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Ref. No: CERC/2023-24/06 **Date: 18-10-2024**

The Secretary
Central Electricity Regulatory Commission
3rd & 4th Floor, Chanderlok Building
36, Janpath Road,
New Delhi - 110 001

Subject: Comments/ Suggestions on the Staff Paper on Stakeholder's suggestions for necessary modifications in the GNA Regulations
Reference: L-1/261/2021/CERC dt: 09-10-2024

Sir,
With reference to L-1/261/2021/CERC dt: 09-10-2024, I in the capacity of Power Sector Professional, furnish my comments/ suggestions on the above mentioned Staff Paper on Stakeholder's suggestions for necessary modifications in the GNA Regulations. I shall be grateful if the Hon'ble Commission recognizes my concerns and makes necessary modifications.
I also crave leave to submit at a future date further materials on the subject which may be available to me in the event I am of the opinion that the same would render meaningful assistance to the Hon'ble Commission in the matter.
I would like to inform you that, I will attend the public hearing if any in Online Video Conferencing mode. I shall be grateful if the Hon'ble Commission shall share the Microsoft teams link of the Public Hearing with my email id: **arkajyoti009@gmail.com**

Yours faithfully,

Arkajyoti Bhattacharjee
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Comments on Issue No. 1: Comments on the Substitution of GNA Quantum under GNA Regulations (Regulation 17.1(i) to Regulation 17.1(iii))

1. Whether Substitution of GNA from Regulation 17.1(i) to Regulation 17.1(iii) Should Be Allowed?

Comments:

- **Support for Substitution**: Allowing substitution of GNA from **Regulation 17.1(i)** to **Regulation 17.1(iii)** makes sense from an operational flexibility and cost-efficiency perspective. It can:
    - **Optimize transmission costs**: Entities may benefit from reduced transmission costs by having direct access to ISTS, bypassing the need for an intermediate intra-State network.
    - **Support Renewable Energy Integration**: DISCOMs, especially those with high RE power procurement targets, may find it more convenient to optimize their access to RE power through direct ISTS connectivity rather than relying on the intra-State transmission system.

Concerns:

- **Impact on STU and Intra-State Network Utilization**: The intra-State transmission system may face under-utilization if entities migrate their GNA to ISTS connectivity. This could result in financial and operational issues for the STU, particularly if a large number of entities opt for direct ISTS access.

2. Should Substitution Be Coupled with Conditions?

If the substitution is allowed, it is crucial to couple it with certain conditions to ensure fairness and prevent adverse impacts on the intra-State network.

a. *NOC from the STU*

- **Comment**: Requiring an NOC from the STU is reasonable and should be mandated. This ensures that the STU is aware of the migration and can assess any potential impact on the intra-State transmission system. The STU can also ensure that its interests are protected, particularly in terms of system reliability and transmission charges.

b. *Liability for Payment of Intra-State Network Charges or Relinquishment Charges*

- **Comment**:
    - Entities that relinquish GNA under Regulation 17.1(i) to switch to direct ISTS access under Regulation 17.1(iii) should be liable for **relinquishment charges**, as they are essentially discontinuing their use of the intra-State network. This is important to ensure that the STU and intra-State transmission operators are compensated for the capacity that was originally allocated to them.
    - **Suggestion**: The relinquishment charges should be clearly defined and reasonable to avoid unnecessary financial burdens on DISCOMs while protecting the interests of the STU.

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c. *Radial Connectivity with ISTS*

- **Comment**:
  - Radial connectivity with ISTS under Regulation 17.1(iii) should be a mandatory condition. This ensures that the entity does not simultaneously access both intra-State and ISTS networks, which could lead to double charging or inefficient usage of transmission resources.
  - **Suggestion**: The Commission could also consider setting specific technical criteria or conditions for radial connectivity to ensure operational stability and reliability of the grid.

