

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram: Dr. Pramod Deo, Chairperson  
Shri S. Jayaraman, Member  
Shri V.S. Verma, Member  
Shri M. Deena Dayalan, Member**

**Date: 2.5.2012**

**In the matter of**

The Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) (Second Amendment) Regulations, 2012.

**Statement of Reasons**

**1. Introduction**

- 1.1 The Commission had notified, the Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010 (hereinafter “the Sharing Regulations”) on 7.6.2010. The Sharing Regulations came into force with effect from 1.7.2011.
- 1.2 The first amendment of the Sharing Regulations was notified in the Official Gazette on 25.11.2011., The amendment mainly included the provisions to remove the difficulties being faced by various stakeholders including the Implementing Agency. Subsequently, some further difficulties being faced for smooth operationalization of the Sharing Regulations were brought to the notice of the Commission by various stakeholders, Implementing Agency and the staff of the Commission. The Commission posted the draft of Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) (Second Amendment) Regulations, 2012 on 14.2.2012 inviting comments/suggestions/objections from the stakeholders/public. The Explanatory Memorandum accompanying the Sharing Regulations explained the reasons for the proposed amendments.
- 1.3 The stakeholders numbering 19, which included State Power Utilities, Central Electricity Authority, Power System Operation Company Ltd., inter-State

Transmission Licensees, Regional Power Committees, NTPC Ltd., Independent Power Producers (IPPs), Tata Energy Research Institute and others made written submissions on the draft amendments. The Commission conducted a Public Hearing on on 13.3.2012. Ten stakeholders made oral submissions before the Commission including three PowerPoint Presentations. The list of stakeholders who submitted their written comments and made presentation and oral submission during Public Hearing is enclosed at **Annexure**. The Commission has considered the comments/ suggestions/ objections received on the draft regulations and after the detailed deliberations has finalized the regulations. The reasons for the decisions of the Commission are discussed in the succeeding paragraphs.

**2. Regulation 2 (1)(c) (Approved Injection):**

2.1 The following proviso was proposed to be added in sub-clause (c) of clause (1) of Regulation 2:

*“Provided that the overload capability of 105% of the installed capacity (MW) for thermal generating stations and 110% of the installed capacity (MW) for hydro generating stations shall not be used for calculating the approved injection under Long-term Access (LTA).”*

2.2 The comments from the following stakeholders have been received:

(a) Power System Operation Company Ltd. (POSOCO) has supported the proposed amendment. However, in order to bring further clarity, POSOCO has suggested that the normative auxiliary consumption should be subtracted from the installed capacity to arrive at the approved injection. These cases cover where no LTA have been granted by CTU explicitly but have been considered as deemed LTA as they been included in the coordinated planning. However, for cases where the CTU has explicitly granted LTA, auxiliary consumption should not be subtracted. POSOCO has suggested that the proviso may be modified as under:

*“Provided that the overload capability shall not be used for calculating the approved injection under Long-term Access (LTA)i.e.*

*installed capacity less normative auxiliary consumption shall be considered.*

*Provided that LTA granted by the CTU shall be considered as it is without subtracting any normative auxiliary consumption.”*

- (b) Southern Regional Power Committee (SRPC) has submitted that as the overload capability of 105%/ 110% of installed capacity shall not be used for calculation of the approved injection under long-term access, the following formula may be inserted in the computation of approved injection:

*“Approved injection for thermal and hydro generators = Installed Capacity \* (1 - Normative Auxiliary Consumption)”*

- (c) NTPC Ltd. (NTPC) has submitted that as far as overload capability of 105% / 110% is concerned, the same is required to be considered only for the stations where the LTA quantum is not defined i.e. for the station where the specific applications under Open Access Regulations have not been made. Where specific long-term access applications have been made, LTA would need to be considered as per the LTA granted. NTPC has suggested that the proviso may be modified as below:

*“Provided that the overload capability is to be considered for Long-term Access (LTA) of ISGS [where specifically LTA has not been sought as application under the CERC (Grant of Connectivity, Long term Access and Medium term Open Access in the inter-State transmission and related matters) Regulations, 2009] to the extent of 105% for thermal generation and 110% for hydro generation, after deducting the normative auxiliary consumption”*

- (d) Odisha Power Transmission Company Ltd. (OPTCL) and Grid Corporation of Odisha Ltd. (GRIDCO) have submitted that any overload capacity over the installed capacity for both thermal and hydro should not be considered for approved injection and the proposed amendment should be made effective from 1.7.2011. Maharashtra State Electricity Distribution Company Ltd. (MAHAVITARAN) has submitted that the amount so far billed on the DICs

in their monthly transmission charge bills on account of injection PoC charges considering overload capabilities of the installed capacity for calculating the approved injection under Long-term Access (LTA) shall be refunded to the DICs retrospectively.

