

Central Electricity Regulatory Commission

New Delhi

Draft Central Electricity Regulatory Commission (Connectivity, General Network Access to the inter-State transmission system and other related matters) Regulations, 2017

Explanatory Memorandum

1. Background:

- 1.1. Transmission infrastructure is backbone for operation of a competitive electricity market. The Electricity Act, 2003 ushered an era of de-licensed generation and Open Access. Transmission is the link which synergises these two. However, achieving synchronization between a licensed activity of transmission and an open market & de-licensed generation coupled with Open Access poses few challenges as compared to the planning carried out with identified location & capacity of Inter-State Generating Station (ISGS) and their identified beneficiaries.

- 1.2. After implementation of the Electricity Act, 2003 and Open Access in Inter-state Transmission System (ISTS), for development of a robust transmission system in the country, the Commission in 2004 framed Regulations on Open Access in inter-state transmission system which were modified in 2009 namely Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access to the inter-State Transmission and related matters) Regulations, 2009 (Connectivity Regulations). The Commission also notified regulations like Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 (Sharing Regulations) and Central Electricity Regulatory Commission (Grant of Regulatory Approval for execution of Inter-State Transmission Scheme to Central

Transmission Utility) Regulations, 2010 keeping in view spirit of the Act, National Electricity Policy and National Tariff Policy.

- 1.3. The Commission has received views of Transmission System Planners namely CEA and CTU and the System Operator, POSOCO on the Connectivity Regulations. IPPs have also raised their concerns in regard to the present mechanism and issues faced by them. Further, CEA and CTU are moving ahead from their initial position of requiring firm beneficiaries of Inter-State Generating Stations (ISGSs) in advance to a more market friendly approach and CEA mooted the concept of General Network Access (GNA) to address the issues raised by CEA, CTU, POSOCO and IPPs.
- 1.4. In view of the issues raised by CEA, CTU, POSOCO and IPPs, the Commission decided to have a relook at the prevailing Regulations and accordingly published “Staff Paper on Transmission Planning, Connectivity, Long Term Access, Medium Term Open Access and other related issues” (Staff Paper) in September, 2014 to seek views of Stakeholders on important issues of Transmission Planning, Connectivity and Access to ISTS in the country vide public notice dated 19.9.2014.
- 1.5. Subsequently, the Commission vide Office Order dated 20.2.2015 constituted a Task Force for giving input for framing of Draft Regulations on Transmission Planning under Chairmanship of Sh. A. Saxena, Chief (Engg.), CERC. The Task Force submitted its report along with draft regulations to the Commission in the month of February, 2016.
- 1.6. The Commission has vide notification dated 26.4.2017 issued draft CERC (Transmission Planning and other related matters) Regulations, 2017. The said draft regulations cover the transmission governance aspect of transmission planning under General Network Access (GNA).

- 1.7. Further, the Commission vide Office Order dated 8.12.2015 formed a Committee to “Review Transmission Planning, Connectivity, Long Term Access, Medium Term Open Access and other related issues” with following composition: (i) Shri Mata Prasad, Power System Expert- Chairman (ii) Shri Rakesh Nath, Former Member, APTEL- Member (iii) Shri A. S. Bakshi, Member CERC- Member and (iv) Ms. Shilpa Agarwal, Dy. Chief (Engg.), CERC- Nodal Officer. Hereinafter, this has been referred to as “Committee”.
- 1.8. The Committee held wide consultation with a number of experts and concerned organisations like statutory bodies (CEA, CTU, POSOCO, MoP), Power system experts, Representatives of States (STU/DISCOMs) and representatives of generators during January-May, 2016. The Committee noted the issues raised by transmission planning agencies, system operator, Ministry of Power, stakeholders including generating companies, transmission licensees, STUs, DISCOMS as well as power system experts. The Committee has submitted its report to the Commission in the month of September, 2016.
- 1.9. While framing draft regulations on CERC (Grant of Connectivity, General Network Access and other related matters) Regulations, 2017, the Commission has considered recommendations of both the Task Force and the Committee as stated above.

2. Salient Features of the Draft Regulations

2.1. Important definitions

- 2.1.1. Definition of “Applicant” for the purpose of grant of Connectivity to ISTS has been proposed as under:

“Applicant for Connectivity” means:

- (i) A thermal generating station with installed capacity of 250 MW and above, including a captive generating plant of exportable capacity of 250 MW and above or;

- (ii) A hydro generating station or renewable energy generating station having installed capacity of 50 MW and above individually or with an aggregate installed capacity of 50 MW and above through a lead generator.
- (iii) Any renewable energy generating station of 5 MW capacity and above but less than 50 MW capacity developed by a generating company in its existing generating station of the description referred to in sub-clauses (i),(ii) above and seeking connectivity to the inter-State transmission system through the electrical system of the existing generating station.
- (iv) Any company authorised by the Central Government or the State Government as
 - a. Solar Power Park Developer or
 - b. Wind Power Park Developer or
 - c. Wind-Solar Power Park Developer
- (v) Distribution Licensee who intends to avail supply for a minimum load of 250 MW from the inter-State transmission system; or
- (vi) Consumer who intends to avail supply for a minimum load of 250 MW from the inter-State transmission system.

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2.1.2. Wind Power Park developers and Wind-Solar Power Park Developer has been proposed to be included as an Applicant for seeking Connectivity to ISTS keeping in view Draft National Wind-Solar Hybrid Policy Policy of MNRE 2016 and upcoming requirements of the Sector.

2.1.3. It is proposed that Government authorized Park developers as eligible entity for seeking Connectivity and GNA to ISTS. However, it is acknowledged that there may be other Park developers interested in seeking Connectivity and GNA to ISTS. Suggestions are invited from stakeholders on the technical and commercial mechanism for

sharing of common facilities and charges for these park developers ensuring that interest of stakeholders are protected.

2.1.4. Bulk Consumer with capacity of more than 100 MW was an eligible entity to seek Connectivity to ISTS under prevailing Connectivity Regulations. An issue came to light that if the Bulk Consumer as specified is granted Connectivity to ISTS it may be required to construct the dedicated transmission line from its point of consumption till the interconnection point of ISTS. The Act only permits a generating company including a captive generating plant to construct dedicated transmission line and that the Bulk Consumer is not permitted to construct the dedicated transmission line. Section 38 (2) (c) of the Act provides functions of CTU as follows:

“to ensure development of an efficient, co-ordinated and economical system of inter-State transmission lines for smooth flow of electricity from generating stations to the load centres;”

2.1.5. The Appellate Tribunal for Electricity in Appeal Nos.139 of 2007 and 140 of 2007 (M/s. Nalwa Steel and Power Ltd. Versus Chhattisgarh State Power Distribution Co. Ltd. & Others) has decided that for the purpose of dedicated transmission line, a single consumer can be considered as load centre. Relevant extract of the judgement is as under:

“12) The Act permits a captive generating company and a generating company to construct and maintain dedicated transmission lines 'Dedicated Line' as per Section 2(16) means any electric supply line for point to point transmission which connects electric lines or electric plants to "any transmission lines or sub stations, or generating stations or load centers". Load centre, it is said is conglomeration of load and not an individual industry/factory as consumer. According to Mr. Ramachandran, advocate for the Commission, a load centre cannot be a consumer because if the two could be the same, Section 10 would permit a generating company to reach a consumer through such dedicated line which will amount to

distribution which is not permissible except with a license. We are not in agreement with Mr. Ramachandran. A dedicated line can go, admittedly, from the captive generating plant to the destination of its use. Such destination, i.e. the point of consumption, has to be covered by the term 'load centre'. The consumption point is neither electricity transmission line nor substation or generating station. Hence, the only way such a line can be termed dedicated transmission line when we treat the point of consumption as a 'load centre'. In other words, a single consumer can be a load centre. A dedicated transmission line can go from the captive generating station to a load centre and such load centre can also be a consumer.”

In the light of the above, it can be stated that a consumer can be covered under “load centre”.

- 2.1.6. From the above it can be concluded that it is the responsibility of CTU to develop the dedicated line till consumer. It is proposed that CTU shall construct such transmission lines upto consumer as ISTS Line. However the charges for such transmission line shall be fully recovered from consumer since such line is of dedicated nature. Suggestions from Stakeholders are invited on the mode of recovery of charges. A possible methodology can be that CTU shall take bank guarantee for Capital cost of transmission line from Consumer before undertaking the execution of transmission system. The tariff of such line shall be determined by Central Commission as ISTS line which shall be recovered from consumer entirely as per applicable Regulations. The bank Guarantee furnished by such consumer may be returned as 1/12th of total value every year till 11th year from date of COD of the transmission line on payment of transmission charges by the consumer. 1/12th of the bank guarantee may be kept subsisting for 25 years from COD as payment security towards transmission charges.

2.1.7. The minimum load for such consumer eligible to apply for Connectivity to ISTS has been specified as 250 MW to avoid CTU building ISTS transmission line for small consumers which would not be economical and efficient. Similar dispensation has been proposed for distribution licensee also.

2.1.8. Any such consumer shall be subject to the Regulation or order of State Commission under subsection 2 of Section 42 of the Act.

2.1.9. Definition of “Applicant” for GNA has been proposed as under:

“Applicant for GNA means the following in respect grant of GNA:

- (i) Applicants covered under Regulation 2(1)(c)
- (ii) State Transmission Utility on behalf of intra-state entities who intend to seek GNA through STU (distribution licensee, consumers, embedded generator etc.)
- (iii) Consumer
- (iv) A generating station including a captive generating plant irrespective of installed capacity
- (v) Distribution licensee

2.1.10. It is intended that generators or consumers embedded within the state and desirous of availing GNA to ISTS may apply for GNA to STU who in turn shall duly consider the requirement of its intra-state entities in its GNA application to CTU. The intra-state entities may apply directly to CTU under intimation to STU. STU, while applying to CTU for GNA to ISTS for the entire state shall duly take into account all the GNA applications made individually by intra-state entities to CTU.

2.1.11. Trading Licensee was eligible to apply Long term Access or medium term open Access to ISTS under prevailing Regulations. The Trading Licensee is not a grid connected entity. In most of the cases trading licensees have taken LTA on behalf of the generators and in case of dispute between the generator and trading licensee, the LTA cannot be

utilized by the concerned generator. Accordingly it is proposed that GNA may be applied by grid connected entities only and trading licensees shall not be eligible. However sale and purchase of energy may take place through trading licensee if authorized by the concerned Generator or consumer or distribution licensee. The existing LTA with trading licensee shall be deemed as GNA of concerned grid connected entity. The trading licensee and grid connected entity shall decide between themselves regarding their liability towards transmission charges.

2.1.12. It is also proposed that if GNA Customer enters into a PPA or Sale Purchase Agreement (SPA) with a person who has been granted license for inter-state trading, such PPA or SPA shall be considered for the purpose of scheduling on behalf of GNA customer.

2.2 Central Repository

2.2.1 Mata Prasad Committee has suggested formation of Central Repository of Generators. It has been indicated that at present, there is no central repository of generators which are in planning and construction stage and this causes an information-lag for the planners of transmission system. A number of IPPs have been commissioned in the 11th and 12th Plan which were not being monitored by the CEA and were not considered in the system studies undertaken by CEA and CTU for transmission Planning. After de-licensing of generation, the need for a central repository is more vital than ever. Such a repository should contain information in regard to the likely generation additions including Renewable Energy projects interconnected to ISTS as well as Intra-State Transmission System, starting from inception of the Generating Station till its commercial operation with periodic update of their status.

2.2.2 The Committee recommended that the frequency of updating of status may be monthly for the units to be commissioned during the ensuing

year and quarterly for other units. In addition, a generator should also indicate status of signing of PPA in its periodic update to Central Repository. This would also be in line with the duty entrusted upon Generators under Section 10(3) of the Act. Section 10(3) (a) of the Act provides for submitting technical details to Appropriate Commission and Authority and Section 10(3) (b) provides for coordination with CTU or STU as the case may be.

2.2.3 Accordingly, following definition for Central Repository has been proposed :

“Central Repository” means a database maintained by Central Electricity Authority in case of conventional energy and by any other authority as notified by the Central Government in respect of renewable energy.

2.2.4 CEA is already in the process of creating a Central Repository. In case the Central Repository under CEA doesnot cover the renewable energy generating station or solar power park developer or wind power park developer or Wind-Solar power park developer, Central Government may notify the authority who shall be responsible to maintain the database for such Sources.

2.2.5 This will not only provide vital data for the transmission planning process but would alleviate problems due to uncoordinated generation additions. CEA or any other authority as authorised by Central Government may indicate the format in which the information has to be furnished by the Applicants at the Central Repository. The indicative formats on parameters to be monitored are attached at Annexure-I and Annexure-II.

2.3 Scope

2.3.1 The existing Connectivity Regulations and Detailed Procedure therein provides as follows:

“1.4 The applicant (Generator/bulk consumer) already connected to grid (regional or state grid) or for which connectivity is already granted under the present arrangement, shall not be allowed to apply for additional connectivity for the same capacity. In case of extension of capacity of generator or bulk consumer, however, it shall be required to make application for connectivity as per the provisions of these procedures.”

