
CENTRAL ELECTRICITY REGULATORY COMMISSION (CONNECTIVITY AND GENERAL NETWORK ACCESS TO THE INTER-STATE TRANSMISSION SYSTEM) REGULATIONS, 2022 INCLUDING FIRST AND SECOND AMENDMENT

ISSUED ON :7.6.2022

EFFECTIVE FROM:5.4.2023

TRANSMISSION ACCESS-EARLIER REGIME

- ❖ Transmission system booking
 - ❖ Long term Access (LTA)- 7 years and above
 - ❖ Medium term Open Access (MTOA)– 3 months to 5 years
 - ❖ Short term Open Access (STOA) - 1 time block to 1 month (up to 3 months in advance)
 - ❖ Each Access comprise of booking of system from injection point till drawl point

- ❖ Availing of the booked transmission system by scheduling
 - ❖ Scheduling of power is under contract between buyer and seller
 - ❖ LTA – PPA for duration more than one year
 - ❖ MTOA and STOA- PPA for the duration of Access to be furnished along with the application

NEED FOR CHANGE:

- ❖ Realities of procurement of cheaper power
- ❖ Requirement of delinking of access to transmission system with fixed contract.
- ❖ Schedules under STOA cannot change 2 days hence.
 - Need to review inflexibility raised by stakeholders.
- ❖ Streamline relinquishment charges.

BACKGROUND

- Draft GNA Regulations 2021- notified on 16.12.2021
- Final GNA Regulations notified on 7.6.2022
- First Amendment- 1.04.2023
- Effective -partly on 5.4.2023 and balance on 1.10.2023
- Second Amendment – issued on 19.06.2024, effective from 15.07.2024
- GNA Regulations 2022 consists of broadly three sections:
 - (A) Connectivity
 - (B) General Network Access (GNA)
 - (C) Temporary GNA (T-GNA)

CONNECTIVITY

❖ **Application fees : Rs 5 lakh + taxes / application**

❖ **Eligible Entities:**

- Injecting entities who are seeking connectivity to the ISTS
- Connectivity grantees shall be deemed to have been granted GNA, equal to the quantum of Connectivity from the start date of Connectivity.
- Minimum quantum to connect to ISTS- Installed capacity of 50 MW individually or collectively through lead generator.

Additional points

- Entities having Connectivity may apply for enhancement of Connectivity of less than 50 MW subject to available capacity in transmission system.
- At a terminal bay already allocated to another Connectivity grantee with an agreement for sharing the terminal bay.
- Through electrical system of a generating station having Connectivity to ISTS with an agreement for sharing.
- Two or more Applicants may apply for grant of Connectivity at a common terminal bay with an agreement for sharing the dedicated transmission lines and the terminal bay.

ROUTE FOR MAKING APPLICATION FOR CONNECTIVITY BY REGS

- LOA by Renewable Energy Implementing Agency (REIA) or PPA with distribution licensee
- Registered Title deed for Land for 50% land required for the project
- Bank Guarantee in lieu of LAND for 10 lakh/MW for upto 1000 MW and 5 lakh/MW for capacity above 1000 MW
 - with a condition to submit land documents within 18 months of initial grant of Connectivity or 12 months of final grant of Connectivity, whichever is earlier

SUBSEQUENT MONITORING FOR REGS POST GRANT OF CONNECTIVITY TO ADDRESS ISSUE OF SQUATTING

- Achieve Financial closure by:

6 months prior to the scheduled date of a commercial operation or start date of Connectivity of such applicant, whichever is later:

- To achieve COD by:

- SCOD – LOA /PPA route grantees
 - SCOD+ 6 months- LAND /LAND BG grantees
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GRANT OF CONNECTIVITY – 2 STEPS

- ❖ In-principle grant of Connectivity - for intimating the amount of Connectivity Bank Guarantees and submission thereof
 - within 60/90 days (where ATS or Augmentation is required)