Additional Suggestions

1. **Impact Assessment**:
   - The Commission could mandate that CTU/STUs conduct an **impact assessment** to analyze how substitution of GNA will affect intra-State transmission system operations, financials, and long-term planning.
2. **Facilitate RE Integration**:

For entities procuring a high proportion of renewable energy, direct access to ISTS should be facilitated to help meet their renewable energy obligations efficiently and at lower costs, especially when RE generation sites are located in regions that are more effectively connected to ISTS.

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Comments on Issue No. 2: Use of GNA by an Entity Connected to an Intra-State Network but Not a GNA Grantee

1. *Whether such utilization of GNA by a non-GNA grantee should be allowed?*

Comments:

- **Support for Utilization of GNA by Non-GNA Grantees**: Allowing an entity ('B') connected to the intra-State network to utilize the GNA granted to another entity ('A') covered under **Regulation 17.1(iii)** has potential benefits:
  - **Facilitate Renewable Energy (RE) Procurement**: Entity 'B' can access competitive power, especially RE, which can help in meeting Renewable Purchase Obligations (RPO) efficiently. This is particularly beneficial for DISCOMs aiming to meet their RPO targets without having direct ISTS connectivity.
  - **Optimized Use of ISTS**: Allowing such utilization promotes optimal use of the ISTS network. Many GNA grantees may not fully utilize their allocated GNA, and sharing with non-GNA grantees would maximize utilization, improving the overall efficiency of the system.
  - **Economic Benefits for Distribution Licensees (DISCOMs)**: Such an arrangement could provide DISCOMs connected to the intra-State network access to more competitive power options, especially RE, which could result in cost savings for both the DISCOM and end consumers.

Concerns:

- **System Security and Reliability**: The introduction of non-GNA grantees into the ISTS network could complicate grid management, especially if such arrangements are not tightly regulated. System operators would need to ensure that this sharing does not compromise network reliability.
- **Transmission Cost Allocation**: While this arrangement may benefit non-GNA grantees, there needs to be clear guidance on the allocation of transmission costs to ensure that the original GNA grantee (entity 'A') is not unfairly burdened.

2. *Conditions for Allowing Utilization of GNA by Non-GNA Grantees*

If such utilization of GNA is allowed, it should be subject to several conditions to ensure fairness, system security, and efficiency:

a. NOC from the STU:

- **Comment**:
  - Requiring an **NOC from the State Transmission Utility (STU)** is crucial. The STU should confirm that the intra-State network has the capacity to handle the additional load resulting from entity 'B' utilizing the GNA of entity 'A'.
  - This ensures that intra-State network constraints are considered before any approval is granted and prevents overloading of the network.

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b. Same State or Region Requirement:

- **Comment**:
  - Initially, the sharing of GNA should be limited to **entities located in the same State or the same region**. This minimizes the complexity of managing such arrangements, particularly with regard to transmission cost allocation, grid management, and operational coordination.
  - If such arrangements are extended beyond the State or region, additional **conditions** should be imposed, including stricter monitoring of available capacity and the imposition of cross-region transmission charges.

c. No ISTS Augmentation for GNA Utilization:

- **Comment**:
  - Utilization of GNA by non-GNA grantees should be **subject to the availability of margin in the ISTS**, and no ISTS augmentation should be allowed specifically to facilitate such usage. This ensures that GNA utilization does not lead to unnecessary investments or upgrades in ISTS infrastructure.
  - **Suggestion**: Before granting approval for such utilization, the Central Transmission Utility (CTU) should confirm that adequate margins are available within the existing ISTS capacity.

d. Restriction to GNA, Not GNARE:

- **Comment**:
  - The sharing of GNA should be **restricted to GNA only** and not extend to **GNARE (General Network Access for Renewable Energy)**. This distinction is important because GNARE is specifically designed for entities that need access to ISTS to meet their renewable energy obligations.
  - **Rationale**: GNARE involves a different set of cost structures, incentives, and waiver mechanisms that should not be conflated with general GNA arrangements.