- (e) Transmission Corporation of Andhra Pradesh Ltd. (APTRANSCO) has submitted that the proposal to discontinue to use the overload capability of the generating units for calculating the approved injection under long-term access will increase the generation PoC charges for LTA beneficiaries. Therefore, the existing method of computation of approved injection may be continued.
- (f) Regulatory Research India (R2I) has supported the proposed amendment and has submitted that it will give relief to the utilities from extra burden on account of consideration of overload capacity in the approved injection. However, R2I has suggested that 105% should not be in respect of installed capacity as proposed in draft amendment, because CEA regulation provides for 105% of Maximum Continuous Rating (i.e. Installed Capacity – Auxiliary Consumption).

2.3 We have considered the submissions of the above stakeholders. It is observed that Central Electricity Authority (Technical Standards *for* Connectivity to the Grid) Regulations, 2007 stipulate capability to generate upto 105% of maximum continuous rating for *short* duration. Further, Regulation 5.2 (h) of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 provides for the same. Hence, the contention of NTPC to consider the overload capacity after deducting auxiliary consumption for the purpose of approved injection cannot be accepted. As regards the contention of R2I regarding Maximum Continuous Rating (MCR), it is noticed that the term

is defined in CEA (Technical Standards for Connectivity to the Grid) Regulations, 2007 as below:

*Maximum Continuous Rating of a generating unit means the maximum continuous output in MW at the generator terminal guaranteed by the manufacturer at rated parameters;*

It appears that R2I is mistaking that MCR is at the ex-bus level whereas as per the CEA regulation, it is at the generator terminal. Therefore, the formula for computation of approved injection suggested by R2I is not in order. MSEDCL, GRIDCO and OPTCL have supported the proposed amendments but have sought its implementation w.e.f 1.7.2011. In our view, retrospective application of the regulation would require the revision of all transactions with effect from 1.7.2011 including Short term Open Access (STOA) transactions, and would unsettle implementation of the PoC regime. Therefore, retrospective revision is not agreed to.

POSOCO, SRPC and NTPC have suggested that the LTA should exclude the auxiliary consumption from the gross generation. We agree with POSOCO that LTA figure should be taken for the purpose of approved injection where LTA has been granted by the CTU and for other cases , approved injection shall be considered on the basis of installed capacity minus normative auxiliary consumption. . Accordingly, the proviso to sub-clause (c) of clause (1) of Regulation 2 is modified as under:

*“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 figure and where long term access has not been granted by the CTU, the installed capacity of the generating unit minus the auxiliary consumption shall be considered for the purpose of computation of approved injection.*

### **3 Regulation 2 (1)(f): Approved Withdrawal**

3.1 The following proviso was proposed to be added in sub-clause (f) of clause (1) of Regulation 2:

*“Provided that the overload capability of 105% of the installed capacity (MW) for thermal generating stations and 110% of the installed capacity (MW) for hydro generating stations shall not be used for calculating the approved withdrawal under long term access (LTA).”*

3.2 The following comments have been received in response to the proposed amendment:

- (a) NTPC has objected to the proposed proviso in the light of its comment with regard to approved injection.
- (b) GRIDCO and OPTCL have submitted that any overload capability above the installed capacity for hydro and thermal generating station shall not be considered for approved withdrawal.
- (c) SRPC has not offered any comments on the proposed amendment but has submitted for insertion of the following proviso:

*Approved withdrawal would be summation of weighted average allocated share from Central Generating Stations considering the ex-bus of generating stations and long term access, medium term open access granted by CTU.*

- (d) WBSIEDCL has submitted that the proposed amendment is not compatible with the withdrawal concept and may be applicable to injection.

3.3 We are not inclined to agree with the suggestion of SRPC. The State may have a plan to buy power during the application period in medium or short term, during the year in addition to the allocated share from Central Generating Stations and long term access, medium term open access granted by the CTU, which it may apply for at a later stage. As regards the submission of WBSIEDCL, we are of the view that the proposed proviso is applicable where beneficiaries have been allocated power from Central Generating Stations and the contention of WBSIEDCL is not in order.

- 3.4 In the light of the above discussion, the proviso to sub-clause (f) of clause (1) of Regulation 2 has been modified as under in the final regulations:

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

#### **4. Regulation 2 (1)(f) : Definition of Implementing Agency**

- 4.1 The following amendment in Regulation 2 (1) (n) was proposed:

*“(n) 'Implementing Agency (IA)' means the agency designated by the Commission to undertake the computation of allocation of transmission charges and transmission losses at various nodes/ zones for the Application Period along with other functions mandated under these regulations or as may be assigned by the Commission from time to time;”*

- 4.2 No comment has been received on this proposed amendment and hence is retained as proposed.