- ❖ Final Grant of Connectivity
 - On submission of required Connectivity Bank Guarantees

CONNECTIVITY BANK GUARANTEE (CONN-BGS):

- Three parts: Conn-BG1, Conn-BG2 , Conn-BG3
- Conn-BGs for an entity may fall under following categories:
 - A. Conn-BG1 + Conn-BG2
 - B. Conn-BG1+Conn-BG2+Conn-BG3
 - C. Conn-BG1+Conn-BG3
- Conn-BG1 is per application for Rs. 50 lakhs - irrespective of quantum of Connectivity.
- Conn-BG2: As a security deposit equivalent to capital cost:
 - For terminal bay only (where no ATS(Associated transmission system)) or
 - For terminal bay plus ATS
- Conn-BG3: @ Rs 2 lakhs/MW- as a security for booking existing system
- Conn-BG2
 - For only Terminal Bay with no ATS

Voltage level of allocated terminal bay	Conn-BG2 (per terminal bay)
132 kV	Rs. 2 crore
220/230 kV	Rs. 3 crore
400 kV	Rs. 6 crore
765 kV	Rs. 12 crore

- The above Conn-BG2 for terminal bay is not applicable In case entity (i) proposes to construct the terminal bay(s) on its own or (ii) seeks Connectivity at a terminal bay constructed or being constructed by another Connectivity grantee or (iii) seeks Connectivity through electrical system or switchyard of a generating station

OR

Conn-BG2 = capital cost of ATS + terminal bay (where ATS is there)

TREATMENT OF CONN-BGS:

- Conn-BG1 i.e. Rs 50/Lakh shall be returned within 30 days of COD of full capacity.
 - In case part capacity is relinquished say 200 MW out of 500 MW is relinquished then Conn-BG1 shall be returned after COD of 300 MW.
- Conn-BG2 and Conn-BG3 shall be returned in five equal parts over five years corresponding to the generation capacity which has been declared under commercial operation.
- In case Connectivity is relinquished, subsisting Conn-BG2 shall be encashed corresponding to the ATS and terminal bay(s), construction of which has already been awarded for implementation.
- The proceeds of encashed Conn-BG2 shall be used for reducing Monthly Transmission Charges under the Sharing Regulations

ELIGIBILITY FOR GNA

- State Transmission Utility on behalf of distribution licensees connected to intra-State transmission system and other intra-State entities. No financial liability on STUs.
- A buying entity connected to intra-State transmission system
- A distribution licensee or a Bulk consumer, seeking to connect to ISTS, directly, (50 MW & above)
- Trading licensees (engaged in cross border trade) for drawal and injection into the Grid
- Transmission licensee connected to ISTS for drawal of auxiliary power.
- Added by first amendment
 - Intra-State injecting entity for purpose of injection into ISTS

GNA FOR STATES:

- ❖ Each State shall have a General Network Access (GNA) to ISTS.
- ❖ To start with GNA for States shall be specified based on ISTS drawal for last 3 years.
- ❖ States shall be able to schedule power under long term or medium term or short term contracts based on its own assessment of merit order on day ahead basis within GNA quantum. This flexibility will help them optimise their overall procurement cost.
- ❖ Additional GNA may be sought by State as per their requirement.
- ❖ States shall pay transmission charges for GNA quantum in accordance with CERC(Sharing of inter-state transmission charges and losses) Regulations 2020.
- ❖ Any drawal beyond GNA shall be with additional charges.
- ❖ GNA once granted shall remain valid until relinquished.
- ❖ GNA granted to a State may be utilized by another State.
- ❖ GNA can be applied for by
 - + STU on behalf of intra-state entities or
 - + intra-state entity

