CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Dated: 1st of April, 2015

NOTIFICATION

No.L-1/44/2010-CERC:In exercise of the powers conferred under section 178 read with Part V of the Electricity Act, 2003 (36 of 2003), and all other powers enabling it in this behalf, and after previous publication, the Central Electricity Regulatory Commission makes the following regulations to amend Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges & Losses) Regulations, 2010 as amended from time to time (hereinafter referred to as "The Principal Regulations"):

1. Short title, extent and commencement

(1) These regulations may be called the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) (Third Amendment) Regulations, 2015.

(2) These regulations shall come into force with effect from 1st of May, 2015.

2. Amendment to Regulation 2 of the Principal Regulations:

(1) Sub-clause (b) of clause (1) of Regulation 2 of the Principal Regulations shall be substituted as under:

> "(b) **Application Period** means the period of application of the charges determined as per these regulations and shall be of 3 (three) months duration i.e. April to June, July to September, October to December, and January to March in a financial year:
>
> Provided that in exceptional circumstances, the Commission may extend or curtail the duration of the application period for the reasons to be recorded in writing."

(2) Sub-clause (c) of clause (1) of Regulation 2 of the Principal Regulations shall be substituted as under:

> **"(c) 'Approved Injection'** means the injection in MW computed by the Implementing Agency for each Application Period on the basis of maximum injection made during the corresponding Application Periods of last three (3) years and validated by the Validation Committee for the DICs at the ex-bus of the generators or any other injection point of the DICs into the ISTS, and taking into account the generation data submitted by the DICs incorporating total injection into the grid:

Provided that the overload capability of a generating unit shall not be used for calculating the approved injection:

Provided further that where long term access (LTA) has been granted by the CTU, the LTA quantum, and where long term access has not been granted by the CTU, the installed capacity of the generating unit excluding the auxiliary power consumption, shall be considered for the purpose of computation of approved injection."

(3) In sub-clause (d) of clause (1) of Regulation 2 of the Principal Regulations, the words "peak and off-peak scenarios" shall be deleted.

(4) Sub-clause (f) of clause (1) of Regulation 2 of the Principal Regulations shall be substituted as under:

"(f) '**Approved Withdrawal**' means the withdrawal in MW computed by the Implementing Agency for each application period on the basis of the actual peak met during the corresponding application periods of last three (3) years and validated by the Validation Committee for any DIC in a control area after taking into account the aggregated withdrawal from all nodes to which DIC is connected and which affect the flow in the ISTS, and the anticipated maximum demand to be met as submitted by the DIC:

Provided that the overload capability of a generating unit in which the DIC has an allocation or with which the DIC has signed an agreement, shall not be used for calculating the approved withdrawal under long term access (LTA)."

(5) Sub-clause (g) of clause (1) of Regulation 2 of the Principal Regulations shall be substituted as under:

"(g) **Approved Additional Medium Term Withdrawal** means the additional withdrawal by a DIC as per the Medium Term Open Access approved by CTU after submission of data to the Implementing Agency by the concerned DIC."

(6) Sub-clause (l) of clause (1) of Regulation 2 of the Principal Regulations (except the provisos) shall be substituted as under:

"(l) **Designated ISTS Customer or DIC** means the user of any segment(s) or element(s) of the ISTS and shall include generator, State Transmission Utility, State Electricity Board or load serving entity including Bulk Consumer and any other entity or person directly connected to the ISTS and shall further include any intra-State entity who has obtained Medium Term Open Access or Long Term Access to ISTS."

(7) The following sub-clauses shall be inserted after Sub-clause (l) of clause (l) of Regulation 2 of Principal Regulations:

"(l-i) **'HVDC Charge'** means the transmission charges shared for use of HVDC transmission systems as provided under Regulation 11 of these regulations.

(8) The following sub-clause shall be inserted after sub-clause (o) of clause (1) of Regulation 2 of Principal Regulations:

(o-ii) **'Merchant Power Plant'** means a generating station or unit thereof whose tariff either for the whole capacity or for the part capacity is not determined under section 62 or section 63 of the Act and which sells electricity in the open market corresponding to such capacity and the term 'merchant capacity' shall be construed accordingly."

(9) The following sub-clauses shall be inserted after sub-clause (t) of clause (1) of Regulation 2 of the Principal Regulations and the existing sub-clause (ti) shall be re-numbered as (t-iii):

"(t-i) **'Reliability Support Charge'** means the Charge for reliability benefits which accrue to the DICs by virtue of operating in an integrated grid.

