

Explanatory Memorandum to Central Electricity Regulatory Commission (Grant of Connectivity, Long-Term Access and Medium-Term Open Access in Inter-State Transmission and related matters) (Second Amendment) Regulations, 2011.

The Central Electricity Regulatory Commission (Grant of Connectivity, Long-Term Access and Medium-Term Open Access in Inter-State Transmission and related matters] Regulations, 2009 (hereinafter referred to as the "Connectivity Regulations") came into force with effect from 1.1.2010 after approval of the detailed procedure of the Central Transmission Utility. The provision of open access in Inter-State Transmission was introduced by the Commission in January 2004 with the notification of Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2004 (Open Access Regulations, 2004"). There was no separate provision for connectivity. The application for long-term open access was deemed to include the request for connectivity. Separate Technical standards for connectivity to the grid of Central Electricity Authority came into force w.e.f. 21.2.2007. The Commission in January 2008 notified the Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008 (Open Access Regulations, 2008) repealing the provisions of Open Access Regulations, 2004 relating to short-term open access in inter-State transmission. The provisions of Open Access Regulations, 2004 continued to apply for the long-term open access up to December 2009.

2. The basic philosophy for grant of long-term open access is that apart from connectivity, there may be need to augment or strengthen the inter-State transmission. However, for grant of short-term open access or medium-term open access, augmentation or strengthening of the inter-

State transmission system is not required to be done and the requirement is to be accommodated within the available spare transmission capacity due to redundancy or part utilization of the transmission capacity.

3. In the Connectivity Regulations, the word "connectivity" has been defined as the 'state of getting connected with the ISTS' and grant of connectivity does not entitle an applicant to interchange any power with the grid without getting either the long-term access or the medium-term open Access or the short-term open access. There is no stipulation for signing of BPTA/TSA for payment of transmission charges of ISTS. Further, the Regulation 8 of Connectivity Regulations makes it mandatory for CTU to construct dedicated lines for the thermal generating stations of 500 MW and above and the hydro Generating stations of the capacity of 250 MW and above.

4. The Regulation 8 of Connectivity Regulations reads as follows:

"(8) An applicant may be required by the Central Transmission Utility to construct a dedicated line to the point of connection to enable connectivity to the grid:

Provided that a thermal generating station of 500 MW and above and a hydro generating station 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."

5. In view of the above provision, the CTU has been flooded with large number of applications for connectivity. The CTU vide its letter dated 3.1.2011 has intimated to the Commission that it has received 82 numbers of connectivity applications corresponding to about 100000 MW of installed capacity (Thermal-71Nos of 95,300 MW & Hydro- 11 nos. of 4,700 MW). The CTU has further informed that the timeframes for coming up of the

generating stations for which dedicated lines are to be constructed is less than the timeframe of nine months plus minimum timeline prescribed by CERC. The CTU has submitted that being a public sector undertaking, it is required to follow stringent procurement procedures and it is difficult for CTU to develop dedicated lines in less than the prescribed timeframe. On the other hand, private developers are in a much better position to develop these lines in much shorter timeframe.

6. In view of the above, the CTU in its letter dated 3.1.2011 has sought for directions of the Commission on the following:

(a) There is a need that application for "connectivity" should be made along with the LTA. However the renewable and solar generation projects may be exempted from this requirement.

(b) Provision for assigning responsibility of implementation of connectivity lines by IPPs, if required earlier than CERC timelines, need to be stipulated.

(c) Defining prerequisites for grant of LTA/Connectivity.

7. With regard to the issue of making application for connectivity along with the application for the long-term access, attention is drawn to the observations of the Commission in its order dated 27.6.2007 in Petition No. 146/2006 which is extracted as under:

"15. Before parting with this case, it would be worthwhile for us to differentiate between providing connectivity to the transmission system and allowing usage of the transmission system through short-term/long-term open access. It is possible that during planning/execution stage, a generating company/licensee may just seek connectivity in the first instance. This will help the generating company/licensee to plan/execute

dedicated transmission system up to the grid. However, the generating company/licensee may be able to firm up its delivery/injection points at a later date, and be able to apply for open access at that stage only. Thus, connectivity may be seen as a pre-cursor to the open access. The requirement of connectivity of this nature was not envisaged previously and, therefore, the Commission's regulations on open access did not cater for these situations. The requests for connectivity from all such persons who are eligible to buy/sell as per the Electricity Act, 2003 should normally be disposed of within one month of receipt of such requests. While granting permission to connect to the system, reasonable broad design requirements may be intimated to the person seeking connection. It is needless to say that the person seeking connectivity must agree to:

- (i) Comply with Indian Electricity Grid Code;*
- (ii) Reimburse the cost of inter-connection bay including bus extensions etc;*
- (iii) Pay O&M expenses for inter-connection bay; and*
- (iv) Apply for required "open access" in due course, but in good time, and not take for granted its approval. There appears to be some merit in the contention of the CTU."*

8. The issue has also been deliberated in the Statement of Reasons dated 30.10.2009 to the Connectivity Regulations where Commission has observed as follows:

"29. We are of the view that a generating station, including captive generating plant or a bulk consumer can not apply for long term access or medium term open access without applying for connectivity. It is not necessary to submit application for open access or access along with application for connectivity. However a person may apply for connectivity and long-term open access or medium-term open access simultaneously in order to save time."

9. The Electricity Act, 2003 (the Act) has de-licensed generation and it is, therefore, expected that there should not be any barriers for setting up of generating stations by the investors/promoters. But in actual practice, there are a number of requirements/activities which need to be

completed before even starting the construction of projects. These activities are:

- (a) Site identification and feasibility- availability of land, fuel, water, basic infrastructure for the transportation of materials and equipments to site etc.
- (b) Tying up of inputs like fuel and water
- (c) Environment and forest clearance
- (d) Acquisition of land
- (e) Tying up of loans/financing
- (f) Identifying buyers
- (g) Evacuation arrangements
- (h) Any other statutory clearance required
- (i) Investment decision and financial close

10. After feasibility, most of the activities run concurrently. It can be seen that the investors/promoters are heavily dependent upon the cooperation of various regulatory authorities and Government offices of the Centre and States for completing all these activities. All the Govt. and regulatory agencies insist on the status of various other clearances before processing the application or firming up the linkages etc. The lenders also insist on firm linkages and clearances before releasing funds for the projects. Against this backdrop, it would not be advisable to define prerequisites for grant of LTA/Connectivity. The detailed procedure already provides for keeping informed the CTU about the current status of the projects.

11. In the prevailing scenario of the power sector in India, it is even difficult to find a buyer beforehand. The Tariff Policy mandates that procuring agencies i.e. distribution companies should procure power only through competitive bidding route. As such, the investors/promoters have to depend on the action of procuring distribution companies to invite bids for competitive procurement of power and wait for their response. Further, it is not necessary that the investor/promoter would emerge as successful bidder through the process of competitive bidding. Therefore, it is not necessary that a generating station would be able to tie-up power for its full capacity on long term basis and may be forced to sell power in short-term or medium term open access through bilateral arrangements with the traders or on power exchanges. The question therefore arises whether generation activities which require much higher investment as compared to the transmission, should be allowed to be frustrated for want of connectivity and transmission system in the absence of long-term open access. It would not be appropriate in the overall interest of the power sector in the long run. In case LTA applications are not being received, CTU and CEA would have to plan for transmission corridors taking into account the generation potential and demand scenario in the various regions and anticipating the power flows in the short term, medium term and long term scenarios. Viewed in this perspective, it should not be necessary to make an application of LTA along with the application for "connectivity".

12. The CTU has submitted that two categories of Long-term Access may be created; one with firm-ed-up beneficiaries and another without firm-ed-up beneficiaries and that this would do away with the requirement of firming up the beneficiaries for the 50% of the capacity before or after the submission of connectivity/LTA applications. According to CTU, there is no clarity as to what should be done in case after grant of LTA, the

generator is unable to tie up at least 50% of LTA capacity in long-term PPAs.

13. CTU has submitted that the long-term purchase of power through competitive bidding route is going rather slow. Further, merchant power gaining wider acceptance amongst developers as well as utilities, it is quite likely that firming up of beneficiaries may not actually happen in near future.

14. In our view this may not be required at this stage. As per the information available till date around 42605 MW of capacity has already been tied up through competitive bidding under case 1 and case 2 as per the details given below:

(In MW)

Case-1	Case-2	UMPP (Case-2)	Total
16265	10340	16000	42605

15. The bifurcation of capacity under State Sector under Case-1 & Case-2 is as follows:

State	Capacity under Case-1	Capacity Under Case-2
CH		1320
GJ	6800	
HY	1724	1320
MH	4900	
MP	1841	
PU		3300
RJ	1000	
UP		4400
Total	16265	10340

16. It is apparent from the above that the States are gradually shifting their focus on generation capacity augmentation with a view to meeting future demand.