GRANT OF GNA

- ❖ For the first year GNA for states shall be considered based on historical data of last 3 years for yearly maximum ISTS drawl and daily maximum ISTS drawal.
- ❖ GNA shall be the average of 'A' for the financial years 2018-19, 2019-20 and 2020-21:
where,
 - ❖ 'A' = {0.5 X maximum ISTS drawal in a time block during the year} + {0.5 X [average of (maximum ISTS drawal in a time block in a day) during the year]}
- ❖ STU shall be the entity to whom GNA shall be deemed to be granted as per above on behalf of intra state entities. Transmission charges liability shall be with intra-state entities as per prevailing regime.
- ❖ STUs within 3 months of coming into force of these regulations, on behalf of intra-state entities, may apply for additional GNA over and above the GNA deemed
- ❖ States may apply for additional GNA to be added in next 3 years, every year in September.

GRANT OF ADDITIONAL GNA TO STUS

- ❖ Deemed GNA computed for a STU 'A' is 4000 MW.
- ❖ 'A' applies for additional GNA for 800 MW within next 3 months which is granted to 'A' by CTU,
 - ❖ GNA for 'A' will become 4800 MW (4000 MW + 800 MW).
- ❖ 'A' may apply once in every financial year by the month of September for additional GNA for the next 3 financial years indicating the start date for such quantum.

Financial Year	Additional GNA granted in each FY from a specified date	Total GNA after grant of additional GNA
2023-24	200 MW w.e.f. 22.6.2023	5000 MW w.e.f. 22.6.2023
2024-25	100 MW w.e.f. 18.5.2024	5100 MW w.e.f. 18.5.2024
2025-26	300 MW w.e.f. 14.9.2025	5400 MW w.e.f. 14.9.2025

GNA FOR TRADING LICENSEE-CROSS BORDER CASES



where

-G1 is a generating station located in other Country

-A is the border substation at which GNA is sought for purpose of injection into Indian grid

-B is the border substation at which GNA is sought for purpose of drawal from Indian grid

-B-1 is buying entity located in other Country.

USE OF GNA BY ANOTHER GNA GRANTEE

- ❖ Any entity having surplus GNA for a period due to reduction in load or seasonal variation, can authorize part of its granted GNA to others with prior approval of CTU. (for period not exceeding 3 year and on mutually agreed terms)

- ❖ Liability to pay GNA charges shall be with original GNA grantee

For example, Punjab may buy GNA capacity for a specific quantum from Delhi/Haryana in case there is diversity in their ISTS drawal requirement and optimise their transmission charges.

- ❖ Suppose UP has 10000 MW GNA and in a season, it may not need to draw for 800 MW from ISTS. Punjab may have ISTS drawal requirement additional to its GNA of 8000 MW in that season. Punjab can use GNA of UP as per mutually agreed terms.
- ❖ Subject to availability of drawal capacity of the State.
- ❖ For the purpose of calculation of transmission deviation charges, GNA of Uttar Pradesh and Punjab shall be considered as 9,200 MW and 8,800 MW respectively for that period.

TEMPORARY GNA (T-GNA)

- ❖ Product akin to prevailing STOA.
- ❖ Can be availed over and above GNA.
- ❖ 1 time block to 11 months.
- ❖ Scheduling flexibility on day ahead basis.
- ❖ Priority to get corridor allocation after GNA grantees.
- ❖ Payment of transmission charges 1 month in advance.

T-GNA

❖ Applicants- buyers

- Distribution licensee /bulk consumer/captive generating plant / ESS / generating station for auxiliary/startup
- Trading license on behalf of buyers
- Power exchanges

❖ Application fees- Rs 5000/application

❖ Bilateral transactions

- Advance application for grant of T-GNA: For T-GNA starting on or after the (D+3) day- same month or next month starting
- Exigency application for grant of T-GNA: Application made on (D) day for grant of T-GNA with scheduling for (S) day, which may be (D) day or (D+1) day or (D+2) day, with a minimum start time of 7 (seven) time blocks unless specified otherwise in the Grid Code:
 - Maximum for 1 day

Advance application category:

- Quantum of T-GNA in MW;
- Start time of T-GNA in terms of time-block and date;
- End time of T-GNA in terms of time-block and date;
- Point of injection, if available, or in the absence of the point of injection, the target injection region;
- Point of drawal;
- Standing Clearance of SLDC under whose jurisdiction the point of drawal is located, in case the buyer is an intra-State entity and;

EXIGENCY APPLICATION CATEGORY:

- Contracted quantum of power (MW) to be scheduled at point of injection;
- Start time of T-GNA in terms of time-block and date;
- End time of T-GNA in terms of time-block and date;
- Point of injection;
- Point of drawal;
- Standing Clearance of SLDCs under whose jurisdiction the point of drawal and point of injection are located, in case the buyer or the supplier is an intra-State entity, as applicable.
- Copy of contract

REVISION OF T-GNA

- T-GNA granted under Exigency application category or under Advance application category for a period not exceeding one month cannot be revised.
- T-GNA granted under Advance application category for a period of more than one month may be reduced for the balance period with a prior notice of one (1) month by the T-GNA grantee:
- Provided that applicable T-GNA charges for the quantum of T-GNA granted shall be payable for the notice period of one (1) month.

SCHEDULING REQUEST FOR POWER UNDER T-GNA

- ❖ Advance application category:

Scheduling request by T-GNA grantees under Advance application category shall be made on day ahead basis before the opening of bidding window for collective transactions under day ahead market, as per provisions of the Grid Code.

- ❖ T-GNA granted under Exigency application category shall be considered as schedule, which cannot be revised.

TRANSMISSION CHARGES FOR T-GNA

- ❖ Transmission charge rate for T-GNA, in Rs./MW/time block, for a State shall be published for each month by the Implementing Agency in terms of the Sharing Regulations.
- ❖ Transmission charges for T-GNA, in case of bilateral and collective transactions, shall be payable only at point of drawal, as per the last published Transmission charge rate for T-GNA for the State where such point of drawal is located:
- ❖ Under collective transactions, transmission charges for T-GNA shall be payable for drawal schedules more than GNA quantum or T-GNA quantum or both, as applicable.
- ❖ In case any scheduling request under T-GNA is not approved by RLDC on day ahead basis or curtailed for the reasons of transmission constraints or grid security, the transmission charges for such quantum not scheduled or curtailed shall be refunded to the T-GNA grantee.

ALLOCATION OF TRANSMISSION CORRIDOR

- ❖ State having GNA, can request scheduling from injection point of its choice as per its contract. The methodology of scheduling and priority of transmission corridor allocation shall be covered under the Grid Code.
- ❖ In case the scheduling request of the GNA Grantee cannot be accommodated by RLDC due to constrain in transmission corridor, RLDC shall allocate the available transmission corridor amongst the GNA grantees in proportion to their GNA within the region or from outside region and the GNA grantee shall be eligible to schedule power under any contract within such allocated transmission corridor. In case the revised schedule is not furnished by the GNA Grantee, RLDC shall finalise the schedule for such GNA Grantee by pro rata reduction of schedule under each contract for such constrained transmission corridor.
- ❖ Transmission corridor shall be allocated on day ahead basis to GNA grantees and TGNA grantees as per the priority and indicative time-line as indicated in following illustration:

Scheduling and Dispatch Code

Timeline	Activity	Product
6:00 a.m.	ISGS to Declare Capacity (DC)	GNA
7:00 a.m.	Entitlement of Beneficiaries by RLDCs	GNA
8:00 a.m.	Requisition by Beneficiaries	GNA
8:00 a.m.	SLDC to intimate Secondary & Tertiary reserves	AS
8:15 a.m.	Congestion Check by RLDCs	GNA
8:30 a.m.	Revised Schedule by Beneficiaries	GNA
9:00 a.m.	Final GNA Schedule.	GNA
9:00 a.m.	T-GNA Schedule requisition by Regional Entity	T-GNA
9:15 a.m.	T-GNA Schedule requisition by SLDC on behalf of Intra-State Entities	T-GNA
9:15 a.m.	Intimation of replacement of power by REGS	GNA
9:45 a.m.	Final T-GNA Schedule	T-GNA
9:45 a.m.	RLDC to incorporate replacement schedules	GNA
10:00 a.m.	DAM /TRAS Start	DAM
11:00 a.m.	DAM /TRAS Close	DAM
11:45 a.m.	Provisional DAM Result	DAM
12:15 p.m.	NLDC Exception	DAM
01:00 p.m.	Final DAM Schedule	DAM
02:00 p.m.	RLDC to process Exigency Application received upto 1 pm	T-GNA
02:00 p.m.	SCUC STEP 1- NLDC to publish List of Genco likely to be below Tech Min. considering unconstrained DAM results	SCUC
02:30 p.m.	SCUC STEP 2- Beneficiaries can revise schedule of Genco below Tech Min.- Final & binding schedules of identified Gencos	SCUC
03:00 p.m.	SCUC STEP 3- NLDC to commit identified Genco based on requirement. Bringing units upto Tech min. & also indicate URS in these GENCO to be kept as reserve.	SCUC
	Revision of Schedule & Exigency Applications	
22:45 p.m.	RTM Session open for 00.00 hrs. to 00.30 hrs.	RTM
23:00 p.m.	RTM Session close for 00.00 hrs. to 00.30 hrs.	RTM
23:15 p.m.	RTM Clearance & Scheduling	RTM
23:30 p.m.	NLDC to finalise schedules under RTM,SCED & Ancillary Services	RTM/SCED/AS
23:35 p.m.	RLDC shall publish the final schedules for despatch	RTM/SCED/AS

CURTAILMENT

- ❖ For the reason of transmission constraints or in the interest of grid security, transactions already scheduled may be curtailed:
 - ❖ Transactions under T-GNA shall be curtailed first followed by transactions under GNA.
 - ❖ Within transactions under T-GNA, bilateral transactions shall be curtailed first followed by collective transactions under day ahead market followed by collective transactions under real time market.
 - ❖ Within bilateral transactions under T-GNA, curtailment shall be on pro rata basis based on T-GNA.
 - ❖ Within transactions under GNA, curtailment shall be on pro rata basis based on GNA.

RELINQUISHMENT OF GNA

- ❖ STU may relinquish GNA on behalf of identified Intra-state entity and the concerned Intra-State entity shall pay relinquishment charges that shall be equal to 18 times the transmission charges paid by such intra-State entity for the last billing month, corresponding to the relinquished quantum.
- ❖ Intra-State entities granted GNA may relinquish full or part GNA and shall pay relinquishment charges corresponding to the relinquished quantum for 18 months or balance period of the GNA whichever is lower.

TRANSMISSION CHARGES

- ❖ Transmission charges towards ISTS -to be paid by the entities drawing power from ISTS.
- ❖ Under the prevailing arrangement, the buying entities pay the transmission charges either explicitly or implicitly by way of transmission charge being embedded in the sale price of the seller.
- ❖ Payment of transmission charges shall be as per CERC(Sharing of inter-state transmission charges and losses)Regulations,2020 as amended from time to time.

ADDITIONAL POINTS IN FIRST AMENDMENT

- Introduction of GNA_{RE} and $T-GNA_{RE}$ – Entities connected with intra-State transmission system, distribution licensee or a bulk consumer may seek GNA_{RE} for drawl of power exclusively from the renewable sources. Similarly, buying entities connected with intra-State transmission system, distribution licensee, a bulk consumer, Generating Stations including REGS, Captive Power Plant Standalone ESS may seek $T-GNA_{RE}$ for drawl of power exclusively from the renewable sources.
- For the entities which are connected with ISTS as well as STU transmission system, they will not be charged to the extent of direct drawal from the STU line.