2.3.2 The above provision specifically makes an entity already connected to the grid ineligible to apply for further Connectivity for the same capacity. However there may be cases where an Applicant connected to state grid may wish to get connected to ISTS at a later stage depending on its sale purchase requirement. A provision has been proposed to facilitate this. However the same shall be subject to payment of transmission charges corresponding to additional Connectivity and GNA and applicable state charges.

2.3.3 An Applicant may wish to get connected to State and at the same time apply for GNA to ISTS. It is proposed that the same shall be allowed provided that such an Applicant shall submit proof of application of its Connectivity to STU or grant of Connectivity by STU and NOC from STU while making an application for GNA to ISTS.

2.4 Application Fee

2.4.1 The Application fee for grant of Connectivity and GNA to ISTS has been proposed to be increased in the Draft Regulations as compared to the prevailing Connectivity Regulations in view of the suggestions of the Committee. The Committee in its report has suggested as under:

“6.12.6 Application fees

The Committee notes that the Commission has, in the Statement of Reasons dated 30th October, 2009 given the basis of fixing application fee for Connectivity, MTOA and LTA as under:

“34. In our view, the system studies involved in dealing with processing of applications for Medium Term open access are relatively simpler and less time consuming as the RLDCs are required to check only the system constraints, whereas stability and other studies would additionally be required for allowing connectivity and long term access. Accordingly, the application fee for Medium Term open access has been kept lower than the fee for the Grant of connectivity and Long Term access for which more elaborate system studies and system planning studies are required to be made. Therefore, application fee for Long Term access and connectivity have been accordingly formulated of the same order. However, the application fees have been reduced for all categories depending upon the quantum of power to be injected in to ISTS or drawn from ISTS.”

The above fee was fixed in 2009. The Committee is of the view that about 7 years having elapsed since then, an increase would be in order keeping in view of increase in manpower expenses (for carrying out system studies). Enhancement in application fees in comparison to the prevailing application fees would also be in order in view of the fact that Application Bank Guarantee along with the application is proposed to be dispensed with. Since construction of Dedicated Lines would be responsibility of the generator and application fees is proposed to be enhanced, no application bank guarantee would be necessary.”

2.4.2 Accordingly, non-refundable Application Fee shall be paid by the Applicant along with application for Connectivity and GNA as per details given below:

Sl. No.	Quantum of Power to be injected/off taken into/from ISTS	Application fee (Rs. in Lakh)	
		For Connectivity	GNA
1	Up to 100MW	4	4
2	More than 100 MW and up to 500 MW	6	6
3	More than 500 MW and up to 1000 MW	12	12

4	More than 1000 MW	18	18
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2.4.3 Further, a generator shall apply for Connectivity and GNA once at the time of its inception whereas STUs shall apply for GNA every year for 5 year period. Hence the above Application fee shall not be levied on STUs applying for GNA.

2.4.4 It is proposed that STUs shall seek GNA at each of its interconnection point with ISTS to facilitate transmission planning. The requirement for same is explained below with an example:

- (a) The planning of transmission system can only be effectively carried out if Drawl/ injection is known at each point. In case if, node wise details are not furnished then it would lead into assumption of loads at different nodes by planner which can results into congestion in some corridors and underutilisation in some other corridors.
- (b) The nodal Load generation is also required for TTC computation and for computation used for sharing of transmission chargers and losses regulations.
- (c) Example showing impact of Assumed value of Load at each Node by planner and subsequently change in the same during operational period may be as follows:
- (d) Suppose in the sample case there are two STUs with following assumed data:

STU -A:

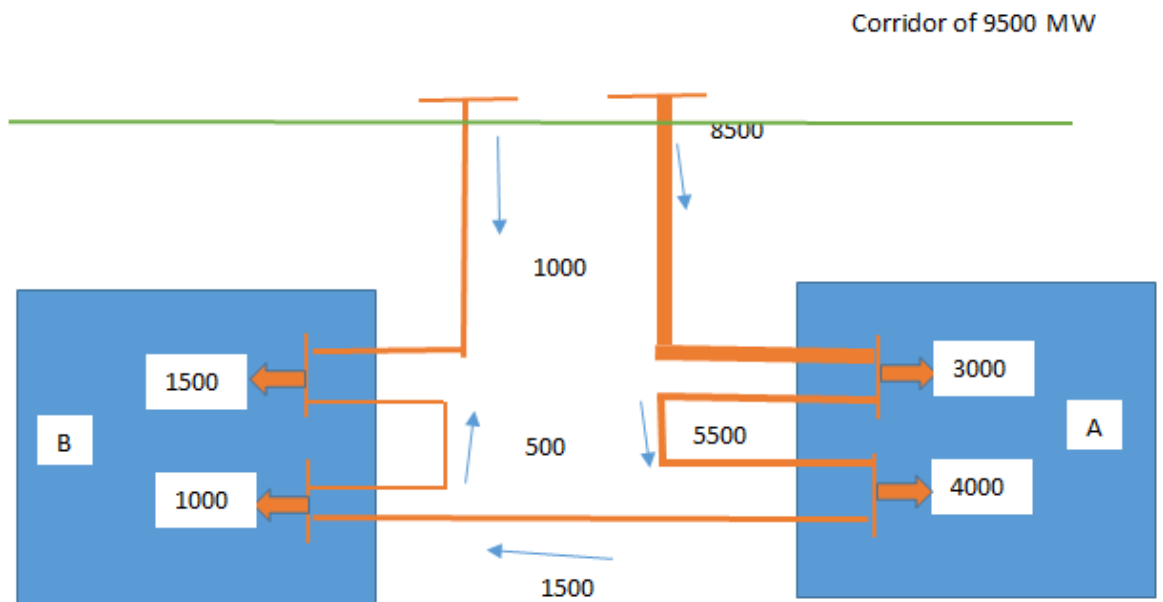
- ✓ GNA Sought for 2500 MW.
- ✓ Demand 4000 MW
- ✓ Internal Generation 1500 MW.

STU -B:

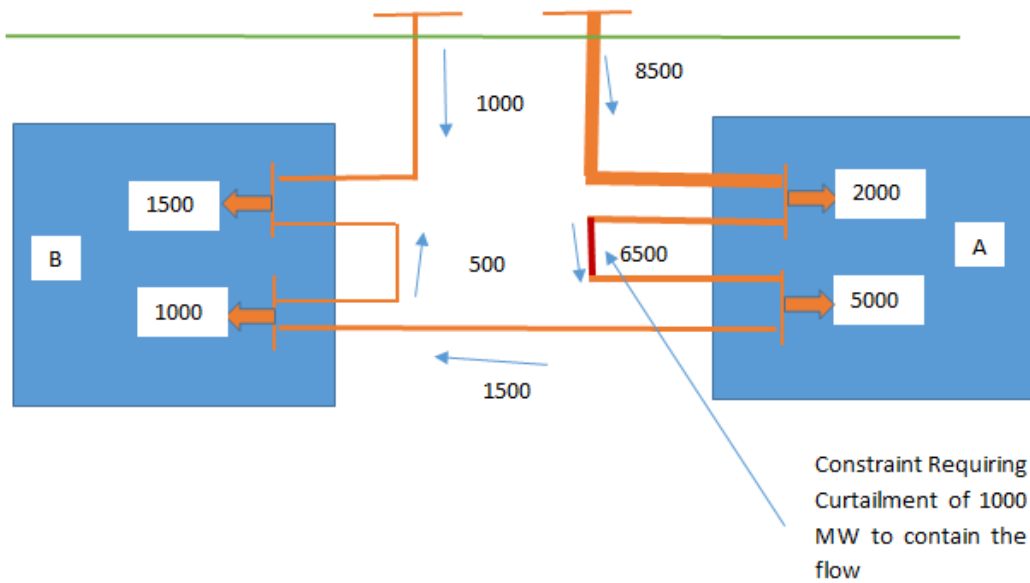
- ✓ GNA Sought for 8000 MW.
- ✓ Demand 15000 MW
- ✓ Internal Generation 7000 MW.

(e) In case GNA at each interconnection point is not segregated, Network shall be planned using Lump sum Value of GNA. Planner may assume node wise value based on assumptions which would be required to asses requirement of substations, lines connecting substation, configuration of lines based on anticipated power flow between two substations etc.

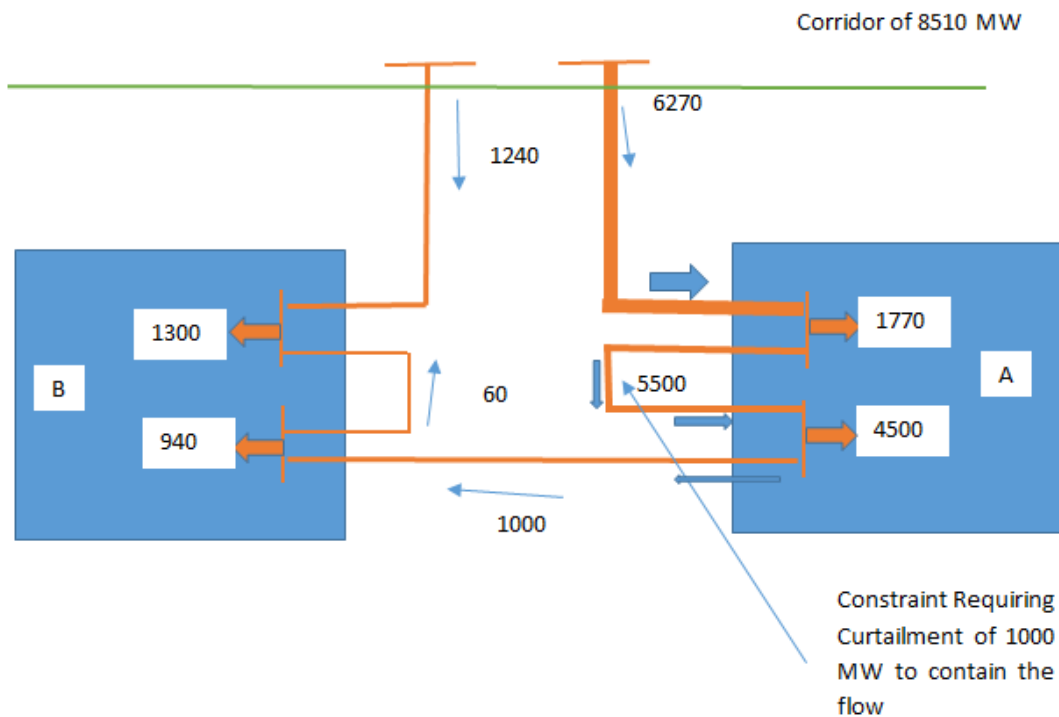
(f) Network Planned Based on Lump sum GNA and assumed Node wise Load:



(g) Change in Power flow due to change in nodal draw points with same GNA:



(h) To control the power flow in the congested corridor TTC as calculated by planner would need to be revised from 8500 MW to 7510 MW. Even when STU B has given correct nodal GNA its GNA gets curtailed based on the priority decided.



2.4.5 The requirement for STUs to apply for GNA every year for 5 year period is detailed as below. The Committee in its report had recommended as follows:

“

6.3.4 Planning of Transmission System & its Implementation

(a)

(b) The projected/anticipated quarterly maximum import/ export requirement in respect of a State (which should be called its Demand/Injection GNA respectively) from ISTS will be provided by the State Transmission Utility (STU) 4 years before for a period of 5 years to CTU. Such data should be provided by concerned STU after taking into account the anticipated demand figures from each DISCOM in the State and likely generation from the generating companies having generating stations in the State. For example, in January 2017, STU should provide its peak quarterly requirement from ISTS (Injection/ Withdrawal GNA) for years 2021, 2022, 2023, 2024 and 2025. Such data should be provided on Annual rolling basis i.e. in January 2018, STU should provide its GNA for 2022-2026. STU can revise its projected GNA for the year 2022 in the year 2018 but would not be allowed to revise the same for the year 2021 keeping in view construction timeline for transmission system being of the order of 3 years plus 1 year processing time. For the first year of implementation of GNA, STU should provide Injection/Withdrawal data for immediate 4 years also. In the present example for years 2017, 2018, 2019 and 2020. This will aid in estimating projected GNA for subsequent years.”

2.4.6 Accordingly it has been proposed in the Regulations that STU shall provide GNA for 5 year period starting 4 years hence the year when GNA application is made. A sample example is detailed below:

Example: In January 2018, STU shall provide its peak quarterly requirement from ISTS (Injection/ Withdrawal GNA) for years 2022, 2023, 2024, 2025 and 2026. Such data should be provided on Annual rolling basis i.e. in January 2018, STU should provide its GNA for 2022- 2026. Such data should be provided by concerned

STU after taking into account the anticipated demand figures from each DISCOM in the State, other intra state entities and likely generation from the generating companies having generating stations in the State. STU can revise its projected GNA for the year 2023 in the year 2019 but would not be allowed to revise the same for the year 2022 keeping in view construction timeline for transmission system being of the order of 3 years plus 1 year processing time.

2.4.7 For the first year of implementation of GNA, STU should provide Injection/Withdrawal data for immediate 4 years also. In the present example GNA for years 2018, 2019, 2020 and 2021 shall also have to be applied which shall be processed and granted by CTU as per available margins. The STU (State) shall not be allowed to reduce its GNA from current quantum being availed as LTA. Once GNA for an year is sought by STU and is granted by CTU, the same shall cannot be revised by STU for the 5th year hence. However STU may revise its GNA quantum for year 2023 or beyond in year 2019 in the abovesaid example which cannot be less than GNA quantum for year 2022.

