chief General Manager (PP&D)  
AEGCL, Guwahati

Date: 29.04.2023

Place: Guwahati

L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL



## MEMO OF PARTIES

**Assam Electricity Grid Corporation Limited (AEGCL) -**

**PETITIONER**

**Verses**

**1. Power Grid Corporation of India Limited**

Saudamini Plot No. 2, Sector-29  
Gurugoaan-122001, Haryana

**RESPONDENT**

**2. Director (Transmission)**

**Meghalaya Power Transmission Corporation Limited**

Lum Jingshai, Short Round Road,  
Shillong - 793 001, Meghalaya

**3. Executive Director (Tech)**

**Manipur State Power Company Limited**

Electricity Complex, Patta No. 1293  
Khwai Bazar, Keishampet,  
Impal - 795 001, Manipur

**4. Department of Power, Nagaland**

Electricity House, A.G. Colony,  
Kohima- 797001, Nagaland

**5. Tripura State Electricity Corporation Limited**

Bidyut Bhavan, North Banamalipur,  
Agartala -799 001, Tripura

*Loknath Choudhury*

L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL

PETITIONER

Assam Electricity Grid Corporation Limited (AEGCL)

On behalf of AEGCL

*Loknath Choudhury*

**Mr. Loknath Choudhury**

Chief General Manager (PP&D)

AEGCL, Guwahati

Dated: 29.04.2023

Place: Guwahati

L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL<sub>9</sub>





**BEFORE**  
**THE CENTRAL ELECTRICITY REGULATORY COMMISSION**  
**NEW DELHI**

FILE No. ....

CASE No. ....

**IN THE MATTER OF:**

Determination of Tariff for the control period FY 2019-20 to FY 2023-24 in respect of Assam Electricity Grid Corporation Limited owned transmission lines/system connecting with other states and intervening transmission lines incidental to inter-State transmission of electricity for inclusion in POC Transmission charges in accordance with CERC (Terms & Conditions of Tariff) Regulations 2019 and CERC (Sharing of Inter-State Transmission Charges and Losses), Regulations, 2020 and its subsequent amendments.

**Assam Electricity Grid Corporation  
Limited.**

Regd. Office: 1st Floor, Bijulee Bhawan,  
Paltan Bazar, Guwahati -781001

.....Petitioner

I, **Mr. Debajyoti Das**, Managing Director, AEGCL, Guwahati hereby authorize **Mr. Loknath Choudhury**, S/o Lt. Prasanna Choudhury, CGM (PP&D), AEGCL, Guwahati whose signature is attested below to represent me as a petitioner in above matter.

*Loknath Choudhury*

**Mr. Loknath Choudhury**

CGM (PP&D)

AEGCL, Guwahati

L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL

*Debajyoti Das*  
13/02/23  
**Mr. Debajyoti Das**  
MD, AEGCL  
Managing Director,  
AEGCL, Guwahati



**BEFORE**  
**THE CENTRAL ELECTRICITY REGULATORY COMMISSION**  
**NEW DELHI**

FILE No. ....

CASE No.....

**IN THE MATTER OF:**

Determination of Tariff for the control period FY 2019-20 to FY 2023-24 in respect of Assam Electricity Grid Corporation Limited owned transmission lines/system connecting with other states and intervening transmission lines incidental to inter-State transmission of electricity for inclusion in POC Transmission charges in accordance with CERC (Terms & Conditions of Tariff) Regulations 2019 and CERC (Sharing of Inter-State Transmission Charges and Losses), Regulations, 2020 and its subsequent amendments.

**AND**

**IN THE MATTER OF**

**Assam Electricity Grid Corporation Limited.**

Regd. Office: 1st Floor, Bijulee Bhawan,  
Paltan Bazar, Guwahati -781001

.....Petitioner

**Power Grid Corporation of India Limited**

Saudamini Plot No. 2, Sector-29  
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
.....Respondent

**and others**

The Petitioner

**MOST RESPECTFULLY SHOWETH:**

1. The Petitioner herein, Assam Electricity Grid Corporation Limited (hereinafter to be referred as "AEGCL" or the "Petitioner") owns and operates the transmission system previously owned by Assam State Electricity Board (ASEB). AEGCL has started functioning as a separate entity from December 10, 2004. The Government of Assam vide Notification No.

  
L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL



PEL.151/2003/Pt/3/349 dated August 16, 2005, issued order to give effect to the reorganization of the ASEB and finalization of the provisional Transfer effected as per the provisions of the Act and the First Transfer Scheme. The Government of Assam notified the opening Balance Sheet updated and finalized based on the Audited Annual Accounts of ASEB as on March 31, 2005 under Notification No. PEL/114/2006/120 dated August 29, 2007. The Petitioner is a STU and deemed Transmission Licensee under Section 14 of the Electricity Act, 2003;

2. Inter-state transmission system has been defined under Section 2 (36) of the Electricity Act, 2003 as under:

*“(36) “inter-State transmission system” includes –*

- (i) any system for the conveyance of electricity by means of main transmission line from the territory of one State to another State;*
- (ii) the conveyance of electricity across the territory of an intervening State as well as conveyance within the State which is incidental to such inter-State transmission of electricity;*
- (iii) the transmission of electricity within the territory of a State on a system built, owned, operated, maintained or controlled by a Central Transmission Utility...”*

3. The Commission vide order dated 14.3.2012 in Petition No. 15/SM/2012 gave the following directions: -

*“5. It has come to the notice of the Central Commission that the some of the owners/developers of the inter-State transmission lines of 132 kV and above in North Eastern Region and 220 kV and above in Northern, Eastern, Western and Southern regions as mentioned in the Annexure to this order have approached the Implementing Agency for including their transmission assets in computation of Point of Connection transmission charges and losses under the Central Electricity Regulatory Commission (Sharing of inter- State Transmission Charges and Losses) Regulations, 2010 (hereinafter “Sharing Regulations”).*

*6. As a first step towards inclusion of non-ISTS lines in the POC transmission charges, the Commission proposes to include the transmission lines connecting two States, for computation of POC transmission charges and losses. However, for the disbursement of transmission charges, tariff for such assets needs to be approved by the Commission in accordance with the provisions of Sharing Regulations. Accordingly, we direct the owners of these inter-State lines*






*to file appropriate application before the Commission for determination of tariff for facilitating disbursement.*

*7. We direct the respondents to ensure that the tariff petition for determination of tariff is filed by the developers/owners of the transmission line or by State Transmission Utilities where the transmission lines are owned by them in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, by 20.4.2012."*

4. In compliance with the direction of the Hon'ble Commission, AEGCL filed a petition being petition No. 216/TT/2013 before Hon'ble Commission in accordance with CERC (Terms and conditions of Tariff) Regulations, 2009 claiming tariff of natural ISTS lines owned by AEGCL. AEGCL has submitted that in the aforesaid petition, the individual capital cost of assets was not known because these lines were part of larger projects, and these were constructed during early 1960s and 1980s. Further, it is difficult to segregate the capital cost individually for these assets. Based on the submission made before the Hon'ble Commission, the YTC of these transmission lines were calculated on the methodology adopted by Commission uniformly for the purpose of calculation of PoC charges and transmission charges of transmission lines whose capital cost is not known.
5. The Hon'ble CERC vide order dated 11.12.2015 of Petition No. 215/TT/2013 has allowed the Tariff for the seven transmission lines of AEGCL to be recovered through the Yearly Transmission Charge (YTC) under PoC mechanism to be adjusted against the ARR approved by Assam Electricity Regulatory Commission (AERC). The copy of the said order is annexed herewith as **Annexure-I**.
6. AEGCL has filed its application for determination of Tariff for the control period FY 2014-15 to FY 2018-19 along with the current petition.
7. Further, AEGCL files instant petition as directed in the Commission order of 15/SM/2012 dated 14.03.2012 for the control period FY 2019-20 to FY 2023-24 in accordance with the CERC (Terms & Conditions of Tariff) Regulations, 2019 and CERC (Sharing of Inter-State Transmission Charges and Losses) Regulation, 2020.

  
L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL



8. In the instant Petition, AEGCL is claiming tariff for the following natural inter-state and incidental lines owned by AEGCL:

| S.N.                    | Name of line                           | Connecting States | No. of Conductors | Line length Ckt.Km. | COD                                       |
|-------------------------|--|-------------------|-------------------|---------------------|---|
| <b>ISTS Lines</b>       |  |                   |                   |                     |   |
| 1                       | 132 kV D/C Kahilipara-Umtru I & II     | Assam-Meghalaya   | 1                 | 12.6                | 1965                                      |
| 2                       | 132 kV S/C Jiribam-Pailapool           | Assam-Manipur     | 1                 | 15                  | 1984                                      |
| 3                       | 132 kV S/C Dimapur-Bokajan             | Nagaland-Assam    | 1                 | 25                  | 1980                                      |
| 4                       | 132 kV S/C Dullavcherra-Dharmanagar    | Assam-Tripura     | 1                 | 26                  | 1974                                      |
| 5                       | 132 kV S/C Panchgram-Lumshnong         | Assam-Meghalaya   | 1                 | 27                  | 1964                                      |
| <b>Incidental Lines</b> |  |                   |                   |                     |   |
| 6                       | 400 kV S/C Mirza-BNG (LILO Portion)    | Assam-Meghalaya   | 2                 | 3.229               | 25.06.2014                                |
| 7                       | 400 kV S/C Mirza-Silchar(LILO Portion) | Assam-Meghalaya   | 2                 | 3.229               | 25.06.2014                                |
| 8                       | 220 kV S/C Agia-Boko                   | Assam-Meghalaya   | 1                 | 67.37               | 28.03.2012                                |
| 9                       | 220 kV S/C Agia-Mirza                  | Assam-Meghalaya   | 1                 | 107.3               | 28.03.2006                                |
| 10                      | 220 kV S/C Agia-BTPS-I                 | Assam-Meghalaya   | 1                 | 70                  | 25.07.2013                                |
| 11                      | 220 kV S/C Agia-BTPS-II                | Assam-Meghalaya   | 1                 | 70                  | 28.03.2006                                |
| 12                      | 220 kV S/C Boko-Mirza                  | Assam-Meghalaya   | 1                 | 37.9                | 28.09.2012                                |
| 13                      | 220 kV D/C Tinsukia-Kathalguri-I & II  | Assam-Meghalaya   | 1                 | 24.6                | Ckt I : 26.08.2005<br>Ckt II : 11.11.2011 |


**The details of the Interstate lines of AEGCL transmission system are provided below:**

### **1. Kahilipara – Umtru I & II**

132 kV D/C Kahilipara – Umtru I & II line connects Kahilipara GSS of AEGCL in Assam with Umtru HEP of MeSEB, Meghalaya. The line was commissioned in 1965 and total line length is 11.68 ckt km of which 6.5 ckt km belong to AEGCL.

### **2. 132 kV S/C Jiribam-Pailapool**

132 kV S/C Pailapool – Jiribam transmission line connects the Pailapool GSS of AEGCL in Assam with Jiribam GSS of PowerGrid situated in Jiribam District of Manipur. The whole line of 15 ckt km is owned and maintained by AEGCL.

  
 L. Choudhury  
 CGM (PP&D)  
 O/o the MD, AEGCL



### **3. 132 kV S/C Dimapur-Bokajan**

The 132 kV S/C Bokajan-Dimapur transmission line connects Bokajan GSS of AEGCL situated in Karbi Anglong district of Assam with Dimapur GSS of Power Grid. The entire line is owned and maintained by AEGCL.

### **4. 132 kV S/C Dullavcherra-Dharmanagar**

The 132 kV Dullavcherra-Dharmanagar transmission line connects Dullavcherra GSS of Assam situated in Karimganj district of Dharmanagar GSS of PGCIL. The Assam portion of the line 26 ckt km is owned & maintained by AEGCL.

### **5. 132 kV S/C Panchgram-Lumshong**

The 132 kV S/C Panchagram – Lumshong transmission line connects Panchgram GSS of AEGCL in Hailakandi district of Assam to Lumshong GSS of Meghalaya. The Assam portion of the line 27 ckt km is owned & maintained by AEGCL.

**The details of the incidental lines of AEGCL transmission system are provided below:**

### **6. 400 kV Silchar-Bongaigaon (LILO at 400kV Mirza (Kukurmara) GSS, AEGCL):**

The 400/220/132/33 kV Kukurmara GSS is the only 400kV voltage level substation of AEGCL. The 400kV incoming source is a LILO of 400kV Silchar-Bongaigaon transmission line of 6.6 ckt. km. 400kV GSS has 400kV 2x315 MVA, 220kV 2x50 MVA and 132kV 2x25 MVA transformation capacity. The GSS is connected to 220kV Sarusajai GSS and Agia with 220kV D/C transmission line and one circuit to Agia is via 220kV Boko GSS.

Two interstate 132kV feeder is connecting from Agia to Meghalaya through (a) 132kV Agia – Nagalbibra and (b) 132kV Agia-Mendipathar. Both the lines belong to Meghalaya. However, this interstate line is a radial as on date and power is exported to Meghalaya from Agia.

### **7. 220 kV S/C Agia-Boko & 220 kV D/C Agia-BTPS (Salakati)**

220kV Agia GSS is situated in Goalpara district of Assam. Agia is connected to 400kV Kukurmara and 220kV Salakati (BTPS) GSS via D/C 220kV transmission line. Agia has 220/132 2x100 MVA transformation capacity. Therefore, the 400kV LILO at Kukurmara, the 220kV Kukurmara-Agia, 220kV Kukurmara-Boko-Agia, 220kV D/C Agia-BTPS (Salakati) transmission lines are incidental to flow of interstate power from Assam transmission system to Meghalaya transmission system.



L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL



## 8. 220 kV S/C Tinsukia-Kathalguri-I & II:

Kathalguri gas-based power plant of NEEPCO is of 291 MW. Kathalguri power is allocated to all the 7 NER states as well as Kathalguri is connected to Tinsukia GSS of AEGCL via 220kV D/C transmission line. Hence, a portion of power generated by Kathalguri flows through the STU network. Therefore, the Tinsukia-Kathalguri 220kV D/C transmission line is incidental to interstate flow of power.