(t-ii) '**Reliability Support Charges Sharing Methodology'** means the mechanism for determination and sharing of Reliability Support Charges as specified in sub-clause (q) of clause (1) of Regulation 7 of these Regulations and para 2.8.1.b. of Annexure-I."

(10) The following sub-clause shall be inserted after sub-clause (u) of clause 1 of Regulation 2 of the Principal Regulations:

"(u-i) **'Validation Committee'** means the committee appointed by the Commission comprising officers from the Commission, the Implementing Agency, each of the RPCs, CTU, CEA, STUs for the purpose of discharging various functions vested under these regulations, and the meetings of the committee shall be chaired by a nominee of the Commission."

(11) Sub-clauses (v), (w) and (x) of clause (1) of Regulation 2 of the Principal Regulations shall be deleted.

(12) The following provisos shall be inserted under sub-clause (y) of clause (1) of Regulation 2 of the Principal Regulations:

"Provided that in case of non-ISTS lines, the asset-wise tariff determined by the respective State Commissions or approved by the Central Commission based on the approved Annual Revenue Requirement of STU, shall be used:

Provided further that transmission charges received by the STU under these regulations shall be adjusted in the Annual Revenue Requirement of the concerned STU approved by the respective State Commission."

3. Amendment to Regulation 3 of the Principal Regulations:

Sub clause (a) of Regulation 3 of the Principal Regulations shall be substituted as under:

"(a) Generating Stations (i) which are regional entities as defined in the Indian Electricity Grid Code (IEGC) or (ii) are having LTA or MTOA to ISTS and are connected either to STU or ISTS or both."

4. Amendments to Regulation 5 of the Principal Regulations:

In clause (4) of Regulation 5 of the Principal Regulations, the words "Rupees per Mega Watt per hour" shall be substituted with the words "Paisa/unit".

5. Amendments to Regulation 7 of the Principal Regulations:

(1) Sub-clause (d) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(d) Nodal generation information shall be based on the forecast data provided by the DICs. Such forecast data shall incorporate estimate of total maximum injection into the grid, considering the injection under long term access, medium term open access and short term open access during an Application Period. The forecast data submitted by the DICs shall be vetted by the Implementing Agency based on historical maximum generation levels obtained from the NLDC/RLDCs/SLDCs. Any variation in the forecast generation shall be communicated to the concerned DIC by the Implementing Agency.

The forecast generation in respect of each DIC shall be normalized with respect to forecast All India Peak Demand met to create base case for load generation balance to arrive at the approved injection.

Approved injection figures so arrived shall be validated by the Validation Committee based on the injection data submitted by the DICs. In case data submitted by any DIC is different from the data computed on the basis of last three years' actual data, requisite justification by the concerned DIC shall be submitted for considering its data.

The generating station for which three years' data are not available, forecast shall be prepared based on available data and the data submitted by the concerned generating station. In case no data is submitted by the generating station, estimated injection as prepared by the Implementing Agency shall be considered as approved injection.

In case of DICs which are injecting into the grid for the first time, approved injection based on norms formulated by the Validation Committee for generation based on different types of stations shall be considered.

All withdrawal DICs shall also submit estimated maximum generation from their own generating stations during the Application Period to the Implementing Agency to prepare the Base Case for load generation balance. The data as validated by the Validation Committee shall be final.

Mis-declaration by a DIC beyond +/- 20% for two consecutive quarters shall be treated as gaming. Unless reasonably explained by the concerned DIC, the Implementing Agency shall report the matter to the Commission for appropriate directions."

(2) Sub-clause (e) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(e) Forecast demand data shall be submitted by the DICs for each node or a group of nodes in a zone, identified by the Implementing Agency under these regulations. The forecast demand data shall incorporate estimate of maximum withdrawal. The forecast demand data submitted by DICs shall be vetted by the Implementing Agency based on historical demand met of each DIC during the periods corresponding to the Application Period. Any variation in the forecast demand shall be communicated by the Implementing Agency to the concerned DIC.

In case data submitted by a DIC is different from the data forecast on the basis of last three years actual data, requisite justification shall be submitted by the concerned DIC for considering its data. The data as validated by the Validation Committee shall be final.

Mis-declaration by a DIC beyond +/- 20% for two consecutive quarters shall be treated as gaming. Unless reasonably explained by the concerned DIC, the Implementing Agency shall report the matter to the Commission for appropriate directions."

(3) Sub-clause (g) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(g) In the event of difference of opinion between any DIC and the Implementing Agency with regard to the revised generation and demand data so obtained, the Validation Committee shall take final decision after considering the point of view of the concerned DIC and the Implementing Agency."

