

No. IEX/BD/1111/14-15

Date: 20 October, 2014

To,

The Secretary  
Central Electricity Regulatory Commission  
3rd & 4th Floor, Chanderlok Building  
36, Janpath  
New Delhi - 100 001  
Fax: 011-23753923

**Sub: Staff Paper on Transmission Planning, Connectivity, Long Term Access, Medium Term Open Access and other related issues.**

**Ref:** Public Notice Engg./DP-Transmission/2014-CERC dated 19<sup>th</sup> September, 2014

Dear Madam,

This has reference to Public Notice dated 19.09.2014 inviting suggestions and comments from stakeholders on the subject matter. Accordingly, comments on behalf of IEX are attached at the **Annexure** for kind consideration of the Hon'ble Commission.

Yours Sincerely,



**Shruti Bhatia**

Vice President (Policy and Communications)

*IEX comments on Staff Paper on Transmission Planning, Connectivity, Long Term Access, Medium Term Open Access and other related issues.*

---

CERC Staff Paper on “Transmission Planning, Connectivity, Long Term Access, Medium Term Open Access and other related issues” is a welcome initiative. The Staff-paper has exhaustive focus on issues and challenges in respect of transmission planning, connectivity, cost allocation, access, and pricing inflicting the power sector at large.

The solutions in the Staff-paper propose a paradigm shift from the existing practices and rightly so since limited availability on the inter-regional transmission corridor is having an adverse impact on the power sector at large – the generators are running on low PLF are not dispatched optimally despite the fact that there is ample demand in the system. Consequently, even though we have installed capacity of almost 245 GW today, the system is unable to fully meet the peak demand of 135 to 140 GW. Also, inadequate transmission is undoubtedly a major constraint in development of power market in the country.

To meet the objective of 24x7 power supply that our new government aspires to achieve, a strong transmission backbone is a pre-requisite. Over the last few decades, we have been unable to design and implement a thorough power system where all parts of the value chain receive adequate emphasis and investments. Overwhelming focus on generation in the last two decades has led to ample build-up of the generation capacity up with inadequate supporting T&D infrastructure.

Considering the lessons and experience acquired over the years, the need of the hour is clearly in favor of adopting a liberal approach in planning the transmission network to a level which allows evacuation to all the generators and also facilitates development of the power market. The objective of 24x7 power supply can only be realized if the transmission infrastructure is ahead of generation capacity and the network is free of congestion.

It is in the above context we support the GNA model proposed by the CEA, POSOCO and CTU wherein connectivity and access are dealt together and the system so built has enough redundancy so as to allow injection entities to seek access either with or without the target region. Our further views are as encapsulated below:

1. The transmission planning must be based on the net installed generation which must be validated through the load-generation balance for next five years under different scenarios by the CTU; and injection/drawal estimates submitted by STUs on rolling basis in beginning of each year for the next five years.

2. Transmission planning must be brought under the regulatory oversight and the regulator should facilitate all stakeholders to participate in the planning process in a disciplined way.
3. Connectivity to the generators should be provided following the shallow interconnection model proposed in the Staff-Paper as being done in many developed countries. The generator should submit BG for connectivity upto the grid sub-station. The investment corresponding towards strengthening in the meshed network to enable the generator evacuate power should be incurred by the CTU and realized through the POC Mechanism. To ensure accountability on part of the generator, in addition to BG for the connectivity upto the grid sub-station, BG of Rs. 5 lakh/MW as being charged presently may be continued.
4. As regards the delays, it could either be at generator or transmission licensee or at the drawing entity's end. In our view, the "delaying party" who should bear the burden / penalty arising due to such delay. However, in case of force majeure reasons, the issue should be decided mutually.

Our detailed submission to the questionnaire proposed in in the Staff-Paper has been provided in the ensuing pages for kind consideration of the Honorable Commission.

## **IEX Response to Questionnaire**

- **Question No. 1:**

Whether Connectivity should be retained as a separate product :

(A) Yes (B) No

**IEX Reply:**

(B) No. Since by providing connectivity as a separate product we have a situation where development of transmission system has not kept pace with installation of generation capacity.

- **Question No. 2(a)**

If Yes, what are in your opinion are the advantages of Connectivity as a separate product?

**IEX Reply:**

Not Applicable.