#### **5 Regulation 2 (1)(p1): Natural inter-State Transmission line**

- 5.1 Definition of ‘Natural inter-State transmission line’ was proposed to be added as Clause 2 (1) (p1) as under:

*‘Natural inter-State transmission line’ means and includes those transmission lines which are physically connected at one end to one State and at the other end to another State.*

- 5.2 The following comments/suggestions have been received:

- (a) POSOCO submitted that this may be modified as below:

*“(p1) ‘Natural inter-State transmission line’ means and includes those transmission lines which are physically connected at one end to one State and at the other end to another State **excluding dedicated lines which are physically connected between two States.**”*

- (b) NRPC, SRPC and R2I have stated that inter-State Transmission System (ISTS) is already defined in Electricity Act, 2003 and hence, the proposed new definition may not be needed and may be dropped. PTC India Ltd.

submitted that the term ‘natural’ may be reviewed legally since these are man-made bilateral transmission lines. Tri-Legal has submitted that the flow of electricity being a ‘natural’ physical phenomenon, every part of the ISTS as defined under the Act is part of ‘natural inter-State line’. The law is well settled that a delegated legislation cannot be inconsistent with the provisions of the parent Act.

- (c) R2I has submitted that if needed, this can be done in procedure of computation as a sub category of interstate transmission system.
- (d) PTC India has submitted that the inclusion of such lines in the transmission pool, primarily built for bilateral exchange of power between two States may face reservation from others.

5.3 We have considered the comments of the stakeholders. With respect to the submission of PTC that these lines primarily built for bilateral exchange of power between two States may face reservation from others, we are of the view that these lines are part of the ISTS and carry inter-State power even though these lines were initially meant for bilateral exchanges some 30 years back. Moreover, these lines are important from the point of grid stability. Keeping in view of the comments of the stakeholders that these lines are covered under the definition of ISTS under Section 2 (36) (i) of the Act, we have decided to change the nomenclature of these lines to “Inter-State transmission line connecting two States”. Since the new nomenclature is self-explanatory, we have not defined the same. Consequently, clause 2(1)(p1) has been dropped in the final regulations.

## **6 Regulation 2 (1)(y) : Yearly Transmission Charge**

6.3 The definition of ‘Yearly Transmission Charge (YTC)’ in sub-clause (y) of clause (1) of Regulation 2 was proposed to be amended as under:

*‘Yearly Transmission Charge (YTC)’ means the Annual Transmission Charges for the existing and new transmission assets of the inter-State transmission licensees, deemed ISTS Licensees, owners of the natural inter-State lines and owners of the non-ISTS lines certified by Regional Power Committees for inter-State transmission of power, determined by the appropriate Commission under Section 62 of the Act or adopted by the Appropriate Commission under section 63 of the Act or as otherwise provided in these Regulations.”*

- 6.4 The definition was proposed to be amended to accommodate the originally proposed “*natural inter-State lines*”. In view of the discussion in para 5.3 above, the definition of YTC has been approved as under:

*“(y) Yearly Transmission Charge (YTC)’ means the Annual Transmission Charges for the existing and new transmission assets of the inter-State transmission licensees, deemed ISTS Licensees, owners of the inter-State transmission line connecting two States, and owners of the non-ISTS lines certified by Regional Power Committees for inter-State transmission of power, determined by the appropriate Commission under Section 62 of the Act or adopted by the Appropriate Commission under section 63 of the Act or as otherwise provided in these Regulations.”*

## **7 Regulation 7(1)(l) : Slab rates for injection and demand PoC**

- 7.3 The Commission has stated in the Explanatory Memorandum that slabbing would reduce the disparity between the high and low PoC charges and losses and would continue till the time the Commission deems fit. Accordingly, it was proposed to add the second proviso to Regulation 7 (1) (l) of the Principal Regulations as under:

*“Provided further that there shall be three slab rates for injection and demand PoC charges for the year 2011-12 or for such period the Commission may consider appropriate.”*

- 7.4 CEA has recommended for continuation of three slab rates computed for a single scenario for the entire year based on average generation and demand data until sufficient experience has been gained. POSOCO has agreed to the slab rates, except that “PoC charges” may be replaced by “PoC rates”. GRIDCO and

OPTCL, WBSEDCL, Tri-Legal, R2I and MB Power have opposed slabs on the ground that the proposal dilutes the very objective of computing transmission charges based on the actual utilization of each network element by the customers and is against the principle of distance, direction and usage sensitivity as enshrined in the National Electricity Policy and Tariff Policy. CESC has submitted that the Slab system may be only for short term transactions.

