

**Explanatory Memorandum to draft Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) (Sixth Amendment) Regulations, 2015 and draft Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, Fifth Amendment 2016.**

**A. Background**

1. CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009 are in vogue since 1.1.2010. Subsequently 5 amendments have been issued to Principal Regulations.
2. The market scenario since 2010 has undergone significant changes. The volume of short-term transactions has increased from 24.69 BUs in year 2008-09 to 63.96 Bus in year 2014-15. However the prices of electricity of short term transactions has come down from about Rs. 7.29/unit in year 2008-09 to Rs. 4.28/unit in year 2014-15 and it further came down in May 2016 to approx. Rs. 2.5 /unit. The trend is likely to cause more participants shifting towards short term transactions.
3. A number of petitions have been filed by stakeholders on various issues affecting them such as relinquishment of LTA, payment of transmission charges for dedicated lines etc. After the passage of Open Access Regulations of 2004 and 2008, the transmission planning process came to be largely driven by the Long-Term Access to the ISTS grid sought predominantly by generators. There are number of petitions and applications before CERC wherein the generators are relinquishing their LTA quantum but at the same time evacuating power under STO/MTOA markets. CTU has also stated that some generators have been evacuating their power only under MTOA/STOA which are granted on the margins available in the transmission system and as such no augmentation is carried out for the purpose of granting MTOA/STOA. As transmission planning is connected with LTA, this scenario is likely to lead to under building of transmission capacity and thereby may lead to congestion.

It is experienced from the recent trends that the power procurement by State utilities has moved from long term contracts of about 25 years to shorter /medium term contracts. Keeping in view the issues raised above and the futuristic market scenario, some amendments are proposed vide the sixth amendment for comments/observations from stakeholders. Further based on feedback from CTU regarding STOA/MTOA offset given to LTA customers and other billing related issues, few related amendments have been proposed to Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations.

## **B. Proposed Amendments to CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters)**

### **1. Provisions related to Long term Access**

- (1) Long term access is currently provided for a period of 12 years upto 25 years. It is proposed that minimum period of long term access be reduced from 12 years to a period of 7 years to align it with long term contracts as provided in "Guidelines for Determination of Tariff by Bidding Process for Procurement of Power by Distribution Licensees dated 19th January, 2005" which provides as follows:

*"long-term procurement of electricity for a period of 7 years and above,"*

- (2) Further it has been observed that LTA customer with target region may firm up buyer through signing of PPA subsequent to start of LTA. In such a case modalities of considering such PPA for scheduling of power is currently not provided explicitly in the Regulations. Hence a Clause has been added specifying the scheduling of power after firming up with beneficiaries. It has been proposed that PPA for not less than a year shall be considered for scheduling under Long term Access for LTA customer with target region. However there may be cases where CTU may not be able to accommodate firm LTA to some state within target region due to

non availability of last mile links. In such cases CTU shall commission last mile links within a timeframe of 3years from date of notifying firm PPA by Long term customer as per Clause 22.7 of detailed procedure under Connectivity Regulations as extracted below:

*"For the balance capacity (not exceeding 50% of LTA sought for) for which exact source of supply or destination could not be firmed up on long-term basis, the augmentation/system strengthening further from the target region shall be taken up only after identification of exact source/destination. CTU shall be allowed up to 3 years time for such augmentation/system strengthening from the target region to the exact source/destination. During such period the applicant shall be liable to pay the transmission charges up to the target region."*

- (3) On receipt of PPA, CTU shall process the same within reasonable time and advise concerned RLDC regarding scheduling. CTU must process the PPA within one month of the receipt of PPA.
- (4) It may happen that transmission capacity created for a LTA customer to target region has been allocated under MTOA/ STOA as per prevailing Regulations. Since LTA customer is liable to pay transmission charges for the capacity created for him, it must be given priority to avail such capacity when he is able to firm up buyer through PPA. Accordingly it has been provided that existing MTOA /STOA availing such corridor which was created for LTA customer shall be curtailed to accommodate scheduling for such LTA customer.
- (5) However in case MTOA granted over the corridor identified for LTA customer to target region has a period of 3 years remaining and the LTA customer to target region has firmed up PPA for suppose 1.5years, CTU shall not curtail MTOA for entire 3 year period since LTA is firmed up only for part period. In such a case MTOA customer may like to retain its status for remaining 1.5 years. However in case such MTOA customer does not wish to retain its right for remaining period it may do so and no

relinquishment charges shall be levied on MTOA customer in such a case. Similarly in case part capacity of MTOA is curtailed to accommodate scheduling for firmed up LTA, MTOA customer may not wish to retain its right for remaining capacity, then it may do so and no relinquishment charges shall be levied on MTOA customer in such a case.