2.4.8 While finalising the Report of the Committee, representatives of States were invited for their views on the proposed GNA. They expressed their difficulty in assessment of GNA accurately. Keeping that in view the Committee in its report has suggested the following:

“6.3.4.....

(c) In case the projected import/export requirement is not provided by STU, CTU should, in consultation with CEA and POSOCO, assess the import /export requirement of the State for the purpose of transmission planning and upload the same on CTU’s website for comments from stakeholders. In the absence of any response to the same from STU, the projected import/export requirement assessed by CTU should be taken for transmission planning.

(d) Bulk Consumers directly connected to ISTS need to provide their drawal requirements from the ISTS.

(e) A Validation Committee comprising representatives of CTU and STUs should be set up under chairmanship of CEA which should validate the projected import/export requirement from ISTS provided by STUs / assessed by CTU considering the comments received from stakeholders on the uploaded data. The Validation Committee should finally approve the projected import/export requirement for each State which should be uploaded on website of CEA and CTU and should form the baseline for planning.”

2.4.9 The above provides that in case STU finds difficulty with projecting its GNA requirement, the same shall be facilitated with coordination of CEA, CTU and POSOCO with due consultation with STU and stakeholders.

2.4.10 The Draft Central Electricity Regulatory Commission (Transmission Planning and other related matters) Regulations, 2017 provided as follows:

“23. Procedure for Transmission Planning:

23.1. The following procedure shall be complied with all entities involved in the transmission planning of ISTS:

(a) The inputs regarding the generating stations which are likely to come up would become available to the transmission planners from the Central Repository of generation projects, applications for GNA and STUs.

(b) The demand projections by the STUs estimated by them in coordination with the DISCOMs should form the baseline for transmission planning.

(c) In case the projected import/export requirement is not provided by STU, CTU should, in consultation with CEA and POSOCO, assess the import /export requirement of the State for the purpose of transmission planning and upload the same on CTU’s website for comments from stakeholders. The same shall be discussed at Regional study Committee level. In the absence of any response to the same from STU, the projected import/export requirement assessed by CTU should be taken for transmission planning.

(d) Bulk Consumers directly connected to ISTS need to provide their drawal requirements from the ISTS.

(e) The Central Study Committee shall validate the projected import/export requirement from ISTS provided by STUs / assessed by CTU considering

the comments received from stakeholders on the uploaded data. The Central Study Committee shall finally approve the projected import/export requirement for each State which shall be uploaded on website of CEA and CTU and shall be used for planning.....”

2.4.11 The above aspects may be kept in view while furnishing suggestions on the proposed model of GNA.

2.5 Connectivity and GNA Application for Renewable Generating Stations or Solar Power Park Developer or Wind Power Park Developer or Wind-Solar Power Park Developer

2.5.1 Power Grid Corporation of India Ltd in its capacity as "CTU" had filed Petition No. 145/MP/2017 on 5.7.2017 bringing out issues related to Connectivity for Wind power projects. CTU vide the said Petition had prayed as follows:

"Any project developer who is seeking intended facilitation through grant of connectivity would be expected to take substantive actions towards physical and financial milestones. Accordingly, while applying for connectivity, not only the seriousness at the application stage but its subsequent actions post-grant of connectivity also needs to be ensured as under :-“

- (i) At the application stage, new connectivity applicants shall submit an application bank guarantee at the rate of `10,000/MW as required for the LTA application as per the extant Regulations.
- (ii) At post-grant stage of connectivity, the grant of connectivity shall be provisional and the same shall be reviewed quarterly in the Joint Coordination Committee meetings for assessment of the actions taken by the connectivity grantee in achieving physical/financial milestones. The connectivity shall be revoked if at least two of the following milestones are not achieved within 6 months of grant of connectivity (about 50% of the gestation period of the generation project) :-
 - a. Affidavit for acquisition/lease hold of 25% land w.r.t to total requirement of connectivity quantum;

- b. Letter of award by bidding agency for at least 50% connectivity quantum authorized by the appropriate Government; and
- c. Letter of award for internal transmission infrastructure (pooling station etc.) and machines (turbine/invertermodules).
- d. Signing of bay implementation agreement & advance deposit for bays implementation at ISTS substation end within stipulated time period

Note 1: In case of revocation of connectivity as per grounds at Para (ii) above, the application bank guarantee shall be encashed. The connectivity application bank guarantee shall be discharged at the time of operationalization of the connectivity, however, till that time, the applicant shall be required to keep the bank guarantee alive, in default of which, the same shall be encashed by CTU.

Note 2: For the cases where Connectivity is already granted, submission of BG may not be sought, however, their connectivity shall be reviewed against the above mentioned parameters. The Connectivity shall be cancelled if the above milestones are not achieved within the prescribed time frame.

- (iii) In case an applicant has been granted connectivity as well as LTA and its Connectivity is revoked for not achieving milestones as indicated above (ii), such LTA shall also be revoked and LTA application bank guarantee shall be returned.
- (iv) Directions are also sought for the situation where new bidder(s) becomes successful in the SECI/Govt. nominated bid at a given location (close to an ISTS substation) at which ISTS Sub-station, all the bays are already reserved and the review of connectivity is not possible for want of passage of minimum period of 6 months between the grant of connectivity and the declaration of bid winner.”

2.5.2 CERC vide Order in the said Petition dated 29.9.2017 has directed as follows:

“98. We have considered the submission of the Petitioner and Respondents. In our view, the applicants who have been granted connectivity have not incurred any reciprocal obligations to compensate CTU for creation of the assets if the connectivity is not utilised by the

persons granted connectivity. While the transmission charges and losses for inter-State transmission are not chargeable on the project developers at present, the expenditures will be borne by the Designated ISTS Customers (DICs). These assets will not be of any use to the DICs if these project developers do not establish the projects despite being granted connectivity. Since there are no reciprocal financial obligations, no vested right can be said to have been created in the favour of the applicants who have been granted connectivity. It is further noted from the submission of the Petitioner that except one, none of the grantee applicants have signed Bay Implementation Agreements with CTU. By merely making the application and being granted connectivity on the basis of first come first serve basis, the wind generator/developer cannot claim vested rights and such connectivity can be regulated by the Commission by introducing non-discriminatory and objective criteria to ensure that the assets created on the basis of connectivity granted do not remain unutilized or stranded. In case of the applicants who have not been granted connectivity, there cannot be any vested rights in their favour. The Hon'ble Supreme Court in *Howrah Municipal Corporation & Ors. Vs. Ganges Rope Co. Ltd. & Ors.* [(2004) 1 SCC 663] has held as under:

“—37. The arguments advanced on the basis of so-called creation of vested right for obtaining sanction on the basis of the building Rules as they were on the date of submission of the application and the order of the High Court fixing a period for decision application and the order of the High Court fixing a period for decision of the same, is misconceived. The word —vested is normally used where an immediate fixed right in present or future enjoyment in respect of a property is created. With the long usage the said word —vested has also acquired a meaning as —an absolute or indefeasible right. The context, in which respondent Company claims a vested right for sanction and which has been accepted by the Division Bench of the High Court, is not a right in relation to —ownership or possession of any property for which the expression —vested is generally used. What we can understand from the claim of a —vested right set up by the respondent Company is that on the basis of Building Rules, as applicable to their case on the date of making an application for sanction and the fixed period allotted by the Court for its consideration, it had a —legitimate or —settled expectation to obtain the sanction. In our considered opinion, such “settled expectation”, if any, did not create any vested right to obtain sanction. True

it is, that the respondent Company which can have no control over the manner of processing of application for sanction by the Corporation cannot be blamed for delay but during pendency of its application for sanction, if the State Government, in exercise of its rule-making power, amended the Building Rules and imposed restrictions on the heights of buildings on G.T. Road and other wards, such „settled expectation“ has been rendered impossible of fulfillment due to change in law. The claim based on the alleged “vested right” or “settled expectation” cannot be set up against statutory provisions which were brought into force by the State Government by amending the Building Rules and not by the Corporation against whom such “vested right” or “settled expectation” is being sought to be enforced. The —vested rightll or —settled expectationll has been nullified not only by the Corporation but also by the State by amending the Building Rules. Besides this, such a “settled expectation” or so-called “vested right” cannot be countenanced against public interest and convenience which are sought to be served by amendment of the Building Rules and the resolution of the Corporation issued thereupon.”

Thus, making an application for connectivity as per the prevailing Connectivity Regulations and Detailed Procedure does not create a vested right in the applicants for connectivity. It is at best a —settled expectationll which does not create any vested right in the applicants in the matter of grant of connectivity. These applicants shall be subject to any revised conditions that the Commission may impose through amendment of connectivity Regulations and Detailed procedure or through orders in exercise of the regulatory power of the Commission.

99. As regards the allegation of squatting or blockage of bays by some of the grantees of connectivity, the Commission has considered the concerns of the affected grantees, particularly the preparatory works required to be taken and the timeline of project execution for wind projects. The Commission is of the view that merely because a connectivity grantee has not participated in the bid or has not been selected in the bid cannot be held against him. If a wind power generator acquires connectivity and takes no actions towards project development for a long period of time, the connectivity granted cannot be allowed to continue ad infinitum. Therefore, there is a need to assess the progress on the basis of certain

objective criteria. CTU is directed to frame objective criteria to be prescribed through amendment to Detailed Procedure after seeking comments from the stakeholders and submit to the Commission within a period of two month from the date of issue of this order.

.....

114. In order to address the problem flagged in the petition, the Commission is of the view that Connectivity for Wind or Solar Projects shall be granted considering preparedness of the applicants as required under Detailed Procedure of Connectivity Regulations. Further, the applicants who have been granted connectivity shall be provided physical connectivity by way of allocation of bay only on commissioning of dedicated line and the wind generating station. Given that the capacities in the substations (existing as well as the one planned in Tirunelveli and Bhuj) being adequate to accommodate all the applicants as on the date of the petition, the aforesaid arrangement will not extinguish the Connectivity rights of any generator and will only make optimal utilisation of this scarce national resource.

115. In order to ensure optimum planning and utilization of transmission system including bays by CTU, the Commission in exercise of its regulatory power under Section 79 (1) (c) of the Act directs the following:

(a) CTU shall plan the sub-station at each location considering the potential of wind resource in consultation with MNRE. (b) All applicants applying for connectivity shall be granted connectivity indicating a firm location of ISTS substation and an alternative location giving the clear cut timelines for commissioning of the ISTS sub-station.

(c) All applicants who have been granted connectivity shall be allowed physical connection at the sub-station based on their readiness for physical connectivity with the bays.

(d) The stipulation at para (c) based on the readiness for physical connection by the wind power generators/developers will not prejudicially affect the interest of any other wind power generator since, only those generators which have physically commissioned their projects in the area and are accommodated within the capacity of the sub-station shall get physical connectivity. Reserving the bay for a wind power developer/generator which is not ready for commissioning will result in under-utilization of bays which should be avoided at all cost in national interest.

(e) It is desired that the wind and solar energy generators should apply for long term access within a reasonable period of grant of Connectivity in accordance with the Connectivity Regulations and Detailed Procedure therein in order to enable the CTU to plan the evacuation system and system strengthening.

(f) CTU shall implement the sub-station, evacuation line and the system strengthening after consulting the wind generators and after assessing the progress and certainty of such generators in the Joint Coordination Committee Meeting.

(g) CTU shall carry out review of the progress of the wind power generators/developers every six months and report the same to the Commission for necessary directions

.....

116. It is observed that there is a need of introduction of concept of Wind Park developer more so when new wind developers are getting connected to ISTS.

117. To ensure further clarity in the process of granting and reviewing connectivity going forward, we direct the staff of the Commission to examine in consultation with CTU the various issues raised in para 115 and 116 above and suggest suitable amendments to the Connectivity Regulations and Detailed Procedure.”

2.5.3 CTU is in the process of framing the detailed procedure as directed above. However keeping the view the issues raised in the Petition, suitable draft Clauses have been proposed in the proposed regulations as briefly explained below:

- a. The Connectivity Application for renewable energy generating station or solar power park developer or wind power park developer or Wind-Solar power park developer shall be in two stages viz Stage-I and Stage-II.
- b. The Applicant shall be required to file Stage-I Application first. It may file Application for Stage-II simultaneously in case it meets the eligibility criterion required for Stage-II Connectivity.

- c. While granting Stage-I Connectivity, the nodal agency shall indicate one firm location and one nearby alternative location. Stage-I Connectivity shall not create a vested right of an applicant on the indicated location of Connectivity since both the locations (firm and alternative) shall be indicative only which shall be confirmed after grant of Stage-II Connectivity.
- d. The Application for Stage-II has been proposed to be accompanied by a Bank Guarantee or Letter of Guarantee (BG or LG) @ Rs. 5 Lakh/MW for the purpose of bay implementation in accordance with the Bay Implementation Agreement with CTU.
- e. An Applicant shall be granted Stage-II Connectivity only on fulfilling the milestones required for Stage-II Connectivity. This is irrespective of application to be made for GNA. GNA has to be applied within a period of 2.5 years from date of intimation of grant of Stage-I Connectivity. It may happen that an Applicant has made an application for GNA or its GNA has become operational but it is not eligible for Stage-II Connectivity.
- f. It is also proposed that an Applicant must apply for GNA within 6 months of grant of Stage-II Connectivity. Hence an Applicant has to apply for GNA within a period of 2.5 years from date of intimation of Stage-I Connectivity or within 6 months of grant of Stage-II Connectivity whichever is earlier.