(4) Sub-clause (i) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(i) Basic Network along with the converged load flow results for the injection and withdrawal data as per sub-clauses (d) and (e) of clause (1) of this Regulation shall be validated by the Validation Committee. The Basic Network, nodal generation, nodal demand and the load flow results for each Application Period shall be validated by the Validation Committee not later than 15 days prior to the commencement of each Application Period**.** The approved Basic Network, nodal generation, nodal demand along with the load flow results shall be made available on the websites of the Commission and the Implementing Agency immediately after its approval by the Validation Committee.

Provided that non-submission of data in time for computation of transmission charges shall be treated as non-compliance of the regulations and action as considered appropriate shall be taken by the Commission after giving an opportunity of hearing to the defaulting DIC."

(5) Sub-clause (k) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(k) Consequent to development of load flows on the Basic Network, the Hybrid Methodology shall be applied by the Implementing Agency on the Basic Network to determine the transmission charges and loss allocation factors attributable to each node in the power system."

(6) The last Proviso under sub-clause (l) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"Provided further that there shall be nine slab rates for PoC charges. The slab rates shall be computed by the Implementing Agency based on the methodology given in **Annexure-I** to these regulations. The slab rates shall be approved by the Commission for each Application Period. The number of slabs shall be reviewed by the Commission after two years."

(7) Sub-clause (n) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(n) For the computation of transmission charges at each node as per Hybrid Methodology, cost of ISTS transmission licensees whose lines feature on the Basic Network shall be considered:

Provided that in case of STU lines which are physically inter-State lines and whose tariff is approved by the Commission, such tariff shall be considered for computation of PoC chages:

Provided further that in case of non-ISTS lines (lines owned by STUs but being used for carrying inter-State power as certified by respective RPCs), the asset-wise tariff as approved by the respective State Commission shall be considered. Where asset-wise tariff is not available, the tariff as computed by the Commission based on the ARR of the STUs (as

approved by respective State Commissions) by adopting the methodology similar to the methodology used for ISTS transmission licensees shall be considered. The transmission charges received by the concerned STU on this account shall be adjusted in its approved Annual Revenue Requirement."

(8) Sub-clause (o) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(o) The participation factors, and the Point of Connection nodal and zonal rates thus determined, shall be computed for each Application Period. Detailed methodology for preparing the Base Case shall be in accordance with the methodology given in **Annexure-I** to these regulations.

Provided that the load flow studies shall be carried out by the Implementing Agency for each Application Period."

(9) In sub-clause (p) of clause (1) of Regulation 7 of the Principal Regulations, the sentence "Such charges shall then be attributed to peak and other than peak periods of each season based on the hours constituting these periods." shall be deleted.

(10) Sub-clause (q) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(q) The recovery of the Yearly Transmission Charges (YTC) of the ISTS network shall be based on the Hybrid Methodology (PoC charge), Reliability Support Charge and HVDC Charge. Ten percent (10%) of the Yearly Transmission Charges shall be recovered through Reliability Support Charge Sharing methodology. The Commission may review the weightage accorded to Reliability Support Charge whenever deemed necessary. The Reliability support charge rates shall be determined separately and shall not be mixed with zonal PoC rates. The Reliability Support Charge shall be payable by the DICs in proportion to their Approved Withdrawal. In case of Injection DIC shaving Long Term Access to target region, Reliability Support Charges shall also be payable in proportion to their Approved Injection."

(11) Sub-clause (s) of clause (1) of Regulation 7 of the Principal Regulations (including the proviso) shall be substituted as under:

"(s) The losses shall be apportioned to the DICs by suitably adjusting their scheduled MWs. The extent of adjustment shall be on the basis of losses apportioned to each DIC based on the Hybrid Methodology. The Detailed Procedure for application of losses to various DICs shall be modified by NLDC with the approval of the Commission.

Provided that there shall be nine slabs for calculation of transmission losses which shall be expressed in terms of percentage. There shall be 4

steps above the average loss and 4 steps below the average loss with a slab size of 0.25% subject to minimum loss of Zero percent. The slabs may be reviewed by the Commission after two years."

(12) Para (iv) including the proviso under sub-clause (t) of clause (1) of Regulation 7 of Principal Regulations shall be substituted as under:

"(iv) Any inter-State Generating Station connected to the 400 kV inter-State Transmission System (including those connected to both 400 kV ISTS and STU) shall be treated as a separate zone and shall not be clubbed with other generator nodes in the area, for the purpose of calculation of PoC injection rate:

Provided that in case of a merchant power plant in a State connected to 400 kV inter-State Transmission System, with zero LTA or part LTA, injection considered in the Base Case or LTA, whichever is higher, shall be considered to arrive at the PoC injection rate."