- (6) The curtailment of existing MTOA/STOA shall be done as - STOA first followed by MTOA as per curtailment priority provided in Regulations.
- (7) In case LTA customer to target region firms up PPA for a period of less than a year, there shall be no curtailment of existing MTOA/ STOA. This is proposed to avoid too many uncertainties of access.
- (8) Based on above discussions followings amendments are proposed:
  - i. Sub-clause (l) of clause (1) of Regulation 2 of the Principal Regulations shall be substituted as under:

“(l) “long-term access” means the right to use the inter-State Transmission system for a period exceeding 7 years but not exceeding 25 years;”
  - ii. Following Clause shall be added after Regulation 15B of Principal Regulation:

“15B. Firming up of Drawl or Injection by LTA Customers:  
The Long Term Access Customer who has been granted long term access to a target region shall, after entering into power purchase agreement for supply of power to the same target region for a period of not less than one year, notify the Nodal Agency about the power purchase agreement along with copy of PPA for scheduling of power under LTA:  
Provided that scheduling of power shall be contingent upon the availability of last mile transmission links in the target region:

Provided further that on receipt of the copy of the PPA, CTU shall advise concerned RLDC for scheduling of power at the earliest, but not later than a period of one month:

Provided also that if the capacity required for scheduling of power under LTA has already been allocated to any other person under MTOA and/or STOA, then MTOA and/or STOA shall be curtailed in accordance with priority for curtailment in accordance with Regulation 25 of these Regulations corresponding to the quantum and the period of the PPA:

Provided also that when capacity under existing MTOA are curtailed for considering scheduling of power under the PPA of the Long term Access Customer, such MTOA customer shall be permitted to relinquish its MTOA without any relinquishment charges: "

## **2. Provisions related to MTOA period**

- (1) In the present Regulations MTOA can be availed from 3 months to 3 years. The Statement of reasons issued vide Order dated 30.10.2009 provides as under

*" The Commission has specified a period of more than 3 months and up to 3 year for medium term open access without any augmentation of transmission system having due regard to available transmission capacity. A period of 12 years and more is specified for Long term access with or without system augmentation with due regard to repayment obligation of the investors. It may not be desirable to provide open access for any intermediate period because this would discourage any entity in seeking long term access which is necessary to create additional redundancies and margins in the transmission system to further facilitate short term and medium term open access. As such, any entity desirous of open access for the period between 3 years to 12 years may opt for medium term open access and renew the same every three years or may go for long term access for 12 years and opt for early exit option after paying necessary*

*charges as per terms of the regulation any time before completion of open access period of 12 years."*

- (2) It was explained vide above that provision of open access for intermediate period between 3 and 12 years was not kept since it would discourage an entity to seek long term access which is necessary to create redundancies.
- (3) Gol Guidelines for Procurement of Electricity for Medium Term from Power Stations set up on Finance, Own and Operate (FOO) basis dated 10.2.2016 provides regarding medium term procurement as follows:

*"The application of these Guidelines shall be restricted to projects constructed and/or operated in accordance with an Agreement for procurement of power for a period of between one and five years, with a provision for extension of this period for the lower of 25% of the initial contract period and one year, with mutual consent."*
- (4) Keeping in view the contracts in current market scenario, the period of MTOA has been proposed as 5 years. However in case PPA for a period of 6 years has been signed, an Applicant may take Long term Access for 7 years or it may obtain MTOA for 5 years subject to the condition that no overriding priority shall be provided for renewal on expiry of term of MTOA.
- (5) Based on above discussions following is proposed:
  - i. Sub Clause (o) of clause (1) of Regulation 2 of the Principal Regulations shall be substituted as under:

**"(o) Medium-Term Open Access** means the right to use the inter-State Transmission system for a period equal to or exceeding 1 year but not exceeding 5 years;"
  - ii. Clause (2) of Regulation 19 of the Principal Regulations shall be substituted as under:

"(2) The start date of the medium-term open access shall not be earlier than 5 months and not later than 2 years from the last day of the month in which application has been made."

### **3. Provisions related to grant of MTOA**

- (1) In the present Regulations, clause (2) of Regulation 9 provides that MTOA shall be granted if the resultant power flow can be accommodated in the existing transmission system or the transmission system under execution. During the proceedings of petition no. 92/MP/2014, the CTU has submitted that MTOA should be granted on the transmission system which have been commissioned and not on the transmission system under execution. The Commission in its order dated 16.02.2015 in petition no. 92/MP/2014 has observed as extracted below:

*"33. CTU has submitted that on account of the uncertainties surrounding the execution of the transmission lines on account of various problems such as Right of Ways and environmental clearance issues, it is difficult to take into account the "transmission system under execution" while calculating the margin for the purpose of deciding the ATC for grant of MTOA. CTU has pleaded that MTOA should be granted on the transmission systems which have been commissioned as this will reduce the scope for error in calculation of ATC. We find strength in the submission of CTU. In our view, CTU's suggestion for granting MTOA on the existing margin needs deliberation. We direct the staff to examine the issue and submit the same for consideration of the Commission."*

The CTU has submitted that on account of the uncertainties surrounding the execution of the transmission lines on account of various problems such as Right of Ways and environmental clearance issues, it is difficult to take into account the "transmission system under execution" while calculating the margin for the purpose of deciding the ATC for grant of MTOA. The Commission has also observed that in number of cases, CTU granted the MTOA subject to commissioning of upcoming transmission system, which got delayed due to many reasons such as ROW problems, delays in environment/forest clearances etc. Due to delays of

commissioning of transmission system under execution, there are delays in start of MTOA which may have commercial ramification for the applicant. We also find strength in the submission of CTU that the uncertainties in commissioning of transmission system under execution make it difficult to calculate margins while deciding ATC for grant of MTOA. Therefore it is proposed to delete the words “or the transmission system under execution” from clause (2) of Regulation 9 of the Principal Regulations. For the MTOA already granted by the CTU for the transmission system under execution shall not be disturbed.