9. The Petitioner submits that, the tariff of five natural ISTS lines at S. No. 1 to 5 were already determined for control period FY 2011-14 and in the instant petition for determination of tariff for the control period FY 2019-24. Hence, AEGCL has considered five natural ISTS lines as per S. No. 1 to 5 and eight incidental lines as per S. No. 6 to 13.
10. AEGCL submits that, the capital cost is not available for the above assets as these were part of larger projects and were constructed during 1960s to 1980s. Further, the incidental lines as per S. No. 6 to 13 were constructed through grants from several schemes like PSDF, NEC, ADB, etc.
11. In accordance with Regulation 19 of CERC (Terms and Conditions of Tariff) Regulations, 2019, the grant obtained for execution of the projects shall not be considered as a part of capital cost and does not carry any liability of repayment and these are excluded from the computation of interest on loan, return on equity and depreciation. Hence, AEGCL prays for the recovery of the operation and maintenance expenses and interest on working capital, since AEGCL is maintaining these ISTS and incidental lines.
12. The O&M expenses were considered as per the admissible normative operation and maintenance expenses in accordance with Regulation 35 (3) (a) of CERC (Terms & Conditions of Tariff) Regulations, 2019 and the same is provided below:

### *“(3) Transmission System*

*(a) The following normative operation and maintenance expenses shall be admissible for the transmission system:*

| Particulars  | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|--|---------|---------|---------|---------|---------|
| <b><i>Norms for sub-station Bays (Rs Lakh per bay)</i></b> |         |         |         |         |         |
| 765 kV   | 45.01   | 46.60   | 48.23   | 49.93   | 51.68   |
| 400 kV   | 32.15   | 33.28   | 34.45   | 35.66   | 36.91   |



| Particulars   | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---------|---------|---------|---------|---------|
| <b>Norms for sub-station Bays (Rs Lakh per bay)</b>                 |         |         |         |         |         |
| 220 kV  | 22.51   | 23.30   | 24.12   | 24.96   | 25.84   |
| 132 kV and below  | 16.08   | 16.64   | 17.23   | 17.83   | 18.46   |
| <b>Norms for Transformers (Rs Lakh per MVA)</b>                     |         |         |         |         |         |
| 765 kV  | 0.491   | 0.508   | 0.526   | 0.545   | 0.564   |
| 400 kV  | 0.358   | 0.371   | 0.384   | 0.398   | 0.411   |
| 220 kV  | 0.245   | 0.254   | 0.263   | 0.272   | 0.282   |
| 132 kV and below  | 0.245   | 0.254   | 0.263   | 0.272   | 0.282   |
| <b>Norms for AC and HVDC lines (in Rs Lakh per km)</b>              |         |         |         |         |         |
| Single Circuit (Bundled Conductor with six or more sub-conductors)  | 0.881   | 0.912   | 0.944   | 0.977   | 1.011   |
| Single Circuit (Bundled Conductor with four sub conductors)         | 0.755   | 0.781   | 0.809   | 0.837   | 0.867   |
| Single Circuit (Twin & Triple Conductor)                            | 0.503   | 0.521   | 0.539   | 0.558   | 0.578   |
| Single Circuit (Single Conductor)                                   | 0.252   | 0.260   | 0.270   | 0.279   | 0.289   |
| Double Circuit (Bundled conductor with four or more sub-conductors) | 1.322   | 1.368   | 1.416   | 1.466   | 1.517   |
| Double Circuit (Twin & Triple Conductor)                            | 0.881   | 0.912   | 0.944   | 0.977   | 1.011   |
| Double Circuit (Single Conductor)                                   | 0.377   | 0.391   | 0.404   | 0.419   | 0.433   |
| Multi Circuit (Bundled conductor with four or more sub-conductors)  | 2.319   | 2.401   | 2.485   | 2.572   | 2.662   |
| Multi Circuit (Twin & Triple Conductor)                             | 1.544   | 1.598   | 1.654   | 1.713   | 1.773   |
| <b>Norms for HVDC Stations</b>                                      |         |         |         |         |         |
| HVDC Back-to-back stations (Rs. Lakh per 500 MW)                    | 834     | 864     | 894     | 925     | 958     |
| Gazuwaka HVDC Back-to-Back station (Rs. Lakh per 500 MW)            | 1,666   | 1,725   | 1,785   | 1,848   | 1,913   |
| 500kV Rihand-Dadri HVDC bipole scheme (Rs. Lakh)                    | 2,252   | 2,331   | 2,413   | 2,498   | 2,586   |
| ±500 kV Talcher- Kolar HVDC bipole scheme (Rs. Lakh)                | 2,468   | 2,555   | 2,645   | 2,738   | 2,834   |
| ±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs. Lakh)                 | 1,696   | 1,756   | 1,817   | 1,881   | 1,947   |
| ±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)     | 2,563   | 2,653   | 2,746   | 2,842   | 2,942   |

Provided that the O&M expenses for the GIS bays shall be allowed as worked out by multiplying 0.70 of the O&M expenses of the normative O&M expenses for bays;”

13. The interest on working capital is computed in accordance with Regulation 34 (c) of CERC (Terms & Conditions of Tariff) Regulations, 2019 and the same is provided below:

“...28. Interest on Working Capital:

(c) Hydro generating station including pumped storage hydroelectric generating station and transmission system including communication system:



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(i) Receivables equivalent to two months of fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and

(iii) Operation and maintenance expenses for one month. ....”

14. Hence, the information pertaining to capital cost of individual asset were not available, it is difficult to compute the tariff in accordance with the Regulations:

- The loan details of the assets are not known, hence weighted average rate of interest for these assets cannot be computed.
- Interest on working capital is purely computed based on the normative operation and maintenance expenses in accordance with the CERC (Terms and Conditions of Tariff) Regulations, 2019.
- Asset wise cost for these lines is not available and these lines are constructed through grants. For the lines constructed through the grants, interest on loans, depreciation and return on equity is not computed.

15. The operation and maintenance expenses and interest on working capital for the lines form S. No. 1 to 13 based on the length of the transmission lines is computed in accordance with CERC (Terms and Conditions of Tariff) Regulations, 2019 for the control period FY 2019-24 is provided below:

| (Rs. Lakh)                                     |               |               |               |               |               |
|--|---------------|---------------|---------------|---------------|---------------|
| Name of the Line                               | FY<br>2019-20 | FY<br>2020-21 | FY<br>2021-22 | FY<br>2022-23 | FY<br>2023-24 |
| <b>ISTS Lines</b>                              |               |               |               |               |               |
| <b>132 kV D/C Kahilipara- Umtru I &amp; II</b> |               |               |               |               |               |
| O & M Expenses                                 | 36.91         | 38.21         | 39.55         | 40.94         | 42.38         |
| Interest on Working Capital                    | 1.61          | 1.51          | 1.51          | 1.58          | 1.63          |
| Total  | 38.52         | 39.72         | 41.06         | 42.52         | 44.01         |
| <b>132 kV S/C Jiribam-Pailapool</b>            |               |               |               |               |               |
| O & M Expenses                                 | 19.86         | 20.54         | 21.28         | 22.02         | 22.80         |
| Interest on Working Capital                    | 0.87          | 0.81          | 0.81          | 0.85          | 0.88          |
| Total  | 20.73         | 21.35         | 22.09         | 22.86         | 23.67         |
| <b>132 kV S/C Dimapur-Bokajan</b>              |               |               |               |               |               |
| O & M Expenses                                 | 19.99         | 20.67         | 21.42         | 22.15         | 22.94         |
| Interest on Working Capital                    | 0.87          | 0.90          | 0.93          | 0.97          | 1.00          |
| Total  | 20.86         | 21.57         | 22.35         | 23.12         | 23.94         |
| <b>132 kV S/C Dullavcherra-Dharmanagar</b>     |               |               |               |               |               |



(Rs. Lakh)

| Name of the Line                             | FY<br>2019-20 | FY<br>2020-21 | FY<br>2021-22 | FY<br>2022-23 | FY<br>2023-24 |
|--|---------------|---------------|---------------|---------------|---------------|
| O & M Expenses                               | 22.63         | 23.40         | 24.25         | 25.08         | 25.97         |
| Interest on Working Capital                  | 0.99          | 0.93          | 0.92          | 0.97          | 1.00          |
| Total  | 23.62         | 24.33         | 25.17         | 26.05         | 26.97         |
| <b>132 kV S/C Panchgram-Lumshnong</b>        |               |               |               |               |               |
| O & M Expenses                               | 23.65         | 24.45         | 25.34         | 26.21         | 27.14         |
| Interest on Working Capital                  | 1.03          | 0.97          | 0.97          | 1.01          | 1.04          |
| Total  | 24.68         | 25.41         | 26.30         | 27.21         | 28.18         |
| <b>Incidental Lines</b>                      |               |               |               |               |               |
| <b>400 kV Mirza-BNG</b>                      |               |               |               |               |               |
| Interest on Working Capital                  | 0.07          | 0.07          | 0.07          | 0.07          | 0.07          |
| O & M Expenses                               | 1.62          | 1.68          | 1.74          | 1.80          | 1.87          |
| Total  | 1.70          | 1.75          | 1.81          | 1.87          | 1.94          |
| <b>400 kV Mirza-Silchar</b>                  |               |               |               |               |               |
| Interest on Working Capital                  | 0.07          | 0.07          | 0.07          | 0.07          | 0.07          |
| O & M Expenses                               | 1.62          | 1.68          | 1.74          | 1.80          | 1.84          |
| Total  | 1.70          | 1.76          | 1.81          | 1.87          | 1.94          |
| <b>220 kV Agia-Boko</b>                      |               |               |               |               |               |
| Interest on Working Capital                  | 0.74          | 0.69          | 0.69          | 0.72          | 0.75          |
| O & M Expenses                               | 16.98         | 17.52         | 18.19         | 18.80         | 19.47         |
| Total  | 17.72         | 18.21         | 18.88         | 19.52         | 20.22         |
| <b>220 kV Agia-Mirza</b>                     |               |               |               |               |               |
| Interest on Working Capital                  | 1.18          | 1.10          | 1.10          | 1.15          | 1.19          |
| O & M Expenses                               | 27.04         | 27.90         | 28.97         | 29.94         | 31.01         |
| Total  | 28.22         | 29.00         | 30.08         | 31.09         | 32.20         |
| <b>220 kV Agia-BTPS-II</b>                   |               |               |               |               |               |
| Interest on Working Capital                  | 0.58          | 0.54          | 0.54          | 0.56          | 0.58          |
| O & M Expenses                               | 13.20         | 13.69         | 14.14         | 14.67         | 15.16         |
| Total  | 13.77         | 14.23         | 14.68         | 15.23         | 15.74         |
| <b>220 kV Agia-BTPS-I</b>                    |               |               |               |               |               |
| Interest on Working Capital                  | 0.58          | 0.43          | 0.43          | 0.45          | 0.47          |
| O & M Expenses                               | 13.20         | 10.96         | 11.34         | 11.69         | 12.11         |
| Total  | 13.77         | 11.39         | 11.77         | 12.14         | 12.58         |
| <b>220 kV Boko-Mirza</b>                     |               |               |               |               |               |
| Interest on Working Capital                  | 0.42          | 0.39          | 0.39          | 0.41          | 0.42          |
| O & M Expenses                               | 9.55          | 9.85          | 10.23         | 10.57         | 10.95         |
| Total  | 9.97          | 10.24         | 10.62         | 10.98         | 11.37         |
| <b>220 kV Tinsukia-Kathalguri-I &amp; II</b> |               |               |               |               |               |
| Interest on Working Capital                  | 0.40          | 0.38          | 0.38          | 0.40          | 0.41          |
| O & M Expenses                               | 9.27          | 9.62          | 9.94          | 10.31         | 10.65         |
| Total  | 9.68          | 10.00         | 10.32         | 10.70         | 11.06         |



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(Rs. Lakh)


| Name of the Line   | FY<br>2019-20 | FY<br>2020-21 | FY<br>2021-22 | FY<br>2022-23 | FY<br>2023-24 |
|--------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Grand Total</b> | <b>224.92</b> | <b>228.95</b> | <b>236.94</b> | <b>245.17</b> | <b>253.82</b> |

16. Hence, AEGCL requests the Hon'ble Commission to approve the yearly transmission charges of Rs. 224.92 Lakh for FY 2019-20, Rs. 228.95 Lakh for FY 2020-21, Rs. 236.94 Lakh for FY 2021-22, Rs. 245.17 for FY 2022-23 and Rs. 253.82 for FY 2023-24 as provided in the below table.

(Rs. Lakh)

| Name of the Line                    | FY<br>2019-20 | FY<br>2020-21 | FY<br>2021-22 | FY<br>2022-23 | FY<br>2023-24 |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|
| <b>ISTS Lines</b>                   |               |               |               |               |               |
| 132 kV D/C Kahilipara-Umtru I & II  | 38.52         | 39.72         | 41.06         | 42.52         | 44.01         |
| 132 kV S/C Jiribam-Pailapool        | 20.73         | 21.35         | 22.09         | 22.86         | 23.67         |
| 132 kV S/C Dimapur-Bokajan          | 20.86         | 21.57         | 22.35         | 23.12         | 23.94         |
| 132 kV S/C Dullavcherra-Dharmanagar | 23.62         | 24.33         | 25.17         | 26.05         | 26.97         |
| 132 kV S/C Panchgram-Lumshnong      | 24.68         | 25.41         | 26.30         | 27.21         | 28.18         |
| <b>Incidental Lines</b>             |               |               |               |               |               |
| 400 kV Mirza-BNG                    | 1.70          | 1.75          | 1.81          | 1.87          | 1.94          |
| 400 kV Mirza-Silchar                | 1.70          | 1.75          | 1.81          | 1.87          | 1.94          |
| 220 kV Agia-Boko                    | 17.72         | 18.21         | 18.88         | 19.52         | 20.22         |
| 220 kV Agia-Mirza                   | 28.22         | 29.00         | 30.08         | 31.09         | 32.20         |
| 220 kV Agia-BTPS-II                 | 13.77         | 14.23         | 14.68         | 15.23         | 15.74         |
| 220 kV Agia-BTPS-I                  | 13.77         | 11.39         | 11.77         | 12.14         | 12.58         |
| 220 kV Boko-Mirza                   | 9.97          | 10.24         | 10.62         | 10.98         | 11.37         |
| 220 kV Tinsukia-Kathalguri-I & II   | 9.68          | 10.00         | 10.32         | 10.70         | 11.06         |
| <b>Total</b>                        | <b>224.92</b> | <b>228.95</b> | <b>236.94</b> | <b>245.17</b> | <b>253.82</b> |

17. The detailed computation sheet for calculation of YTC has been attached as **Annexure-II**.
18. Further, AEGCL requests the Hon'ble Commission the application filing fee of Rs.5,00,000 (Rupees Five Lakh only) may be included in the YTC and allow AEGCL to recover the same from the beneficiaries for the control period FY 2019-20 to FY2023-24.