(13) Para (vii) under sub-clause (t) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(vii) In case an ISGS is connected only to STU network and the shares of the beneficiaries of the said station are being delivered through the STU network, such a line of the STU network shall be considered as an ISTS for the purpose of these regulations."

(14) The following proviso shall be added under sub-clause (u) of Clause (1) of Regulation 7 of the Principal Regulations:

"Provided that the above provision shall also be applicable for the useful life of the projects commissioned during the period 1.7.2014 to 30.6.2017."

(15) The following proviso shall be added under sub-clause (v) of Clause (1) of Regulation 7 of the Principal Regulations:

"Provided that the above provision shall also be applicable for the useful life of the projects commissioned during the period 1.7.2014 to 30.6.2017."

6. Amendment to Regulation 8 of the Principal Regulations:

(1) In clause (1) of Regulation 8 of the Principal Regulations, the words "for both peak and other than peak conditions" shall be deleted.

(2) Clause (5) of Regulation 8 of the Principal Regulations shall be substituted as under:-

"(5) Where the Approved Withdrawal or Approved Injection in case of a DIC is not materializing either partly or fully for any reason whatsoever,

the concerned DIC shall be obliged to pay the transmission charges allocated under these regulations:

Provided that in case the commissioning of a generating station or unit thereof is delayed, the generator shall be liable to pay Withdrawal Charges corresponding to its Long term Access from the date the Long Term Access granted by CTU becomes effective. The Withdrawal Charges shall be at the average withdrawal rate of the target region:

Provided further that where the operationalization of LTA is contingent upon commissioning of several transmission lines or elements and only some of the transmission lines or elements have been declared commercial, the generator shall pay the transmission charges for LTA operationalised corresponding to the transmission system commissioned:

Provided also that where the construction of dedicated transmission line has been taken up by the CTU or the transmission licensee, the transmission charges for such dedicated transmission line shall be payable by the generator as provided in the Regulation 8 (8) of the Connectivity Regulations:

Provided also that during the period when a generating station draws start-up power or injects infirm power before commencement of LTA, withdrawal or injection charges corresponding to the actual injection or withdrawal shall be payable by the generating station and such amount shall be adjusted in the next quarter, from the ISTS transmission charges to be recovered through PoC mechanism from all DICs:

Provided also that CTU shall maintain a separate account for the above amount received in a quarter and deduct the same from the transmission charges of ISTS considered in PoC calculation for the next application period.”

(3) Clause (6) of the Regulation (8) of the Principal Regulations shall be substituted as under:-

"(6) For Long Term Transmission Customers availing power supply from inter-State generating stations, the charges attributable to such generation for long term supply shall be calculated directly at drawal nodes as per methodology given in the Annexure-I. Such mechanism shall be effective only after commercial operation of the generator. Till then it shall be the responsibility of the generator to pay transmission charges.”

7. Amendment to Regulation 10 of the Principal Regulations:

In sub-clause (a) of clause (1) of Regulation (10) of the Principal Regulations, the words" for peak and other than peak hours" shall be deleted.

8. Amendment to Regulation 11 of the Principal Regulations

(1) Clause (4) of Regulation 11 of the Principal Regulations shall be substituted as under:

"(4) The first part of the bill shall recover charges for use of the transmission assets of the ISTS Licensees based on the Point of Connection methodology. This part of the bill shall be computed in three sub-parts as under:

1. Point of Connection transmission charge towards LTA/MTOA

For Generators having LTA to target region:

$$\left[PoC\ transmission\ rate\ of\ \ generation\ \ zone\ in\ Rs/MW/month\ \right]\times \left[\left(Approved\ \ Injection\right)\right]$$

For Demand:

$$\left[PoC\ transmission\ rate\ \ for\ demand\ \ zone\ in\ Rs/MW/month\ \right]\times \left[\left(Approved\ Withdrawal\ \right)\right]$$

2. Reliability Support Charge

For Generators having LTA to target region:

$$\left[\text{Reliability Support Rate}\ in\ Rs/MW/month\ \right]\times \left[\left(Approved\ \ Injection\right)\right]$$

For Demand:

$$\left[\text{Reliability support rate}\ in\ Rs/MW/month\ \right]\times \left[\left(Approved\ Withdrawal\ \right)\right]$$

3. HVDC charge

(i) 10% of Monthly Transmission Charges (MTC) of HVDC transmission system shall form part of Reliability Support Charges and the balance shall be billed as detailed below:

Transmission charges for HVDC system created to supply power to specific regions shall be borne by DICs of such regions. The HVDC Charge shall be payable by DICs of the Region in proportion to their Approved Withdrawal. In case of Injection DICs having Long Term Access to target region, it shall also be payable in proportion to their Approved Injection.