- (2) Based on the above discussion following amendment is proposed:
- i) In Clause (2) of Regulation 9 of the Principal Regulations, the words "or the transmission system under execution" shall be deleted.

#### **4. Provisions related to Dedicated transmission lines**

- (1) In the present Regulations, clause (8) of Regulation 8 provides that a thermal generating station of 500 MW and above and a hydro generating station or a generating station using renewable sources of energy of capacity of 250 MW and above, other than a captive generating plant, shall not be required to construct a dedicated line to the point of connection and such stations shall be taken into account for coordinated transmission planning by the Central Transmission Utility and Central Electricity Authority. It is further provided that the construction of such dedicated transmission line may be taken up by the CTU or the transmission licensee in phases corresponding to the capacity which is likely to be commissioned in a given time frame after ensuring that the generating company has already made the advance payment for the main plant packages i.e. Turbine island and steam generator island or the EPC contract in case of thermal generating station and major civil work packages or the EPC contract in case of hydro generating stations for the corresponding capacity of the phase or the phases to be commissioned, subject to a minimum of 10% of the sum of such contract values. The regulation also provides that the transmission charges for such dedicated



transmission line shall be payable by the generator even if the generation project gets delayed or is abandoned.

- (2) During the process of fourth amendment of Indian Electricity Grid Code, the POWERGRID has submitted its comments on the draft amendment Regulations as extracted below:

*“In the Connectivity Regulations, 2009, the Commission included the dedicated transmission line as part of coordinated planning for generators having more than specified capacity. For implementation of dedicated line including transmission system strengthening, if required, Construction Bank Guarantee of only Rs.5 lakh/MW was also provided in the Regulations, which is very less compared to the cost of the Transmission line. Based on above provisions in the Connectivity Regulations, 2009, dedicated transmission lines for some IPPs are under implementation/ have been implemented by POWERGRID/under TBCB after taking regulatory approval from the Commission. In an effort to match the commissioning of dedicated transmission lines with that of generator, POWERGRID is continuously coordinating with the Generators regarding their progress. However, it has been seen that some of the Generators are inordinately delayed or are abandoning the projects despite their continuous insistence for materialisation of their generation as per indicated time schedule. After award of the contract for transmission line, it is not possible to inordinately delay the commissioning of assets due to contractual obligations.”*

- (3) The Commission in SOR to fourth amendment of Indian Electricity Grid Code Regulations has observed as extracted below:

*“9.4.4 POWERGRID has stated that the bidders cannot be burdened with the risk of entering into an Implementation Agreement with the Generator and more so, meet the requirement to match the generation schedule. The bidder under TBCB is governed to deliver the system as per the dates and provisions of the TSA. We find merit in submission of POWERGRID in regards to provisions of Scheduled COD of the TSA under TBCB, where the bidder has to deliver transmission system as per the dates and provisions of the TSA. In our view, this situation can be avoided if the evacuation line from the generating station to the nearest pooling station are executed by the generator or by CTU if the*

*same has been included in the Coordinated transmission planning. This requires detailed deliberation and necessary changes in the Connectivity Regulations. We direct the staff to examine this aspect.*

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*9.4.7 With respect to proposal of PGCIL that in future all the dedicated lines may be developed by respective generators, we are of the view that the same is beyond the scope of present amendment. However, the suggestion will be considered while dealing with the amendment to Connectivity Regulations.”*

- (4) It is observed that a number of petitions have been filed before the Commission regarding mismatch of commissioning of generating station with the commissioning of dedicated transmission lines where the dedicated transmission lines are not executed by the generator. There are various reasons for delay in commissioning or abandonment of a generating station as well as for dedicated transmission system including land acquisition/ROW problem, delays in obtaining various clearances, fuel linkages etc. The progress of generating station and corresponding transmission system is monitored through Joint Coordination Committee (JCC) meetings. Still there are cases of mismatch between generating station and dedicated transmission line. As per POWERGRID, after award of the contract for transmission line, it is not possible to inordinately delay the commissioning of assets due to contractual obligations. Further the transmission licensees under TBCB are governed to deliver the transmission system as per the dates and provisions of the TSA. If the generator gets delayed, matching is difficult as the transmission licensee has to deliver the system by Scheduled COD as per TSA for start of recovery of its investment. Further in case the generator gets delayed or abandoned, the dedicated transmission line may not be utilized and remain stranded.
- (5) Dedicated transmission line should be matched with generating station and it is best matched when the dedicated transmission line to the nearest pooling station is executed by the generator itself. However, the

specifications for these dedicated transmission line may be indicated by CTU while granting Connectivity/ Long term Access/Medium term Open Access.

- (6) APTEL vide Order in Appeal No. 145 of 2011 dated 23.5.2012 has observed as follows:

*"It is declared that the generating company is governed by Section 10 of the Electricity 2003 Act and as such Generating Company alone is liable to construct transmission line at its own cost. It would, therefore, be appropriate to direct the Respondent Generating Company to get the dedicated transmission lines constructed at its own cost as per Section 10 of the 2003 Act. Accordingly directed.*

*52. In order to overcome the apprehended difficulty of laying down dedicated transmission line as per the mandate of Section 10 of the Act and avoid further delay, the generator may take the help of the Appellant transmission licensee to get the dedicated transmission lines erected by the Appellant on deposit work basis paying the full cost."*

Hence APTEL has concluded that dedicated line should be constructed by generator at its own cost under the provisions of Act.