  
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 CGM (PP&D)  
 O/o the MD, AEGCL



## PRAYER

It is respectfully prayed that the Hon'ble Commission may be pleased to

- a. Allow AEGCL to recover the Yearly Transmission Charges (YTC) for the assets covered under this petition;
- b. Approve the Yearly Transmission Charges (YTC) for the control period FY 2019-20 to FY 2023-24 from the beneficiaries;
- c. Condone the inadvertent delay in filing of the instant petition and admit the petition.
- d. Approve the reimbursement of expenditure by beneficiaries towards petition fee, and expenses in relation to filing of Petition;
- e. Condone any inadvertent omission/errors/ short coming and permit the Petitioner to add/modify/alter this filing and make further submission as may be required at the later stage;
- f. To grant any other relief as the Hon'ble Commission may consider appropriate;
- g. To pass any other order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice;
- h. To permit AEGCL to make further submissions, addition and alteration to this Petition as may be necessary from time to time;

*Lohana B Choudhury*

On behalf of the Petitioner

L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL

Date: 29.04.2023

Place: Guwahati

Chief General Manager, AEGCL

Bijulee Bhawan



# **ANNEXURE-I**



**CENTRAL ELECTRICITY REGULATORY COMMISSION**

**NEW DELHI**

**Petition No. 216/TT/2013**

**Coram:**

**Shri Gireesh B. Pradhan, Chairperson  
Shri A. K. Singhal, Member**

**Date of Hearing : 04.06.2015**

**Date of Order : 11.12.2015**

**In the matter of:**

Determination of tariff in respect of Assam Electricity Grid Corporation Limited owned transmission lines/system connecting with other states and intervening transmission lines incidental to inter-State transmission of electricity as per the Central Electricity Regulatory Commission's order dated 14.3.2012 in Petition No. 15/Suo-Motu/2012, for inclusion in POC Transmission charges in accordance with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009.

**And in the matter of:**

Assam Electricity Grid Corporation Limited,  
1<sup>st</sup> Floor Bijuli Bhawan  
Guwahati -781001.

.....Petitioner

**ORDER**

The petitioner, Assam Electricity Grid Corporation Limited (AEGCL) is a successor company incorporated in 2005 after reorganization of Assam State Electricity Board (ASEB) as per provision of the Electricity Act, 2003. The AEGCL is entrusted with the construction and operation of transmission network of Assam and all assets of State network is now under AEGCL. The instant petition has been filed by AEGCL for approval of the annual transmission charges of the transmission assets under the Central Electricity



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Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter "2009 Tariff Regulations") in compliance of the Commission's order dated 14.3.2012 in Petition No.15/SM/2012.

2. The Commission vide order dated 14.3.2012 in Petition No. 15/SM/2012 gave the following directions:-


"5. It has come to the notice of the Central Commission that the some of the owners/developers of the inter-State transmission lines of 132 kV and above in North Eastern Region and 220 kV and above in Northern, Eastern, Western and Southern regions as mentioned in the Annexure to this order have approached the Implementing Agency for including their transmission assets in computation of Point of Connection transmission charges and losses under the Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010 (hereinafter "Sharing Regulations").

6. As a first step towards inclusion of non-ISTS lines in the POC transmission charges, the Commission proposes to include the transmission lines connecting two States, for computation of POC transmission charges and losses. However, for the disbursement of transmission charges, tariff for such assets needs to be approved by the Commission in accordance with the provisions of Sharing Regulations. Accordingly, we direct the owners of these inter-State lines to file appropriate application before the Commission for determination of tariff for facilitating disbursement.

7. We direct the respondents to ensure that the tariff petition for determination of tariff is filed by the developers/owners of the transmission line or by State Transmission Utilities where the transmission lines are owned by them in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, by 20.4.2012."

3. Ten transmission lines were identified by the Commission as ISTS (Inter-State Transmission Lines), for the purpose of inclusion in the POC charges, vide order dated 14.3.2012 in Petition No.15/SM/2012 and AEGCL was directed to file tariff petition for the ten transmission lines, for the purpose of inclusion in the PoC charges. The details of the lines are as follows:-



  
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| Srl. No. | Name of Line                    | Connecting States    |
|----------|---------------------------------|----------------------|
| 1        | 132 kV Umtru-Sarusajai -I       | Assam-Meghalaya      |
| 2        | 132 kV Umtru-Sarusajai -II      | Assam-Meghalaya      |
| 3        | 132 kV Kahelipara- Umtru-I      | Assam-Meghalaya      |
| 4        | 132 kV Kahelipara- Umtru-II     | Assam-Meghalaya      |
| 5        | 132 kV Jiribam-Pailapul         | Assam-Manipur        |
| 6        | 132 kV Bokajan -Dimapur         | Assam Nagaland-      |
| 7        | 132 kV Dullavcherra-Dharmanagar | Assam-Tripura        |
| 8        | 132 kV Panchgram-Lumshnong      | Assam-Meghalaya      |
| 9        | 132 kV -Mariani -Mokokchang     | Assam Nagaland-      |
| 10       | 220 kV Kathalguri- Deomali      | Assam-Andhra Pradesh |

4. The petitioner vide letter dated 17.9.2015, has submitted the list of seven ISTS owned by it and their configuration. The details filed by the petitioner are as follows:-

| Srl. No. | Name of Line                        | Connecting States | Length of line in Ckt. Km (Assam portion) |
|----------|-------------------------------------|-------------------|---|
| 1        | 132 kV D/C Kahelipara- Umtru I & II | Assam-Meghalaya   | 12.60                                     |
| 2        | 132 kV S/C Mariani-Dimapur          | Assam-Nagaland    | 112.00                                    |
| 3        | 132 kV S/C Panchgram-Lumshnong      | Nagaland-Assam    | 30.02                                     |
| 4        | 132 kV S/C Mokokchang-Mariani       | Assam-Nagaland    | 18.80                                     |
| 5        | 132 kV S/C Ziribum-Pailapool        | Assam-Mizoram     | 15.00                                     |
| 6        | 132 kV S/C Dullavcherra-Dharmanagar | Assam-Tripura     | 26.00                                     |
| 7        | 132 kV D/C Sarusajai-Umum           | Assam-Meghalaya   | 18.20                                     |

5. The above lines includes nine lines covered under 15/SM/2012 as indicated at para 3 above. The 132 kV Umtru-Sarusajai -I (i.e. S.No.1) and 132 kV D/C Sarusajai-Umum (S.No. 7) above is indicated as D/C line in place of two 2 lines in para 3 above.

6. We have considered the submission of the petitioner and have perused the material on record. We proceed to determine the annual fixed charges in respect of the assets covered in the petition.



*h*



**No. of assets to be covered**

7. The instant petition has been filed in response to the Commission's direction for determination of tariff of transmission lines owned or controlled by the STU which carry inter-state power. Section 2(36) of the Electricity Act, 2003 defines the ISTS as under:-

"2(36) inter-State transmission system includes-

- (i) Any system for the conveyance of electricity by means of main transmission line from the territory of one State to another state;
- (ii) The conveyance of electricity across the territory of any intervening State as well as conveyance within the State which is incidental to such inter-State transmission of electricity;
- (iii) The transmission of electricity within the territory of a State on a system built, owned, operated, maintained or controlled by a Central Transmission Utility"

8. Out of the ten transmission lines identified by the Commission seven transmission lines are owned by the petitioner and satisfy the conditions of ISTS. The STU lines used for carrying inter-State power can be considered for inclusion in the PoC charges only if it is certified by RPC in terms of para 2.1.3 of the Annexure-I to Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010, which is extracted hereunder:-

"The line-wise YTC of the entire network shall be provided by the Transmission Licensees. In case a line is likely to be commissioned during the Application Period, the data in respect of the same, along with the anticipated COD will be provided by the CTU/ Transmission Licensee to the Implementing Agency.

For the determination of the transmission charges based on Hybrid Methodology applicable in the next Application Period, all the above data shall be provided to the Implementing Agency as per the timelines specified by the Implementing Agency.

Overall charges to be allocated among nodes shall be computed by adopting the YTC of transmission assets of the ISTS licensees, deemed ISTS licensees and owners of the non-ISTS lines which have been certified by the respective Regional Power Committee (RPC) for carrying inter-State power. The Yearly Transmission Charge, computed for assets at each voltage level and conductor configuration in accordance with the provisions of these regulations shall be calculated for each ISTS transmission licensee based on indicative



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cost provided by the Central Transmission Utility for different voltage levels and conductor Page 17 of 21 configuration. The YTC for the RPC certified non-ISTS lines which carry inter-State power shall be approved by the Appropriate Commission.

In case line-wise tariff for the RPC certified non-ISTS lines has not been specified by the Appropriate Commission, the tariff as computed for the relevant voltage level and conductor configuration shall be used. The methodology for computation of tariff of individual asset shall be similar to the methodology adopted for the ISTS transmission licensees and shall be based on ARR of the STU as approved by the respective State Commission.

Certification of non-ISTS lines carrying inter-State power, which were not approved by the RPCs on the date of notification of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2009, shall be done on the basis of load flow studies. For this purpose, STU shall put up proposal to the respective RPC Secretariat for approval. RPC Secretariat, in consultation with RLDC, using Web Net Software would examine the proposal. The results of the load flow studies and participation factor indicating flow of Inter State power on these lines shall be used to compute the percentage of usage of these lines as inter State transmission. The software in the considered scenario will give percentage of usage of these lines by home State and other than home State. For testing the usage, tariff of similar ISTS line may be used. The tariff of the line will also be allocated by software to the home State and other than home State. Based on percentage usage of ISTS in base case, RPC will approve whether the particular State line is being used as ISTS or not. Concerned STU will submit asset-wise tariff. If asset wise tariff is not available, STU will file petition before the Commission for approval of tariff of such lines. The tariff in respect of these lines shall be computed based on Approved ARR and it shall be allocated to lines of different voltage levels and configurations on the basis of methodology which is being done for ISTS lines."

9. The petitioner has identified Seven (7) transmission lines as inter-State transmission lines for inclusion in the PoC:-

| Srl. No. | Name of Line                          | Connecting States | Length of line in Ckt. km (Assam portion) | Total chargeable cost (in ₹ lakh) |
|----------|---------------------------------------|-------------------|---|-----------------------------------|
| 1        | 132 kV D/C Kahilipara- Urr.tru I & II | Assam-Meghalaya   | 12.60                                     | 45.53                             |
| 2        | 132 kV S/C Ziribum-Pailapool          | Assam-Manipur     | 15.00                                     | 44.35                             |
| 3        | 132 kV Dimapur-Bokajan                | Nagaland-Assam    | 15.50                                     | 48.85                             |
| 4        | 132 kV Dullavcherra-Dharmanagar       | Assam-Tripura     | 26.00                                     | 49.88                             |
| 5        | 132 kV Panchgram-Lumshnong            | Assam-Meghalaya   | 30.02                                     | 47.67                             |
| 6        | 132 kV Mokokchang-Mariani             | Nagaland-Assam    | 18.80                                     | 58.16                             |
| 7        | 132 kV D/C Sarusajai-Umium            | Assam-Meghalaya   | 18.20                                     | Not given                         |



*(Signature)*



The petitioner vide letter dated 17.9.2015 submitted that 132 kV Mariani-Dimapur D/C line may be read as 132 kV Bokajan-Dimapur line and the length of the line is 15.50 Ckt. Km instead of 112.00 Ckt. Km.

### **Capital Cost**

10. The petitioner has submitted that the 132 kV and above transmission lines considered in the instant petition were constructed during early 1960 to 1980 by ASEB. All assets of ASEB were maintained in consolidated form. Therefore, no separate details of assets are available with AEGCL. The instant transmission lines are very old and have completed their useful life and accordingly the capital cost is considered as fully depreciated. Thus, only the Operation and Maintenance Expenses (O&M Expenses) and Interest on Working Capital (IWC) have been considered for the purpose of Annual Fixed Cost of these non-ISTS lines.

11. The Commission vide letter dated 16.11.2012 sought the details of the ARR approved by the State commission for the 2009-14 period and details of the O&M Expenses besides other information. The petitioner has not submitted the said information. As such, the petitioner was again directed vide letter dated 17.6.2014 to submit the above said information, but the petitioner had not furnished the information.

12. The matter was heard on 4.6.2015. The petitioner was directed vide RoP dated 4.6.2015 to submit the network configurations in the prescribed pro-forma and the details of ARR approved by the SERC for the years 2009-10 to 2013-14 separately including the total amount approved for the respective years. The petitioner was directed to implead the respondents and file memo of parties. However, the petitioner has not filed the same.