- 7.5 We have considered the above objections and suggestions. In the earlier postage stamp regime of sharing of transmission charges, there was little disparity in the transmission charges between the Regions, except the North-Eastern Region. At the time of initial implementation of the Sharing Regulations, the Implementing Agency brought to the notice of the Commission that based on the injection PoC and drawal PoC, the PoC charges vary widely between the zones in the range of 5 paise to 25 paise/kWh. To smoothen the transition from the postage stamp regime to PoC regime, the Implementing Agency suggested for introduction of slab rates in order to minimise the diversity of PoC rates. The Implementing Agency was directed to carry out a sensitivity analysis. After taking into account the results of the sensitivity analysis and other relevant factors, the Commission introduced slab rates in place of wide range of rates during the transition period through the Removal of difficulty Order dated 4.4.2011. Though CEA and POSOCO have favoured retention of slab rates, some of the DICs have opposed the slab rates on the ground that slab rates are against the principles of distance, directions and usage sensitivity as enshrined in National Tariff Policy. In our view, slabs do not remove the distance and direction sensitivity but only dilute the same to some extent for the purpose of reducing disparity in PoC rates among the DICs. The Commission consciously introduced the slab rates in order to reduce the disparity so that the new system is accepted by all DICs. We are of the view that when there is wide variation of PoC rates, it would be difficult to implement PoC rates. Therefore, we have decided to continue with the slab rates during the transition period and then to

gradually move towards the rationalization of slab rates, so that all the DICs share the transmission charges based on their usage. We are therefore proposing that slab rates shall be rationalised by the Commission after two years, i.e. in the year 2014-15. As suggested by POSOCO, the words “PoC charges” have been replaced by “PoC rates”. Accordingly, the proviso has been modified as under:

*“Provided further that there shall be slab rates for injection and demand PoC charges upto the year 2013-14, after which the same shall be rationalised based on review by the Commission in 2014-15.”*

## **8. Regulation 7(1)(o): Load Flow Studies**

8.1 The following proviso was proposed in the draft amendment in Regulation 7 (1) (o) after the first proviso:

*"Provided further that the load flow studies shall be carried out by the Implementing Agency as and when the YTC is revised in accordance with proviso to sub-clause (1) of Clause (1) of this regulation."*

8.2 The following comments from the stakeholders have been received:

- (a) CEA has submitted that if different PoC charges are computed for multiple scenarios rather than a single scenario, it may lead to disputes due to lack of reliable data and extreme volatility for season to season in the transmission charges. The transmission prices should provide stable signal for market participants to plan their procurement of power with reasonable certainty. The procurement of power under Case-I bidding involves evaluation of transmission charges upto the electrical boundary of the procuring State. If seasonal pricing is introduced for inter-State transmission charges, the evaluation of bids for 25 years for procurement of power under Case-I bidding would become very complicated and cumbersome.
- (b) POSOCO has submitted that single PoC rate for the year is easy to comprehend and gives a more stable signal. Despite simulating a single scenario, the dynamic nature of power flows in the grid is getting captured

in case of loss, which is the variable cost of transmission. PoC charges for five seasons and peak and other than peak scenarios are highly volatile and may be difficult to comprehend initially. For the year 2012-13, PoC rates have been computed for two scenarios i.e. Apr-Sept'12 and Oct'12-Mar'13 and the results indicate volatility of charges. All the expected generation may not come up in one go but commissioned in a phased manner. This may cause temporary increase in the PoC rates in next few years which may stabilize subsequently. Increasing the PoC rate without corresponding increase in the ISGS Capacity may be difficult to appreciate. POSOCO has suggested to use a reference YTC for computation of PoC Charges. The reference YTC may include the transmission charges of all assets whose tariff or provisional tariff has been approved by the Commission and *estimated* tariff of transmission assets likely to be commissioned by 30th September of the next application period. However, based on the tariff/provisional tariff approved by the Commission, ISTS Licensees may be required to submit monthly transmission charges every month. This may be considered for disbursement of transmission charges. POSOCO has further suggested that a roadmap for moving towards multi-year rate may be framed by the Commission. For the time being, rates may be determined based on a single load flow study for average case and YTC may be revised on monthly basis for the purpose of disbursement to owners of ISTS assets.

- (c) OPTCL and GRIDCO have submitted that load flow study must be uploaded in the website of Implementing Agency in a transparent manner prior to implementation for an application period.
- (d) NTPC has submitted that the accuracy of such data shall be better if it is required to be forecasted for a nearer period. The demand forecasting by beneficiaries shall be near actual if a smaller timeframe is taken. Also the certainty of new generation being added to the system shall be more accurately known in a near timeframe. NTPC has suggested that the

Implementing Agency should collect nodal demand and generation data as and when it carries out revised load flow. Necessary provision in this regard may be made in the regulations.