3. *Waiver of Transmission Charges for RE Power Drawl by Entity 'B'*

Comment:

- **Transmission Charges Waiver for RE**: The **waiver of transmission charges for renewable energy (RE) power** drawl is a critical incentive under the GNA Regulations, designed to promote the uptake of renewable energy. In this case, if **entity 'B' draws RE power** while utilizing **entity 'A's GNA**, a waiver of transmission charges should be considered for the following reasons:
  - **Incentivizing RE Procurement**: Allowing the waiver would encourage greater participation by entities connected to intra-State systems to procure more RE, aligning with India's clean energy goals and RPO requirements.
  - **Equity for Non-GNA Grantees**: Given that GNA grantees are eligible for such waivers when they draw RE power, it would be fair to extend this benefit to non-GNA grantees utilizing GNA for RE procurement. This ensures consistency in the treatment of entities drawing RE power.

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Conditions for Waiver:

- To avoid potential misuse, the waiver should be allowed only when:
    - The power drawn by entity 'B' is **certified as RE** power, with supporting documentation from appropriate authorities.

Entity 'A' remains liable for any transmission charges that would otherwise apply if non-RE power is drawn.

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Comments on Issue No. 3: Dual Connectivity for Bulk Consumers for the Same Load Capacity

1. *Whether Dual Connectivity Should Be Allowed for Bulk Consumers for the Same Load Capacity?*

Comments:

- **Support for Dual Connectivity**:
  - Granting **dual connectivity** to Bulk Consumers, i.e., connecting to both the ISTS and intra-State networks for the same load capacity, would enable consumers to efficiently source **Round-The-Clock (RTC) green power**. By leveraging RE power from ISTS during its availability and switching to banked power from intra-State entities during low RE hours, Bulk Consumers can ensure a more sustainable and reliable power supply. This is particularly important for large industrial consumers aiming to maximize their use of renewable energy and minimize their carbon footprint.
- **Increased Flexibility for DISCOMs**:
  - Allowing Bulk Consumers to have dual connectivity offers DISCOMs the flexibility to manage grid demand efficiently. It could help in balancing load, especially during periods of fluctuating renewable energy generation, ensuring reliable power for industrial loads, which is critical to industrial productivity.

Concerns:

- **Redundant Capacity**:
  - Dual connectivity may lead to **redundant capacity** in both the ISTS and intra-State networks. This raises concerns about who will bear the cost for this unused capacity when a bulk consumer is connected to both systems for the same load but is not fully utilizing both simultaneously. This redundancy could increase transmission charges for DISCOMs and other consumers connected to these networks.
- **Complexity in System Planning**:
  - Coordinating between the intra-State transmission system (STU) and the ISTS (CTU) is necessary to ensure proper load management. The power flow between these two networks must be monitored carefully, and system planning would become more complex, requiring better coordination to avoid operational inefficiencies.

2. *Conditions for Granting Dual Connectivity*

If dual connectivity is allowed, the following conditions could ensure fairness, transparency, and minimal disruption:

a. NOC from the STU:

- **Comment**:
  - Before granting dual connectivity, the **NOC from the STU** must be mandatory. The NOC should confirm the intra-State network's ability to handle the potential changes in load resulting from dual connectivity and ensure that the consumer commits to paying **applicable charges** for the intra-State network, even if the majority of their load shifts to the ISTS. This will prevent underutilization of the intra-State system and ensure fair cost recovery.

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b. Commitment to Pay Applicable Transmission Charges for Both Networks:

- **Comment**:
  - The bulk consumer should commit to paying the **applicable transmission charges** for both networks, whether they are connected to ISTS or intra-State networks. This ensures that the cost of maintaining both transmission systems is fairly distributed among users, preventing stranded or underutilized capacity from becoming a financial burden on DISCOMs or the STU/CTU.
  - If a bulk consumer reduces usage on either the intra-State or ISTS networks, they should still bear a portion of the fixed transmission charges to ensure the system's financial sustainability.

c. Restricting GNARE to RE Power:

- **Comment**:
  - Bulk Consumers should be allowed to receive **GNARE (General Network Access for Renewable Energy)** from ISTS only if they are committed to drawing **only RE power** from the intra-State network as well. If the consumer starts drawing non-RE power from the intra-State network after being granted GNARE, it would be reasonable to **convert the GNARE to GNA** (General Network Access) and apply the standard ISTS charges for GNA as per the **Sharing Regulations, 2020**.
  - This would prevent consumers from exploiting the system by drawing conventional power from the intra-State network while taking advantage of RE waivers under ISTS for the same load. Ensuring a clear distinction between GNA and GNARE usage would maintain the integrity of the system's financial and operational framework.