17. Further, the CTU is taking regulatory approval for creating transmission corridors and Commission has already granted permission to construct about nine such transmission corridors and this practice may continue in future also. This adequately takes care of the concern of the CTU or transmission licensee about the recovery of its transmission charges.

18. Therefore, there does not appear to be an immediate need of changing of provision relating to signing of PPA for the 50% capacity as the necessary condition for the construction of transmission lines by CTU/Transmission licensees.

19. In the matter of removal of difficulties for giving effect to certain provisions of the Central Electricity Regulatory Commission (Sharing of Inter- State Transmission Charges and Losses) Regulations, 2010 , Commission in its order dated 4.4.2011 has observed as follows:

“The MTOA and STOA shall be offset against the long-term access granted without identified beneficiaries to the same region only and not against LTA granted to any other region. The traders who have a portfolio of generators in a state, for which LTA was obtained to a target region, shall not be allowed to use this facility to prevent corridor blocking through LTA.”

20. In view of above, the third proviso to clause (1) of Regulation 12 is proposed to be substituted as under:

“Provided also that the construction of such augmentation of the transmission system 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 released the advance 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 subject to a minimum of 10% of the sum of the such contract values:

Provided also that if the long-term customer has not identified the buyer for the capacity in full or in part under long-term access and sells such power under short-term or medium term open access, then the short term or medium term transmission charges paid or payable for the period of such short-term or medium-term open access for the given capacity shall be offset against the transmission charges for the Long Term access granted without identified beneficiaries, only if such short-term or medium-term open access is taken to the same region:

Provided also that the electricity traders, who have a portfolio of generators in a State for which Long Term Access has been obtained to a target region, shall not be allowed to offset charges for short-term or medium-term open access against the transmission charges for the long term access obtained without identified beneficiaries:

Provided also that the exact source of supply or destination of off-take, as the case may be, shall have to be firmed up and accordingly notified to the nodal agency:

Provided also that the Central Transmission Utility shall be required to construct the last leg of transmission line in the destination region in such time period as estimated by Central Transmission Utility for augmentation of such line segment subject to a maximum of 3 years from the date of notifying by the long-term customer."

21. But with regard to construction of dedicated lines for the generator by CTU as per Regulation 8, CTU's main concern is regarding recovery of cost of investment on the dedicated line in case generation gets unduly delayed or does not come up. It appears to be genuine concern and it

may be difficult for the Regulatory Commissions also to burden the other constituents with such stranded cost. At the same time, the generation should not be frustrated unduly as discussed above for want of connectivity or for want of dedicated line. The concerns of the CTU would get addressed adequately once they take construction of dedicated lines after the generator has released the advance to the main plant packages and construction contracts as the CTU should draw sufficient comfort that generator would not release the advance unless it is sure of completing the project. However, the CTU and the transmission licensees are expected to complete the ground work of coordinated planning, the substation in which dedicated line is to be terminated, designing of substation or the additional bay etc and be ready with the construction in the shortest possible timeline.

22. Accordingly, following two provisos are proposed to be inserted after the proviso to clause 8 of Regulation 8 of Connectivity Regulations:

“Provided further 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 released the advance 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 subject to a minimum of 10% of the sum of the such contract values:

Provided also that the transmission charges for such dedicated transmission line shall be payable by the generator even if the project gets delayed or is abandoned.”

23. As regards the issue of assigning responsibility of implementation of connectivity lines by IPPs, if required earlier than CERC timelines, the Commission is not in agreement with CTU that IPP is in a better position to

do the lines much earlier than the CTU. With the expertise available with the CTU, it is in a much better position to do the transmission project as compared to the IPPs. If it is not possible for the CTU to do the line to meet the COD of the station then it should try to make arrangement for evacuation of power through alternate mode till such time the proposed dedicated line is constructed by CTU. Further it is not clear as to how many stations are having such problem and in the absence of relevant data, there is no need to make provision in the regulations for construction of transmission lines by IPPs.