- 8.3 We have considered the suggestions and objections of the stakeholders. We are of the view that the extent of usage of transmission system depends on seasons. The Sharing Regulations specify 5 seasonal scenarios. The reason for multiple scenarios has already been explained in Explanatory Memorandum. It has to be in line with the revision of YTC. Besides, the inter-State transmission licensees and the CTU can approach the Commission for tariff only 6 months in advance. Also, many transmission assets and generating units are anticipated to come during the application period. The closer the load flow studies are done to the actual scenario, the more accurate the data about system configurations and hence the results. Evaluation of bids for ISTS through competitive bidding can be done using escalation factors for weighted average of the two or more scenarios.
- 8.4 POSOCO has suggested that a roadmap for moving towards multi-year rate may be framed by the Commission and the rates should not change on year to year basis over the tariff period, except for considerations of inflation or escalation, which may be pre-defined. This means that the transmission charges based on usage is absent. In our view, load flow studies should be carried out in consonance with the revision of YTC in order to have a realistic assessment of the PoC charges. We have therefore retained the proposed amendment.
- 8.5 POSOCO also submitted that the bi-annual / quarterly computation of the load flow results during the financial year would not be in line with Regulation 7(1)(i) and would bring in discrepancy.

- 8.6 In sub-clause (i) of clause (1) of Regulation 7 of the Principal Regulations, the words "not later than 15th of December in each financial year", shall be substituted as under, namely:

*"three months before the revision of the YTC in accordance with first proviso to sub-clause (l) of clause (1) of this regulation".*

**9. Regulation 7(1)(t): Creation of zones for generation and demand DICs**

- 9.1 It was proposed to add that opening para of sub-clause (t) of clause (1) of Regulation 7 would be substituted as under:

*"The Implementing Agency shall aggregate Point of Connection charges for the geographically and electrically contiguous nodes on the ISTS within the geographical boundary of the State to create zones, in order to arrive at uniform zonal rate in ₹/MW/month. The Implementing Agency shall create zones for generation and demand. Such zoning shall be governed by the following considerations:"*

- 9.2 No comment has been received on the proposed amendment and hence the same is incorporated in the final amendment.

**10. Regulation 7(1)(t) para (ii) : Treatment of NER**

- 10.1 It was proposed to amend para (ii) of sub-clause (t) of clause (1) of Regulation 7 as follows, in order to treat each State of North Eastern Region as a separate zone:

*"The nodes within zones shall be combined in a manner such that they are geographically and electrically proximate. The demand zones shall be the geographical boundary of the State."*

- 10.2 POSOCO has submitted that treating each State of North Eastern Region (NER) as a separate demand and generation zone is a welcome step. No objection to

the amendment has been received. The proposed amendment has been retained in the final amendment.

**11. Regulation 7(1)(t): High PoC injection charge vis a vis low LTA in a State**

11.1 It has been explained in the Explanatory Memorandum that in case of the DICs which are inter-State Generating Stations (ISGSs) having capacity less than 1500 MW and connected to the ISTS, the whole charge of the ISTS network of that State is getting billed on such ISGS resulting in high PoC injection rate for the ISGS. Accordingly it was proposed in the draft amendment that para (iv) of sub-clause(t) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

*"(iv) An inter-State Generating Station (ISGS) directly connected to the 400 kV inter-State Transmission System 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 the 400 kV inter-State Transmission System, with zero LTA or part LTA to a DIC in another State, the entire merchant capacity plus the LTA to the DICs in other States shall be considered to arrive at the PoC injection rate."*

11.2 The comments from the following stakeholders have been received:

(a) POSOCO has submitted that in the proviso, LTA to a DIC in the same state would be excluded, which is not desirable. It is submitted that instead of considering "LTA to other states", all LTA should be considered. POSOCO has stated that there may be a scenario where a generator has taken LTA for full quantum and yet may remain merchant. In this case it would not be prudent to consider LTA + Merchant Capacity for computation of PoC Rate.

(b) LANCO has submitted that this is a positive development, which better reflects the network usage by each generator. However, if generators are not

charged because they have LTA with the home state, then there will be “under recovery” of charges.

(c) Trilegal has submitted that the high charges in that case did not result from the fact that the State of Andhra Pradesh had a small quantum of LTA, which resulted in very high PoC charges. The discrepancy arose since the IA had failed to consider that the treatment of ISTS has to be in line with the definition provided in the Electricity Act, 2003 which includes any system that is incidental to inter-State transmission of electricity. Even for the purpose of determination of LTA, the IA had only considered the LTA to the CTU and other inter-State licensees, but did not consider the LTA of State based generating stations to intra-State transmission system, which is incidental to inter-State transmission of electricity, and therefore forms part of the ISTS. None of these fundamental flaws in the computation of PoC charges have been addressed in the proposed amendments.

(d) MB Power Ltd. has submitted that with the above proposed amendment, the number of zones would increase exponentially leading to increase in variation in the Injection Charges of various ISGS which are electrically and geographically proximate, thereby creating confusion and complexities in the PoC based transmission pricing mechanism. They have suggested that for the limited specific cases where a single or a group of ISGS with a combined long-term access (LTA) of capacity less than 1500 MW is/are connected to the ISTS network, they may be treated as pooled and the billing on each of such ISGS may be restricted to their proportionate “Approved Injection” till the time the actual injection in the common pooling station reaches a minimum threshold of 1500 MW.