- **Question No. 2(b)**

If connectivity is retained as a separate product, then whether it should be free or transmission charges should be borne by generator or drawee entity which is applying for connectivity?

**IEX Reply:**

Not Applicable.

- **Question No. 2(c)**

Whether for connectivity, only transmission charges corresponding to connectivity transmission system should be charged or some part of Grid transmission charges ( 25% as proposed) should also be charged ?

**IEX Reply:**

Not Applicable.

- **Question No. 3:**

If no, what is in your opinion are the dis-advantages of Connectivity as a separate product?

**IEX Reply:**

Our past experience of having connectivity and access as two distinct products indicates that most generators only take connectivity and avoid taking access to minimize their liability and risks. As a result the transmission system development has not taken place.

- **Question No. 4: Bank Guarantee**

What should be amount of sufficient construction bank guarantee to safe guard against the risk of stranded asset in case generating project fails to get commissioned?

- a. Is existing construction bank guarantee amount(Rs 5 lakh per MW) sufficient when transmission cost is about Rs 1 cr per MW.?
- b. Is proposed bank guarantees equivalent to cost of transmission line is sufficient?
- c. Is proposed bank guarantees very high?

**IEX Reply:**

The Bank Guarantee towards cost of construction of dedicated connectivity line upto the pooling sub-station may be taken from the generator. The investment corresponding towards strengthening in the meshed network to enable the generator evacuate power should be incurred by the CTU and realized through the POC Mechanism. To ensure accountability on part of the generator, in addition to BG for the connectivity upto the grid sub-station, BG of Rs. 5 lakh/MW as being charged presently may be continued.

As regards the stranded assets, the CTU has rightly pointed out the difficulty in identification of stranded assets in a meshed network because such assets are utilized by all the constituents and it is difficult to identify which asset is being used by which constituent. Further the cost of such assets is also being recovered through the PoC Charges. Therefore, we do not see any risk in recovery of cost of such assets.

- **Question No. 5: Bank Guarantee**

What should be amount of sufficient construction bank guarantee to safe guard against the risk of stranded asset or transfer of liability to other consumer in case generating project wants to exit/ downscale LTA after commissioning (Please give justification for your views)

- a. NPV equivalent to 12 year transmission charges
- b. NPV equivalent to 7 year transmission charges
- c. X Rs per MW of installed capacity –One time charge
- d. Five years Average Injection and withdrawal charges
- e. Five years Average injection charges only

**IEX Reply:**

Bank Guarantee should be kept as mentioned in our reply to Question 4 above.

- **Question No. 6: Delay in Commissioning**

In case of delay in generating unit(s) /project:

- a. Date of LTA should be firm and no relaxation should be provided
- b. If information of delay is provided sufficiently in advance some staggered relief can be granted
- c. Issue should be decided mutually between generating company and transmission licensee subject to condition that no burden is transferred to other users.

**IEX Reply:**

The delay could either be at the end of the generator or the transmission licensee or the drawing entity. In our view, the “delaying party” should bear the burden arising out of delay. In case of delay due to force majeure, Option (c) should be adopted since it has equitable proposition for both the generating company and transmission licensee.

- **Question No. 7: Shallow Connection vs Deep Connection:**

- a. what is your view on shallow connection vs deep connection
- b. Shallow connection should be permitted to only renewable generation or to both Renewable and conventional generators.
- c. Under shallow connection system how transmission planning will be done and who shall bear the Grid level transmission charges

**IEX Reply:**

- a. We suggest shallow connection concept as adopted in many developed countries. As mentioned in our reply to Question no. 4 above, the Bank Guarantee towards cost of construction of dedicated connectivity line upto the pooling sub-station may be taken from the generator. The investment corresponding towards strengthening in the meshed network to enable the generator evacuate power should be incurred by the CTU and realized through the POC Mechanism. To ensure accountability on part of the generator, in addition to BG for the connectivity upto the grid sub-station, BG of Rs. 5 lakh/MW as being charged presently may be continued.
- b. Shallow connection should be permitted to both conventional and renewable generators.
- c. We support transmission planning methodology as proposed under Para 6.5 of the Staff Paper. The transmission planning must be based on the net installed

generation which must be reinforced through load-generation balance for next five years under different scenarios by the CTU; and injection/drawal estimates submitted by STUs on rolling basis in beginning of each year for the next five years. As regards investment towards the grid level charges, these should be incurred by the CTU and recovered from the constituents through the PoC mechanism. Further, an important aspect in planning which needs to be incorporated under 6.5.3 of the Staff Paper is consideration to economic dispatch of power planning.