KEY AMENDMENTS UNDER THE THIRD AMENDMENT TO THE GNA REGULATIONS

Grant of Connectivity with Solar hour access and non solar hour access

A. Existing SOLAR based entities

- + Connectivity grantee :Renewable energy generating station(REGS) (with or without ESS) or Renewable Power Park Developer based on solar source or an RHGS with a combination of solar source with another source (with or without ESS) shall be converted as entity with solar hour access.
- + Such entity will have injection scheduling rights corresponding to Connectivity, quantum for solar hours and corresponding to non-solar capacity, during non-solar hours limited to the quantum of Connectivity, and drawl rights throughout the day.
- + Such entity shall be given first right to apply for non solar capacity within three months, post which its non solar access shall be given to others .

B.NEW WIND /ESS

- + An REGS based on Wind source (with or without ESS) or ESS may seek Connectivity with non-solar hours access (injection scheduling rights for non-solar hours, at a terminal bay
 - × through a separate dedicated transmission line, or
 - × already allocated to another REGS or Renewable Power Park, with solar hour access

C. New SOLAR based entities

- × New Applicants based on solar or RHGS with a combination of Solar source, shall be granted solar hour access with injection scheduling rights upto connectivity quantum for solar hours, drawl rights through out the day and injection rights equal to the capacity of the other than solar sources (limited to the quantum of Connectivity) during non solar hours.
- × The remaining part of the Connectivity (i.e. Connectivity quantum – non solar access quantum), if more than 50 MW, will be available for grant of connectivity with non solar access

C. Grant of Connectivity with Solar hour access and non solar hour access....contd.

- ❖ Example: for conversion of the existing REGS to entity with Solar hour access

Details of REGS	Connectivity granted	injection scheduling right during Solar hours	injection scheduling right during Solar hours	Capacity available for grant of Connectivity with non solar hour access
Solar – 1000MW	1000 MW	1000 MW	0 MW	1000MW
Solar – 700MW Wind – 400MW ESS – 200MW	1000 MW	1000 MW	600 MW	400
Solar – 600MW Wind – 500MW ESS – 160MW	700 MW	700 MW	660 MW	Nil (as the minimum quantum for non solar access is < 50MW)
Solar – 700MW Wind – 400MW ESS – 100MW Add. Capacity granted under Reg 5.2 for 100MW ESS	1000 MW	1000 MW	600 MW	400 MW

B. Amendments to address the issues pertaining to the grant of Connectivity

- ❖ Connectivity to REGS based on LOA or PPA route shall be limited to quantum of LOA or PPA. For the balance quantum of Connectivity, if any, entity may seek Connectivity on other route.
- ❖ Connectivity to a generator on same bay as bulk consumer and vice versa permitted with detailed procedure for accounting to be issued by NLDC.
- ❖ Final Grant of Connectivity with tentative date of start date of connectivity , firm date to be confirmed in 6 months of final grant.
- ❖ RLDC to monitor the utilization of the connectivity quantum by a connectivity grantee and GNA granted to the entity under Regulation 17.1(iii) and propose the actions to be taken in case of non-optimal utilization of Connectivity or the GNA quantum by the Grantees

LAND or LAND BG to LOA conversion

- ❖ Conversion may be done for full or part quantum of Connectivity granted.
- ❖ After conversion on LoA/PPA route, if the LoA/PPA is terminated and applicant seeks reconversion on Land/Land BG, the same shall be considered as following:
 - ❖ conversion of Connectivity shall be accompanied by a non-refundable conversion fee of Rs 50,000/MW along with applicable taxes
 - ❖ Land document required to be furnished within three months from such approval
 - ❖ entity shall furnish the Financial Closure documents considering start date of Connectivity as the scheduled date of commercial operation
 - ❖ any subsequent conversion to Connectivity on LoA/PPA route shall not be permitted
- ❖ Applicant shall not be eligible to seek another Connectivity using the same land once it has been converted from land route to LoA/PPA route

THANK YOU