11.3 The Commission has considered the views of the stakeholders. It is noticed that none of the stakeholders have expressed any objection to the proposed methodology, except MB Power Ltd., which has expressed that this would lead

to increase in the number of zones. MB Power has suggested pooling of smaller pooling stations (i.e. less than 1500 MW) into a zone, and proportionate sharing of transmission charges, till the size of the individual pooling station becomes greater than 1500 MW. We have doubt if two pooling stations are pooled, that the pooling station with lower POC injection rate would like to be pooled with a pooling station with higher POC injection rate. Therefore we are not inclined to agree with this proposal. It would always be more accurate to demarcate them into separate zones.

The Commission had proposed in the draft Regulations that, in addition to the generators connected to the 400 kV inter-State Transmission System(ISTS) with long-term PPA, generators with merchant capacity and PPA to other States, should also have a POC injection rate based on the sum of merchant capacity and long-term PPA to other States. POSOCO and LANCO have pointed out that the ISGS connected to the *400 kV inter-State Transmission System(ISTS)*, should be considered for calculation of the POC injection rate, whether they have LTA to other States or to the host State and the sum of such capacity be considered, if the generator has part long-term PPA and part merchant capacity, limited to its generating capacity. Trilegal has mentioned that the LTA of the State based generating stations to intra-State transmission system, which is incidental to inter-State transmission of electricity, and therefore forms part of the ISTS, should also be considered.

We tend to agree with the argument given by POSOCO and LANCO. However, the issue of use of the intra-State transmission system, which is incidental to inter-State transmission, pointed out by Trilegal, is a generic issue, for which a solution still needs to be found. We have already mentioned in the Explanatory Memorandum to the Second Amendment that:

*“Subsequently, after applying our minds, we feel that the issue is very involved, and almost all intra-State lines may carry inter-State power to a small or large extent. Similarly, ISTS lines may also carry intra-State power. Therefore, at the first instance, we are inclined to consider that all*

*transmission lines, which are naturally inter-State lines, i.e. linking one State to another, would, without doubt, carry power from one State to another and would therefore have to be inter-State lines.”*

11.4 We have decided to incorporate the following amendment :

*“(iv) Any inter-State generating station directly connected to the 400 kV inter-State Transmission System 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 the 400 kV inter-State Transmission System, with zero LTA or part LTA to a DIC in another State, the entire merchant capacity plus the LTA to the DICs in other States shall be considered to arrive at the PoC injection rate.”*

## **12. Regulation 7(1)(t) Part (v):**

12.1 It was proposed in the draft amendment to repeal Para (v) of sub-clause (t) of clause (1) of Regulation 7 of the principal regulations, in order to remove the limit of 1500 MW thermal capacity and 500 MW hydro generating capacity, directly or through pooling station, in view of amendment of para 7(t)(iv).

12.2 WBSEDCL has submitted that the proposed deletion of paragraph of (v) of sub-clause (t) of clause (1) of regulation 7 will increase the approved injection charge to some of those users of the network who are not getting benefit of those pooling stations or the hydro-generating stations. Therefore, this clause may not be deleted.

12.3 It is clarified that the deletion of this clause has become essential after considering each ISGS connected at 400 kV ISTS network to be treated as a separate generation zone and for which rationale has been given in the ‘Explanatory Memorandum’. Accordingly, the clause has been deleted.

### **13. Regulation 7(1)(s)**

13.1 It was proposed to add the following proviso at the end of sub-clause (s) of clause (1) of Regulation 7:

*“Provided that there shall be slabs for transmission losses in percentage for the year 2011-12 or for such period the Commission may consider appropriate.”*

13.2 In accordance with this provision in the main Regulations, a similar provision was proposed to be added at the end of Para 2.7 of Annexure:

*“There shall be slabs for the percentage transmission losses for the year 2011-12 or till such period the Commission may consider appropriate.”*

13.3 The following comments have been received:

- (a) R2I submitted that it is nowhere mentioned in Regulations, losses were calculated by IA on Regional basis under its procedure. While transmission charges are calculated on NEW GRID and SR Grid, without sufficient reasoning or amendment, losses are calculated on Regional basis.
- (b) POSOCO has supported the proposed provision regarding slabs rates for transmission losses.
- (c) CESC Ltd submitted that it supports slabs in losses for convenience.
- (d) GRIDCO and OPTCL have submitted that consideration of slabs for transmission losses is not agreed to and loss calculation should be on actual basis.
- (e) NLDC and RLDCs have submitted that the PoC losses are coming with large variation for the DICs and in order to smoothen the transition process, the proviso regarding slabs for transmission losses is supported.