- **Question No. 8:**

- a. Whether you are a injecting entity or Drawee entity or both?

**IEX Reply:**

As a Power Exchange we are both an injecting and drawee entity.

- **Question No. 9: GNA**

- a. What is your opinion on General Network Access (GNA) proposed by CEA ?
- b. Whether it should be adopted for transmission access and transmission charges ?
- c. What should be bank guarantees and Exit Charges under GNA mechanism?
- d. Whether it would be possible to plan transmission system to give assured access in all directions?

**IEX Reply:**

- a. General Network Access (GNA) proposed by CEA should be adopted.
  - b. Yes. GNA should be adopted for transmission access and transmission charges.
  - c. In case of exit, BG towards connectivity line upto the pooling sub-station may be forfeited. However, the suggested BG of Rs. 5 Lakh/MW towards strengthening of meshed network only be forfeited in case generator is unable to find alternative equivalent user in same time frame at same pooling station.
  - d. In case the transmission system is planned and developed based on thorough and periodic assessment of both the generation as well as the demand, it will indeed be possible to give assured access in all directions. However, it will be important to set out a framework to address the situation of congestion in a post GNA scenario such as what will be the consequences and who will bear the cost.
- **Question No. 10: Transmission Planning:**
  - a. How Transmission planning in the country needs to be reviewed under present condition to take care of future need of robust transmission system?

- b. Whether there is need for a separate Regulation for transmission planning to make it more participative?
- c. Whether transmission planning should mandatorily make margins available for short term power market?
- d. Whether transmission system planned by CEA /CTU need to be adequately explained from cost benefit point of view?
- e. Is there requirement of making submission of information related to transmission planning legally binding?

**IEX Reply:**

- a. Transmission planning should be done under regulatory oversight. Presently, the transmission planning for the meshed network including additional line from one point to another point required for strengthening is done by CTU and CEA without any regulatory intervention and approval. With regulatory oversight, the stakeholders will have an opportunity to participate in the process and as a result there will be enhanced ownership. CTU will be able to undertake investments in the approved plans and recover those investments through POC.
  - b. Yes, there is need for a separate Regulation for transmission planning to make it more participative.
  - c. Yes at least 30% margin should be mandatorily available for short term power market.
  - d. Yes, for optimum development of the transmission system, CEA /CTU need to adequately explain from the cost benefit point of view.
  - e. The suggestions made by us under the point 'a' above will makesubmission of information related to transmission planning legally binding.
- **Question No. 11 : Utilization of Congestion charges**
    - a. Whether proposal of using congestion charges to reduce the long term ISTS transmission charges acceptable? Or
    - b. Whether Congestion charges are to be utilized for creation of specific transmission assets for relieving the congestion? How should this be treated- as equity, loan or grant?

**IEX Reply:**

The congestion charges paid by short term consumers in the collective market should only be utilized for building the transmission assets in order to ease congestion. Since the Transmission Utility will not want to dilute its RoE, we suggest the congestion charge



be offered as low interest loan to CTU for building the transmission lines and undertaking the requisite network strengthening.

- **Question No.12: Transmission corridor allocation for Power market:**

- a. Whether participants of Power exchanges should be allowed to participate in e-bidding for transmission corridor?  
or
- b. For power market development, certain quantum of corridor may be reserved for power market with all participant of Power Exchange sharing the transmission charges of reserved corridor?

**IEX Reply:**

The power exchanges have been experiencing severe congestion on several inter-state transmission corridors over the last two to three years. In the year 2011-12, IEX lost 1,762 MUs to congestion and consequent unavailability of the transmission corridor which increased to 5,306 MUs in 2013-14 – a sizeable portion (19%) of total volume cleared (28,925 MUs) during the fiscal.

In a scenario where transmission capacity is under immense stress with more demand and limited availability, it would be appropriate to reserve inter-regional corridor for the power exchanges and a premium may be charged from the exchange participants towards such reservation. Since Power Exchange is most transparent and competitive platform for trading electricity, developing this market further will certainly be in the interest of the overall development of the sector. Moreover, world over exchange platform is promoted for all short term transactions.