For Generators having LTA to target region:

$$[\text{HVDC Charge for Region in Rs/month}] \times [\text{ApprovedInjection}] / [\text{Total ApprovedWithdrawal of the Withdrawal DIC and Approved Injection of the Generator having LTA to target Region}]$$

For Demand:

$$[\text{HVDC Charge for Region in Rs/month}] \times [\text{ApprovedWithdrawal}] / [\text{Total ApprovedWithdrawal of the Withdrawal DIC and Approved Injection of the Generator having LTA to target Region}]$$

(ii) HVDC Charge shall also be applicable for additional MTOA. Over/under recovery of HVDC charges shall be adjusted in the third part of bill in a manner as provided in Regulation 11(6) of these Regulations.

(iii) Where transmission charges for any HVDC system are to be partly borne by a DIC (injecting DIC or withdrawal DIC, as the case may be) under a PPA or any other arrangement, transmission charges in proportion to the share of capacity in accordance with the PPA or other arrangement shall be borne by such DIC and the charges for balance capacity shall be borne by the remaining DICs by scaling up of MTC of the AC system included in the PoC. Such HVDC shall not be considered under (i) above.

This first part of the bill shall be raised based on the Point of Connection rates, Reliability Support rate, HVDC Charge, Approved Withdrawal and Approved Injection for each DIC, provided by the Implementing Agency on the next working day of uploading of the Regional Transmission Accounts by the respective Regional Power Committees on their websites in each month for the previous month and determined prior to the commencement of the application period:

Provided that the list of transmission assets along with the approved transmission charges for which billing has been done shall be enclosed with the first part of the bill:

Provided further that the charges for the DICs having long term access without beneficiaries shall comprise the Injection POC Charges, Reliability Support Charges and HVDC Charges."

(2) Clause (5) of Regulation 11 of the Principal Regulations shall be substituted as under:

"(5) The second part of the bill shall be raised to recover charges for Additional Approved Medium Term Open Access which shall be computed as follows:

For Demand:

$$\left[PoC\ Transmission\ rates\ \ for\ demand\ \ zone\ in\ Rs/MW/month\ \right]\times$$
$$\left[\left(Approved\ \ Additional\ \ Medium\ Term\ Withdrawal\ \right)\right]$$

The second part of the bill shall be raised on the DICs alongwith the first part of the bill:

Provided that the revenue collected from the approved additional Medium-term injection, which has not been considered in the Approved Injection/Approved Withdrawal, shall be reimbursed to the DICs having Long-term Access in the following month, in proportion to the monthly billing of the respective month:

Provided further that the Withdrawal PoC charges for Medium-term Open Access to any region shall be adjusted against Injection PoC charges for the Long-term Access to the target region without identified beneficiaries:

Provided also that a generator who has been granted Long-term Access to a target region shall be required to pay PoC injection charge for the remaining quantum after offsetting the quantum of Medium-term Open Access:

Provided also that where a generator is liable to pay withdrawal charges for the specified quantum as per the terms of any MTOA contract, then injection charges for same quantum of power shall be offset against LTA granted."

(3) The provisos under Clause (9) of Regulation 11 of the Principal Regulations shall be substituted as under:

"Provided that the DICs which were granted LTA to a target region and are paying injection charges for Long Term Access, the injection PoC Charges and Demand PoC Charges paid for Short Term Open Access to any region shall be adjusted in the following month against the monthly injection PoC Charges for Approved injection:

Provided further that a generator, who has been granted Long-term Access to a target region, shall be required to pay PoC injection charge for the Approved injection for the remaining quantum after offsetting the charges for Medium-term Open Access, and Short-term open access:

Provided also that the injection PoC charge/Withdrawal PoC charges for Short-term open access given to a DIC shall be offset against the corresponding injection PoC charges or Withdrawal PoC charges to be

paid by the DICs for Approved injection/Approved withdrawal corresponding to Net withdrawal (load minus own injection) considered in base case:

Provided also that for withdrawal DIC, this adjustment is given only for STOA transaction by DIC and not applicable to other intra-State entity embedded in State and engaged in STOA:

Provided also that this adjustment shall also be allowed for collective transactions. Generators who are granted LTA to a target region shall be given adjustment corresponding to injection charges and withdrawal DICs shall be given adjustment corresponding to withdrawal charges:

Provided also that this adjustment shall not be allowed for collective transactions and bilateral transactions carried out by any trading licensee, who has a portfolio of generators in a State for which LTA was obtained to a target region.