- (7) It is further observed that in some cases the nearest pooling station of transmission licensee is very far from the location of the switchyard of generating station especially in cases of hydro generating station. The length of dedicated transmission lines are generally 30-60 km, but in some cases, nearest pooling substation is as far as 150 to 200 km. There is a view that a limit on maximum length of dedicated transmission line should be there and accordingly CTU and CEA may plan the pooling substation of transmission licensee with a maximum limit on length of dedicated transmission line on case to case basis. Accordingly it is proposed that the maximum length of dedicated transmission line should not be more than 100 km from the nearest pooling substation of transmission licensee till the switchyard of the generating station.

- (8) In cases where dedicated transmission line are executed by the generator from its generating station to the nearest pooling station of the transmission licensee the terminating bays associated with the dedicated transmission line are part of dedicated transmission line for evacuation of power from the generating station. Since scope of dedicated transmission line is with the generator, it is proposed that tariff of bays associated with dedicated transmission lines terminating at substation of transmission licensee shall be borne by the applicant generator and shall not be considered for inclusion in POC pool. The generator may endeavour to commission the dedicated transmission line and the associated bays simultaneously as far as practicable and shall ensure the same through appropriate Implementation Agreement.
- (9) For the existing cases where dedicated transmission lines have already been constructed or are under construction under coordinated planning by CTU, the transmission charges for such dedicated transmission line shall be payable by the generating company to the transmission licensee (including deemed transmission licensee) from the date of COD of dedicated line till operationalisation of LTA for the generator. The clause "(c) Provided also that the transmission charges for such dedicated transmission line shall be payable by the generator even if the generation project gets delayed or is abandoned" is deleted since it has been already provided that generator shall pay the charges till operationalisation of its LTA. In case a project gets abandoned it will have to bear the charges for the dedicated line. In case of abandonment of the generating project, the transmission licensee if it has not awarded the project already should endeavour that, it shall not execute the line and if it is already under construction but only minor works has been completed, it should endeavour to put dedicated transmission line for alternate use by relocating towers/conductors in view of national interest. In such a situation generator will bear the relocation cost & shall not be liable to pay the transmission charges.

(9) Based on the above following is proposed:

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

"(8) The dedicated transmission line from generating station of the generating company to the pooling station of the transmission licensee (including deemed transmission licensee) shall be developed, owned and operated by the applicant generating Company. The specifications for dedicated transmission lines may be indicated by CTU while granting Connectivity/ Long term Access/Medium term Open Access:

Provided that in case of a thermal generating station of 500 MW and above and a hydro generating station or a generating station using renewable sources of energy of capacity of 250 MW and above, CTU shall plan the system such that maximum length of dedicated transmission line shall not exceed 100 km from switchyard of the generating station till the nearest pooling substation of transmission licensee.

Provided that where the dedicated transmission lines have already been constructed/are under construction by CTU under coordinated transmission planning,

(a) the transmission charges for such dedicated transmission lines shall be payable by the concerned generating company to the transmission licensee (including deemed transmission licensee) from the date of COD of the dedicated line till operationalisation of LTA of the generating station of the generating company:

(b) after operationalisation of the LTA, the dedicated transmission line shall be included in the POC pool and payment of transmission charges for the said dedicated transmission line shall be governed as per the CERC (Sharing of inter-state transmission charges and losses) Regulations, 2010 as amended from time to time."

## 5. Provisions related to Underutilization of LTA/ MTOA

(1) In a few cases reported to Commission it has been observed that there are cases where LTA has been operationalized but it is not utilized for scheduling by a generator may be because it is delayed or is under forced shutdown for a long period. In few of such cases the transmission capacity becoming available should be utilized for scheduling by other entities. We have perused para 17 (a) of detailed procedure to CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009 which provides as follows:

*a. Underutilization of transmission capacity In case it is observed by RLDCs that the MTOA customer request for scheduling is consistently (for more than 5 days) lower than the capacity granted by the Nodal Agency (i.e.; CTU), RLDC may issue a notice to such MTOA customer asking the reasons for such under-utilization. The MTOA customer shall furnish the reasons for such under-utilization and will provide such details like the reduced requirement, likely period, etc. by the following day. The un-utilized transfer capability will then be released for scheduling of Short-term open access transaction.*

The above provision provides for utilisation of capacity which is kept underutilised by MTOA customer. There is no such specific provision in the Regulations / detailed procedure in case of non utilisation of capacity by LTA customer. Accordingly a provision is proposed in the draft amendment to utilise such capacity. In cases where a generator is not able to schedule its power under LTA, the generator shall inform RLDC / CTU about the tentative period till which time it shall not be able to schedule its power. CTU/ RLDC may release this capacity under MTOA / STOA as the case may be depending on the period for which such capacity has become available. If such capacity is released under MTOA, generator will not be liable towards LTA charges for such reallocated capacity under MTOA. A draft amendment is proposed to utilise the underutilised capacity by LTA/ MTOA customer.