2.6 Timeframe for Processing of Application

- 2.6.1 The timeline for processing of application for grant of Connectivity has been proposed as 60 days from the last date of the month in which application was received by the Nodal Agency as per the prevailing Connectivity Regulations.
- 2.6.2 Further, the Draft Central Electricity Regulatory Commission (Transmission Planning and other related matters) Regulations, 2017 (Draft Transmission Planning Regulations) has proposed to conduct Standing Committee on Transmission Planning for all India Grid at National Level as under:

“21.1 National Standing Committee on Transmission Planning under the CEA shall be responsible for taking all decision with regard to the planning of ISTS after considering the inputs received from Central Study Committee and Regional Study Committee in accordance with the timelines specified in Regulations 26 of these Regulations.”

2.6.3 The Regulation 26 of the above said Draft Transmission Planning Regulations also proposes the timeline for exchange of information for considering injection GNA application filed by DICs. However the timeline for processing of GNA Applications shall be strictly as proposed in the current draft Regulations. Necessary changes shall be considered in Draft Transmission Planning Regulations, as required.

2.7 Connectivity

2.7.1 The grant of Connectivity was discussed in detail during the Committee meetings in view of the issues raised in the Staff Paper. The Committee observed as under:

“6.2.1 Connectivity

- (a) In the staff paper certain issues related to Connectivity were raised - whether Connectivity should be retained as a separate product or Connectivity and LTA applications should be sought simultaneously, the quantum for which Connectivity should be applied, pre-requisites, if any, for grant of connectivity, charges for connectivity etc. Most of the Stakeholders have suggested that Connectivity should remain as a separate product in view of its requirement for securing finances. According to stakeholders, it enables the generators to (i) know in advance, the connection point up to which they have to build dedicated lines, (ii) finalise switchyard of the generator including generator transformer, (iii) synchronise generating unit without getting a customer, draw start-up power, and carry out performance tests.
- (b) The Committee is of the view that Connectivity needs to continue to be a distinct product in view of the foregoing. Connectivity should be

applied for a quantum equal to installed capacity of generating station less auxiliary consumption. In case of captive power plants connectivity may be applied for a quantum of maximum exportable capacity proposed to be connected to ISTS. An applicant may apply for Connectivity after it registers itself at Central Repository with CEA.

- (c) The Committee finds that under the prevailing Regulations, the applicant, while applying for 'Connectivity to ISTS', is obligated to inform the following :
- (i) Site identification and status of land acquisition and possession
 - (ii) Status of submission of proposal for Environmental clearance for the power station to the concerned administrative authority (first level submission).
 - (iii) Status of submission of proposal for Forest Clearance (if applicable) for the land for the power station to the concerned administrative authority (first level submission).
 - (iv) Fuel Arrangements: Details in regard to quantity of fuel required, percentage of fuel already tied up / proposed to be tied to generate power from the power station for the total installed capacity of the project
 - (v) Water linkage: Status of approval from the concerned state irrigation department or any other relevant authority for the quantity of water required for the power station.

The Committee is of the view that aforesaid prerequisites are adequate for making an application for Connectivity.

- (d) The Committee is of the view that Connectivity is primarily for facilitating following:
- (i) the financial closure of new generation projects
 - (ii) planning of dedicated transmission line
 - (iii) take into account cost of dedicated transmission system in the estimated project cost
- (e) CTU may grant the Connectivity to the applicant but applicant should not be allowed physical connection with the grid before filing the application for GNA and furnishing bank guarantee thereof. Application seeking GNA has to be filed within 2.5 years of date of grant of Connectivity by CTU, failing which Connectivity granted should be

withdrawn and application fees should be forfeited. Applicant will have to file fresh application for Connectivity if it wishes to obtain the same.”

- 2.7.2 In view of the recommendations of the Committee, the draft regulations propose that Connectivity shall remain a distinct product and generators shall be required to apply for connectivity after registering itself at Central Repository with CEA and for a quantum equal to installed capacity of generating station less auxiliary consumption. For CPP, quantum of connectivity shall be equal to installed capacity proposed to be connected to ISTS less auxiliary power consumption.
- 2.7.3 Further, generators shall not be allowed physical connection with the grid before filing the application for GNA and furnishing bank guarantee thereof. Application seeking GNA has to be filed within 2.5 years of date of grant of Connectivity by CTU, failing which Connectivity granted shall be withdrawn and application fees should be forfeited. Applicant shall have to file fresh application for Connectivity if it wishes to obtain the same.
- 2.7.4 It is proposed that an “Applicant for Connectivity” may be connected to both inter-State transmission system and intra-State transmission system. In such cases, “Applicant for Connectivity” shall apply for Connectivity for demarcated quantum to CTU and STU such that total Connectivity quantum equals installed capacity less auxiliary consumption. CTU shall ascertain that the applicant has made adequate arrangement with State for the stated quantum to be connected to State. This shall help in coordinated transmission planning.

2.8 Construction of Dedicated transmission Line

- 2.8.1 The Committee in its report while dealing with the issue of construction of dedicated transmission line has observed as under:

“6.12.2. Construction of Dedicated Transmission Line

- (a) The Regulations in vogue provide that for generating stations with capacity of more than 500 MW in case of thermal plants and with capacity more than 250 MW in case of renewable /hydro stations, dedicated line should be considered by CTU under coordinated planning. However many stakeholders have suggested that dedicated line should be constructed by the generating company
- (b) Section 10 of Electricity Act 2003 provides as follows:
“Section 10. (Duties of generating companies): --- (1) Subject to the provisions of this Act, the duties of a generating company should be to establish, operate and maintain generating stations, tie-lines, substations and dedicated transmission lines connected therewith in accordance with the provisions of this Act or the rules or regulations made thereunder.”
The above provides that it is a duty of generating company to construct dedicated line.
- (c) The Committee is of the view that establishing dedicated lines should be responsibility of a generator as prescribed in the Act. Needless to mention that the generator can match the commissioning of dedicated line with the commissioning of its generating station.
- (d) A generating station may also be planned to be connected at two different substations. In such case, the lines emanating from switchyard of the generating station to substation(s) of the inter-State Transmission Licensees including Deemed inter-State Transmission Licensees should be constructed by generators as dedicated lines.
- (e) An Applicant should be required to construct Dedicated Line(s) to the point(s) of connection to ISTS to enable connectivity to the grid. In case CTU envisages dedicated lines as lines which should be required to enhance the system reliability even if generation project does not come up or is delayed, CTU may consider such lines under coordinated transmission planning.
- (f) If a generator gets connected to dedicated line established by another generator, then such dedicated line may be considered as ISTS after obtaining transmission license on filing application with the Commission under CERC (Transmission License) Regulations.”

2.8.2 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, 2017 notified dated 17.2.2017 have already included the above said proposal of the Committee.

2.8.3 Accordingly, the same has been proposed in the draft regulation with modification with respect to capacity of the generating stations keeping in-line with eligibility for Connectivity.

2.8.4 **Sharing of dedicated line by more than one generator**

(a) It has been proposed that more than one generator can use the dedicated transmission line connecting their generating station to pooling station of ISTS after formalising all aspects including sharing of the transmission charges and losses of the transmission line among the generators. This is in-line with Aptel Order dated 2.1.2013 in Appeal No.81 of 2011 which observed as follows:

“24.19 It is perfectly legal for two generating companies to plan in coordination with CEA and Power Grid and construct and operate & maintain their dedicated transmission systems together for optimal utilisation of the transmission corridor with a view to minimize cost of point to point transmission of electricity and minimize the requirement of transmission corridor as long as the dedicated transmission system is used exclusively for evacuation and point to point transmission of power of their generating stations.”

(b) It is observed that there shall be a need to share the common infrastructure for which it has been proposed that the same may be decided amongst themselves after taking into account the norms specified in the Tariff Regulations issued by Central Commission from time to time.

2.8.5 **Operational Control by CTU**

- (a) It has been proposed that on completion of the dedicated transmission line the generator(s) shall be required to hand over the dedicated transmission line to CTU for the purpose of coordinated operation of ISTS and dedicated transmission line. To facilitate such coordinated operation, CTU shall be entitled to normative operation and maintenance expenses as per CERC Tariff Regulations. The line shall be under the operational control of CTU for all the purposes.
- (b) The above provision has been made since dedicated transmission line is an integral part of the grid which should be available and maintained to ensure grid security.

2.9 Start Date of Connectivity

- 2.9.1 The Committee has made following recommendations in respect of start date of Connectivity:

“6.12.3 Start Date of Connectivity

Few stakeholders have suggested that Connectivity is required for the purpose of availing startup power from the grid. The Committee agrees with the suggestion. As per prevailing Connectivity Regulations, a generating unit can avail startup power 21 months before it is expected to be declared under commercial operation. A generating unit can avail startup power even when the Associated Transmission System for a generation project is not commissioned. Hence a generator may seek Connectivity prior to the anticipated date of its Commercial operation depending upon its requirement for startup power or injection of infirm power. Since the Connectivity lines should be built by a generator, it should be able to avail startup power on getting connected with the grid provided that it has applied for GNA and deposited requisite bank guarantee as suggested above. A generator will be allowed startup power only through dedicated line. However, in exceptional cases CTU in consultation with RLDC/NLDC/CEA may consider drawal of startup power through LILO of existing lines.”

- 2.9.2 Accordingly, the start date of Connectivity shall be the date from which a generator is allowed to draw start-up power from the grid or

inject infirm power into the grid whichever is earlier if the generator has applied for GNA and deposited requisite bank guarantee as per these regulations. Further, generators are responsible for developing dedicated transmission line from their switchyard to the nearest pooling station. It has been proposed that a generator shall be allowed to draw start-up power from the grid or inject infirm power into the grid only through dedicated line after grant of Connectivity and GNA except where LILO has been allowed as part of coordinated transmission planning.

2.10 Connectivity/GNA by a Captive Generating Plant (CGP)

2.10.1 Regarding Connectivity/GNA to a captive generating plant, the Committee in its report has recommended as under:

“6.12.5 Connectivity/GNA by a Captive Power Plant

A captive power plant may have surplus capacity which it may sell on long term/medium term/short term basis. It may also wish to draw power in case of shutdown of its generating units. It should pay transmission charges for the quantum of schedule drawal at POC rate applicable for the State in which it is located. In such a case the captive plant may apply for Connectivity for the maximum injectable/maximum drawal capacity with ISTS. However, it may seek GNA for injectable capacity i.e. maximum surplus capacity which it would normally sell through ISTS. It may be allowed to sell power/buy power on obtaining LTA/ MTOA/ STOA as per the GNA sought. If its actual injection / drawal schedule exceeds respective GNA quantum by 120%, additional transmission charges should be levied. CPP may also draw emergency power for short duration in case of tripping of captive generating unit. Such a plant may be allowed to draw emergency power for short duration of up to 3 hrs equivalent to installed capacity of its largest unit for its captive load during the time the CPP is able to procure power under short term.”

Since, CGP may sell surplus power, to facilitate CGP in transaction of electricity with grid, provisions have been included in the draft regulations so that CGP may apply for Connectivity and seek GNA for

the maximum exportable capacity to ISTS. The CGP shall be allowed to sell power/buy power on signing long term/medium term/short term PPA as per the GNA sought.

2.11 Point of Commercial Metering

2.11.1 Regarding point of commercial metering for existing as well as new generating plants, the Committee has suggested as under:

“6.12.4 Point of Commercial Metering

CEA Metering Regulations provide that metering should be done at interface point of connection with transmission system of licensee. In case Dedicated Lines are owned/ constructed by a generator, such metering point will be at the pooling substation of ISTS licensee. In case generator is connected to more than one pooling station, there may be flow of power from one pooling station to other through generating station, thereby causing losses in Connectivity lines for incidental power flow. Hence it is suggested that metering should be at the bus bar of the generating station. The above provision of metering at bus bar should be implemented for existing stations also where dedicated lines have been built by generating stations so as to apply the Regulations uniformly to all generators.”

2.11.2 In view of the recommendations of the Committee, it has been proposed that metering shall be at the interface of the generating station with ISTS.

2.11.3 Further in case generator is connected to more than one pooling station, metering shall be at the bus bar of the generating station since there may be flow of power from one pooling station to other through generating station, thereby causing losses in Connectivity lines for incidental power flow. This provision may be implemented for existing stations also.