9. Amendment to Regulation 16 of the Principal Regulations:

(1) In clauses (1) and (2) of Regulation 16 of the Principal Regulations, the words "the end of the fourth week of November in each Financial Year" shall be replaced with the figure and words "At least 45 days prior to the beginning of the application period”.”

(2) In sub-clause (b) of Clause (3) of Regulation 16 of the Principal Regulations, the words "next financial year" shall be replaced with the words "next Application Period".”

(3) Sub-clause (a) of Clause (4) of Regulation 16 of the Principal Regulations shall be substituted as under:

"(a) MW and MVAR Data for injection or drawal at various nodes or a group of nodes shall be submitted for maximum injection/maximum withdrawal for each application period. Such data shall include the power tied in long term contracts and approved medium term open access agreements."

(4) Sub-clause (b) of Clause (4) of Regulation 16 of the Principal Regulations shall be deleted.

10. Amendment to Regulation 17 of the Principal Regulations:

Regulation 17 of the Principal Regulation shall be substituted as under:

"17. Information to be published by the Implementing Agency

(1) The information to be provided by the Implementing Agency consequent to the computations undertaken shall include:

(a) Approved Basic Network Data and Assumptions, if any;

(b) Zonal and nodal transmission charges for the ensuing Application Period;

(c) Zonal and nodal transmission losses data for the ensuing Application Period;

(d) Schedule of charges payable by each constituent for the ensuing Application Period;

(e) YTC detail (Information submitted by the transmission licensees covered under these Regulation and computation by Implementing Agency);

(f) Zone wise details of PoC Charges to enable each DIC to see details of transmission lines it is using and whose transmission charges it is sharing;

(g) LTA /MTOA and their commencement schedule."

11. Amendment to Annexure-I of the Principal Regulations:

(1) In Para 2.1 of the Annexure-I of the Principal Regulations, the words" peak and other than peak conditions" appearing in the first sentence shall be substituted with the words "maximum injection/maximum withdrawal".

(2) Para 2.1.1 of the Annexure-I of the Principal Regulations shall be substituted as under:

"2.1.1 NODAL GENERATION AND DEMAND INFORMATION

Data Required for Annual process of determination of transmission charges based on Hybrid Methodology:

The DICs will provide forecast injection/withdrawal information {MW and MVAR (or an assumption about the power factor to be used)} at all the nodes or a group of nodes in a zone (identified a-priori by the Implementing Agency (IA) in the Network. "Typical" injection/withdrawal data based on maximum injection/withdrawal as defined in these regulations shall be provided to the Implementing Agency by the DICs for each of the application period.

DICs shall also provide injection and withdrawal data for the corresponding quarter of last three years. The data provided by the DICs shall be as per the formats prepared by the IA and duly approved by the Commission under the relevant provisions of these Regulations.

Information provided by the DICs shall be vetted by the Implementing Agency as per the provisions of the Regulations and Detailed procedure notified by Implementing Agency.

Methodology for calculation of forecasted maximum generation/withdrawal of DICs for vetting by Implementing Agency

For Demand data:

The projected maximum withdrawal figures provided by DICs will be vetted by Implementing Agency based on the following:

a. Monthly peak demand met for each State/UT in the last 3 years for the period corresponding to the Application Period shall be considered.
b. The average of monthly peak demand met for each State/UT in each of the last 3 years for the period corresponding to the Application Period shall be calculated.
c. The average peak demand met for each State/UT for the Application Period shall be projected based on last 3 year's average of monthly peak demand met figures.
d. Similarly All India peak demand met in last 3 years shall be averaged for the period corresponding to the Application Period. This shall be projected for the ensuing Application Period. The projected peak demand of each State/UT thus arrived shall be normalized with the projected All-India peak demand met of the Application Period under consideration for the current year.

For Generation Data:

a. The projected maximum injection figures provided by DICs shall be vetted by the Implementing Agency based on average of monthly maximum injection in the last 3 years (based on actual metered data available from RLDCs) for the period corresponding to Application Period projected for the ensuing Application Period. Similarly maximum injection data (for last 3 years as well as projected for the ensuing quarter) for generators embedded within the State system shall be provided by respective SLDC. In case data is not provided by SLDC to the Implementing Agency, the maximum injection of the concerned State shall be taken as the difference between peak met and withdrawal from ISTS based on actual metered data (for the time block corresponding to the block in which peak met occurred).

b. If sum of projected generation in the grid is more than sum of projected demand, the generation may be proportionately reduced to match sum of withdrawal data. If sum of projected generation in the grid is less than sum of projected demand, the demand may be proportionately reduced to match sum of generation.

c. The peak demand met figures in respect of each State/UT and All India peak met shall be taken from the final/revised monthly power supply position published by CEA.

d. The Implementing Agency shall finalize the data duly maintaining Load Generation balance.

e. If the Validation Committee encounters any difficulty for validation of Approved Injection or Approved Withdrawal or any other data on account of non availability or partial availability of any information from the DICs, the Validation Committee may adopt such method as may be considered necessary consistent with the objectives of these regulations.

f. The data as validated/adopted by the Validation Committee shall be final."