(2) Based on above discussions following amendment is proposed:

**“16B. Underutilization of Long term Access and Medium term Open Access:**

"In case it is observed by RLDCs that the LTA / MTOA customer request for scheduling is consistently (for more than 5 days) lower than the capacity granted by the Nodal Agency (i.e.; CTU), RLDC may issue a notice to such LTA/MTOA customer asking the reasons for such under-utilization. The LTA/MTOA customer shall furnish the reasons for such under-utilization and will provide such details like the reduced requirement, likely period, etc. by the following day. The un-utilized transfer capability will then be released for scheduling of Medium term and Short-term open access transaction depending upon the period of such underutilization with a condition that such transaction shall be curtailed in the event original LTA/MTOA customer seeks to utilize its capacity. "

**6. Provisions related to Power to Relax and Power to Remove Difficulties**

(1) There is no Regulation of Power to Relax and Power to Remove Difficulties in Principal regulations. As a result of this, it is not possible to meet the contingencies arising in the course of operationalisation of Connectivity Regulations. It is proposed to insert two new regulations in the Principal Regulations as given below:

**“33A. Power to Relax:**

The Commission, for reasons to be recorded in writing, may relax any of the provisions of these regulations on its own motion or on an application made before it by an affected person to remove the hardship arising out of the operation of Regulation, applicable to a class of persons.

**33B. Power to Remove Difficulty:**

If any difficulty arises in giving effect to the provisions of these regulations, the Commission may, by order, make such provision not inconsistent with the provisions of the Act or provisions of other regulations specified by the Commission, as may appear to be necessary

for removing the difficulty in giving effect to the objectives of these regulations.”

## **C. Draft Amendments to Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations**

### **1. Introduction of Reliability Support Charge for Connectivity**

(1) It has been observed that a number of generators are availing Connectivity but have not applied for LTA or MTOA or have applied for part LTA. It is provided vide Statement of reasons to CERC( Sharing of inter-state transmission charges and losses ) Regulations 2010 while introducing Reliability support charge as follows:

*"We agree with POSOCO that all the entities, be it a generator or load serving entity, are availing reliability support of the grid. We are of the view that any user who is connected to the Grid gets access to improved power quality, enhanced reliability and stabilized operation. The interconnected system (Electricity Grid as a whole) gives stability and provides inertia. Transmission system is a common carrier and every entity (whether an injecting or drawing utility) having connectivity to the transmission system avails its services."*

(2) Hence the applicants should be liable to pay Reliability Support charge for the Connectivity quantum. However the applicants may enter into LTA/ MTOA with firm PPA in which case the transmission charges including Reliability support charge is being raised on withdrawal end. Hence the applicant shall be liable to pay Reliability support charge for the balance quantum of Connectivity for which there is no LTA/MTOA.

(3) The above is illustrated through a sample example:



Suppose a generator has Connectivity of 1000 MW from year 1.2018. Its LTA is to be operational from 21.1.2020 considering that it has sought Connectivity earlier for availing start up power. It shall have to pay Reliability support charge for 1000 MW from 21.1.2018 to 21.1.2020 provided that it got connected to grid on 21.1.2018.

Post 21.1.2020 following will be the treatment of Reliability charge: Suppose generator has 500 MW of LTA to target region, 100 MW MTOA (tied up), 200 MW LTA (tied up).

- Generator will have to pay Reliability charge for balance quantum of Connectivity for which there is no LTA/MTOA i.e. for 200 MW.
- Generator will pay Reliability charge towards LTA to target region for 500 MW.
- Reliability support charge for LTA(tied up) and MTOA (tied up) i.e. 300 MW, Reliability charges are billed only on drawal end.

(4) Suppose the Generator had Connectivity for 1000 MW but did not have any LTA/MTOA and it does STOA for 100 MW it shall pay for Reliability charge for 1000 MW towards Connectivity. Additionally it shall be paying reliability charge towards STOA for 100 MW. IN such case generator will get offset for reliability charge paid towards STOA since total quantum for which reliability charge is to be paid is limited to quantum of Connectivity.

Accordingly amendments have been proposed to Regulations 7 (1)(q), Regulations 11(4) and para 2.8.1.c of Annexure to Sharing Regulations

(5) Based on above discussions following amendments are proposed:

**(a) Following sentence shall be added at the end of Sub-clause (q) of Clause (I) of Regulation 7 of the Principal Regulations:**

"Additionally, Reliability Support Charge shall also be payable by a DIC for the quantum of Connectivity granted by CTU from the date of

physical Connection to ISTS including the case where DIC is not availing any LTA / MTOA provided that the total quantum for the purpose of Reliability Charge shall not exceed the quantum of Connectivity granted to a DIC.

Provided further that if Connectivity has been sought in a phased manner, Reliability charges shall be billed accordingly.

Provided also that Reliability Support Charge paid by a DIC under STOA shall be offset against the quantum covered under Connectivity."