13. In response the petitioner vide letter dated 3.9.2015, has submitted ARR for the 2009-14 tariff periods as approved by the State Commission. The details of the approved ARR furnished by the petitioner are given hereunder:-

| Line* Type                | 2009-10         | 2010-11         | 2011-12         | 2012-13         | 2013-14         |
|---------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| +500kV HVDC               | -               | -               | -               | -               | -               |
| +800kV HVDC               | -               | -               | -               | -               | -               |
| 765kV D/C                 | -               | -               | -               | -               | -               |
| 765kV S/C                 | -               | -               | -               | -               | -               |
| 400kV D/C                 | 0               | 0               | 0               | 0               | 7               |
| 400 Kv DC Quad Moose      | -               | -               | -               | -               | -               |
| 400 kV S/C                |                 |                 |                 |                 |                 |
| 220 kV D/C                | 958.301         | 958.301         | 958.301         | 1049.95         | 1073.39         |
| 220 kV S/C                | 337.209         | 337.209         | 337.209         | 337.209         | 337.209         |
| 132 kV D/C                | 990.85          | 990.85          | 998.71          | 998.71          | 1026.13         |
| 132 kV S/C                | 1481.54         | 1497.40         | 1644.14         | 1712.66         | 1754.46         |
| 66 kV D/C                 | 541             | 541             | 541             | 541             | 541             |
| 66 kV S/C                 | 154             | 154             | 154             | 154             | 154             |
| <b>ARR approved</b><br>** | <b>29921.00</b> | <b>34121.00</b> | <b>39114.00</b> | <b>53645.00</b> | <b>45603.00</b> |

\*Line length in ckt. km.

\*\* ARR in ₹ lakh

#### **Procedure for calculating YTC for the seven transmission lines**

14. As the petitioner has submitted that the capital costs of the transmission lines are not available, the indicative cost of lines of various configurations owned and operated by PGCIL has been considered for the purpose of computation of capital cost of the inter-State transmission lines owned by other entities. Similar approach has been adopted in the instant case. Indicative cost of 400 kV D/C Quad Moose transmission line has been taken as base and indicative cost of lines with configurations other than 400 kV D/C Quad Moose have been made equivalent to indicative cost of 400 kV D/C Quad Moose (i.e. by dividing indicative cost of the 400 kV D/C Quad Moose line by the indicative cost of line of other configurations).

For example – the indicative cost of 400 kV D/C Quad Moose is Rs.202 lakh/km (cost/ckt km= ₹101 lakh) and of 765 kV S/C is ₹159.25 lakh/km. Therefore, the ratio of indicative



*h*



cost of ckt km of 400 kV D/C Quad Moose and indicative cost of ckt km of 765 kV S/C is 0.63 (i.e. 101/159.25) and so on for other configurations.

15. The petitioner also owns lines of 66 kV level but the indicative cost data provided by PGCIL is for voltage level 132 kV and above level. Therefore, line lengths of 66 kV level to 132 kV level have been added and considered the indicative cost of 132 kV level as indicative cost for all the transmission lines having voltage level 132 kV and below. The indicative cost of lines of various configurations owned and operated by PGCIL are as under:-

**For FY 2011-12:**

(in ₹)

| Type                   | Cost<br>(₹ in lakh) | Cost<br>(₹ in lakh/circuit) | Co-efficient |      |
|------------------------|---------------------|-----------------------------|--------------|------|
| 765 KV D/C             | 315.25              | 157.625 (A)                 | a=D/A        | 0.64 |
| 765 KV S/C             | 159.25              | 159.25 (B)                  | b=D/B        | 0.63 |
| 400 KV D/C             | 109.50              | 54.75 (C)                   | c=D/C        | 1.84 |
| 400 KV D/C Quad. Moose | 202.00              | 101 (D)                     | d=D/D        | 1.00 |
| 400 KV S/C             | 74.25               | 74.25 (E)                   | e=D/E        | 1.36 |
| 220 KV D/C             | 59.50               | 29.75 (F)                   | f=D/F        | 3.39 |
| 220 KV S/C             | 37.00               | 37.00 (G)                   | g=D/G        | 2.73 |
| 132 KV D/C             | 46.75               | 23.375 (H)                  | h=D/H        | 4.32 |
| 132 KV S/C             | 28.50               | 28.50 (I)                   | i=D/I        | 3.54 |

**For FY 2012-13**

(in ₹)

| Type                   | Cost<br>(₹ in lakh) | Cost<br>(₹ in lakh/circuit) | Co-efficient |      |
|------------------------|---------------------|-----------------------------|--------------|------|
| 765 KV D/C             | 357.00              | 178.5 (A)                   | a=D/A        | 0.63 |
| 765 KV S/C             | 179.20              | 179.20 (B)                  | b=D/B        | 0.63 |
| 400 KV D/C             | 122.60              | 61.3 (C)                    | c=D/C        | 1.83 |
| 400 KV D/C Quad. Moose | 224.80              | 112.4 (D)                   | d=D/D        | 1.00 |
| 400 KV S/C             | 84.20               | 84.20 (E)                   | e=D/E        | 1.33 |
| 220 KV D/C             | 67.80               | 33.9 (F)                    | f=D/F        | 3.32 |
| 220 KV S/C             | 41.40               | 41.40 (G)                   | g=D/G        | 2.71 |
| 132 KV D/C             | 53.00               | 26.5 (H)                    | h=D/H        | 4.24 |
| 132 KV S/C             | 32.40               | 32.40 (I)                   | i=D/I        | 3.47 |



*L*



**For FY 2013-14**

(in ₹)

| Type                  | Cost<br>(₹ in lakh) | Cost<br>(₹ in lakh/circuit) | Co-efficient |
|-----------------------|---------------------|-----------------------------|--------------|
| 765 kV D/C            | 412.00              | 206 (A)                     | a=D/A 0.56   |
| 765 kV S/C            | 179.80              | 179.80 (B)                  | b=D/B 0.65   |
| 400 kV D/C Twin Moose | 130.40              | 65.2 (C)                    | c=D/C 1.78   |
| 400 kV D/C Quad Moose | 232.60              | 116.3 (D)                   | d=D/D 1.00   |
| 400 kV S/C Twin Moose | 87.00               | 87.00 (E)                   | e=D/E 1.34   |
| 220 kV D/C            | 61.40               | 30.7 (F)                    | f=D/F 3.79   |
| 220 kV S/C            | 37.80               | 37.80 (G)                   | g=D/G 3.08   |
| 132 kV D/C            | 48.40               | 24.2 (H)                    | h=D/H 4.81   |
| 132 kV S/C            | 30.00               | 30.00 (I)                   | i=D/I 3.88   |

16. After getting ratio with respect to 400 kV D/C Quad Moose, YTC per ckt. Km of 400 kV D/C Quad Moose transmission line has been calculated as follows:-

ARR for FY.....in ₹

$$\left\{ \begin{array}{l} \text{YTC per ckt km} \\ \text{400 kV D/C} \\ \text{Quad Moose} \end{array} \right\} = \frac{\text{(Length of 765 kV DC/a) + (Length of 765 kV SC/b) + (Length of 400 kV DC QM/c) + (Length of 400 kV DC TM /d) + (Length of 400 kV SC TM /e) + (Length of 220 kV DC /f) + (Length of 220 kV SC /g) + (Length of 132 kV DC /h) + (Length of 132 kV SC /i)}}{\text{}} \quad \text{-----}$$

\*value of a, b, c, d, e, f, g, h, & i are as given in para 15 and length in ckt km as given in para 13 above of this order.

DC-Double Circuit, SC-Single Circuit, QM-Quad Moose, TM-Twin Moose

17. We have not carried out any due diligence of the tariff of these lines (for consideration of PoC calculations). The tariff of the lines owned by STU has already been determined by State Electricity Regulatory Commission. We have considered the ARR of the STU as approved by the State Electricity Regulatory Commission and have adopted



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the methodology as discussed in para 14 and 15 of this order for the purpose of calculation of PoC charges and apportionment of transmission lines and charges to the transmission system of different configurations of the STU. This methodology has been adopted uniformly for the lines owned by other STUs used for inter-State transmission of power duly certified by respective RPCs for the purpose of inclusion in the PoC mechanism.

18. We have considered the submission of the petitioner. On the basis of the line length in ckt. km and the ARR approved by the State Commission for the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 and PoC cost data for the respective years, YTC for the instant transmission assets for the years 2011-12, 2012-13 and 2013-14 have been calculated as given here under:-

**For FY 2011-12:**

Total ARR approved by the State Commission for 2011-12 is ₹39, 114, 00,000.00  
(YTC in ₹)

| Srl. No      | Asset      | For entire system (Assam) |                   |                      |
|--------------|------------|---------------------------|-------------------|----------------------|
|              |            | Line length (ckt. km)     | YTC (Per ckt. km) | YTC                  |
| 1            | 220 kV D/C | 958.301                   | 907,507.50        | 869,665,344.60       |
| 2            | 220 kV S/C | 337.209                   | 1,128,664.79      | 380,595,925.07       |
| 3            | 132 kV D/C | 1,539.71                  | 713,041.61        | 1,097,877,292.73     |
| 4            | 132 kV S/C | 1,798.14                  | 869,376.93        | 1,563,261,437.60     |
| <b>Total</b> |            |                           |                   | <b>39,114,00,000</b> |

**For FY 2012-13:**

Total ARR approved by the State Commission for 2012-13 is ₹53, 645, 00,000.00



*h*



(YTC in ₹)

| Srl. No      | Asset      | For entire system (Assam) |                   |                         |
|--------------|------------|---------------------------|-------------------|-------------------------|
|              |            | Line Length (Ckt. km)     | YTC (Per ckt. km) | YTC                     |
| 1            | 220 kV D/C | 1,049.95                  | 1,205,658.62      | 1,265,881,263.09        |
| 2            | 220 kV S/C | 337.209                   | 1,472,397.25      | 496,505,603.25          |
| 3            | 132 kV D/C | 1,539.71                  | 942,476.50        | 1,451,140,489.74        |
| 4            | 132 kV S/C | 1,866.66                  | 1,152,310.89      | 2,150,972,643.91        |
| <b>Total</b> |            |                           |                   | <b>53,645,00,000.00</b> |

**For FY 2013-14:**

Total ARR approved by the State Commission for 2013-14 is ₹45, 603, 000, 00.00

(YTC in ₹)

| Srl. No      | Asset                 | For entire system (Assam) |                   |                      |
|--------------|-----------------------|---------------------------|-------------------|----------------------|
|              |                       | Line Length (Ckt. km)     | YTC (Per ckt. km) | YTC                  |
| 1            | 400 kV D/C Twin Moose | 7.00                      | 2,103,746.36      | 14,726,224.54        |
| 2            | 220 kV D/C            | 1,073.39                  | 990,567.69        | 1,063,265,452.10     |
| 3            | 220 kV S/C            | 337.209                   | 1,219,656.63      | 411,279,193.84       |
| 4            | 132 kV D/C            | 1,567.130                 | 780,838.37        | 1,22,367,524.11      |
| 5            | 132 kV S/C            | 1,908.460                 | 967,981.46        | 1,847,353,888.41     |
| <b>Total</b> |                       |                           |                   | <b>4,560,300,000</b> |

**YTC of the seven transmission lines**

19. YTC per ckt. km for 132 kV D/C and 132 kV S/C line considered for Assam lines is as under:-

(YTC in ₹)

| Voltage Level | 2011-12    | 2012-13      | 2013-14    |
|---------------|------------|--------------|------------|
| 132 kV D/C    | 713,041.61 | 942,476.50   | 780,838.37 |
| 132 kV S/C    | 869,376.93 | 1,152,310.89 | 967,981.46 |

20. YTC of the seven transmission lines calculated as per methodology discussed above is given overleaf:-



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O/o the MD, AEGCL



(in ₹)

| Srl. No.     | Name of Line                        | Length of line (Assam portion) | 2011-12 *          | 2012-13               | 2013-14               |
|--------------|-------------------------------------|--------------------------------|--------------------|-----------------------|-----------------------|
| 1            | 132 kV D/C Kahilipara- Umtru        | 12.60                          | 6,738,243.21       | 11,875,203.90         | 9,838,563.51          |
| 2            | 132 kV S/C Ziribam-Pailapool        | 15.00                          | 9,780,490.46       | 17,284,663.35         | 14,519,721.83         |
| 3            | 132 kV S/C Dimapur-Bokajan          | 15.50                          | 10,106,506.81      | 17,860,818.80         | 15,003,712.56         |
| 4            | 132 kV S/C Dullavcherra-Dharmanagar | 26.00                          | 16,952,850.19      | 29,960,083.14         | 25,167,517.84         |
| 5            | 132 kV S/C Panchgram-Lumshnong      | 30.02                          | 19,57,4021.64      | 34,592,372.92         | 29,058,803.29         |
| 6            | 132 kV S/C Mokokchang-Mariani       | 18.8                           | 122,58214.75       | 21,663,444.73         | 18,198,051.36         |
| 7            | 132 kV D/C Sarusajai- Umium         | 18.20                          | 9,733,017.98       | 17,153,072.30         | 14,211,258.41         |
| <b>Total</b> |                                     |                                | <b>85143345.03</b> | <b>150,389,659.13</b> | <b>125,997,628.80</b> |

\*YTC for 9 months has been taken as per Sharing Regulations, 2010 which came into force from 1.7.2011.

21. The annual transmission charges allowed for the assets covered in the instant petition shall be considered in the YTC as per the Sharing Regulations and shall be adjusted against the ARR of the petitioner approved by the State Commission.