(3) Sub-paras under Para 2.1.3 of the Annexure-I to the Principal Regulations shall be substituted as under:

"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 cost provided by the Central Transmission Utility for different voltage levels and conductor

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 WebNet 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."

(4) Para 2.2 of the Annexure-I of the Principal Regulations shall be substituted as under:

"2.2 COMPUTATION OF LOAD FLOWS ON THE BASIC NETWORK

The Implementing Agency shall run AC load flow on the Basic Network using the technical data obtained from the DICs, SLDCs, RLDCs and NLDC. The real power generation at the generator nodes in the Basic Network shall be based on maximum injection of the generators connected directly to the ISTS or the injection submitted by the DICs, where such nodes are embedded in the networks of the DIC. The demand at the load nodes shall be based on the maximum demand met of the DICs. In the case of an STU / SEB, the total injection at all the generator nodes owned by the STU/SEB shall be equal to the aggregate of injection of the entities connected in the state network. Similarly, the withdrawal at

all the nodes owned by the SEB/STU shall be equal to withdrawal of all the entities connected in the SEB / STU network.

In the process of convergence of the Load Flow on the Basic Network, the IA may require to make certain adjustments in the load/generation at various buses to ensure load generation balance. Such load flow analysis shall be performed for all the network conditions as required by the Regulations in force. The entire process of formation of the Basic Network and convergence to load flows shall be validated by the Validation Committee.

(5) Para 2.3 of Annexure-I of the Principal Regulations shall be deleted.

(6) In third sentence of para 2.5 of Annexure-I of the Principal Regulations, the words "peak and other than peak conditions" shall be deleted.

(7) In first sentence of sub-para (3) of para 2.5 of the Annexure-I of the Principal Regulations, the words "and for every scenario" shall be deleted.

(8) In sixth sentence of sub-para (3) of para 2.5 of Annexure-I of the Principal Regulations, the words "typical seasonal system peak and other than peak periods" shall be substituted with the words "maximum injection/ maximum withdrawal".

(9) In first and fifth sentences of sub-para (3) of para 2.5 of the Annexure-I of the Principal Regulations, the word "seasonal" shall be deleted.

(10) Sub-paras 1, 2, 5, 6 and 12 under Para 2.7 of the Annexure-I of the Principal Regulations shall be substituted as under:

"1. Converged AC Load Flow data for the all India Grid shall be used directly for the implementation of the Hybrid Methodology."

"2. Treatment of HVDC: Flow on HVDC systems is regulated by power order and remains constant for marginal change in load or generation. Hence, marginal participation (MP) of HVDC systems is zero. Since the HVDC systems were specifically set up for transfer of bulk power to specific Region, the DICs of the Region shall share the cost of HVDC systems. HVDC system also helps in controlling voltages and power flow in inter-regional lines and some benefits accrue to all DICs by virtue of HVDC system. Accordingly, 10 % of the MTC of these systems be recovered through Reliability Support Charges. The balance amount shall be payable by Withdrawal DICs of the Region in proportion to their Approved Withdrawal. In case of Injection DICs having Long Term Access to target region, it shall be payable in proportion to their Approved Injection.

Where transmission charges for any HVDC system line are to be partly borne by a DIC (injecting DIC or withdrawal DIC, as the case may be)

under a PPA or any other arrangement, transmission charges in proportion to the share of capacity in accordance with PPA or other arrangement shall be borne by such DIC and the charges for balance capacity shall be borne by the remaining DICs by scaling up of YTC of the AC system included in the PoC."

"5. Hybrid Methodology shall be applied to Application Period."

"6. Annual Average YTC of each line will then be attributed to maximum injection/maximum withdrawal."

"12. There shall be slabs for the percentage transmission losses in the All India grid till such period the Commission may consider appropriate."

(11) In first sentence of para 2.8 of the Annexure-I of the Principal Regulations, the word "(Rs/MW/hr)" shall be substituted with the words "(Paisa/unit)".

(12) Para 2.8.1 of Annexure-I of the Principal Regulations shall be substituted as under:

"The transmission access rates shall be determined for each generation zone by computing the weighted average of nodal access charges at each generation node in this zone.