**(b) Following shall be added after sub para (2) of Para 4 of Regulation 11.**

For Generators having Connectivity over and above LTA + MTOA. The MTOA shall be considered in addition to LTA only if it is over and above LTA.

$$\left[ \text{Reliability Support Rate in Rs / MW / month} \right] \times \left[ \left( \text{Connectivity Quantum} - (LTA + MTOA) \right) \right]$$

**(c) Amendment to Annexure of the Principal Regulations:**

Sub clause (i) to Para 2.8.1.c shall be substituted as follows:

- (i) Reliability Support Charges shall be 10% of the Monthly Transmission Charges. The Reliability Support Rate, in Rs/MW/month shall be as under:

Reliability Support Charge for Withdrawal DIC shall be obtained by multiplying the above rate (in Rs/MW/month) by Approved Withdrawal (LTA/MTOA). For Generator with Long term Access to

target region shall be obtained by multiplying these charges by Approved Injection. For Generators whose Connectivity is for quantum more than its LTA+MTOA, Reliability Support Charges shall be obtained by multiplying the above rate by [Connectivity quantum – (LTA+MTOA)].

The above principle shall also apply for additional MTOA.

## **2. Rates of STOAMTOA**

- (1) Open access was introduced in 2004 through notification of Open Access Regulations, 2004 and the short-term customers were charged at a minimum rate corresponding to 25% of the regional transmission charges for the previous year calculated in terms of Rs./MW/day. The Commission in SOR to Open Access Regulations, 2004 has observed that in an uncongested transmission corridor, the short-term customers should pay about 1/4th of the charges applicable to the long-term customers. The STOA charges were increased to 50% of the regional transmission charges for use of inter-regional systems through first amendment of Open Access Regulations in 2005. Subsequently, the STOA charges were changed from Rs./MW/day to Rs./MWh. The Commission in SOR to Open Access Regulations, 2008 has observed that transmission charges for short term open access should only be nominal and have, therefore, deliberately specified them on the lower side, and in Rs./MWh, for easy application. The STOA charges were further increased through notification of first amendment of Open Access Regulations, 2009. The Commission in SOR to first amendment, Open Access Regulations, 2009 has observed as extracted below:

*“89. We have reviewed the comments received from different stakeholders and it is clear that most of the stakeholders urged against the increase proposed in transmission charges. It needs to be appreciated that the transmission capacity planning has become complex with the opening up of the power sector, providing for open*

*access under the Act. Huge merchant capacity has lined up whose buyers are yet not identified. The low transmission charges for the short-term open access do not induce these generators to commit long-term use of the networks. This may not only lead to congestion and higher losses in the existing transmission network but may also add considerable uncertainty in transmission capacity expansion whereas transmission system augmentation would be necessary to take into account these capacities. It is necessary to ensure that the transmission licensee recovers its transmission charges and at the same time long-term customers do not get burdened unnecessarily. Therefore, in the long run the transmission charges for the short-term customers and long-term customers have to converge. Further, the proposed transmission charges are about 50 % of the existing average transmission charges of the inter-State transmission system on all India basis and still a small fraction of the traded prices in open access (bilateral or at power exchange) and in unscheduled interchange charges. In view of this, we have retained the proposed amendment.”*

- (2) The Sharing Regulations was notified in 2010. The STOA charges (Rs./MWh) were made equivalent to MTOA/LTA (Rs./MW/month) charges in accordance with Sharing Regulations through notification of second amendment of Open Access Regulations, 2013.
- (3) After the passage of Open Access Regulations of 2004 and 2008, the transmission planning process came to be largely driven by the Long-Term Access to the ISTS grid sought predominantly by generators. Transmission System augmentation is taken up primarily for meeting the LTA requirement. It is experienced from recent trends that the power procurement by State utilities has moved from long term contracts of about 25 years to shorter term contracts. In the recent past, only few States have carried out Case-I bidding for procurement of power on long term and that too for much less quantum, however, on the other hand the procurement is mainly done for medium or short term basis. Further, the growing transactions at power exchange indicate that a shift

in preference from long term PPAs towards short or medium term PPAs. The generation projects are not sure about the long term takers of power from them and therefore they are not willing to remain committed for long term payment of transmission charges. As STOA charges are in Rs./MWh as compared to LTA/MTOA charges in Rs/MW/month, it is further beneficial for the generators which are running their units at lower PLF.

- (4) The Connectivity Regulations provides for free connectivity and as a result many generators have applied for the LTA much lesser than their connectivity/Installed Capacity. Further, the generators who have applied for LTA quantum corresponding to their installed capacity intend to remain connected with the Grid but at the same time they are relinquishing the LTA in order to avoid the commitment for payment of transmission charges. There are number of petitions and applications before the Commission wherein the generators are relinquishing their LTA quantum but at the same time evacuating power under STOA/MTOA markets. This causes burden of higher transmission charges on other long term customers. The MTOA and STOA are granted only on the margins available in the transmission system and no augmentation is carried out for the purpose of granting MTOA/STOA. As our transmission planning is connected with LTA, this scenario is likely to lead to under building of transmission capacity thereby leading to instances of congestions.
- (5) The volume of short-term transactions has increased from 24.69 BUs in year 2008-09 to 63.96 Bus in year 2014-15. However, the prices of electricity of short term transactions has come down from about Rs. 7.29/unit in year 2008-09 to Rs. 4.28/unit in year 2014-15. The same for the month of May 2016 is approx. Rs. 2.5 /unit. This trend may increase the volumes of short-term transaction in future. In this scenario, it is likely that generators may not apply for LTA and to evacuate power under STOA/MTOA or it is likely that there is less long term PPAs leading to lack of LTAs thereby inefficient transmission planning.