3. *Redundant Capacity and Transmission Charges*

Comments:

- **Transmission Cost Allocation**:
  - **Redundant capacity** in either the ISTS or intra-State network is a significant concern, especially if bulk consumers switch between networks based on market conditions (e.g., drawing more RE power from ISTS when available and switching back to the intra-State system during RE shortages). DISCOMs should not bear the financial burden of underutilized intra-State capacity if bulk consumers prioritize ISTS usage.
  - To mitigate this, consumers should be made liable for the fixed transmission charges of both networks, as applicable, regardless of whether they are fully utilizing the capacity in each system. This prevents costs from being passed on to DISCOMs and ensures fair cost-sharing for infrastructure maintenance.

Coordinated Planning between CTU and STU:

- **Suggestion**:
  - The interflow between ISTS and intra-State networks requires **coordinated planning** between the CTU and STU. This coordination is essential to avoid operational issues, such as power imbalances, congestion, or suboptimal utilization of transmission capacity. The planning process should include forecasting power flows, scheduling transmission availability, and assessing network stability in real-time.

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Regular reporting of transmission usage by dual-connected bulk consumers to both CTU and STU will help in managing the power flows and preventing overloading or under-utilization of network capacity.

Comments on Issue No. 4: Provision of Conn-BG2 for Bulk Consumers

1. *Whether Implementation of the System for Providing Connection to ISTS for Grant of GNA Should Be Implemented as ISTS under TBCB/RTM, for Which the Concerned Entity Shall Submit Conn-BG2?*

Comments:

- **Support for Implementation under ISTS**:
  - Implementing the system for providing connection to ISTS through the **Tariff-Based Competitive Bidding (TBCB)** or **Regulated Tariff Mechanism (RTM)** routes ensures a transparent and competitive process. This aligns with the broader goal of optimizing transmission infrastructure development and managing costs efficiently.
  - Requiring the bulk consumer to submit **Conn-BG2 (Bank Guarantee)** would help secure the financial commitment of the entity, ensuring that the necessary transmission system augmentation, such as ICT (Interconnecting Transformer) or LILO (Line-In Line-Out) arrangements, is completed and maintained by ISTS.

Concerns:

- **Equity for Bulk Consumers**:
  - Bulk consumers should not be unfairly burdened with the cost of system augmentation under ISTS. They should only be required to pay for the **proportional share** of the infrastructure they utilize, without having to subsidize other users. Therefore, a balanced approach in charging for system augmentation and ensuring Conn-BG2 serves as an appropriate security measure is important to maintain fairness.

Suggestions:

- **Clear Guidelines for Conn-BG2**:
  - If Conn-BG2 is to be implemented, it would be prudent to have clear and transparent guidelines regarding the **quantum of Conn-BG2** required and the specific purpose for which the funds will be used (e.g., augmenting lines, bays, transformers). This will provide assurance to the bulk consumer that their funds are being used appropriately and not being diverted to other projects.

2. *Whether Post Construction Under ISTS, Transmission Charges for Such ATS or Dedicated Elements Like ICT Should Be Bilaterally Billed to the Bulk Consumer or Considered Under the Transmission Charges Pool?*

Comments:

- **Bilateral Billing for Dedicated Elements**:
  - Dedicated elements like ICTs or LILO arrangements that are constructed **specifically for a bulk consumer's use** should be **bilaterally billed** to that consumer. This ensures that the costs associated with the infrastructure that is directly benefiting a specific consumer are appropriately recovered from that entity, rather than being pooled and spread across all consumers in the transmission network.

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- **Bilateral billing** offers greater transparency and accountability, allowing bulk consumers to be billed fairly for the specific transmission elements they use while protecting DISCOMs and other consumers from absorbing these costs through the general transmission charges pool.