22. This order disposes of Petition No. 216/TT/2013.

-sd-  
(A. K. Singhal)  
Member

-sd-  
(Gireesh B. Pradhan)  
Chairperson



L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL



## **Annexure -II**



**Summary of Annual Transmission Charges of Assets for FY 2019-24**

| S.No. | Transmission Lines                  | FY 2019-20    | FY 2020-21    | FY 2021-22    | FY 2022-23    | FY 2023-24    |
|-------|-------------------------------------|---------------|---------------|---------------|---------------|---------------|
|       | <b>ISTS Lines</b>                   |               |               |               |               |               |
| 1     | 132 kV D/C Kahilipara- Umtru I & II | 38.52         | 39.72         | 41.06         | 42.52         | 44.01         |
| 2     | 132 kV S/C Jiribam-Pailapool        | 20.73         | 21.35         | 22.09         | 22.86         | 23.67         |
| 3     | 132 kV Dimapur-Bokajan              | 20.86         | 21.57         | 22.35         | 23.12         | 23.94         |
| 4     | 132 kV Dullavcherra-Dharmanagar     | 23.62         | 24.33         | 25.17         | 26.05         | 26.97         |
| 5     | 132 kV Panchgram-Lumshnong          | 24.68         | 25.41         | 26.30         | 27.21         | 28.18         |
|       | <b>Incidental Lines</b>             |               |               |               |               |               |
| 6     | 400 kV MIRZA-BNG                    | 1.70          | 1.75          | 1.81          | 1.87          | 1.94          |
| 7     | 400 kV MIRZA-SILCHAR                | 1.70          | 1.75          | 1.81          | 1.87          | 1.94          |
| 8     | 220 kV AGIA-BOKO                    | 17.72         | 18.21         | 18.88         | 19.52         | 20.22         |
| 9     | 220 kV AGIA-MIRZA                   | 28.22         | 29.00         | 30.08         | 31.09         | 32.20         |
| 10    | 220 kV AGIA-BTPS-II                 | 13.77         | 14.23         | 14.68         | 15.23         | 15.74         |
| 11    | 220 kV AGIA-BTPS-I                  | 13.77         | 11.39         | 11.77         | 12.14         | 12.58         |
| 12    | 220 kV BOKO-MIRZA                   | 9.97          | 10.24         | 10.62         | 10.98         | 11.37         |
| 13    | 220 kV TINSUKIA-Kathalguri-I & II   | 9.68          | 10.00         | 10.32         | 10.70         | 11.06         |
|       | <b>Total</b>                        | <b>224.92</b> | <b>228.95</b> | <b>236.94</b> | <b>245.17</b> | <b>253.82</b> |



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## Summary Sheet

Name of the Transmission Licensee :

Assam Electricity Grid Corporation Limited

Name of the Transmission Assets :

132 kV D/C Kahilipara- Umtru I &amp; II

(Rs. in lakh)

| S.No. | Particulars                 | FY 2019-20   | FY 2020-21   | FY 2021-22   | FY 2022-23   | FY 2023-24   |
|-------|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| 1     | 2                           | 4            | 5            | 6            | 7            | 8            |
| 1     | Depreciation                | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 2     | Interest on Loan            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 3     | Return on Equity            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 4     | O & M Expenses              | 36.91        | 38.21        | 39.55        | 40.94        | 42.38        |
| 5     | Interest on Working Capital | 1.61         | 1.51         | 1.51         | 1.58         | 1.63         |
|       | <b>Total</b>                | <b>38.52</b> | <b>39.72</b> | <b>41.06</b> | <b>42.52</b> | <b>44.01</b> |

## Summary Sheet

Name of the Transmission Licensee :

Assam Electricity Grid Corporation Limited

Name of the Transmission Assets :

132 kV S/C Jiribam-Pailapool

(Rs. in lakh)

| S.No. | Particulars                 | FY 2019-20   | FY 2020-21   | FY 2021-22   | FY 2022-23   | FY 2023-24   |
|-------|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| 1     | 2                           | 4            | 5            | 6            | 7            | 8            |
| 1     | Depreciation                | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 2     | Interest on Loan            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 3     | Return on Equity            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 4     | O & M Expenses              | 19.86        | 20.54        | 21.28        | 22.02        | 22.80        |
| 5     | Interest on Working Capital | 0.87         | 0.81         | 0.81         | 0.85         | 0.88         |
|       | <b>Total</b>                | <b>20.73</b> | <b>21.35</b> | <b>22.09</b> | <b>22.86</b> | <b>23.67</b> |

## Summary Sheet

Name of the Transmission Licensee :

Assam Electricity Grid Corporation Limited

Name of the Transmission Assets :

132 kV Dimapur-Bokajan

(Rs. in lakh)

| S.No. | Particulars                 | FY 2019-20   | FY 2020-21   | FY 2021-22   | FY 2022-23   | FY 2023-24   |
|-------|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| 1     | 2                           | 4            | 5            | 6            | 7            | 8            |
| 1     | Depreciation                | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 2     | Interest on Loan            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 3     | Return on Equity            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 4     | O & M Expenses              | 19.99        | 20.67        | 21.42        | 22.15        | 22.94        |
| 5     | Interest on Working Capital | 0.87         | 0.90         | 0.93         | 0.97         | 1.00         |
|       | <b>Total</b>                | <b>20.86</b> | <b>21.57</b> | <b>22.35</b> | <b>23.12</b> | <b>23.94</b> |



## Summary Sheet

Name of the Transmission Licensee :

Assam Electricity Grid Corporation Limited

Name of the Transmission Assets :

132 kV Dullavcherra-Dharmanagar

(Rs. in lakh)

| S.No. | Particulars                 | FY 2019-20   | FY 2020-21   | FY 2021-22   | FY 2022-23   | FY 2023-24   |
|-------|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| 1     | 2                           | 4            | 5            | 6            | 7            | 8            |
| 1     | Depreciation                | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 2     | Interest on Loan            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 3     | Return on Equity            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 4     | O & M Expenses              | 22.63        | 23.40        | 24.25        | 25.08        | 25.97        |
| 5     | Interest on Working Capital | 0.99         | 0.93         | 0.92         | 0.97         | 1.00         |
|       | <b>Total</b>                | <b>23.62</b> | <b>24.33</b> | <b>25.17</b> | <b>26.05</b> | <b>26.97</b> |

## Summary Sheet

Name of the Transmission Licensee :

Assam Electricity Grid Corporation Limited

Name of the Transmission Assets :

132 kV Panchgram-Lumshnong

(Rs. in lakh)

| S.No. | Particulars                 | FY 2019-20   | FY 2020-21   | FY 2021-22   | FY 2022-23   | FY 2023-24   |
|-------|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| 1     | 2                           | 4            | 5            | 6            | 7            | 8            |
| 1     | Depreciation                | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 2     | Interest on Loan            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 3     | Return on Equity            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 4     | O & M Expenses              | 23.65        | 24.45        | 25.34        | 26.21        | 27.14        |
| 5     | Interest on Working Capital | 1.03         | 0.97         | 0.97         | 1.01         | 1.04         |
|       | <b>Total</b>                | <b>24.68</b> | <b>25.41</b> | <b>26.30</b> | <b>27.21</b> | <b>28.18</b> |

## Summary Sheet

Name of the Transmission Licensee :

Assam Electricity Grid Corporation Limited

Name of the Transmission Assets :

400 kV MIRZA-SILCHAR

(Rs. in lakh)

| S.No. | Particulars                 | FY 2019-20  | FY 2020-21  | FY 2021-22  | FY 2022-23  | FY 2023-24  |
|-------|-----------------------------|-------------|-------------|-------------|-------------|-------------|
| 1     | 2                           | 4           | 5           | 6           | 7           | 8           |
| 1     | Depreciation                | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        |
| 2     | Interest on Loan            | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        |
| 3     | Return on Equity            | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        |
| 4     | Interest on Working Capital | 0.07        | 0.07        | 0.07        | 0.07        | 0.07        |
| 5     | O & M Expenses              | 1.62        | 1.68        | 1.74        | 1.80        | 1.87        |
|       | <b>Total</b>                | <b>1.70</b> | <b>1.75</b> | <b>1.81</b> | <b>1.87</b> | <b>1.94</b> |

## Summary Sheet

Name of the Transmission Licensee :

Assam Electricity Grid Corporation Limited


Name of the Transmission Assets :

400 kV MIRZA-BONGAIGAON

(Rs. in lakh)

| S.No. | Particulars      | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 |
|-------|------------------|------------|------------|------------|------------|------------|
| 1     | 2                | 4          | 5          | 6          | 7          | 8          |
| 1     | Depreciation     | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 2     | Interest on Loan | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 3     | Return on Equity | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |

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 L. Choudhury  
 CGM (PP&D)  
 O/o the MD, AEGCL



|   |                             |             |             |             |             |             |
|---|-----------------------------|-------------|-------------|-------------|-------------|-------------|
| 4 | Interest on Working Capital | 0.07        | 0.07        | 0.07        | 0.07        | 0.07        |
| 5 | O & M Expenses              | 1.62        | 1.68        | 1.74        | 1.80        | 1.87        |
|   | <b>Total</b>                | <b>1.70</b> | <b>1.75</b> | <b>1.81</b> | <b>1.87</b> | <b>1.94</b> |

*h*

L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL



## Summary Sheet

Name of the Transmission Licensee :  
Name of the Transmission Assets :

Assam Electricity Grid Corporation Limited  
220 kV AGIA-BOKO

(Rs. in lakh)

| S.No. | Particulars                 | FY 2019-20   | FY 2020-21   | FY 2021-22   | FY 2022-23   | FY 2023-24   |
|-------|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| 1     | 2                           | 4            | 5            | 6            | 7            | 8            |
| 1     | Depreciation                | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 2     | Interest on Loan            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 3     | Return on Equity            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 4     | Interest on Working Capital | 0.74         | 0.69         | 0.69         | 0.72         | 0.75         |
| 5     | O & M Expenses              | 16.98        | 17.52        | 18.19        | 18.80        | 19.47        |
|       | <b>Total</b>                | <b>17.72</b> | <b>18.21</b> | <b>18.88</b> | <b>19.52</b> | <b>20.22</b> |

PART-III  
FORM- 1

## Summary Sheet

Name of the Transmission Licensee :  
Name of the Transmission Assets :

Assam Electricity Grid Corporation Limited  
220 kV AGIA-MIRZA

(Rs. in lakh)

| S.No. | Particulars                 | FY 2019-20   | FY 2020-21   | FY 2021-22   | FY 2022-23   | FY 2023-24   |
|-------|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| 1     | 2                           | 4            | 5            | 6            | 7            | 8            |
| 1     | Depreciation                | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 2     | Interest on Loan            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 3     | Return on Equity            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 4     | Interest on Working Capital | 1.18         | 1.10         | 1.10         | 1.15         | 1.19         |
| 5     | O & M Expenses              | 27.04        | 27.90        | 28.97        | 29.94        | 31.01        |
|       | <b>Total</b>                | <b>28.22</b> | <b>29.00</b> | <b>30.08</b> | <b>31.09</b> | <b>32.20</b> |

PART-III  
FORM- 1


## Summary Sheet

Name of the Transmission Licensee :  
Name of the Transmission Assets :

Assam Electricity Grid Corporation Limited  
220 kV AGIA-BTPS II

(Rs. in lakh)

| S.No. | Particulars                 | FY 2019-20   | FY 2020-21   | FY 2021-22   | FY 2022-23   | FY 2023-24   |
|-------|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| 1     | 2                           | 4            | 5            | 6            | 7            | 8            |
| 1     | Depreciation                | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 2     | Interest on Loan            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 3     | Return on Equity            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 4     | Interest on Working Capital | 0.58         | 0.54         | 0.54         | 0.56         | 0.58         |
| 5     | O & M Expenses              | 13.20        | 13.69        | 14.14        | 14.67        | 15.16        |
|       | <b>Total</b>                | <b>13.77</b> | <b>14.23</b> | <b>14.68</b> | <b>15.23</b> | <b>15.74</b> |

  
L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL



## Summary Sheet

Name of the Transmission Licensee :

Assam Electricity Grid Corporation Limited

Name of the Transmission Assets :

220 kV AGIA-BTPS I

(Rs. in lakh)

| S.No. | Particulars                 | FY 2019-20   | FY 2020-21   | FY 2021-22   | FY 2022-23   | FY 2023-24   |
|-------|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| 1     | 2                           | 4            | 5            | 6            | 7            | 8            |
| 1     | Depreciation                | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 2     | Interest on Loan            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 3     | Return on Equity            | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 4     | Interest on Working Capital | 0.58         | 0.43         | 0.43         | 0.45         | 0.47         |
| 5     | O & M Expenses              | 13.20        | 10.96        | 11.34        | 11.69        | 12.11        |
|       | <b>Total</b>                | <b>13.77</b> | <b>11.39</b> | <b>11.77</b> | <b>12.14</b> | <b>12.58</b> |

## Summary Sheet

Name of the Transmission Licensee :

Assam Electricity Grid Corporation Limited

Name of the Transmission Assets :

220 kV BOKO-MIRZA

(Rs. in lakh)

| S.No. | Particulars                 | FY 2019-20  | FY 2020-21   | FY 2021-22   | FY 2022-23   | FY 2023-24   |
|-------|-----------------------------|-------------|--------------|--------------|--------------|--------------|
| 1     | 2                           | 4           | 5            | 6            | 7            | 8            |
| 1     | Depreciation                | 0.00        | 0.00         | 0.00         | 0.00         | 0.00         |
| 2     | Interest on Loan            | 0.00        | 0.00         | 0.00         | 0.00         | 0.00         |
| 3     | Return on Equity            | 0.00        | 0.00         | 0.00         | 0.00         | 0.00         |
| 4     | Interest on Working Capital | 0.42        | 0.39         | 0.39         | 0.41         | 0.42         |
| 5     | O & M Expenses              | 9.55        | 9.85         | 10.23        | 10.57        | 10.95        |
|       | <b>Total</b>                | <b>9.97</b> | <b>10.24</b> | <b>10.62</b> | <b>10.98</b> | <b>11.37</b> |

## Summary Sheet

Name of the Transmission Licensee :

Assam Electricity Grid Corporation Limited

Name of the Transmission Assets :

220 kV TINSUKIA-KATHALGURI I &amp; II

(Rs. in lakh)

| S.No. | Particulars                 | FY 2019-20  | FY 2020-21   | FY 2021-22   | FY 2022-23   | FY 2023-24   |
|-------|-----------------------------|-------------|--------------|--------------|--------------|--------------|
| 1     | 2                           | 4           | 5            | 6            | 7            | 8            |
| 1     | Depreciation                | 0.00        | 0.00         | 0.00         | 0.00         | 0.00         |
| 2     | Interest on Loan            | 0.00        | 0.00         | 0.00         | 0.00         | 0.00         |
| 3     | Return on Equity            | 0.00        | 0.00         | 0.00         | 0.00         | 0.00         |
| 4     | Interest on Working Capital | 0.40        | 0.38         | 0.38         | 0.40         | 0.41         |
| 5     | O & M Expenses              | 9.27        | 9.62         | 9.94         | 10.31        | 10.65        |
|       | <b>Total</b>                | <b>9.68</b> | <b>10.00</b> | <b>10.32</b> | <b>10.70</b> | <b>11.06</b> |