13.4 We have considered the comments of the stakeholders. As already explained in the Explanatory Memorandum, slabs have been adopted for calculation of

losses for smoothening transition process. The proposed amendment has been retained.

#### **14. Para 2.7 of Annexure: Talcher Kolar HVDC lines**

14.1 It was proposed that Step 4 under sub-para 2 of Para 2.7 to Principal Regulations shall be substituted as under:

*“Step 4: The entire YTC of the Talcher - Kolar HVDC transmission link shall be borne by the DICs of the Southern Region by scaling up their PoC charges. PoC injection charge for 200 MW share allocated from Talcher – II station to the State of Odisha shall be charged at the PoC injection rate of Talcher – II station as per Sharing Mechanism in the NEW grid.*

*Provided that after the entire country is synchronously connected, the cost of all the HVDC systems shall be borne by all the DICs in the country by scaling up the YTC calculated without including the HVDC costs.”*

14.2 Comments from the following stakeholders have been received:

- (a) NTPC has submitted that the specific of quantum “200 MW” indication may be replaced by “allocated quota” to avoid any discrepancies at a later stage. Currently PoC Injection Charges for Talcher-II cannot be computed for NEW grid. This injection should be charged at Talcher-I rates instead.
- (b) POSOCO has proposed that the share of Odisha from Talcher-II shall be charged at the injection PoC rate of nearest generating node, i.e. Talcher-I.
- (c) GRIDCO and OPTCL have agreed with the proposal of PoC injection rate of Talcher – II station as per the sharing mechanism in NEW grid.
- (d) SRPC has submitted that the actual usage of Talcher-Kolar link can be obtained by LTA of Talcher stage – II as the power carried by it is Talcher Stage – II power. In the current scenario, Odisha is paying PoC charge of Southern Region, which is actually the transmission charge payable by Talcher Stage – II for usage of Southern Region A/C transmission system. Talcher Stage – II has to pay transmission charge for SR and hence

Odisha needs to pay the same. Thus the existing sharing methodology for Talcher Stage – II may be retained.

- (e) APTRANSCO has submitted that the cost of HVDC may be apportioned as per the utilization of AC transmission system in terms of magnitude, direction and distance. Otherwise, the proportionate share of Andhra Pradesh allocation from Talcher II may be deducted while allocating the HVDC charges.

14.3 We have considered the suggestions and objections of the stakeholders. It is clarified that the Talcher-Kolar HVDC Bipole link was specifically constructed for evacuation of power from Talcher Stage – II to the Southern Region. This link is also used for transfer of power to other DICs in Southern Region. We are therefore of the view that the cost of this asset has to be borne by the DICs of the Southern Region by scaling up the POC charges of DICs of Southern Region proportionately. Further, we are in agreement with POSOCO and NTPC that PoC injection rate of allocated quantum of power from Talcher Stage – II shall be injection rate of Talcher Stage – I, since Talcher\_II is not represented in the NEW grid, due to most of its power allocated to the Southern States, and it is interconnected to Talcher-I and they are geographically proximate. Accordingly, the amendment in respect of Step 4 is being incorporated as given below.

*“Step 4: The entire YTC of the Talcher - Kolar HVDC transmission link shall be borne by the DICs of the Southern Region by scaling up their PoC charges. However, the PoC injection rate for the allocated share from Talcher – II station to the State of Odisha shall be the PoC injection rate of Talcher – I station:*

*Provided that after the entire country is synchronously connected, the cost of all the HVDC systems shall be borne by all the DICs in the country by scaling up the YTC calculated without including the HVDC costs.”*

**15. Para 2.8.1 of Annexure: Computation in particular scenario**

15.1 It was proposed to modify Table under para 2.8.1 as under:

***ZZ zone computation in a particular scenario:***

	<i>Transmission Charge (₹/month)</i>	<i>Approved Injection/ Approved withdrawal*(MW)</i>	<i>Zonal Transmission Rate (₹/MW/month)</i>
<i>PP</i>	<i>45,00,000</i>	<i>250</i>	<i>70,000</i>
<i>AA</i>	<i>50,00,000</i>		
<i>KK</i>	<i>80,00,000</i>		
<b><i>ZZ – Zone</i></b>	<b><i>1,75,00,000</i></b>	<b><i>250</i></b>	

*\* Approved Injection/ Approved withdrawal (MW) shall be the Long-term Access for the average scenario based on the CEA generation and demand data. Otherwise, for the scenarios mentioned in Regulation 7 (1) (o) of the Principal Regulations, it shall be the Approved Injection/ Approved withdrawal.*