Transmission Charges Pool for Common Elements:

- For shared elements or general system augmentations that benefit multiple entities, such costs can be included in the **transmission charges pool**. This ensures that the costs for infrastructure that benefits the larger grid and multiple users are distributed equitably across all stakeholders, including bulk consumers, DISCOMs, and other connected entities.

Suggestions:

- A hybrid approach could be implemented where **dedicated elements** are bilaterally billed, while **shared infrastructure** (e.g., system strengthening projects) is included in the transmission pool. This would promote fairness while ensuring that all consumers pay their fair share of common infrastructure costs.

3. *Should the Charges for Providing Connection to ISTS, Constructed Under ISTS, Be Paid by the Entities Under GNA/GNARE Where More Than 50% of Transmission Charges Are Waived Off?*

Comments:

- **Equitable Cost Allocation**:
  - For **GNARE (General Network Access for Renewable Energy)** entities that benefit from waivers on more than 50% of their transmission charges, the remaining costs for **dedicated transmission infrastructure** should still be borne by them, proportionally. Even with transmission charge waivers, these entities are consuming network resources, and it is fair to require them to pay for the infrastructure that directly supports their connection to the grid.
  - DISCOMs and other stakeholders should not bear the burden of costs for infrastructure used by GNARE entities, especially if those entities are benefiting from substantial waivers. This ensures that **cost recovery is balanced** and the grid remains financially sustainable.

Encouraging Renewable Energy Integration:
While GNARE entities benefit from transmission charge waivers to promote renewable energy integration, it is essential that these waivers do not lead to disproportionate financial strain on DISCOMs or other stakeholders. Therefore, the waivers should apply only to **operational charges**, while the **capital cost of dedicated infrastructure** (e.g., ICTs, bays) should still be covered by the GNARE entities, ensuring a fair distribution of costs.

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Comments on Issue No. 5: Utilization of Connectivity Granted to a Subsidiary by Another Subsidiary of the Same Parent Company

1. Allowing Utilization of Connectivity by Subsidiaries of the Same Parent Company

Comments:

- **Flexibility for Corporate Entities**:
  - Allowing **utilization of connectivity** granted to one subsidiary by another subsidiary within the same parent company can provide **operational flexibility** for large corporate entities, especially those with multiple subsidiaries operating under a unified energy strategy. This could be particularly beneficial for large renewable energy developers with diversified portfolios across various subsidiaries.
  - This flexibility would enable **optimal use of available capacity** and help companies meet their renewable energy obligations, especially if one subsidiary's projects are delayed, but another subsidiary has excess capacity.

Concerns for DISCOMs:

- **Impact on Transmission Planning**:
  - DISCOMs rely on structured and predictable **connectivity usage** to plan their distribution and transmission systems effectively. Allowing the transfer of connectivity among subsidiaries without strict guidelines could lead to **unplanned capacity utilization** and **network congestion**, disrupting the overall grid management.
  - Additionally, allowing such transfers could reduce **transparency**, as multiple subsidiaries could effectively operate as a single entity without regulatory oversight, leading to challenges in the calculation of transmission charges and grid balancing.

Suggestions:

- **Guidelines and Monitoring**:
  - If the transfer of connectivity among subsidiaries of the same parent company is allowed, it should come with **clear guidelines** that ensure transparency and **strict monitoring** by the nodal agency (CTU/STU) and DISCOMs. Such transfers should be subject to approval, with considerations of potential network congestion and transmission constraints.
  - The process should include the requirement for the **submission of updated connectivity agreements** and the **recalculation of transmission charges**, so that all relevant stakeholders, including DISCOMs, have clarity on capacity usage and the financial obligations of the parent company and its subsidiaries.

2. Ensuring Proper Allocation of Transmission Charges and Compliance

Comments:

- **Equitable Distribution of Transmission Charges**:
  - If connectivity is shared between subsidiaries, it is crucial that **transmission charges** are allocated **fairly** based on actual usage of capacity. This prevents subsidiaries from avoiding their financial obligations while still benefiting from shared infrastructure.