2.12 General Access Network by Generators

2.12.1 The Committee in its report has described the procedure for obtaining GNA by injecting entities as under:

“6.3.3. General Access Network by Generators- Generation addition inputs- Injection GNA

The new generation projects that are intending to avail the transmission services from ISTS should be required to avail General Network Access (Injection GNA) from CTU. The information made available through applications for GNA should facilitate receiving generation input data for the transmission planners to evolve optimal transmission plans. Salient features of such GNA are given below:

- (a) GNA should be akin to the present concept of Connectivity plus LTA with the difference that its quantum should mandatorily be required to be equal to the installed capacity minus auxiliary consumption. An Applicant may seek phased GNA in accordance with the commissioning schedule of its units.
- (b) In case of captive power plants (CPP) with co-located captive load, the CPP should have option to take Injection GNA corresponding to installed capacity less normative auxiliary power consumption less the captive load estimated by the CPP for the co-located captive plant. For captive power plant not located at the same place as captive load, the captive power plant should take Injection GNA corresponding to the captive load to be met and any additional quantum of power that the CPP wants to sell to other persons. CPPs connected to the CTU should also have the option for applying for Withdrawal GNA for meeting captive requirement under contingency of tripping of its captive power plant and for meeting start-up power requirement of CPP. In case of Generators supplying free power to home State, GNA may be sought for capacity less free power only if the State makes its own arrangement for drawal of free power from the bus-bar of the generating station. Phased/unit-wise GNA based on estimated CoD of the units should be permissible to the generating projects.
- (c) GNA should be required to be obtained four (4) years prior to the expected date of commissioning of the generation project. Some relaxation (2 year in place of 4 years) can be given for solar and wind generation projects considering their low gestation period. In case GNA

is sought for less than 4 years in advance, the same may be considered for grant by CTU if it can be accommodated on existing system or the system which is already under execution and is likely to be commissioned in the time frame of commissioning of the generator. In case of early commissioning of generator, CTU may operationalize its GNA (partly/fully) prior to date from which GNA has been granted if it can be accommodated on the existing system.

- (d) GNA should attract Reliability Charges as specified by the Commission. The Reliability Charges should be applicable from the date of first synchronisation of a unit corresponding to its installed capacity minus normative auxiliary power consumption.
- (e) Relinquishment of GNA should lead to disconnection from grid. In case an IPP has been converted to CPP and it relinquishes its GNA, it should be liable to pay Relinquishment Charges as specified by the Commission. In such a specific case the Connectivity for such plant may continue subject to payment of Reliability Charges corresponding to the capacity of the larger size unit less normative auxiliary consumption.
- (f) Generating station seeking GNA to the ISTS should be responsible for construction of the dedicated transmission line(s) from its switchyard to the ISTS point(s) identified by CTU while granting Connectivity/GNA.
- (g) GNA and its associated connectivity may be applied by a trader on behalf of a generator provided that the trader fulfils the entire requirement as expected of a generator.”

2.12.2 In view of the above recommendations of the Committee, the draft regulations have proposed that generators shall be required to seek GNA for a quantum equal to installed capacity minus auxiliary power consumption. Provisions for seeking phased GNA in accordance with commissioning schedule have also been provided so that generator does not need to pay any extra transmission charges for units which are still under commissioning.

2.12.3 Separate provisions to facilitate CGPs to sell surplus power after seeking injection GNA by CGP. Further, in case a generator supplying free power to State, it may seek GNA for capacity less free

power only if the State availing free power makes its own arrangement for drawal of free power from the bus-bar of the generating station.

2.12.4 The generating station shall be required to obtain GNA five (5) years prior to the expected date of commissioning of the project. Projects based on renewable energy have been given 2 year to obtain GNA considering their low gestation period. It has also been provided that if a generating station, other than Projects based on renewable energy seeks GNA less than 5 years in advance, the same may be considered for grant by CTU if it can be accommodated on existing system or the system which is already under execution and is likely to be commissioned in the time frame of commissioning of the generator without affecting the security and reliability of the Indian Grid. Further, in case of early commissioning of generator, CTU may operationalize its GNA (partly/fully) prior to date from which GNA has been granted if it can be accommodated on the existing system without affecting the security and reliability of the Grid.

2.12.5 Provision for Reliability Support Charges has not been covered in these regulations as this shall be covered in the Sharing Regulations.

2.13 Availing Network Services for Transfer of Power under various Terms of PPA

2.13.1 The Committee has suggested that a generating station shall have to apply for GNA equal to installed capacity less auxiliary power consumption. However, the generating station shall be allowed to transact power only after signing PPA/contract and registers the same with CTU or sells power through exchange. The relevant extract of the report is as under:

“6.3.5. Availing Network Services for Transfer of Power under various Terms of PPA

- (a) GNA should, by itself, not entitle any generating station to interchange any power with the grid till it either signs a PPA/contract and registers the same with CTU or sells power through exchange. The Committee proposes that an online portal for registration of PPA by a Generator / DISCOMS / Trader be developed by CTU.
- (b) All the registrations done in a month be considered by CTU within twenty days of end of the month and confirm the scheduling priority for the Generator / Discom / bulk consumer by the end of next month. While confirming the scheduling priority under long term /medium term/short term, CTU should give priority to long term PPAs over medium term PPAs and to medium term over short term and among PPAs of same category under prorata basis. A Generator/Discom/bulk consumer may also transact power through power exchange which should be scheduled as per available corridor.
- (c) The PPAs of more than seven years tenure be considered as Long Term PPA, PPAs from one year to five years as Medium Term PPA and PPAs of less than one year as Short Term PPA. The registration for Long Term and Medium Term PPA has to be done with CTU and for short term PPA with RLDC. Access to the ISTS should be commensurate with the term of PPA signed between the seller and the buyer of power except when the transaction is done through power exchange. However drawl of start-up power/injection of in-firm power should be allowed only after commissioning of dedicated line by the generator. It is expected that the proposed system for transmission planning will facilitate development of robust transmission system enabling economic exchange of power.
- (d) In case operationalization of scheduling for full quantum of PPA is not possible, CTU should operationalise PPA for the maximum quantum which can be accommodated in the existing system and may indicate the date from which full quantum as sought through PPA could be scheduled. Generator and DISCOMs/ buyers may cover the eventuality of constraints in transmission system as an event beyond the control of the buyer / seller to ensure that the generator is not penalized for non-availability of transmission system.
- (e) The above arrangement should continue for next five years post which the transmission scheduling process should be reviewed considering equal priority for long/ medium /short term.”

- 2.13.2 Accordingly, the draft regulation propose to facilitate generating stations to transact power after signing PPA/contract and register the same with CTU or sell power through exchange. Further, an online portal for registration of PPA by a Generator / DISCOMS / Trader shall be developed by CTU.
- 2.13.3 It has also been proposed that the PPAs of more than seven years tenure shall be considered as Long Term PPA, PPAs from one year to five years as Medium Term PPA and PPAs of less than one year as Short Term PPA. The registration for Long Term and Medium Term PPA shall to be done with CTU and for short term PPA with RLDC.
- 2.13.4 With implementation of GNA, generating stations shall be required to specify only injection point and drawing entity need to specify only drawal point i.e. generators can sign PPA for sale of power to any entity. A generator may enter into PPA or sale purchase agreement and inform CTU. However, it may not be possible to operationalize full quantum of scheduling sought corresponding to such signing of Agreement. This may happen in absence of information of PPA at the time of transmission planning. CTU shall consider various scenarios of transfer of power keeping agreed PPAs in consideration while planning the system. In case the information pertaining to PPA is not available, the system shall be planned based on assumed scenarios which shall be finalized with due consultation of all stakeholders as proposed in draft CERC (Transmission Planning and other related matters) Regulations, 2017. In real time, when the actual scheduling is required, load generation scenario may be different than that was considered at planning stage. Hence it is proposed that CTU should be informed of PPA/SPA signing as soon as the same is signed so that CTU can incorporate the same for scheduling purpose.
- 2.13.5 In such case CTU shall operationalize PPA for the maximum quantum which can be accommodated in the existing system and

may indicate the date from which full quantum as sought through PPA could be scheduled.

2.13.6 Generator and DISCOMs/ buyers may cover the eventuality of constraints in transmission system as an event beyond the control of the buyer / seller to ensure that the generator is not penalized for non-availability of transmission system.

2.14 Scheduling mechanism for States

2.14.1 This clause pertains to scheduling which may require consequential changes in CERC (IEGC) Regulations 2010 but have been included here for clarity on mechanism of functioning of GNA.

2.14.2 Scheduling of power under various contracts was discussed during deliberations of the Committee. The Committee observed as under:

“6.4. Scheduling Mechanism for State

A state procures power under Long term /medium term / short term. Post operationalisation of GNA, it is envisaged that state may be able to schedule its power under any tenure (long-/medium-/short-term) as required. However, under certain circumstances it may not be possible to accommodate the quantum requested on day ahead basis on account of constraints in ISTS. Under such circumstances, the state should be asked to provide its revised schedule. Under such conditions the State's entitlement through the constrained transmission corridor may be intimated and the State may be given liberty to curtail the schedule from long term /medium term /short term transactions through the constrained corridor as per the relative economics of the transactions to the State. The total corridor capacity available to STU should be specified. Out of available corridor, an STU should have liberty to decide which transaction it wishes to schedule. For example, if an STU has Withdrawal GNA for 2,000 MW and it has contracts under Long/medium/short term with suppliers for 3,000 MW, however on day ahead basis available corridor is only for 1,800 MW, the STU may inform POSOCO from which suppliers it wishes to avail power out of

3,000 MW so that total allocation of corridor is limited to 1,800 MW. It may so happen that multiple STUs wish to avail the corridor in which there is a constraint. Suppose corridor from WR-NR can accommodate 5,000 MW. Total GNA granted to NR beneficiaries is 6,000 MW. In such case, POSOCO should consider pro-rata capacity for each state in proportion to its long term PPAs tied up on that corridor.”

2.14.3 It has been envisaged that states shall be able to schedule its power under contract for any period (Long/medium/short term) after operationalization of GNA. However, on account of constraints in ISTS, it may not be possible to accommodate the quantum requested by State on day ahead basis under certain circumstances. Therefore, the State shall be asked to provide its revised schedule and the State's entitlement through the constrained transmission corridor shall be intimated.

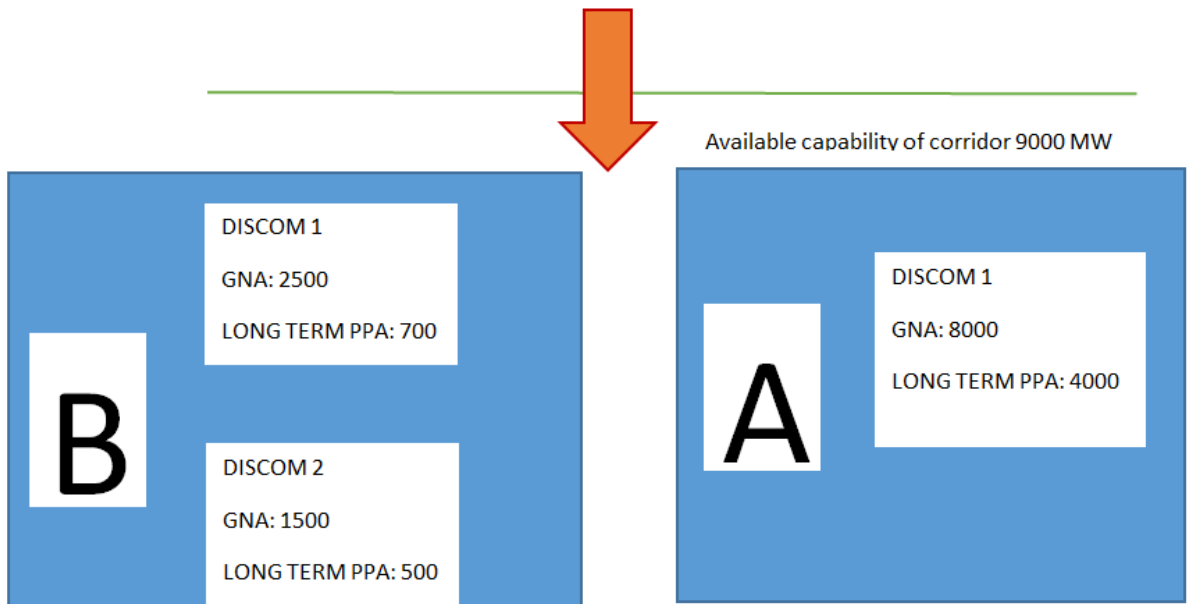
2.14.4 The State shall be given liberty to schedule from long term /medium term /short term contracts through the constrained corridor as per the relative economics of the transactions to the State.

2.14.5 In case of more than one state is availing power through the constraint corridor, POSOCO shall schedule the power in proportion to long term PPAs tied up on that corridor by each state.

2.14.6 A sample example is shown below for clarity:

Case I: When corridor capability requirement sought by two States is more than available corridor capacity for day ahead scheduling requiring curtailment among States and their DISCOMS.

Suppose there are two States State A and State B.



In case sum of requisitions from both the states for power import through the specific corridor exceeds the available capability due to any contingency, then the requisitions made by the States need to be rescheduled to ensure that the total requisition is equal to available capability.

The scheduling would be carried out proportionate to the quantum of corridor allocated to each of the DISCOMs pursuant to their long term PPA.