24. The Clause (6) of Regulation 8 of CERC (Grant of Connectivity, Long-Term Access and Medium-Term Open Access in Inter-State Transmission and related matters] Regulations 2009 provides that the mere grant of connectivity to the grid shall not entitle any entity to interchange power with the grid. The Regulation reads as follows:

“The grant of connectivity shall not entitle an applicant to interchange any power with the grid unless it obtains long-term access, medium-term open access or short-term open access.”

25. Clause (7) of the Regulation 8 carves out an exception to clause (6) by providing for injection of power by the generator as infirm power before commercial operation of the generating station even without having any access . The said clause reads as under:

“A generating station, including captive generating plant which has been granted connectivity to the grid shall be allowed to undertake testing including full load testing by injecting its infirm power into the grid before being put into commercial operation, even before availing any type of open access, after obtaining permission of the concerned Regional Load Despatch Centre, which shall keep grid security in view while granting such permission. This infirm power from a generating station

or a unit thereof, other than those based on non-conventional energy sources, the tariff of which is determined by the Commission, will be governed by the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009. The power injected into the grid from other generating stations as a result of this testing shall also be charged at UI rates.”

26. It has come to the notice of the Commission that a certain private generator is injecting power into the grid without declaring the commercial operation even though the generating station has been synchronized to the grid for a considerable period of time. This has happened apparently due to two reasons; firstly there is no provision in the Connectivity Regulations about the period during which injection of infirm power by the generator as UI can be allowed. Secondly, there is no built-in disincentive which would prevent the generator to stop injecting infirm power into the grid as UI and identify buyers for sale of such infirm power. Therefore, the generator also is required to be allowed to inject infirm power during testing before COD of units of a generating station after finding buyers for the same as far as possible. However, if the generators are unable to do so, the infirm power generated during testing before COD of units of the generating station may be allowed to be injected as UI but charged at UI rates subject to the ceiling rates which should be near to their variable cost which would encourage the generators to declare their COD at an early date. As a number of merchant power plants getting connected to the grid is likely to rise in future, there is a requirement for clarity on the issue. Accordingly, it has been proposed to substitute clause (7) of Regulation 8 of Connectivity Regulations as under:

“(7) (i) Notwithstanding anything contained in clause (6) of this regulation, a generating station, including a captive generating plant which has been granted connectivity to the grid shall be allowed to inject infirm power into the grid during testing including full load testing before its COD for a period not

exceeding three months after obtaining prior permission of the concerned Regional Load Despatch Centre:

Provided that the concerned Regional Load Despatch Centre while granting such permission shall keep the grid security in view and ensure that injection of such infirm power is only for the purpose of testing, prior to COD of the generating station or a unit thereof;

(ii) Infirm power from a generating station or a unit thereof, other than those based on non-conventional energy sources, the tariff of which is determined by the Commission, shall be governed by the provisions of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 as amended from time to time or subsequent amendment thereof;

(iii) In respect of a generating station or unit thereof, whose tariff is not determined by the Commission, the generator may identify buyers for sale of infirm power during the period of testing prior to COD of the unit or the generating station as the case may be, and such infirm power shall be scheduled by the concerned Regional Load Despatch Centre subject to transmission constraints, if any. The price for such sale of infirm power to the identified buyers shall be as mutually agreed between the generator and identified buyer(s):

Provided that where infirm power is injected into the grid during the testing prior to COD of a generating station or unit thereof for which no buyer has been identified, the generator shall be paid at UI rates for such infirm power subject to the ceiling of the following rates corresponding to the fuel used for the generation:

Domestic coal (Rs. / kWh sent out)	:	1.65
APM gas as fuel (Rs. / kWh sent out)	:	2.60
Imported Coal/RLNG (Rs. / kWh sent out)	:	3.30
Liquid Fuel (Rs. / kWh sent out)	:	9.00

Provided further that in case imported coal is being blended with domestic coal, then the ceiling rate of infirm power shall be arrived at in proportion to the ratio of blending based on the above rates of domestic and imported coal and shall be subject to a further ceiling of Rs. 1.90 / kWh ex-bus:

Provided also that in case the generating station uses natural gas supplied under Administrative Price Mechanism (APM), Re-gassified Liquid Natural Gas (RLNG) and Liquid fuel in combination for power generation, then the rate of infirm power shall be arrived at in proportion to the ratio of fuel consumption based on the rates specified above.”

27. Any short fall in recovery of fuel cost could be factored in the tariff by the merchant power generator for the firm power supply as and when starts.