L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL





## DETAILS OF TRANSMISSION LINES &amp; SUBSTATIONS

Name of the Transmission Licensee : Assam Electricity Grid Corporation Limited

Transmission lines

| S.NO. | Name of line                        | Type of line<br>AC/HVDC | S/C or D/C     | No. of Conductors | Voltage level<br>kV | Line length<br>Ckt.Km. | Date of Commercial<br>operation         | Covered in<br>this petition<br>(Yes/No) |
|-------|-------------------------------------|-------------------------|----------------|-------------------|---------------------|------------------------|---|---|
| 1     | 132 kV D/C Kahilipara- Umtru I & II | AC                      | Double Circuit | 1                 | 132 kV              | 12.6                   | 1965                                    | Yes                                     |
| 2     | 132 kV S/C Ziribum-Pailapool        | AC                      | Single Circuit | 1                 | 132 kV              | 15                     | 1984                                    | Yes                                     |
| 3     | 132 kV Dimapur-Bokajan              | AC                      | Single Circuit | 1                 | 132 kV              | 15.5                   | 1980                                    | Yes                                     |
| 4     | 132 kV Dullavcherra-Dharmanagar     | AC                      | Single Circuit | 1                 | 132 kV              | 26                     | 1974                                    | Yes                                     |
| 5     | 132 kV Panchgram-Lumshnong          | AC                      | Single Circuit | 1                 | 132 kV              | 30.02                  | 1964                                    | Yes                                     |
| 6     | 400 kV MIRZA-BNG                    | AC                      | Single Circuit | 2                 | 400 kV              | 3.229                  | 25.6.2014                               | Yes                                     |
| 7     | 400 kV MIRZA-SILCHAR                | AC                      | Single Circuit | 2                 | 400 kV              | 3.229                  | 25.6.2014                               | Yes                                     |
| 8     | 220 kV AGIA-BOKO                    | AC                      | Single Circuit | 1                 | 220 kV              | 67.37                  | 28.3.2012                               | Yes                                     |
| 9     | 220 kV AGIA-MIRZA                   | AC                      | Single Circuit | 1                 | 220 kV              | 107.3                  | 28.3.2006                               | Yes                                     |
| 10    | 220 kV AGIA-BTPS-I                  | AC                      | Double Circuit | 1                 | 220 kV              | 70                     | 25.7.2013                               | Yes                                     |
| 11    | 220 kV AGIA-BTPS-II                 | AC                      | Double Circuit | 1                 | 220 kV              | 70                     | 28.3.2006                               | Yes                                     |
| 12    | 220 kV BOKO-MIRZA                   | AC                      | Single Circuit | 1                 | 220 kV              | 37.9                   | 28.9.2012                               | Yes                                     |
| 13    | 220 kV TINSUKIA-Kathalguri-I & II   | AC                      | Double Circuit | 1                 | 220 kV              | 24.6                   | Ckt I: 26.08.2005<br>Ckt II: 11.11.2011 | Yes                                     |


  
 L. Choudhury  
 CGM (PP&D)  
 O/o the MD, AEGCL



**Calculation of Annual Transmission Charges of Asset**  
**132 kV D/C Kahilipara- Umtru I & II**

Annexure - 1

Name of the Asset:

|                          |      |                       |      |
|--------------------------|------|-----------------------|------|
|                          |      | Life in Years         | 57   |
| Transmission Line Length | 12.6 | Voltage Level         | 132  |
|                          |      | Date of Commissioning | 1965 |

(Rs. In Lakh)

| S.No. | Particulars                                   | Value                 | Unit            | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 |
|-------|---|-----------------------|-----------------|------------|------------|------------|------------|------------|
|       | <b>Transmission Line Charges for the Year</b> |                       |                 |            |            |            |            |            |
|       | <b>O&amp;M Expenses</b>                       |                       |                 |            |            |            |            |            |
| 1     | Norms for O&M per Km                          |                       | Rs.lakh/Km      | 0.377      | 0.391      | 0.404      | 0.419      | 0.433      |
| 2     | Norms for O&M per Bay                         |                       | Rs Lakh per bay | 16.08      | 16.64      | 17.23      | 17.83      | 18.46      |
| 3     | Annual Normative O&M Expenses                 | 2 Bays & 12.6 Km line | Rs. Lakh        | 36.91      | 38.21      | 39.55      | 40.94      | 42.38      |
|       | <b>Interest on Working Capital</b>            |                       |                 |            |            |            |            |            |
| 1     | Maintainance spares                           | 15% of O&M            | Rs. Lakh        | 5.54       | 5.73       | 5.93       | 6.14       | 6.36       |
| 2     | O&M Expenses                                  | 1 Month               | Rs. Lakh        | 3.08       | 3.18       | 3.30       | 3.41       | 3.53       |
| 3     | Receivables                                   | 1.5 Months            | Rs. Lakh        | 4.82       | 4.96       | 5.13       | 5.31       | 5.50       |
| 4     | <b>Total</b>                                  |                       | Rs. Lakh        | 13.43      | 13.88      | 14.36      | 14.87      | 15.39      |
|       | <b>Interest Rate</b>                          |                       |                 | 12.00%     | 10.90%     | 10.50%     | 10.60%     | 10.60%     |
|       | <b>Interest on Working Capital</b>            |                       | Rs. Lakh        | 1.61       | 1.51       | 1.51       | 1.58       | 1.63       |
|       | <b>Yearly Transmission Charges</b>            |                       |                 |            |            |            |            |            |
| 1     | Depreciation                                  |                       | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 2     | Interest on Loan                              |                       | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 3     | Return on Equity                              |                       | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 4     | O&M Expenses                                  |                       | Rs. Lakh        | 36.91      | 38.21      | 39.55      | 40.94      | 42.38      |
| 5     | Interest on Working Capital                   |                       | Rs. Lakh        | 1.61       | 1.51       | 1.51       | 1.58       | 1.63       |
|       | <b>Total Charges</b>                          |                       | Rs. Lakh        | 38.52      | 39.72      | 41.06      | 42.52      | 44.01      |

*L. Choudhury*  
CGM (PP&D)  
O/o the MD, AEGCL



Calculation of Annual Transmission Charges of Asset  
132 kV S/C Jiribam-Pailapool

Annexure - 2

Name of the Asset:

|                          |    |                       |      |
|--------------------------|----|-----------------------|------|
|                          |    | Life in Years         | 38   |
| Transmission Line Length | 15 | Voltage Level         | 132  |
|                          |    | Date of Commissioning | 1984 |

(Rs. In Lakh)

| S.No. | Particulars                                   | Value              | Unit            | FY 2019-20   | FY 2020-21   | FY 2021-22   | FY 2022-23   | FY 2023-24   |
|-------|---|--------------------|-----------------|--------------|--------------|--------------|--------------|--------------|
|       | <b>Transmission Line Charges for the Year</b> |                    |                 |              |              |              |              |              |
|       | <b>O&amp;M Expenses</b>                       |                    |                 |              |              |              |              |              |
| 1     | Norms for O&M per Km                          |                    | Rs.lakh/Km      | 0.252        | 0.26         | 0.27         | 0.279        | 0.289        |
| 2     | Norms for O&M per Bay                         |                    | Rs Lakh per bay | 16.08        | 16.64        | 17.23        | 17.83        | 18.46        |
| 3     | Annual Normative O&M Expenses                 | 1 Bay & 15 Km line | Rs. Lakh        | 19.86        | 20.54        | 21.28        | 22.02        | 22.80        |
|       | <b>Interest on Working Capital</b>            |                    |                 |              |              |              |              |              |
| 1     | Maintainance spares                           | 15% of O&M         | Rs. Lakh        | 2.98         | 3.08         | 3.19         | 3.30         | 3.42         |
| 2     | O&M Expenses                                  | 1 Month            | Rs. Lakh        | 1.66         | 1.71         | 1.77         | 1.83         | 1.90         |
| 3     | Receivables                                   | 1.5 Months         | Rs. Lakh        | 2.59         | 2.67         | 2.76         | 2.86         | 2.96         |
| 4     | <b>Total</b>                                  |                    | Rs. Lakh        | 7.22         | 7.46         | 7.73         | 7.99         | 8.28         |
|       |   |                    |                 | 12.00%       | 10.90%       | 10.50%       | 10.60%       | 10.60%       |
|       | <b>Interest on Working Capital</b>            |                    | <b>Rs. Lakh</b> | <b>0.87</b>  | <b>0.81</b>  | <b>0.81</b>  | <b>0.85</b>  | <b>0.88</b>  |
|       | <b>Yearly Transmission Charges</b>            |                    |                 |              |              |              |              |              |
| 1     | Depreciation                                  |                    | Rs. Lakh        | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 2     | Interest on Loan                              |                    | Rs. Lakh        | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 3     | Return on Equity                              |                    | Rs. Lakh        | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 4     | O&M Expenses                                  |                    | Rs. Lakh        | 19.86        | 20.54        | 21.28        | 22.02        | 22.80        |
| 5     | Interest on Working Capital                   |                    | Rs. Lakh        | 0.87         | 0.81         | 0.81         | 0.85         | 0.88         |
|       | <b>Total Charges</b>                          |                    | <b>Rs. Lakh</b> | <b>20.73</b> | <b>21.35</b> | <b>22.09</b> | <b>22.86</b> | <b>23.67</b> |

L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL



Name of the Asset:

Calculation of Annual Transmission Charges of Asset  
132 kV Dimapur-Bokajan

Annexure - 3

|                          |      |                       |      |
|--------------------------|------|-----------------------|------|
|                          |      | Life in Years         | 42   |
| Transmission Line Length | 15.5 | Voltage Level         | 132  |
|                          |      | Date of Commissioning | 1980 |

(Rs. In Lakh)

| S.No. | Particulars                                   | Value                 | Unit            | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 |
|-------|---|-----------------------|-----------------|------------|------------|------------|------------|------------|
|       | <b>Transmission Line Charges for the Year</b> |                       |                 |            |            |            |            |            |
|       | <b>O&amp;M Expenses</b>                       |                       |                 |            |            |            |            |            |
| 1     | Norms for O&M per Km                          |                       | Rs.lakh/Km      | 0.252      | 0.26       | 0.27       | 0.279      | 0.289      |
| 2     | Norms for O&M per Bay                         |                       | Rs Lakh per bay | 16.08      | 16.64      | 17.23      | 17.83      | 18.46      |
| 3     | Annual Normative O&M Expenses                 | 1 Bay & 15.50 Km line | Rs. Lakh        | 19.99      | 20.67      | 21.42      | 22.15      | 22.94      |
|       | <b>Interest on Working Capital</b>            |                       |                 |            |            |            |            |            |
| 1     | Maintainance spares                           | 15% of O&M            | Rs. Lakh        | 3.00       | 3.10       | 3.21       | 3.32       | 3.44       |
| 2     | O&M Expenses                                  | 1 Month               | Rs. Lakh        | 1.67       | 1.72       | 1.78       | 1.85       | 1.91       |
| 3     | Receivables                                   | 1.5 Months            | Rs. Lakh        | 2.61       | 2.70       | 2.79       | 2.89       | 2.99       |
| 4     | <b>Total</b>                                  |                       | Rs. Lakh        | 7.27       | 7.52       | 7.79       | 8.06       | 8.35       |
|       | <b>Interest Rate</b>                          |                       |                 | 12.00%     | 10.90%     | 10.50%     | 10.60%     | 10.60%     |
|       | <b>Interest on Working Capital</b>            |                       | Rs. Lakh        | 0.87       | 0.90       | 0.93       | 0.97       | 1.00       |
|       | <b>Yearly Transmission Charges</b>            |                       |                 |            |            |            |            |            |
| 1     | Depreciation                                  |                       | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 2     | Interest on Loan                              |                       | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 3     | Return on Equity                              |                       | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 4     | O&M Expenses                                  |                       | Rs. Lakh        | 19.99      | 20.67      | 21.42      | 22.15      | 22.94      |
| 5     | Interest on Working Capital                   |                       | Rs. Lakh        | 0.87       | 0.90       | 0.93       | 0.97       | 1.00       |
|       | <b>Total Charges</b>                          |                       | Rs. Lakh        | 20.86      | 21.57      | 22.35      | 23.12      | 23.94      |

L. Choudhury  
CGM (PP&D)  
O/o the MD, AEGCL



Calculation of Annual Transmission Charges of Asset  
132 kV Dullavcherra-Dharmanagar

Annexure - 4

Name of the Asset:

|                          |    |                       |      |
|--------------------------|----|-----------------------|------|
|                          |    | Life in Years         | 48   |
| Transmission Line Length | 26 | Voltage Level         | 132  |
|                          |    | Date of Commissioning | 1974 |

(Rs. In Lakh)

| S.No. | Particulars                                   | Value              | Unit            | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 |
|-------|---|--------------------|-----------------|------------|------------|------------|------------|------------|
|       | <b>Transmission Line Charges for the Year</b> |                    |                 |            |            |            |            |            |
|       | <b>O&amp;M Expenses</b>                       |                    |                 |            |            |            |            |            |
| 1     | Norms for O&M per Km                          |                    | Rs.lakh/Km      | 0.252      | 0.26       | 0.27       | 0.279      | 0.289      |
| 2     | Norms for O&M per Bay                         |                    | Rs Lakh per bay | 16.08      | 16.64      | 17.23      | 17.83      | 18.46      |
| 3     | Annual Normative O&M Expenses                 | 1 Bay & 26 Km line | Rs. Lakh        | 22.63      | 23.40      | 24.25      | 25.08      | 25.97      |
|       | <b>Interest on Working Capital</b>            |                    |                 |            |            |            |            |            |
| 1     | Maintainance spares                           | 15% of O&M         | Rs. Lakh        | 3.39       | 3.51       | 3.64       | 3.76       | 3.90       |
| 2     | O&M Expenses                                  | 1 Month            | Rs. Lakh        | 1.89       | 1.95       | 2.02       | 2.09       | 2.16       |
| 3     | Receivables                                   | 1.5 Months         | Rs. Lakh        | 2.95       | 3.04       | 3.15       | 3.26       | 3.37       |
| 4     | <b>Total</b>                                  |                    | Rs. Lakh        | 8.23       | 8.50       | 8.81       | 9.11       | 9.43       |
|       | <b>Interest Rate</b>                          |                    |                 | 12.00%     | 10.90%     | 10.50%     | 10.60%     | 10.60%     |
|       | <b>Interest on Working Capital</b>            |                    | Rs. Lakh        | 0.99       | 0.93       | 0.92       | 0.97       | 1.00       |
|       | <b>Yearly Transmission Charges</b>            |                    |                 |            |            |            |            |            |
| 1     | Depreciation                                  |                    | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 2     | Interest on Loan                              |                    | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 3     | Return on Equity                              |                    | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 4     | O&M Expenses                                  |                    | Rs. Lakh        | 22.63      | 23.40      | 24.25      | 25.08      | 25.97      |
| 5     | Interest on Working Capital                   |                    | Rs. Lakh        | 0.99       | 0.93       | 0.92       | 0.97       | 1.00       |
|       | <b>Total Charges</b>                          |                    | Rs. Lakh        | 23.62      | 24.33      | 25.17      | 26.05      | 26.97      |