Suppose DISCOM1 of State B requests for import of 2500 MW from specified corridor. Requisition of 2500 MW by DISCOM 1 of State B through corridor would be reduced to:

$$9000 \times 700 / (700 + 500 + 4000) = 1212 \text{ MW}$$

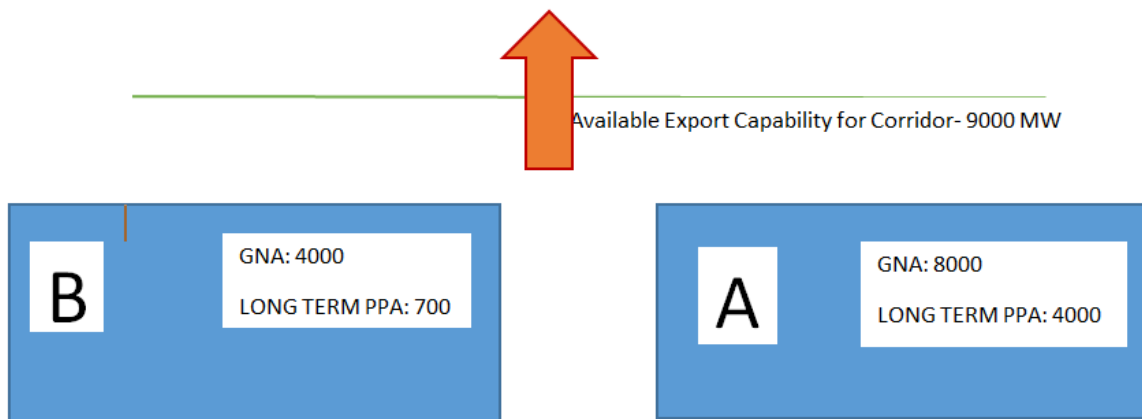
DISCOM 1 can requisite power from any generator who is in upstream of the congested corridor subject to total requisition of 1212 MW. It can be through any PPA under short, medium or long term based on economic operations.

Similarly for DISCOM 2 of State B Requisition through corridor would be reduced to:

$$9000 \times 500 / (700 + 500 + 4000) = 864 \text{ MW}$$

And for DISCOM of State A, scheduling through corridor would be as:
 $9000 \times 4000 / (700 + 500 + 4000) = 6924 \text{ MW}$.

Case II: When Export capability sought by two Generators is less than available capacity requiring scheduling accordingly among Generators.



In case sum of schedules requested from both the generators for power export through the corridor exceeds the available export capability due to any contingency, then the schedule obtained by the generators needs to be finalised to ensure that the total schedule is equal to available export capability.

The scheduling would be carried out proportionate to the quantum of long term PPA entered by each Generator.

Corridor Allocated to schedule power from Generator A:

$$9000 \times 4000 / (4000 + 700) = 7660$$

Corridor Allocated to schedule power from Generator B:

$$9000 \times 700 / (4000 + 700) = 1340$$

The beneficiary who wishes to avail power through this export corridor through Generator A would be able to schedule 7660 MW from

Generator A and similarly for 1340 MW from Generator B through the said Corridor.

In case out of 7600 MW which can be scheduled from Generator A through constrained corridor more than one beneficiary seeks to schedule power such that total requisition is more than 7660 MW then following methodology is proposed:

Suppose the PPAs between generators and beneficiaries is as detailed below:

Beneficiary	GB			GA		
	Long	Medium	Short	Long	Medium	Short
B1	100	300	1500	2500	1000	500
B2	600	1000	500	1500	500	2000

B2 can schedule power from GB:

$$1340 \times 600 / (600 + 100) = 1448 \text{ MW}$$

B2 can select the transaction from GB under Long, medium or short term PPA based on economic operation subject to total being 1448MW.

Similarly from B2 to GA:

$7660 \times 1500 / (1500 + 2500) = 2873 \text{ MW}$. Though total transaction right for B2 through the corridor is 4321 MW ($1448 + 2873 = 4321 \text{ MW}$), it cannot schedule the total power from GA only even if it is more economical. B2 cannot schedule more than 2873 MW from GA, subject to total schedule given to GB from B1 & B2.

The samples indicated are illustrative for understanding. Suggestions are invited from stakeholders on methodology which may be followed based on actual scenarios which may happen.

2.15 General Network Access Agreement

2.15.1 Regarding signing of GNA agreement after grant of GNA by CTU, the Committee has observed as under:

“6.5. GNA Agreement

An agreement should be signed by GNA applicant with CTU within one month of grant of GNA (as per the format prescribed by the CTU and approved by the Commission) and intimation by CTU to the applicant to sign the agreement. In case it fails to sign the agreement within specified time period, the bank guarantee furnished by the applicant should be forfeited. This has been proposed to have seriousness while applying for GNA.”

2.15.2 Accordingly, GNA customer shall be required to sign GNA Agreement within 1 month of grant of GNA by CTU. A detailed format of GNA agreement is enclosed for suggestions. In case the GNA customer fails to sign GNA Agreement within the specified timeline, 1/10th of the Access BG submitted by the GNA customer shall be forfeited and balance shall be returned.

2.16 Curtailment of transactions after finalization of day ahead schedule

2.16.1 During deliberation of the committee, it was observed that after operationalization of GNA, a State shall be able to schedule their entire quantum. However, there may be circumstances such as constraint in transmission system when it becomes necessary to curtail power flow after finalization of day ahead schedule. For this the Committee observed as under:

“6.6. Curtailment of transactions after finalization of day ahead schedule

When for the reason of transmission constraints, it becomes necessary to curtail power flow on a transmission corridor after finalization of day ahead schedule and in real time, the transactions already scheduled may be curtailed by the Regional Load Despatch Centre. The

transactions should be curtailed on the basis of duration of transaction with short term transactions to be curtailed first, followed by curtailment of medium term transactions and thereafter curtailment of long term customers. Amongst the customers of same category, curtailment should be carried out on pro rata basis. The aforesaid methodology for curtailment in real time operation may be reviewed five years after implementation of GNA system based on the experience during the intervening years.”

2.16.2 Accordingly, it has been proposed that in case of constraint in transmission corridor, the transactions already scheduled shall be curtailed by RLDC on the basis of duration of contract with short term contracts shall be curtailed first followed by medium term and long term contracts. In case of the customers of same category, curtailment shall be carried out on pro rata basis.

2.17 Date of Operationalisation of General Network Access (GNA)

2.17.1 Presently, the Nodal Agency does not give any firm date for operationalization of LTA where augmentation of transmission system is required. The grant of LTA letter given by CTU provides that the operationalization of LTA is subject of commissioning of dedicated lines and a no. of transmission system.

2.17.2 There have been many instances when some of the transmission systems mentioned in the grant of LTA letter have been commissioned but transmission charges for the same are not borne by beneficiaries who had signed TSA because of non-operationalization of LTA.

2.17.3 The above issue was discussed during deliberation of the Committee meeting and the Committee in its report has observed as under regarding operationalization of GNA:

“6.8. Date of operationalization of General Network Access

Stakeholders have suggested that date of GNA should be firm and no relaxation should be provided. However, in force majeure conditions and if generator informs about its delay sufficiently in advance, a relief may be considered.

6.8.2. The Committee suggests that subject to force majeure conditions or Change in Law as specified in Paragraph 6.8.6 of this Report, the operationalisation of GNA should start from the date indicated in the letter of grant of GNA or from the availability of the identified transmission system, whichever is later and the liability of payment of transmission charges should begin from this date.

6.8.3. The Committee also suggests that inability of a GNA Applicant to generate/supply electricity would not absolve it from liability to pay transmission charges.

6.8.4. In case a generator has not started injection of power on date of operationalisation of GNA and its Point of Connection (PoC) rate under CERC (Sharing of inter-state transmission charges and losses) Regulations, 2010 is not available, such generator should be liable to pay at all India average PoC rate for the region as its GNA charges.

6.8.5. In cases where operationalisation of GNA is contingent upon commissioning of several transmission lines or systems and only some of the transmission lines or elements have been declared to be under commercial operation, GNA to the extent which can be operationalised without affecting the security and reliability of the Indian Grid should be operationalised and the GNA customer should pay transmission charges for the quantum of GNA operationalised. The transmission licensee because of delay of whose transmission system GNA for an applicant could not be operationalised in full, should pay corresponding transmission charges as per its TSA, which should be provided to generator as compensation in case generator is ready and transmission system is not ready.

6.8.6. A generator which has sought GNA may get delayed due to reasons beyond its control or for reasons within its control for example

delays due to contractor. In case a transmission system or a generator is delayed beyond the scheduled date of GNA due to event caused by force majeure and Change in Law, the date of operationalisation of GNA may be extended to the extent the delay is attributable to force majeure or Change in Law which is beyond the control of the party. Force Majeure Conditions and Change in Law may be specified in the Regulations to be framed by the Commission.

6.8.7. In case a generator gets delayed due to reasons beyond its control other than force majeure, the relief is suggested as under:

- (a) In case of delay up to three months from date of operationalisation of GNA- a generator be liable to pay 25% of the transmission charges due on him.
- (b) In the event of delay beyond three months up to six months from date of operationalisation of GNA- a generator be liable to pay 50% of the transmission charges due on him.
- (c) In case of delay beyond six months from date of operationalisation of GNA, generator be liable to pay 100% of the transmission charges due on him.

6.8.8. CTU should determine whether the delay was due to reasons beyond the control of the generator. In case of any dispute, the matter will be adjudicated by the Commission.”

2.17.4 In view of the recommendations of the Committee, the date of operationalisation of GNA have been specified in the Regulations. The liability of payment of transmission charges shall begin from this date even if the GNA customer is not able to supply power from the date of operationalization of GNA.

2.17.5 In cases where operationalisation of GNA is contingent upon commissioning of several transmission lines or systems and only some of the transmission lines or elements have been declared to be under commercial operation after the effective date, GNA to the extent which can be operationalised without affecting the security and reliability of the Indian Grid shall be operationalised and the

GNA customer shall pay transmission charges for the quantum of GNA operationalised.

2.17.6 The issues and treatment of delay related to Force Majeure as suggested by the Committee have not been considered in the proposed Regulations. Suggestions are invited from the stakeholders whether provisions should be included in the Regulations or in the GNA Agreement or in both.

2.18 Intimation regarding termination of Power Purchase Agreement

2.18.1 The Committee has observed that after operationalization of GNA, the GNA customers shall be required to intimate CTU regarding long term and medium term contracts, and to RLDC in case of short term contracts for scheduling the power to beneficiaries. In case PPAs/contracts are terminated by a court or Tribunal or Appropriate Commission of competent jurisdiction or in the event of mutual termination, the Committee has observed as under:

“6.9. Intimation regarding termination of Power Purchase Agreement

Where the entire or part of the Power Purchase Agreement (PPA) of the GNA customer is terminated in accordance with the provisions of their agreement or through determination by a court or Tribunal or Appropriate Commission of competent jurisdiction or in the event of mutual termination, it should be incumbent on the GNA customer to give intimation about such termination of PPA to CTU and POSOCO immediately and not later than one month from the date of such termination. CTU should consider the transmission capacity so made available for scheduling of transactions for other Long term access / medium term open access customers.”

2.18.2 Accordingly, it has been proposed that the GNA customer shall intimate CTU and POSOCO about termination of PPAs/contracts by a court or Tribunal or Appropriate Commission of competent jurisdiction or in the event of mutual termination immediately and

not later than one month from the date of such termination. It has also been proposed that the transmission capacity so made shall be considered for scheduling of transaction of other GNA customers.

2.19 Sharing of Transmission Charges under GNA

2.19.1 The sharing of transmission charges under GNA mechanism for transmission panning shall be similar to the prevailing mechanism provided under the Sharing Regulations. The Committee in its report submitted to the Commission has also observed the same. The relevant portion of the report is extracted below:

“6.10. Sharing of transmission charges under GNA

- (a) The outline of the proposal for Connectivity, GNA, sharing of transmission charges, etc. is presented below for sake of clarity and completeness.
- (b) The transmission charges should be shared among users of ISTS in accordance with CERC (Sharing of Inter-state transmission charges and losses) Regulations, 2010.
- (c) The methodology of sharing of transmission charges should be as under:
 - (i) Prior to beginning of a quarter for which POC charges are to be specified, Designated ISTS Customers (DICs) need to provide their peak demand/injection from their generating stations. This data is fed into POC software which has the entire grid modelled. Injection into / drawal from ISTS in respect of each DIC is automatically derived from the peak demand/injection data provided by DICs.
 - (ii) Based on projected peak injection/drawal requirement, transmission charges are allocated to various nodes under POC mechanism. These charges should be divided by GNA (MW) of each DIC to determine POC rate for each DIC. These rates should be put into slabs as per prevailing Sharing Regulations notified by CERC.
 - (iii) There may be cases where projected peak injection /drawal in actual time frame i.e. just prior to beginning of a quarter will be different from the GNA quantum projected 5 years before by a DIC. In such cases projected ISTS drawal/injection as projected before beginning of quarter should be used in the POC software for the purpose of allocation of transmission charges as in the prevailing CERC Sharing Regulations. However, additional charges should be levied for injection /drawal beyond GNA

sought by an entity so as to bring seriousness while seeking GNA. An example is illustrated below for clarity:

Suppose an entity has sought GNA for 5,000 MW for Quarter 2 of year 2021-22. In May 2021, entity would be required to provide its projected demand/ injection for determination of transmission charges for quarter July-September 2021. Suppose this entity has 3000 MW under Long term PPA and 1000 MW under Medium term PPA. In July 2021 it does Short term PPA for another 2,500 MW, thereby its total transaction shall be equal to 6500 MW which is 500 MW more than 120% of its GNA, it should be liable to pay transmission charges @ 1.25 times POC rate for this 500 MW and normal POC rate for drawl up to 6000 MW.