Therefore, there is a need to increase the rates for MTOA and STOA transactions by DICs who have not obtained LTA for that quantum. Keeping in view this requirement of transmission planning and at the same time ensuring that power market is affected minimally, it is proposed in draft amendment of Connectivity Regulations to increase the MTOA and STOA charges to 1.25 and 1.35 times respectively that for normal POC rates specified so that adequate capacity augmentation takes place. This also helps in alleviating problems of congestion.

(6) There are LTA customers to target region who are already paying transmission charges and are also applying for STOA based on sale of power from their stations. Such customers shall be charged at normal POC rates as specified by the Commission since they have already sought LTA and are liable to pay charges for same.

(7) Based on the above discussions following is proposed:

a. Sub-clause (l) of Regulation 9 of the Principal Regulations shall be substituted as under:

"(1) The transmission charges for MTOA customers who are not availing LTA to target region for the capacity under MTOA shall be charged 1.25 times of the LTA POC rates as notified by the Commission from time to time.

(2) The transmission charges for STOA customers who are not availing LTA to target region for the capacity under STOA shall be charged 1.35 times of the normal STOA POC rates as notified by the Commission from time to time:

Provided that the surplus charges collected under above clauses shall be reimbursed back to DICs paying charges under first bill in the next month."

b. Following shall be added after sub-para (1) of Para 4 of Regulation 11.

For DICs having MTOA over and above LTA:

$$\left[ \text{PoC transmission rate of demand zone in Rs / MW / month} \right] \times [1.25] \times \left[ \frac{\text{Approved withdrawal}}{\text{Approved injection}} \right]$$

### 3. ISTS charges and losses for wind and solar projects

- (1) Tariff Policy notified by MoP dated 28.1.2016 provides at para 6.4 (6) as follows:

*"In order to further encourage renewable sources of energy, no inter-State transmission charges and losses may be levied till such period as may be notified by the Central Government on transmission of the electricity generated from solar and wind sources of energy through the inter-state transmission system for sale."*

- (2) In this regard MoP had notified vide Notification dated 14.9.2016 regarding ISTS charges and losses for solar and wind based projects as follows:

"(i) For generation projects based on wind resources, no inter-State transmission charges and losses will be levied on transmission of the electricity through the inter-state transmission system for sale by such projects commissioned till 31.3.2019.

Provided that the above waiver will be available for a period of 25 years from the date of commissioning of such projects.

Provided further that such waiver will be available only for the projects entering into Power Purchase Agreements (PPAs) for sale of electricity to the Distribution Companies for compliance of their renewable purchase obligation.

For generation projects based on solar resources, no inter-State transmission charges and losses will be charged for use of inter-State transmission system (ISTS) network by such projects commissioned till 30.6.2017 as per the CERC (Sharing of Inter-State Transmission Charges and Losses) (Third Amendment) Regulations, 2015.

Provided that this waiver will be available for a period of 25 years from the date of commissioning of such projects.

Waiver will be allowed only to those solar and wind projects that are awarded through competitive bidding process."

- (3) We observe that Regulations already provide for no ISTS transmission charges and losses for solar based projects commissioned upto 30.6.2017 for useful life of the project. The useful life of solar project under CERC Regulations in vogue is 25 years. Hence, there is no need of any further amendment with regards to Solar based generation.
- (4) Based on above discussions following amendment is proposed for wind based generation:
  - (a) A New Sub clause (y) to Clause (1) to Regulation 7 of Principal Regulations shall be added as under:

"No transmission charges and losses for the use of ISTS network shall be attributed to wind based generation for the projects awarded through competitive bidding and commissioned till 31.3.2019. This shall be applicable for a period of 25 years from the date of commissioning of such projects.

Provided that such waiver will be available only for the projects entering into Power Purchase Agreements (PPAs) for sale of electricity to the Distribution Companies for compliance of their renewable purchase obligation."



#### **4. Amendments in regards to third bill**

(1) As per principal regulation, third part of the bill was to be used to adjust any variations in interest rates, FERV, rescheduling of commissioning of transmission assets, etc. as allowed by the Commission for any ISTS Transmission Licensee. This part of the bill was to be raised on first working day of September and first working day of March for the previous six months. Initially, for FY 2012-13, PoC Charges were determined on six monthly basis, which later changed to quarterly basis. In order, to have harmony with Calculation of PoC Rates and to adjust any variation as early as possible, it is necessary to raise the Bill-3 on quarterly basis coinciding with PoC Computations. Arrears arising out of various True up orders and final orders are being included in Bill-3, and same has been included in the draft amendment as follows:

Clause (6) of Regulation 11 of the Principal Regulations shall be substituted as under:

"The third part of the bill shall be used to adjust any variations in FERV, Incentive, rescheduling of commissioning of transmission assets etc. as allowed by the Commission for any ISTS Transmission Licensee. Total amount to be recovered / reimbursed because of such under recovery / over recovery shall be billed by CTU to each Designated ISTS Customer in proportion of its average Approved Injection / Approved Withdrawal Charges over the three months of PoC application period on quarterly basis. This part of the bill shall be raised on first working day of September, December, March and June for the previous PoC application period."