The weighted average transmission access rate for nodes in a zone is the zonal transmission access [rate] based on Hybrid Methodology for generation, e.g. in a Zone - ZZ, the following three nodes were considered in one zone: PP, AA and KK.

ZZ - zone computation in a particular scenario:

Node	Transmission Charges	Approved Injection/ Withdrawal*	Zonal Transmission Rate
	(`/Month)	(MW)	(`/MW/Month)
PP	45,00,000	250	70,000
AA	50,00,000		
KK	80,00,000		
ZZ - Zone	**1,75,00,000**	**250**	

*****Approved Injection/ Approved withdrawal (MW) shall be the Long-term Access plus Medium Term Open Access i.e. Zonal PoC Charge computed considering maximum injection /maximum withdrawal shall be divided by LTA +MTOA to arrive at PoC Rate. The PoC rates shall be further grouped under slabs in accordance with sub-clause (l) of clause (1) of Regulation 7."

(13) After para 2.8.1 of the Annexure-I of the Principal Regulations, the following paras shall be added:

"2.8.1.a. Methodology for calculation of PoC rates and billing of POC charges

(i) PoC rates for billing towards LTA/MTOA shall be calculated only on Withdrawal nodes (as Withdrawal charges) and for generators who have Long Term Access to target region (as injection charges) corresponding to untied power. PoC rates shall not be calculated for ISGS with identified long term customers/ beneficiaries with whom PPA have been signed.

Example for billing a Generator who have LTA to target region:

Suppose a Generator "A" has LTA of 900 MW to target region (WR-500 MW, NR-400 MW).He ties up 150 MW of power with U.P through PPA. "A" shall be billed for 500+250 =750 MW as its LTA to target region.

(ii) If any generator has contractual liability to pay the Withdrawal Charges of drawee entity, then drawee DIC shall inform CTU and bill shall be raised by the CTU to generator directly. In such a case, only withdrawal charges shall be payable by generator for corresponding quantum of power.

(iii) For balance injection i.e. difference between Approved Injection and Quantum of withdrawal, generator shall pay Injection Charges only.

(iv) For the purpose of STOA, collective transactions and computation of transmission deviation charges, POC injection rate / withdrawal rate for all DICs shall be determined separately and shall be declared in paise/kWh

(v) The injection and withdrawal rates in paise/kWh as at (iv) above shall be computed before transferring injection charges of ISGS having long term customers on withdrawal DICs.

2.8.1.b. Methodology for calculation of Slab Rates

(i) The PoC rates shall be arrived at by dividing the quantum of charges allocated to each zone by its LTA+MTOA.

(ii) The PoC rates so arrived shall be adjusted based on average rate and one sigma deviation on either side. The difference between maximum rate and minimum rate so arrived shall be divided by eight to determine width of each slab. The POC rates

for all entities shall be placed in appropriate slab, minimizing the distance from slab rate as per its adjusted rate calculated after accounting for standard deviation. The rates may be scaled up/down as required.

(iii) For the purpose of STOA, collective transactions and computation of transmission deviation charges, there shall be separate slabs for injection and withdrawal rates.

2.8.1.c. Methodology for calculation of Reliability Support Charge Rate and billing of Reliability Support Charges

(i) Reliability Support Charges shall be 10% of the Monthly Transmission Charges.

The Reliability Support Charge Rate, in `/MW/month shall be as under:

[10% of the Monthly Transmission Charges of ISTS]/
[Total Approved Withdrawal of the Withdrawal DICs and Approved Injection of the Generators having LTA to target region]

Reliability Support Charge for Withdrawal DIC shall be obtained by multiplying the above rate (in `/MW/month) by Approved Withdrawal. For Generator with Long term Access to target region shall be obtained by multiplying these charges by Approved Injection.

The above rate shall also apply for additional MTOA.

(ii) Over/under recovery shall be adjusted in the transmission charges of ISTS in the third part of bill in a manner as provided in Regulation 11(6) of these Regulations.

(iii) These charges shall also be applicable to STOA/collective transactions. The offset shall also be given in the manner as provided in Regulation 11 (9) of these Regulations.

sd/-
(Shubha Sarma)
Secretary

Note: The Principal Regulations were published on 16th June 2010 in the Gazette of India Extraordinary Part III-Section 4 at Serial No. 162. The first amendment was issued on 25th November 2011 in the Gazette of India Extraordinary Part III, Section 4 at Serial No. 229, the second amendment was issued on 28th March 2012 in the Gazette of India Extraordinary Part III, Section 4 at Serial No. 76.