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- The current regulations require submission of **Conn-BG2 and Conn-BG3**, which serve as financial guarantees for the infrastructure usage. Any transfer or utilization of connectivity should ensure that each subsidiary is **liable for its share of the charges**.

Suggestions:

- **Framework for Transmission Charge Allocation**:
  - A clear framework for the **allocation of transmission charges** among subsidiaries within the same parent company should be established. This will ensure that DISCOMs and other stakeholders receive appropriate compensation for infrastructure usage and that costs are **equitably distributed**.
  - The regulations could also include **penalties for misuse** or misreporting of shared connectivity, ensuring compliance with **capacity utilization norms**.

3. Potential Impact on Renewable Energy Grid Stability

Comments:

- **Grid Integration and REGS Compliance**:
  - Allowing subsidiaries to utilize the same connectivity could create challenges in ensuring the **integration of renewable energy generation systems (REGS)** into the grid. Subsidiaries may have different energy generation profiles, leading to difficulties in balancing the grid and ensuring smooth integration of renewable power.
  - DISCOMs must ensure that the **aggregate impact** of connectivity sharing does not compromise **grid stability**, especially as more renewable energy sources, with their inherent variability, come online.

Suggestions:

- **Coordination and Grid Management**:
  - There should be a strong focus on **coordinated grid management** between the transmission licensees and DISCOMs to monitor the **cumulative effects** of shared connectivity usage on the stability of the grid. **Real-time data sharing** and enhanced communication systems may be needed to handle the variability and ensure smooth operation.
  - The transfer of connectivity should be contingent upon the subsidiaries meeting specific **grid integration requirements**, ensuring they comply with the **renewable energy obligations (RPO)** and contribute to **balancing grid supply and demand**.

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Comments on Issue No. 6: Platform for Providing NOC by the STU in a Time-Bound and Transparent Manner

1. Challenges in the Current NOC Process

Comments:

- **Delays and Inefficiencies**:
  - Currently, entities seeking **General Network Access (GNA)** to the **Inter-State Transmission System (ISTS)** face significant delays in obtaining the necessary **No Objection Certificate (NOC)** from the **State Transmission Utility (STU)**. This not only impacts project timelines but also creates **operational bottlenecks**, particularly for large consumers and renewable energy developers that rely on a smooth and timely approval process.
  - **Lack of transparency** in the existing manual process often leads to **discrimination** or favoritism, especially when multiple entities are vying for limited transmission capacity.

Suggestions:

- **Streamlining via a Centralized Platform**:
  - A **centralized online platform** would introduce much-needed efficiency and transparency. By allowing applicants to submit requests and receive **real-time updates** on the status of their NOC application, the system would not only improve the **accountability** of the STU but also ensure that all stakeholders—**DISCOMs, licensees, and developers**—have equal access to available capacity.
  - This system should be designed to provide clear, **time-bound responses** (approval or rejection with valid reasons) from the STU, ensuring faster decision-making and **predictable timelines** for project developers and bulk consumers.

2. Regulatory Compliance and Non-Discriminatory Access

Comments:

- **Ensuring Non-Discriminatory Open Access**:
  - Under **Section 39(2)** and **Section 42(2)** of the **Electricity Act, 2003**, it is the duty of STUs and distribution licensees to provide **non-discriminatory open access** to their transmission systems. The current system may not fully guarantee this, given the potential for **delayed approvals** or **lack of clarity** in capacity allocation.
  - For DISCOMs, non-discriminatory access is crucial to ensure a **level playing field** for all market participants. Any delays or lack of transparency in the process could lead to **market distortions** where some entities are unfairly advantaged over others.

Suggestions:

- **Transparent Capacity Allocation**:
  - The proposed platform should integrate clear guidelines for **transmission capacity availability**, ensuring that all entities, including **distribution licensees** and **bulk consumers**, are treated equitably in the process of obtaining NOCs.

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- Additionally, the system should maintain a **public record of pending and approved NOC requests**, so stakeholders can assess capacity availability and the fairness of the approval process.