L. Choudhury  
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O/o the MD, AEGCL




Name of the Asset:

Calculation of Annual Transmission Charges of Asset  
132 kV Panchgram-Lumshnong

Annexure - 5

|                          |       |                       |      |
|--------------------------|-------|-----------------------|------|
| Transmission Line Length | 30.02 | Life in Years         | 58   |
|                          |       | Voltage Level         | 132  |
|                          |       | Date of Commissioning | 1964 |

| S.No. | Particulars                                   | Value                 | Unit            | (Rs. In Lakh) |            |            |            |            |
|-------|---|-----------------------|-----------------|---------------|------------|------------|------------|------------|
|       | <i>Transmission Line Charges for the Year</i> |                       |                 | FY 2019-20    | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 |
|       | <b>O&amp;M Expenses</b>                       |                       |                 |               |            |            |            |            |
| 1     | Norms for O&M per Km                          |                       | Rs.lakh/Km      | 0.252         | 0.26       | 0.27       | 0.279      | 0.289      |
| 2     | Norms for O&M per Bay                         |                       | Rs Lakh per bay | 16.08         | 16.64      | 17.23      | 17.83      | 18.46      |
| 3     | Annual Normative O&M Expenses                 | 1 Bay & 30.02 Km line | Rs. Lakh        | 23.65         | 24.45      | 25.34      | 26.21      | 27.14      |
|       | <i>Interest on Working Capital</i>            |                       |                 |               |            |            |            |            |
| 1     | Maintainance spares                           | 15% of O&M            | Rs. Lakh        | 3.55          | 3.67       | 3.80       | 3.93       | 4.07       |
| 2     | O&M Expenses                                  | 1 Month               | Rs. Lakh        | 1.97          | 2.04       | 2.11       | 2.18       | 2.26       |
| 3     | Receivables                                   | 1.5 Months            | Rs. Lakh        | 3.08          | 3.18       | 3.29       | 3.40       | 3.52       |
| 4     | <b>Total</b>                                  |                       | Rs. Lakh        | 8.60          | 8.88       | 9.20       | 9.52       | 9.85       |
|       | <b>Interest on Working Capital</b>            |                       | <b>Rs. Lakh</b> | 12.00%        | 10.90%     | 10.50%     | 10.60%     | 10.60%     |
|       |   |                       |                 | 1.03          | 0.97       | 0.97       | 1.01       | 1.04       |
|       | <i>Yearly Transmission Charges</i>            |                       |                 |               |            |            |            |            |
| 1     | Depreciation                                  |                       | Rs. Lakh        | 0.00          | 0.00       | 0.00       | 0.00       | 0.00       |
| 2     | Interest on Loan                              |                       | Rs. Lakh        | 0.00          | 0.00       | 0.00       | 0.00       | 0.00       |
| 3     | Return on Equity                              |                       | Rs. Lakh        | 0.00          | 0.00       | 0.00       | 0.00       | 0.00       |
| 4     | O&M Expenses                                  |                       | Rs. Lakh        | 23.65         | 24.45      | 25.34      | 26.21      | 27.14      |
| 5     | Interest on Working Capital                   |                       | Rs. Lakh        | 1.03          | 0.97       | 0.97       | 1.01       | 1.04       |
|       | <b>Total Charges</b>                          |                       | <b>Rs. Lakh</b> | 24.68         | 25.41      | 26.30      | 27.21      | 28.18      |

  
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**Calculation of Annual Transmission Charges of Asset**

**Name of the Asset:**

**400 kV MIRZA-SILCHAR**

**Annexure - 2a**

|  |       |                       |            |
|--|-------|-----------------------|------------|
| Rationalised Cost of 400kV line Rs. Lakh per ckt. Km | 0     | Life in Years         | 25         |
| Transmission Line Length                             | 3.229 | Voltage Level         | 400 kV     |
| Multiplication Factor                                | 1.39  | Date of Commissioning | 27.06.2014 |

**(Rs. in Lakh)**

| S.No. | Particulars                                   | Value          | Unit            | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 |
|-------|---|----------------|-----------------|------------|------------|------------|------------|------------|
|       | <b>Transmission Line Charges for the Year</b> |                |                 |            |            |            |            |            |
|       | <b>O&amp;M Expenses</b>                       |                |                 |            |            |            |            |            |
| 1     | Rate Rs. Lakh per KM                          |                | Rs.lakh/Km      | 0.503      | 0.521      | 0.539      | 0.558      | 0.578      |
| 2     | <b>Annual Normative O&amp;M Expenses</b>      |                | Rs. Lakh        | 1.62       | 1.68       | 1.74       | 1.80       | 1.87       |
|       | <b>Interest on Working Capital</b>            |                |                 |            |            |            |            |            |
| 1     | Maintainance spares                           | 15% of O&M     | Rs. Lakh        | 0.24       | 0.25       | 0.26       | 0.27       | 0.28       |
| 2     | O&M Expenses                                  | 1 Month of O&M | Rs. Lakh        | 0.14       | 0.14       | 0.15       | 0.15       | 0.16       |
| 3     | Receivables                                   | 1.5 Months     | Rs. Lakh        | 0.21       | 0.22       | 0.23       | 0.23       | 0.24       |
| 4     | <b>Total</b>                                  |                | Rs. Lakh        | 0.59       | 0.61       | 0.63       | 0.65       | 0.68       |
|       | Interest Rate                                 |                |                 | 12.00%     | 10.90%     | 10.50%     | 10.60%     | 10.60%     |
|       | <b>Total Interest on Working Capital</b>      |                | <b>Rs. Lakh</b> | 0.07       | 0.07       | 0.07       | 0.07       | 0.07       |
|       | <b>Yearly Transmission Charges</b>            |                |                 |            |            |            |            |            |
| 1     | Depreciation                                  |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 2     | Interest on Loan                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 3     | Return on Equity                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 4     | Interest on Working Capital                   |                | Rs. Lakh        | 0.07       | 0.07       | 0.07       | 0.07       | 0.07       |
| 5     | O&M Expenses                                  |                | Rs. Lakh        | 1.62       | 1.68       | 1.74       | 1.80       | 1.87       |
|       | <b>Total Charges</b>                          |                | <b>Rs. Lakh</b> | 1.70       | 1.75       | 1.81       | 1.87       | 1.94       |

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**Calculation of Annual Transmission Charges of Asset**

**Annexure - 2b**


**Name of the Asset:**

**400 kV MIRZA-BONGAIGAON**

|  |       |                       |            |
|--|-------|-----------------------|------------|
| Rationalised Cost of 400kV line Rs. Lakh per ckt. Km | 0     | Life in Years         | 25         |
| Transmission Line Length                             | 3.229 | Voltage Level         | 400 kV     |
| Multiplication Factor                                | 1.39  | Date of Commissioning | 14.01.2015 |

**(Rs. In Lakh)**

| S.No. | Particulars                                   | Value          | Unit            |            |            |            |            |            |
|-------|---|----------------|-----------------|------------|------------|------------|------------|------------|
|       |   |                |                 | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 |
|       | <b>Transmission Line Charges for the Year</b> |                |                 |            |            |            |            |            |
|       | <b>O&amp;M Expenses</b>                       |                |                 |            |            |            |            |            |
| 1     | Rate Rs. Lakh per KM                          |                | Rs.lakh/Km      | 0.503      | 0.521      | 0.539      | 0.558      | 0.578      |
| 2     | <b>Annual Normative O&amp;M Expenses</b>      |                | Rs. Lakh        | 1.62       | 1.68       | 1.74       | 1.80       | 1.87       |
|       |   |                |                 |            |            |            |            |            |
|       | <b>Interest on Working Capital</b>            |                |                 |            |            |            |            |            |
|       |   |                |                 |            |            |            |            |            |
| 1     | Maintainance spares                           | 15% of O&M     | Rs. Lakh        | 0.24       | 0.25       | 0.26       | 0.27       | 0.28       |
| 2     | O&M Expenses                                  | 1 Month of O&M | Rs. Lakh        | 0.14       | 0.14       | 0.15       | 0.15       | 0.16       |
| 3     | Receivables                                   | 1.5 Months     | Rs. Lakh        | 0.21       | 0.22       | 0.23       | 0.23       | 0.24       |
| 4     | Total   |                | Rs. Lakh        | 0.59       | 0.61       | 0.63       | 0.65       | 0.68       |
|       | Interest Rate                                 |                |                 | 12.000%    | 10.90%     | 10.50%     | 10.60%     | 10.60%     |
|       | <b>Total Interest on Working Capital</b>      |                | <b>Rs. Lakh</b> | 0.07       | 0.07       | 0.07       | 0.07       | 0.07       |
|       |   |                |                 |            |            |            |            |            |
|       | <b>Yearly Transmission Charges</b>            |                |                 |            |            |            |            |            |
|       |   |                |                 |            |            |            |            |            |
| 1     | Depreciation                                  |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 2     | Interest on Loan                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 3     | Return on Equity                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 4     | Interest on Working Capital                   |                | Rs. Lakh        | 0.07       | 0.07       | 0.07       | 0.07       | 0.07       |
| 5     | O&M Expenses                                  |                | Rs. Lakh        | 1.62       | 1.68       | 1.74       | 1.80       | 1.87       |
|       | <b>Total Charges</b>                          |                | <b>Rs. Lakh</b> | 1.70       | 1.75       | 1.81       | 1.87       | 1.94       |

  
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**Calculation of Annual Transmission Charges of Asset**  
**Name of the Asset: 220 kV AGIA-BOKO**

**Annexure - 2c**

|  |       |                       |            |
|--|-------|-----------------------|------------|
| Rationalised Cost of 400kV line Rs. Lakh per ckt. Km | 0     | Life in Years         | 25         |
| Transmission Line Length                             | 67.37 | Voltage Level         | 220 kV     |
| Multiplication Factor                                | 0.36  | Date of Commissioning | 28.03.2012 |

**(Rs. In Lakh)**

| S.No. | Particulars                                   | Value          | Unit            |            |            |            |            |            |
|-------|---|----------------|-----------------|------------|------------|------------|------------|------------|
|       |   |                |                 | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 |
|       | <b>Transmission Line Charges for the Year</b> |                |                 |            |            |            |            |            |
|       | <b>O&amp;M Expenses</b>                       |                |                 |            |            |            |            |            |
| 1     | Rate Rs. Lakh per KM                          |                | Rs.lakh/Km      | 0.252      | 0.26       | 0.27       | 0.279      | 0.289      |
| 2     | <b>Annual Normative O&amp;M Expenses</b>      |                | Rs. Lakh        | 16.98      | 17.52      | 18.19      | 18.80      | 19.47      |
|       |   |                |                 |            |            |            |            |            |
|       | <b>Interest on Working Capital</b>            |                |                 |            |            |            |            |            |
| 1     | Maintainance spares                           | 15% of O&M     | Rs. Lakh        | 2.55       | 2.63       | 2.73       | 2.82       | 2.92       |
| 2     | O&M Expenses                                  | 1 Month of O&M | Rs. Lakh        | 1.41       | 1.46       | 1.52       | 1.57       | 1.62       |
| 3     | Receivables                                   | 1.5 Months     | Rs. Lakh        | 2.21       | 2.28       | 2.36       | 2.44       | 2.53       |
| 4     | Total   |                | Rs. Lakh        | 6.18       | 6.36       | 6.60       | 6.83       | 7.07       |
|       | Interest Rate                                 |                |                 | 12.000%    | 10.90%     | 10.50%     | 10.60%     | 10.60%     |
|       | <b>Total Interest on Working Capital</b>      |                | <b>Rs. Lakh</b> | 0.74       | 0.69       | 0.69       | 0.72       | 0.75       |
|       |   |                |                 |            |            |            |            |            |
|       | <b>Yearly Transmission Charges</b>            |                |                 |            |            |            |            |            |
| 1     | Depreciation                                  |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 2     | Interest on Loan                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 3     | Return on Equity                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 4     | Interest on Working Capital                   |                | Rs. Lakh        | 0.74       | 0.69       | 0.69       | 0.72       | 0.75       |
| 5     | O&M Expenses                                  |                | Rs. Lakh        | 16.98      | 17.52      | 18.19      | 18.80      | 19.47      |
|       | <b>Total Charges</b>                          |                | <b>Rs. Lakh</b> | 17.72      | 18.21      | 18.88      | 19.52      | 20.22      |

  
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**Calculation of Annual Transmission Charges of Asset**

**Annexure - 2d**


**Name of the Asset:**

**220 kV AGIA-MIRZA**

|   |       |                       |            |
|---|-------|-----------------------|------------|
| Rationalised Cost of 400kV line Rs. Lakh per Km | 0     | Life in Years         | 25         |
| Transmission Line Length                        | 107.3 | Voltage Level         | 220 kV     |
| Multiplication Factor                           | 0.36  | Date of Commissioning | 28.03.2006 |