#### **5. Amendments related to offset provided for charges paid under MTOA /STOA by LTA Customer**

The Regulations provides that a DIC with LTA to target region shall be given offset for STOA/MTOA to any region. However, it is required that more clarity is required in the same to clarify following:

- (1) The offset shall be provided for the quantum only. A DIC may be paying an injection POC rate under LTA to target region which may be different from POC rates paid by it under STOA/ MTOA. A DIC shall be provided offset in the LTA bill of next month for the quantum for which it has already paid under MTOA /STOA in previous month.
- (2) Such an offset shall be provided only if DIC which is paying charges for LTA under target region does STOA/MTOA which effectively implies it has paid both for LTA and MTOA/STOA. In case a DIC (or a trader on its behalf) has not sought STOA/MTOA and has not paid charges towards MTOA/STOA it shall not be given offset for same. Offset is to be provided only to entity which is paying charges for the same quantum twice.
- (3) Accordingly draft amendments have been proposed to bring clarity in how the offset is to be provided. An example is provided below for clarity:

DIC "A" has LTA of 500 MW from WR to SR (Target Region). PoC Injection Rates (PoC + Rel. Supp. Charges + HVDC Charges) applicable to this DIC is Rs. 150000/- Per MW per Month. DIC will pay Rs. 75000000/-. In case DIC identifies beneficiary through MTOA for 200 MW and withdrawal rate of beneficiary identified is Rs. 200000/- Per MW per Month, then charges collected for MTOA of 200 MW from DIC is Rs. 40000000/-. In next month bill the DIC having LTA to target region have to pay PoC Charges for balance quantum of 300 MW after offsetting the quantum of MTOA of 200 MW @Rs. 150000 / MW i.e. next month's bill under LTA will be Rs. 45000000/-.

- (4) Accordingly following amendments have been proposed:

(a) Second proviso to clause (5) of Regulation 11 of the Principal Regulations shall be substituted as under:

“Provided further that while billing transmission charges for next month, the quantum of Medium-term Open Access to any region shall be adjusted against the quantum of Long-term Access to the target region without identified beneficiaries limited upto quantum of Long Term Access:”

(b) First, Second and third proviso to clause (9) of Regulation 11 of the Principal Regulations shall be substituted as under:

"Provided that a DIC which has been granted LTA to a target region and is paying injection charges for Long Term Access avails Short Term Open Access to any region, the quantum of Short Term Open Access shall be adjusted in the following month against the quantum of Long Term Access to target region limited to quantum of Long Term Access to the extent of the quantum for which DIC has paid charges.

Provided further that a DIC, which has been granted Long-term Access to a target region, shall be required to pay PoC injection/ withdrawal charge for the Approved Injection/Withdrawal for the remaining quantum after offsetting the quantum for Medium-term Open Access, and Short-term open access to the extent of the quantum for which DIC has paid charges.

Provided also that the Withdrawal PoC charges paid by DIC towards Short-term open access given to a DIC shall be offset against the corresponding Withdrawal PoC charges to be paid by the Withdrawal DICs for Approved Withdrawal limited to difference of Approved Withdrawal and Net withdrawal (load minus own injection) considered in base case, if Approved Withdrawal is less than the Net Withdrawal:

**(c) Amendment related to returning back transmission charges collected towards start up power/infirm power.**

Charges collected towards Start-up power/infirm power was to be adjusted against the YTC of next quarter. Since charges towards Start-up power/infirm power are part of Regional Transmission Deviation Account and CTU is raising Bill-4 for them, it is proposed to reimburse the charges collected towards Start-up power/infirm power to the DICs in the following month as in case of deviation charges. Further, adjustment against next quarter will result in delayed reimbursement to DICs. Accordingly, following amendment is proposed:

Fourth proviso to Clause (5) to Regulation 8 of Principal Regulations shall be substituted as under:

"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 received shall be reimbursed to the DICs in the following month, in proportion to the monthly billing of the respective month."

**6. Amendments with regard to POC Rates to be considered for billing DICs whose rate is not available**

(1) SRPC during 3rd Validation Committee Meeting held on 30.8.2016 sought a clarification on PoC rates to be considered for generators whose rate has not been notified. It has been recorded in the minutes of meeting dated 9.9.2016 of 3<sup>rd</sup> Validation Committee meeting for Q3 2016-17 as follows:

*“Poc rates of generator whose rate has not been notified: Agenda by SRPC PoC rate for some generators having LTA without identified beneficiaries has not been computed since their LTA was not identified prior to beginning of PoC Quarter. RPCs are finding it difficult to apply the PoC rate to arrive the transmission charges payable by such generators. Representative from SRPC highlighted the point regarding the non-availability of PoC rate for TPCIL and SEPL for the month of Jun’16. In this regard, CERC representative clarified that there is a provision in the Sharing Regulations for new generating units.*

*Proviso to Clause 5 of regulation 8 of Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) (Third Amendment) Regulations, 2015 provides as under:*

*“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.”*

*In line with the above provision for new generators, it was agreed that generators which has been commissioned but for whom PoC rate have not been notified, may be charged at average withdrawal rate of the target region. Chief (Engg.) stated that CTU should provide LTA data prior to beginning of quarter prudently so that such cases do not arise.”*

(2) To formalize the above, following amendment is proposed:

A new Clause (7) shall be added after Clause (6) to Regulation 8 of Principal Regulations.

“(7) For generators with LTA to target region whose POC rate has not been determined for the quarter, shall be billed at Average PoC rate of target region.”