3. Accountability and Time-Bound Responses

Comments:

- **Addressing Accountability Gaps**:
  - One of the key issues highlighted by stakeholders is the **lack of accountability** in the current manual NOC process. Delays can arise due to bureaucratic inefficiencies, which is detrimental to DISCOMs and other entities seeking access to the grid.
  - The absence of **time-bound deadlines** for issuing NOCs often leaves applicants in uncertainty, further delaying the implementation of crucial energy projects, including renewable energy initiatives.

Suggestions:

- **Time-Bound Approvals**:
  - The online platform should incorporate **strict timelines** for processing NOC applications. For instance, the STU should be mandated to **approve or reject** the application within a set period (e.g., **30 days**), failing which a **deemed NOC** should be automatically granted. This would ensure that projects are not stalled unnecessarily.
  - In case of rejection, the platform should provide a detailed explanation outlining the reasons for rejection, giving applicants an opportunity to address any shortcomings and **reapply promptly**.

4. Ease of Use and Integration with Other Stakeholders

Comments:

- **Centralized and Unified Platform**:
  - Developing a **single, centralized portal** managed by the **CTU** and accessible to all stakeholders (STU, SLDC, RLDC, DISCOMs, and applicants) would ensure a **seamless and unified process**. This would not only reduce administrative burden but also ensure a **consistent approach** to the NOC issuance process across different states and regions.
  - For DISCOMs, integration with this platform will provide **real-time visibility** into the transmission capacity available in the state network, allowing them to plan better for **power procurement** and **load management**.

Suggestions:

- **User-Friendly Interface and Data Sharing**:
  - The proposed online platform should be designed with a **user-friendly interface** that enables **easy submission of applications** and tracking. It should also facilitate **real-time data sharing** between STUs, SLDCs, and DISCOMs, enabling better **coordination** between these entities.

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- Additionally, the platform could feature a **capacity reservation system**, where entities can view **available transmission capacity** and reserve it in real time, thus promoting efficient use of the network.

5. Maintaining Grid Reliability and Fair Pricing

Comments:

- **Impact on Grid Management**:
  - A more streamlined process for granting NOCs should not compromise **grid reliability**. As more entities gain access to intra-state transmission systems, DISCOMs must ensure that grid stability is maintained, especially with the growing influx of renewable energy sources.
  - **Fair pricing** of transmission charges is also critical. Entities must not be allowed to **manipulate the NOC system** to gain undue advantages in accessing lower-cost power sources or avoid transmission charges.

Suggestions:

- **Capacity Allocation Based on Grid Conditions**:
  - The platform should include tools for **grid reliability assessment**, ensuring that the issuance of NOCs takes into account the **current state of the grid** and any potential risks. This could include mechanisms for **dynamic pricing** of transmission charges based on **real-time demand and capacity constraints**.

Additionally, the system should be capable of **limiting approvals** in cases where grid conditions are likely to be stressed, preventing overloading and ensuring **secure grid operation**.

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Comments on Issue No. 7: Provision for Solar Hours and Non-Solar Hours Connectivity

1. Optimizing Transmission Utilization

DISCOMs, having large RE share, face challenges due to the intermittent nature of renewable energy (RE) generation and the underutilization of transmission infrastructure during non-solar hours. The proposal to separate connectivity into **solar-hour connectivity** and **non-solar hour connectivity** is a promising solution for maximizing the efficient use of transmission lines. By allowing other entities (such as ESS or other generators) to use the same infrastructure during non-solar hours, the proposal helps optimize grid resources, increase RE penetration, and reduce overall transmission costs.

2. Incentivizing Energy Storage Integration

The integration of **Energy Storage Systems (ESS)** is essential to improve the dispatchability of RE and balance the grid. Granting **non-solar hour connectivity** to solar generators who install storage systems is a smart incentive. This would encourage RE generators to co-locate ESS, which will help stabilize the grid during non-solar hours and reduce the need for additional fossil-based generation. This approach would align with the national goal of reducing dependence on coal-fired plants.

DISCOMs could also benefit from this as it would improve grid stability and reduce the costs associated with managing RE variability.