**(Rs. In Lakh)**

| S.No. | Particulars                                   | Value          | Unit            |            |            |            |            |            |
|-------|---|----------------|-----------------|------------|------------|------------|------------|------------|
|       |   |                |                 | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 |
|       | <b>Transmission Line Charges for the Year</b> |                |                 |            |            |            |            |            |
|       | <b>O&amp;M Expenses</b>                       |                |                 |            |            |            |            |            |
| 1     | Rate Rs. Lakh per KM                          |                | Rs.lakh/Km      | 0.252      | 0.26       | 0.27       | 0.279      | 0.289      |
| 2     | <b>Annual Normative O&amp;M Expenses</b>      |                | Rs. Lakh        | 27.04      | 27.90      | 28.97      | 29.94      | 31.01      |
|       |   |                |                 |            |            |            |            |            |
|       | <b>Interest on Working Capital</b>            |                |                 |            |            |            |            |            |
| 1     | Maintainance spares                           | 15% of O&M     | Rs. Lakh        | 4.06       | 4.18       | 4.35       | 4.49       | 4.65       |
| 2     | O&M Expenses                                  | 1 Month of O&M | Rs. Lakh        | 2.25       | 2.32       | 2.41       | 2.49       | 2.58       |
| 3     | Receivables                                   | 1.5 Months     | Rs. Lakh        | 3.53       | 3.63       | 3.76       | 3.89       | 4.03       |
| 4     | Total   |                | Rs. Lakh        | 9.84       | 10.13      | 10.52      | 10.87      | 11.26      |
|       | Interest Rate                                 |                |                 | 12.000%    | 10.9%      | 10.5%      | 10.6%      | 10.6%      |
|       | <b>Total Interest on Working Capital</b>      |                | <b>Rs. Lakh</b> | 1.18       | 1.10       | 1.10       | 1.15       | 1.19       |
|       |   |                |                 |            |            |            |            |            |
|       | <b>Yearly Transmission Charges</b>            |                |                 |            |            |            |            |            |
| 1     | Depreciation                                  |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 2     | Interest on Loan                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 3     | Return on Equity                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 4     | Interest on Working Capital                   |                | Rs. Lakh        | 1.18       | 1.10       | 1.10       | 1.15       | 1.19       |
| 5     | O&M Expenses                                  |                | Rs. Lakh        | 27.04      | 27.90      | 28.97      | 29.94      | 31.01      |
|       | <b>Total Charges</b>                          |                | <b>Rs. Lakh</b> | 28.22      | 29.00      | 30.08      | 31.09      | 32.20      |

  
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**Calculation of Annual Transmission Charges of Asset**

**Annexure - 2d**

**Name of the Asset:**

**220 kV AGIA-BTPS II**

|   |      |                       |            |
|---|------|-----------------------|------------|
| Rationalised Cost of 400kV line Rs. Lakh per Km | 0    | Life in Years         | 25         |
| Transmission Line Length                        | 35   | Voltage Level         | 220 kV     |
| Multiplication Factor                           | 0.57 | Date of Commissioning | 28.03.2006 |

**(Rs. In Lakh)**

| S.No. | Particulars                                   | Value          | Unit            |            |            |            |            |            |
|-------|---|----------------|-----------------|------------|------------|------------|------------|------------|
|       |   |                |                 | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 |
|       | <b>Transmission Line Charges for the Year</b> |                |                 |            |            |            |            |            |
|       | <b>O&amp;M Expenses</b>                       |                |                 |            |            |            |            |            |
| 1     | Rate Rs. Lakh per KM                          |                | Rs.lakh/Km      | 0.377      | 0.391      | 0.404      | 0.419      | 0.433      |
| 2     | <b>Annual Normative O&amp;M Expenses</b>      |                | Rs. Lakh        | 13.20      | 13.69      | 14.14      | 14.67      | 15.16      |
|       | <b>Interest on Working Capital</b>            |                |                 |            |            |            |            |            |
| 1     | Maintainance spares                           | 15% of O&M     | Rs. Lakh        | 1.98       | 2.05       | 2.12       | 2.20       | 2.27       |
| 2     | O&M Expenses                                  | 1 Month of O&M | Rs. Lakh        | 1.10       | 1.14       | 1.18       | 1.22       | 1.26       |
| 3     | Receivables                                   | 1.5 Months     | Rs. Lakh        | 1.72       | 1.78       | 1.83       | 1.90       | 1.97       |
| 4     | Total   |                | Rs. Lakh        | 4.80       | 4.97       | 5.13       | 5.33       | 5.50       |
|       | Interest Rate                                 |                |                 | 12.00%     | 10.90%     | 10.50%     | 10.60%     | 10.60%     |
|       | <b>Total Interest on Working Capital</b>      |                | <b>Rs. Lakh</b> | 0.58       | 0.54       | 0.54       | 0.56       | 0.58       |
|       | <b>Yearly Transmission Charges</b>            |                |                 |            |            |            |            |            |
| 1     | Depreciation                                  |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 2     | Interest on Loan                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 3     | Return on Equity                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 4     | Interest on Working Capital                   |                | Rs. Lakh        | 0.58       | 0.54       | 0.54       | 0.56       | 0.58       |
| 5     | O&M Expenses                                  |                | Rs. Lakh        | 13.20      | 13.69      | 14.14      | 14.67      | 15.16      |
|       | <b>Total Charges</b>                          |                | <b>Rs. Lakh</b> | 13.77      | 14.23      | 14.68      | 15.23      | 15.74      |

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**Calculation of Annual Transmission Charges of Asset**

**Annexure - 2f**


**Name of the Asset:**

**220 kV AGIA-BTPS I**

|   |      |                       |            |
|---|------|-----------------------|------------|
| Rationalised Cost of 400kV line Rs. Lakh per Km | 0    | Life in Years         | 25         |
| Transmission Line Length                        | 35   | Voltage Level         | 220 kV     |
| Multiplication Factor                           | 0.57 | Date of Commissioning | 25.07.2013 |

**(Rs. In Lakh)**

| S.No. | Particulars                                   | Value          | Unit            | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 |
|-------|---|----------------|-----------------|------------|------------|------------|------------|------------|
|       | <b>Transmission Line Charges for the Year</b> |                |                 |            |            |            |            |            |
|       | <b>O&amp;M Expenses</b>                       |                |                 |            |            |            |            |            |
| 1     | Rate Rs. Lakh per KM                          |                | Rs.lakh/Km      | 0.377      | 0.313      | 0.324      | 0.334      | 0.346      |
| 2     | <b>Annual Normative O&amp;M Expenses</b>      |                | Rs. Lakh        | 13.20      | 10.96      | 11.34      | 11.69      | 12.11      |
|       | <b>Interest on Working Capital</b>            |                |                 |            |            |            |            |            |
| 1     | Maintainance spares                           | 15% of O&M     | Rs. Lakh        | 1.98       | 1.64       | 1.70       | 1.75       | 1.82       |
| 2     | O&M Expenses                                  | 1 Month of O&M | Rs. Lakh        | 1.10       | 0.91       | 0.95       | 0.97       | 1.01       |
| 3     | Receivables                                   | 1.5 Months     | Rs. Lakh        | 1.72       | 1.42       | 1.47       | 1.52       | 1.57       |
| 4     | Total   |                | Rs. Lakh        | 4.80       | 3.98       | 4.12       | 4.25       | 4.40       |
|       | Interest Rate                                 |                |                 | 12.00%     | 10.90%     | 10.50%     | 10.60%     | 10.60%     |
|       | <b>Total Interest on Working Capital</b>      |                | <b>Rs. Lakh</b> | 0.58       | 0.43       | 0.43       | 0.45       | 0.47       |
|       | <b>Yearly Transmission Charges</b>            |                |                 |            |            |            |            |            |
| 1     | Depreciation                                  |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 2     | Interest on Loan                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 3     | Return on Equity                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 4     | Interest on Working Capital                   |                | Rs. Lakh        | 0.58       | 0.43       | 0.43       | 0.45       | 0.47       |
| 5     | O&M Expenses                                  |                | Rs. Lakh        | 13.20      | 10.96      | 11.34      | 11.69      | 12.11      |
|       | <b>Total Charges</b>                          |                | <b>Rs. Lakh</b> | 13.77      | 11.39      | 11.77      | 12.14      | 12.58      |

  
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Calculation of Annual Transmission Charges of Asset

Annexure - 2g


Name of the Asset:

220 kV BOKO-MIRZA

|   |      |                       |            |
|---|------|-----------------------|------------|
| Rationalised Cost of 400kV line Rs. Lakh per Km | 0    | Life in Years         | 25         |
| Transmission Line Length                        | 37.9 | Voltage Level         | 220 kV     |
| Multiplication Factor                           | 0.36 | Date of Commissioning | 25.07.2012 |

(Rs. In Lakh)

| S.No. | Particulars                                   | Value          | Unit            |            |            |            |            |            |
|-------|---|----------------|-----------------|------------|------------|------------|------------|------------|
|       |   |                |                 | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 |
|       | <b>Transmission Line Charges for the Year</b> |                |                 |            |            |            |            |            |
|       | <b>O&amp;M Expenses</b>                       |                |                 |            |            |            |            |            |
| 1     | Rate Rs. Lakh per KM                          |                | Rs.lakh/Km      | 0.252      | 0.26       | 0.27       | 0.279      | 0.289      |
| 2     | <b>Annual Normative O&amp;M Expenses</b>      |                | Rs. Lakh        | 9.55       | 9.85       | 10.23      | 10.57      | 10.95      |
|       |   |                |                 |            |            |            |            |            |
|       | <b>Interest on Working Capital</b>            |                |                 |            |            |            |            |            |
| 1     | Maintainance spares                           | 15% of O&M     | Rs. Lakh        | 1.43       | 1.48       | 1.53       | 1.59       | 1.64       |
| 2     | O&M Expenses                                  | 1 Month of O&M | Rs. Lakh        | 0.80       | 0.82       | 0.85       | 0.88       | 0.91       |
| 3     | Receivables                                   | 1.5 Months     | Rs. Lakh        | 1.25       | 1.28       | 1.33       | 1.37       | 1.42       |
| 4     | Total   |                | Rs. Lakh        | 3.47       | 3.58       | 3.72       | 3.84       | 3.98       |
|       | Interest Rate                                 |                |                 | 12.00%     | 10.90%     | 10.50%     | 10.60%     | 10.60%     |
|       | <b>Total Interest on Working Capital</b>      |                | <b>Rs. Lakh</b> | 0.42       | 0.39       | 0.39       | 0.41       | 0.42       |
|       |   |                |                 |            |            |            |            |            |
|       | <b>Yearly Transmission Charges</b>            |                |                 |            |            |            |            |            |
| 1     | Depreciation                                  |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 2     | Interest on Loan                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 3     | Return on Equity                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 4     | Interest on Working Capital                   |                | Rs. Lakh        | 0.42       | 0.39       | 0.39       | 0.41       | 0.42       |
| 5     | O&M Expenses                                  |                | Rs. Lakh        | 9.55       | 9.85       | 10.23      | 10.57      | 10.95      |
|       | <b>Total Charges</b>                          |                | <b>Rs. Lakh</b> | 9.97       | 10.24      | 10.62      | 10.98      | 11.37      |

  
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Calculation of Annual Transmission Charges of Asset

Annexure - 2h


Name of the Asset:

220 kV TINSUKIA-KATHALGURI I & II

|   |      |                       |            |
|---|------|-----------------------|------------|
| Rationalised Cost of 400kV line Rs. Lakh per Km | 0    | Life in Years         | 25         |
| Transmission Line Length                        | 24.6 | Voltage Level         | 220 kV     |
| Multiplication Factor                           | 0.57 | Date of Commissioning | 01.08.2005 |

(Rs. In Lakh)

| S.No. | Particulars                                   | Value          | Unit            |            |            |            |            |            |
|-------|---|----------------|-----------------|------------|------------|------------|------------|------------|
|       |   |                |                 | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 |
|       | <b>Transmission Line Charges for the Year</b> |                |                 |            |            |            |            |            |
|       | <b>O&amp;M Expenses</b>                       |                |                 |            |            |            |            |            |
| 1     | Rate Rs. Lakh per KM                          |                | Rs.lakh/Km      | 0.377      | 0.391      | 0.404      | 0.419      | 0.433      |
| 2     | <b>Annual Normative O&amp;M Expenses</b>      |                | Rs. Lakh        | 9.27       | 9.62       | 9.94       | 10.31      | 10.65      |
|       |   |                |                 |            |            |            |            |            |
|       | <b>Interest on Working Capital</b>            |                |                 |            |            |            |            |            |
| 1     | Maintainance spares                           | 15% of O&M     | Rs. Lakh        | 1.39       | 1.44       | 1.49       | 1.55       | 1.60       |
| 2     | O&M Expenses                                  | 1 Month of O&M | Rs. Lakh        | 0.77       | 0.80       | 0.83       | 0.86       | 0.89       |
| 3     | Receivables                                   | 1.5 Months     | Rs. Lakh        | 1.21       | 1.25       | 1.29       | 1.34       | 1.38       |
| 4     | Total   |                | Rs. Lakh        | 3.37       | 3.49       | 3.61       | 3.74       | 3.87       |
|       | Interest Rate                                 |                |                 | 12.00%     | 10.90%     | 10.50%     | 10.60%     | 10.60%     |
|       | <b>Total Interest on Working Capital</b>      |                | <b>Rs. Lakh</b> | 0.40       | 0.38       | 0.38       | 0.40       | 0.41       |
|       |   |                |                 |            |            |            |            |            |
|       | <b>Yearly Transmission Charges</b>            |                |                 |            |            |            |            |            |
| 1     | Depreciation                                  |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 2     | Interest on Loan                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 3     | Return on Equity                              |                | Rs. Lakh        | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| 4     | Interest on Working Capital                   |                | Rs. Lakh        | 0.40       | 0.38       | 0.38       | 0.40       | 0.41       |
| 5     | O&M Expenses                                  |                | Rs. Lakh        | 9.27       | 9.62       | 9.94       | 10.31      | 10.65      |
|       | <b>Total Charges</b>                          |                | <b>Rs. Lakh</b> | 9.68       | 10.00      | 10.32      | 10.70      | 11.06      |

  
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