- (iv) In cases where power is tied up under contracts other than short term contracts, the POC charges should continue to be calculated directly at drawal nodes as in the prevailing Sharing Regulations.
- (v) The DISCOMs seem to have an apprehension that they may be required to pay transmission charges for the entire quantum of GNA which would be projected 4 years before and may cause huge penalty in case of wrong projection. The apprehension is misplaced as the basic premise of Sharing Regulations is that the transmission charges are usage based. Hence a DIC will be allocated transmission charges which are commensurate to its usage of ISTS as per its projected demand for the next quarter. However DISCOMs should endeavour to seek GNA as prudently as possible and there should be additional transmission charges if actual drawal is more than 120% of its GNA. GNA quantum should be used to determine the slab rate for POC Charges and additional transmission charges should be payable by a DIC only in case the drawal from ISTS is beyond 120% of Withdrawal GNA.
- (vi) An entity transacting power in a grid is either an injecting DIC or a withdrawal DIC. As per the proposed mechanism for sharing of transmission charges, each entity should be paying as per its GNA quantum under first bill as per sharing mechanism currently in vogue for long term access. Since it should be seeking GNA quantum for its maximum injectable/maximum drawal quantum required, it should transact under power exchange within this quantum for which it should pay charges under first bill. Hence there should be no separate

transmission charges for exchange transactions / short term transactions.”

2.19.2 Hence, the sharing of transmission charges under GNA mechanism shall be done amongst the users of ISTS in accordance with the proposal of the Committee. Further, required amendment shall be done in due time in the Sharing Regulations to incorporate the provisions of the regulations on GNA.

2.20 The concept of GNA proposed in the draft Regulations is a new concept. The Regulations may lead to variation in ISTS charges sharing among States. The assessment of the same couldnot be carried out in absence of data for GNA for States.

2.21 Further a State may not be able to accurately assess its GNA for which the Committee recommended as follows

“6.7. Mismatch between injection GNA and drawal GNA

....6.7.2. The STUs are required to firm up the Withdrawal GNA in consultation with and based on inputs from DISCOMs and generating stations in the State regarding anticipated demand and their anticipated off take from the generating stations located in the State in different seasons/month. Their Withdrawal GNA from the ISTS is likely to be maximum during the season/month when the shortfall between their demand and generation availability to them from the internal sources is going to be maximum. The Committee is of the view that this is not a difficult exercise. Requisite format for estimation of withdrawal GNA may be specified in detailed procedure to be formulated by CTU. If required, the STUs/DISCOMs could seek assistance of CEA or RPC for estimation of Withdrawal GNA. The Withdrawal GNA so assessed would then be discussed in the meeting of Validation Committee. Further, the apprehension of the STUs in regard to repercussions of error in assessment of Withdrawal GNA get addressed by the fact that the sharing of transmission charges of ISTS is to be based on usage of ISTS. Drawal from ISTS up to Withdrawl GNA plus a margin of 20% would not attract any

additional transmission charges. The additional transmission charges for drawal from ISTS beyond the margin as mentioned earlier may be kept as 25% above normal transmission charges. Transmission Planners may consider up to 20% margin above withdrawal GNA while planning.”

2.22 As per above, in case of any error in estimation of seasonal withdrawal requirement, there is a margin of 20% over and above the approved withdrawal requirement from ISTS for which there shall be no additional charges i.e. transmission charges for drawal up to 120% of the approved withdrawal requirement shall attract normal PoC charges. However, in case of withdrawal from ISTS is more than 120% of the approved withdrawal, the withdrawal entity shall be required to pay 25% extra PoC charges for the quantum over and above 120% of the approved withdrawal quantum.

2.23 The proposal pertains to Sharing Regulations, but have been included for clarity on overall mechanism of GNA. The consequential changes shall be carried out in relevant regulations as required.

2.24 Transition phase between prevailing LTA Regulations and new proposed GNA mechanism and Sharing of Transmission Charges during transition phase

2.24.1 The prevailing Connectivity Regulations doesnot require LTA application to be mandatorily made after Connectivity application. It provides the applicant to apply for LTA according to their requirement. However due to this there have been issues related to suboptimal planning brought out in Mata Prasad Committee Report.

2.24.2 Under the proposed regulations on GNA, it is mandatory for applicants to apply for GNA for the quantum equal to installed capacity minus auxiliary power consumption within a period of 2.5 years of grant of Connectivity by CTU failing which Connectivity granted shall be deemed to be cancelled.

2.24.3 The Committee observed that applications seeking grant of GNA after coming into effect of GNA regulations shall be dealt in accordance with the GNA Regulations.

2.24.4 The Committee observed as under with regards to Transition mechanism:

“6.11 Transition phase between prevailing LTA regulations and new proposed GNA mechanism

6.11.1. Under the prevailing Connectivity, LTA and MTOA Regulations, Connectivity is not to be mandatorily followed by Long term Access (LTA) Application. The same has to be replaced with Connectivity plus GNA Application. Suppose the new GNA Regulations become effective from 1st January, 2017, any new application for Connectivity/GNA to be received post 1.1.2017 should be processed as per the new regulations. The treatment of Connectivity / LTA Applications received till December 2016, should be as given below:

- (a) For existing generating stations with full capacity tied up, for example NTPC/NHPC stations etc., their GNA for installed capacity minus auxiliary power consumption should be deemed to have been granted and a list of same should be published by CTU.
- (b) For generating stations where LTA has been sought for part capacity and the same is already operational, the generating station should be required to apply for additional quantum (balance quantum for which there is no LTA) under GNA within 3 months from the date on which the new GNA Regulations/ amended Connectivity Regulations become effective, so that they have access for full injectable capacity. CTU may grant GNA to such generating stations from the date of availability of transmission system. In case no application is received from such a generating station within the stipulated time, generating station should not be allowed to schedule any power.
- (c) In case of generating stations who have applied for LTA for full capacity but their LTA is yet to be operational, CTU should consider same as GNA application for the full injectable capacity and operationalise GNA as per availability of transmission system. This would imply that there is no concept of target region once the new regulations come into force. In case LTA for only part capacity has been applied, generating station

should be required to apply for additional quantum (balance quantum for which there is no LTA) under GNA within 3 months from the date on which the new GNA Regulations/ amended Connectivity Regulations become effective, so that they have access for full injectable capacity.

- (d) The applications for Connectivity / LTA received till December 2016 which are pending with CTU for grant of LTA should be processed as per the new Regulations, i.e. any applicant of only Connectivity should be granted Connectivity subject to submission of application for GNA within 2.5 years. Any application for part LTA should be supplemented with GNA application for balance quantum within 3 months as indicated above. CTU to grant GNA for full quantum for such cases.

2.24.5 Accordingly, provisions have been incorporated in the draft regulations on GNA to facilitate smooth transition from existing Connectivity Regulations to the proposed GNA Regulations. The existing LTA of States or distribution Licensees shall be converted into GNA.”

2.24.6 Regarding Sharing of Transmission Charges during transition phase, the Committee observed as under:

“6.11.2. Sharing of transmission charges in transition phase

Sharing of transmission charges will continue to be done as is done under the prevailing Sharing Regulations provided that LTA/MTOA quantum currently considered should be replaced by GNA quantum once GNA is granted by CTU on the basis of GNA sought by the generators/ Withdrawal DICs. The process may take up to 6 months. Till then POC rates will be calculated based on LTA/MTOA. It has been proposed that there should be no separate transmission charges for short term / power exchange transactions. This mechanism can become effective only after GNA system is fully operationalized.”

2.24.7 Accordingly, it has been proposed that sharing of transmission charges shall continue to be governed by the Sharing Regulations as amended from time to time provided that LTA/MTOA quantum currently considered shall be replaced by the GNA quantum once

GNA is granted by CTU on the basis of GNA sought by the generators/ Withdrawal DICs.

2.24.8 Further, the process of grant of GNA by CTU may take up to 6 months time, till then the present LTA/MTOA quantum shall be used for calculating PoC rates.

2.24.9 It has also been proposed that after fully operationalization of GNA, there shall be no separate transmission charges for short term / power exchange transactions.

2.24.10 All the abovesaid provisions need to be duly incorporated in Sharing Regulations.

2.25 Access Bank Guarantee and encashment of Access Bank Guarantee

2.25.1 The prevailing Connectivity Regulations provide for submission of Bank Guarantee at Rs. 5 lakh/MW for the quantum of LTA granted to the LTA customer when augmentation of transmission system is required. CTU have raised that the quantum of BG provided in the Connectivity Regulations is very small as compared to the quantum of work involved in the augmentation of transmission system to cover the eventuality like relinquishment of LTA right, etc. This issue was discussed in detail during deliberations of the Committee and the Committee observed as under:

“6.12.7 Access Bank Guarantee

(a) The main issue is the amount of bank guarantee which could be considered as sufficient as bank guarantee to safeguard against the risk of stranded asset in case generation project fails to get commissioned.

(b) The basic question in regard to amount of Bank Guarantee in the Staff Paper was whether to continue existing bank guarantee of Rs 5 lakh per MW despite transmission cost being of the order of Rs 1 cr per MW. The propositions in the Staff Paper in this regard were (i) BG equal to NPV of transmission charges for 12 years or 7 years (ii) BG at a flat rate of Rs X per MW of installed capacity as one time charge, (iii) Five years

Average Injection and withdrawal charge and (iv) Five years Average injection charges only.

- (c) Few stakeholders have suggested that existing bank guarantee of Rs. 5 lakh/ MW is sufficient and few have suggested that it should be equivalent to cost of transmission line or it should be equivalent to 2-5 years of estimated transmission charges. The purpose of bank guarantee is to safeguard recovery of charges for transmission which is already under execution for an Applicant and in case the generating plant gets delayed or is abandoned, the charges for transmission unutilized / underutilized due to its exit should not be passed on to other beneficiaries of the grid.
- (d) The existing BG for augmentation of transmission system is up to Rs. 5 Lakh/MW. Staff Paper recognized that BG of Rs. 5 lakh/MW is grossly inadequate to cover investment by transmission licensee. POWERGRID and GUVNL have stated that BG should be equivalent to 12 years transmission charges. POSOCO has stated that Bank Guarantee amount should be sufficient to bring in seriousness regarding entry as well as exit. Few generators have stated that BG amount shall be equivalent to 3 to 5 years of transmission charges payable for the GNA capacity. We have perused data of POWERGRID system for a few projects where the cost of associated transmission system varies from Rs. 5 lacs/MW to Rs. 90 Lacs/MW. The monthly transmission charge for Q2 2016-17 is approx. Rs. 2,100 Crore and LTA+MTOA among which this is divided is approx. 80,000 MW. Hence the average transmission charge is Rs. 2.6 lacs/MW/month which approximates to Rs. 31 lac /MW/year. However the Committee has proposed that the construction of the dedicated line for all the generators should now be the responsibility of the generating company. Further, in the proposed arrangement the generator will be able to schedule any power only when it obtains GNA. Most of the issue of relinquishment of LTA was due to the existing system of LTA with target region which has since been revised. The Committee has also seen that abandoning of LTA was in case of less than 2% of capacity addition in the country. Keeping all these factors in view, the Committee suggests that BG should be approximately equal to one year transmission charges. Since the Committee has already recommended that dedicated lines should be responsibility of generator, the Committee suggests that Access bank

guarantee may be considered as Rs. 20 lac/MW. The Access Bank Guarantee should be kept subsisting for 12 years from the date of operationalisation of GNA. After operationalisation of GNA, Access BG equivalent to 1/5th of amount should be returned back to the Applicant till 4th year. The amount equivalent to 1/5th of Access BG should be kept subsisting till the end of 12th year as security towards relinquishment charges. It is expected that in a power system with the growth as it is being witnessed in the country at present, spare transmission capacities created if any due to exit of a generator in pooled network would get utilized to some extent.

(e) In case, GNA application is not accompanied with adequate Bank Guarantee, the application should be considered incomplete and should be rejected.

(f) Access bank guarantee shall not be required to be paid by STUs.”

2.25.2 In view of the suggestion made by the Committee in its report, it has been proposed that the Access Bank Guarantee shall be at Rs.20 lakh/MW which shall be kept subsisting for 12 years from the date of operationalisation of GNA. After operationalisation of GNA, Access BG equivalent to 1/5th of amount shall be released to the Applicant till 4th year and amount equivalent to 1/5th of Access BG shall be kept subsisting till the end of 12th year as security towards relinquishment charges.

2.25.3 The Access Bank Guarantee for projects based on renewable energy have been proposed as Rs. 10 Lakh/ MW.

2.25.4 Since, as per the GNA mechanism, STUs are required to submit seasonal GNA every year, STUs shall not be required to submit Access BG.