15.2 The following responses have been received to the proposed amendment:

- (a) NTPC submitted that the injection value furnished for single day is not representative data for the entire block. The following changes in the regulations have been suggested:
- (i) The seasonal and peak and other than peak pricing of transmission system may be done away with. The year may be divided into 2 or 4 equal periods for taking into account additions in system / cost.*
  - (ii) The injection and demand average of the period may be estimated based on the data available for the previous year corresponding period and PoC charges can be computed using the same in load flow simulation.*
  - (iii) The injection/ withdrawal PoC rates may be worked out for each point of injection / withdrawal on the ISTS.*
  - (iv) Charges for injection and withdrawal can be calculated on actual injection and at the end of the period if the actual injection averages to the estimate made the previous year, full charges would have been recovered.*
  - (v) All other deterrents to discipline the players, if any, must be applied independently.*

- (b) POSOCO has submitted that the modification of the example given in the table under 2.8.1 of Annexure will align the methodology adopted with the provisions of the Regulations.
- (c) GRIDCO and OPTCLR2I and LANCO has submitted that the charges should be on usage of lines rather than on LTA.
- (d) Trilegal has stated that Approved Injection is computed solely on the basis of LTA of generating stations connected directly to the CTU. Since it is not mandatory for the STUs to avail LTA to the CTU, therefore the state-based generators who are connected to the intra-state network are not liable for sharing of PoC charges (not having an LTA with the CTU) even though they may be utilizing ISTS capacity on long term and consistent basis. This will only encourage malpractice in the sector where generators will connect to the intra-state network to avoid payment of PoC charges.

15.3 As regards the submissions of NTPC, it is clarified that doing away with the seasonal and other variations are against the Sharing Regulations. This provision has not been proposed in the draft amendment also. Hence, the suggestion cannot be accepted. Further, the approved injection and approved withdrawal are based on trending of load and generation data of CEA for last 3 years and is modulated by new generation addition/abnormal increase of load based on feedback received from DICs. The same may be provided in the Procedure for computation by IA and there is no need to amend the regulation for the same. As regards the proposed amendment of the table in the annexure, the Commission is of the view that the charges *are* based on usage. The charges are divided by LTA to get the PoC *rate*, when CEA data is used, since LTA is a sacrosanct figure. With respect to the suggestion of Trilegal, we feel that this is a generic issue of utilization of inter-State transmission system by the State embedded generators and loads, and, vice versa, use of intra-State system by

ISGS. We have already flagged the issue of certification of State owned system for carrying inter-State power, based on a certain rationale, which has to be worked out through a scientific method, up till which time it has been kept on hold. We are of the view that this issue has to be tackled after due consideration and deliberations. For the present, we feel that the existing system can continue.

**16. Miscellaneous**

A few amendments were proposed to change the word ‘charge’ to ‘rate’, change of nomenclature etc. in response to which no comment or suggestion has been received. These changes have been retained in the final regulations.

sd/-  
**(M Deena Dayalan)**  
**Member**

sd/-  
**(V S Verma)**  
**Member**

sd/-  
**(S Jayaraman)**  
**Member**

sd/-  
**(Dr Pramod Deo)**  
**Chairperson**

**List of Stakeholders who made written submissions on draft Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) (Second Amendment) Regulations, 2012:**

1. Adani Power Ltd. (APL)
2. Central Electricity Authority (CEA)
3. CESC Ltd.
4. GridCorporation of Odisha Ltd. (GRIDCO)
5. Gujarat Urja Vikas Nigam Ltd. (GUVNL)
6. LancoKondapalli Power Ltd.
7. Maharashtra State Electricity Distribution Company Ltd. (MAHAVITARAN)
8. MoserBear Power Ltd.
9. Northern Regional Power Committee (NRPC)
10. NTPC Ltd. (NTPC)
11. Odisha Power Transmission Company Ltd. (OPTCL)
12. PTC IndiaLtd.
13. Power System Operation Corporation Ltd. (POSOCO)
14. Reliance Power Transmission Company Ltd. (RPTL)
15. Regulatory Research India (R2I)
16. Southern Regional Power Committee (SRPC)
17. Transmission Corporation of Andhra Pradesh Ltd. (APTRANSCO)
18. TRILEGAL
19. West Bengal State Electricity Distribution Company Ltd. (WBSEDCL)

**Presentation made by the Stakeholders during Public Hearing on 13.3.2012**

1. Power System Operation Corporation Ltd. (POSOCO)
2. LANCO Kondapalii Power Ltd.
3. Odisha Power Transmission Company Ltd. (OPTCL)

**Oral Submissions made by the Stakeholders during Public Hearing on 13.3.2012**

1. Haryana Vidyut Vitaran Nigam Ltd. (HVVNLI)
2. Madhya Pradesh Power Trading Company Ltd. (MPPTCL)
3. NTPC Ltd.
4. Power Grid Corporation of India Ltd. (Powergrid)

5. Powerlinks Transmission Ltd. (PTL)
6. Reliance Power Transmission Ltd. (RPTL)
7. Tata Energy Research Institute (TERI)