2.25.5 Further, the Committee has made following recommendations in respect to encashment of access bank guarantee:

“6.12.8 Encashment of Bank Guarantee

- (a) The quantum of Access Bank Guarantee should be progressively reduced each year after operationalisation of GNA corresponding to the one fifth of its total value. Each year one fifth of the value of Access bank guarantee should be returned to the Applicant till 4th year. The amount equivalent to 1/5th of Access BG should be kept subsisting till the end of 12th year as security towards relinquishment charges.
- (b) If GNA Customer seeks an exit (fully or partly) or abandons the generation project or relinquishes GNA at any stage after placement of LOA or order to a successful bidder under TBCB route by bid process coordinator or placement of LOA to contractor by POWERGRID for transmission system to be developed by POWERGRID on nomination basis of Transmission System associated with that GNA either partly or fully, the bank guarantee subsisting should be encashed.”

2.25.6 In view of the above recommendations of the Committee, it has been proposed that the 1/5th of Access BG submitted by GNA customer shall be released each year progressively after operationalization of GNA in the next four years. However, the remaining 1/5th of Access BG shall be kept subsisting till the end of 12th year as security towards likely eventualities such as relinquishment, etc.

2.25.7 The conditions of encashment of Access BG have been included in Regulation 12.7.

2.26 Charges in case of exit/downscale of GNA after commissioning

2.26.1 The prevailing Connectivity Regulations provide that LTA customers willing to relinquish LTA right partly or fully shall pay compensation for the stranded transmission capacity. In such cases Generators after relinquishing LTA may transact under MTOA or STOA with ISTS.

2.26.2 The Commission has received many petitions wherein generators have prayed for relinquishment of LTA right without any liability because in a meshed network there would not be any stranded capacity. CTU has also expressed difficulty in assessing stranded

capacity on account of the meshed network of the inter-State transmission system.

2.26.3 Considering the above concerns raised by generators and CTU, the Committee observed as under:

“6.12.9 Charges in case of exit/downscale of GNA after commissioning

- (a) Stakeholders have suggested that a onetime charge should be specified for cases of exit since CTU has expressed its inability to determine stranded capacity in a meshed network. It has also been suggested that 3-5 years injection and withdrawal charges may be considered.

- (b) The Committee is of the view that any downscaling of GNA should not be allowed for units which are running except if unit gets non-functional due to force majeure conditions. Further calculation of exit charges on the basis of estimated charges for future years should be difficult to estimate. Hence the charges for exit should be known upfront to a generator. In case a generator wishes to exit from GNA it should be disconnected from the grid. In case it exits prior to completion of 5 years after GNA is operationalized, the remaining / available Access Bank Guarantee be encashed by CTU towards exit charges. In addition the generator should be liable to pay transmission charges for one year (as per prevailing POC rate for the generator in case rate is available for the generator, else all India average POC rate) towards exit charges. In case it exits after 5 years, the generator should be liable to pay transmission charges for one year (as per prevailing POC rate for the generator in case rate is available for the generator, else average POC rate) towards exit charges. However in case there are pending applications for GNA seeking same corridor, exit charges should not be leviable on the generator to the extent corridor is reallocated to other seekers.

- (c) A generator may derate its units due to technical issues in which case it should be allowed downscaling of GNA without any charges.”

2.26.4 Accordingly, the determination of stranded capacity in case of relinquishment of GNA has been done away in the proposed regulation. It has been proposed that any downscaling of GNA shall not be allowed for running units subject to force majeure conditions and exit from GNA shall lead to disconnection from the grid after paying relinquishment charges. After disconnection if the generator wishes to get connected to ISTS again, it shall be required file for connectivity and GNA afresh as per these regulations.

2.26.5 Further, as per observation of the Committee that the charges for exit/relinquishment should be known upfront to a generator, the charges for relinquishment have been included in the proposed Regulations.

2.27 Treatment of delay in Transmission system /Generation projects

2.27.1 There have been cases where transmission system has been commissioned but the generating stations for which transmission system being planned and commissioned have been delayed and vice-versa. This issue was also discussed in detail during deliberation of the Committee meeting and the Committee in its report observed as under:

“6.12.10 Treatment of delay in Transmission system /Generation projects

- (a) In order to monitor/ review the progress of generating units along with its direct evacuation lines and also the common transmission system, Joint Co-ordination meeting with the representative of each developer, CTU and transmission licensees should be held at regular intervals (preferably quarterly) after grant of GNA as prevailing.
- (b) In case any of the developer fails to construct the generating station /dedicated transmission system or makes an exit or abandon its project, CTU should have the right to encash the bank guarantee.
- (c) In case of adverse progress of individual generating unit(s) /expected delay of generators assessed during coordination meeting, CTU should endeavour to re-plan the system if the augmentation system has already not been awarded. In case the augmentation system has

already been awarded and generator seeks deferment of start of GNA, no such deferment should be granted and the generator should be liable to pay full transmission charges from the date of operationalisation of GNA or commissioning of the related transmission system whichever is later.

- (d) In the event of delay in commissioning of concerned transmission system from its scheduled date, CTU should make alternate arrangement for dispatch of power at the cost of the transmission licensee. The interim arrangement so provided should be removed with commissioning of actual planned system.
- (e) In case such alternative arrangement cannot be provided the transmission licensee should pay proportionate transmission charges as per its TSA which should be provided to generator as compensation in case generator is ready and line is not ready. Such payment from the transmission licensee may be recovered from the Contract Performance Guarantee furnished by the transmission licensee.”

2.27.2 In view of the above recommendations by the Committee, the draft regulations propose that the prevailing mechanism of holding Joint Co-ordination (JCC) meeting with representatives of developer, CTU and transmission licensee shall continue to be held in each quarter after grant of GNA. During the JCC, if adverse progress of individual generating is assessed by CTU, CTU shall endeavour to re-plan the system.

2.27.3 If generating station has been commissioned but there is delay in commissioning of concerned transmission system, CTU shall make interim arrangement for dispatch of power at the cost of the transmission licensee which shall be removed after commissioning of actual planned system. In case such interim arrangement cannot be provided, the transmission licensee shall pay proportionate transmission charges to generator as compensation.

2.28 Treatment of payment of charges in case of non-availability/delay in upstream /downstream system

2.28.1 The Commission has received many petitions for inclusion of transmission assets under PoC mechanism after declaring CoD of assets under provision of the Tariff Regulations citing reasons that though the transmission assets are ready for commercial operation, they cannot be put under regular use because of non-completion of downstream transmission system.

2.28.2 This issue was discussed during deliberation of the Committee meeting in light of the order dated 5.8.2015 in Petition No. 11/SM/2014 wherein representatives of various states were also present. In this regard, the Committee in its report has observed as under:

“6.12.11 Treatment of payment of charges in case of non-availability/delay in upstream /downstream system

- (i) 'Upstream system' means the end bays/ transmission lines at same or higher voltage associated with a transmission line without commissioning of which the transmission line cannot be in regular service. 'Downstream system' for a transmission line means the terminating bays/ transmission lines at same or lower voltage associated with a transmission line without commissioning of which the transmission line cannot be in regular service. It has been observed that in few cases downstream system of states to be built by STUs is not available matching commissioning with ISTS lines due to which ISTS remains unutilised/ doesn't serve intended purpose. The issue was discussed with representatives of States during Committee Meetings where few states suggested that in such cases charges for associated ISTS may be charged to the DISCOM for whom the associated ISTS has been built. Few states have suggested that compensation should be covered under a mutual agreement between both the transmission licensees. States have also stated that in case CTU system is not ready and State system is ready CTU should also be liable to pay compensation to State. CERC has already issued Suo

Motu Order 11/SM/2014 dated 5.8.2015 whereby following is directed:

"Keeping in view the mismatch between commissioning of transmission system by an ISTS licensee and upstream/downstream system of STU, we are of the view that ISTS transmission licensees and STUs should also sign such Implementation Agreement for development of ISTS and downstream system in coordinated way to avoid any mismatch.

Concerned STU, who had requested for provision of downstream line bays in the various meetings of Standing Committee/RPC, should bear the transmission charges till completion of downstream system."

- (ii) Gujarat has stated that STU doesn't have any agreement with ISTS licensee and it is the DISCOM who should be liable to pay the transmission charges.
- (iii) Accordingly Committee is of the view that ISTS licensee, CTU, STU, associated State transmission licensee; DISCOM should enter into indemnification agreement to agree upon payment of charges in case of delay by ISTS licensee/ State transmission licensee. In the absence of indemnification agreement the payment liability should fall on entity due to which an element is not put to use. For e.g., Line is ready but terminal bays belonging to other licensees are not ready, the owner of terminal bays should pay the charges to line owner in a ratio of 50:50 till the bays are commissioned. In case one end bays are commissioned, the owner of other end bays should pay the entire transmission charges of the line till its bays are commissioned.
- (iv) Further CTU may coordinate with STU to ensure that ordering for state lines are done such that it is commissioned matching with ISTS lines. The ISTS system should be included under POC calculations only after it is put to use. The Committee feels that there is a need of planning State systems along with ISTS. A State Power Committee similar to Regional Power Committee may be established at State level to coordinate issues affecting state involving all stakeholders within States."

2.28.3 In view of the above recommendations, provisions have been included in the draft regulations for fixing liability for payment of

transmission charges in case of non-availability/delay in upstream /downstream system.

2.29 Transmission Corridor Allocation for power markets

2.29.1 Regarding corridor allocation for power market, the Committee has observed as under:

“6.12.13 Transmission Corridor Allocation for power markets

- (a) Few stakeholders have supported the idea of booking of corridor for participants of power exchange and few have opposed the idea.
- (b) The Committee feels that in a power exchange point to point transaction cannot be ascribed since it is not a bilateral transaction. Hence booking of corridor would be subject to speculations and gaming. Hence booking of corridor by participants is not recommended. However it is recommended that 5% of each flow gate may be booked for day ahead collective transactions which may be released for contingency market in case of non-utilisation the corridor by exchanges. The percentage of booking may be reviewed after one year of operation.”

2.29.2 Accordingly, provision has been included in the draft regulations for reserving 5% capacity of each corridor for day ahead collective transaction under power exchanges. A provision has also been included to review the percentage of booking after five years based on the feedback from the stakeholders during the intervening period.

2.30 Sale of surplus power by States

2.30.1 The committee has observed following to facilitate the States willing to sell their surplus power form the generating stations located inside the State or having contracts from an ISGS outside the State:

“6.14.1. Sale of surplus power by States

GRIDCO has stated that GNA Mechanism does not speak out on the issue of sale of surplus power by the States for which even if the states will declare their injection GNA as there is no prescribed mechanism for such

sale. In this regard a state may seek injection GNA and drawl GNA separately. A state may like to sell power for a few hours in a day and draw for rest of the hours. It may seek STOA accordingly. Committee also notes that many states are involved in Banking mechanism in which case a State sells power in a particular season and takes back same in other season. A state has power from its own stations and the contracted power from ISGS. A state may like to sell power from its contracted power from ISGS. However currently there is no such provision through which a State may sell its share of contracted power from an ISGS at injection point of ISGS. The Committee recommends that necessary provision may be made in the Regulations to enable a State to sell power out of its contracted power from ISGS at injection point of ISGS.”

2.30.2 In view of the above recommendations, it has been proposed in the draft regulations that the State willing to sell surplus power can do so by availing injection GNA. It has also been provided that in case of sale from the State share in ISGS, the State shall be allowed to sell its share of power at the injection point of that ISGS.

Quarterly Progress Report

(To be submitted by Thermal Generating Stations including Captive Generating Station and Hydro Generating Station)

1	Name of the Applicant	
2	Address for Correspondence	
3	Nature of the Applicant	
	Thermal Generating Station	
	Captive Generating Station	
	Hydro Generating Station	
4	Status of Connectivity	
5	Status of GNA	
6	Status of Land Acquisition	
7	Status of Clearance from MoE&F	
8	Status of Fuel Linkage	
9	Status of Water Linkage	
10	Status of Dedicated transmission Line	
11	Power Purchase Agreement, if any	

Quarterly Progress Report

(To be submitted by Renewable Generating Stations, Solar Power Park Developer,
Wind Power Park Developer, Wind-Solar Power Park Developer)

1	Name of the Applicant	
2	Address for Correspondence	
3	Nature of the Applicant	
	Renewable Generating Station	
	Solar Power Park Developer	
	Wind Power Park Developer	
	Wind-Solar Power Park Developer	
4	Status of Stage-I Connectivity <i>(Monitoring Parameter of Stage-I Connectivity is attached at Annexure-A)</i>	
5	Status of Stage-II Connectivity	
6	Status of GNA	
7	Status of Site Identification/Land Acquisition (as applicable)	
8	Status of Environment Clearance (as applicable)	
9	Status of Forest Clearance (as applicable)	
10	Status of Sub-Pooling Station	
11	Status of Dedicated transmission Line	
12	Status of Financial Closure of project	
13.	Installation of Wind Mast, in case of Wind	
14.	(i) Finalization of location of sub-pooling station (ii) Walkover Survey for Dedicated Transmission Line	

15.	(i) Completion of Resource Assessment Studies (ii) 100% Acquisition of Land for sub-pooling station	
16.	Final Route Survey of Dedicated Transmission Line	
17.	Status of internal Transmission System	
18.	Status of PPA/ SPA	

The above data shall be submitted on Affidavit by board authorized representative