3. Flexibility in GNA and Connectivity

Granting **flexibility** to existing RE generators (without storage) to add storage and maintain GNA for non-solar hours is a critical move. However, to avoid delays in system optimization, a strict timeline (24 months) for storage deployment is reasonable. If the deadline is not met, the system can be opened to other RE generators or storage operators.

DISCOMs must support this initiative, as it ensures that grid infrastructure is not underutilized, reducing unnecessary costs for building new transmission assets.

4. Transparent and Non-Discriminatory Access

The proposal also emphasizes the **sharing of dedicated grid infrastructure** between solar and non-solar hour users. It ensures fair compensation for using shared infrastructure and helps mitigate disputes over grid access. DISCOMs should advocate for a **clear, transparent pricing mechanism** to determine transmission charges for shared infrastructure. This will help avoid conflicts between RE generators and ensure non-discriminatory access to the grid, improving overall operational efficiency.

5. Addressing Implementation Challenges

Although this proposal is promising, DISCOMs should raise concerns about the **implementation challenges** associated with:

- **Coordination between stakeholders**: Close collaboration between CTU, RLDC, and SLDC will be required to ensure smooth scheduling and operation of solar and non-solar hour connectivity.

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- **Monitoring and enforcement**: Proper mechanisms should be established for monitoring compliance with scheduling and utilization rules to prevent overuse or underuse of grid capacity.
- **Right-of-way issues and project delays**: Expanding transmission infrastructure remains a challenge, especially in acquiring land and clearing forested areas. While this model reduces the need for new infrastructure, DISCOMs should urge for improved coordination at the state level to minimize delays.

6. Consumer Impact

Optimizing the use of existing transmission infrastructure can potentially lower **transmission tariffs** for end consumers. DISCOMs should advocate for this model, which helps maintain affordable consumer tariffs by reducing the capital expenditure required for new transmission lines.

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Comments on Issue No. 8: Provision for Minimum Transmission Capacity Utilization for Hybrid ISTS Connectivity

1. Importance of Efficient Transmission Utilization for DISCOMs

For DISCOMs having large RE share, efficient utilization of transmission infrastructure is critical to maintain affordable power tariffs and ensure grid stability. Underutilization of transmission capacity by **Renewable Hybrid Generating Stations (RHGS)** could lead to inefficiencies, increasing costs that might be passed on to consumers. Mandating a **minimum transmission capacity utilization** is, therefore, a reasonable step to ensure that valuable transmission assets are not wasted and that other potential users can access the grid.

2. Supporting the 50% Minimum Annual Capacity Utilization

The proposal for a **50% minimum annual capacity utilization** aligns with the need to prevent grid congestion and ensure optimal use of the ISTS. From the perspective of DISCOMs, this requirement would help:

- Maximize the value of existing transmission infrastructure.
- Ensure that the grid is available for more generators, including storage and other renewable sources, who are capable of maintaining a higher capacity utilization.
- Reduce the need for costly expansions, which could increase transmission tariffs.

A threshold of 50% strikes a balance between ensuring adequate utilization and recognizing the intermittency challenges faced by RHGS, particularly solar and wind combinations.

3. Mechanism for Revoking Underutilized Connectivity

The proposal to revoke underutilized capacity after the first year of operation provides a **fair and transparent mechanism**. For DISCOMs, this approach ensures that any unutilized transmission capacity can be reassigned to other generators, improving the overall efficiency of the grid.

However, this process should be coupled with a **clear and transparent monitoring mechanism** to assess the actual utilization of connectivity. DISCOMs should advocate for:

- **Real-time monitoring** of RHGS utilization to ensure compliance with the minimum capacity threshold.
- **Clear guidelines** for reducing connectivity allocations in a way that avoids disrupting the financial and operational planning of RHGS projects.

4. Flexibility for RHGS Operators

While enforcing a minimum utilization requirement is important, it is also necessary to provide some **flexibility** to RHGS operators. Variability in renewable energy production (due to factors like seasonal wind patterns or solar generation fluctuations) should be considered when evaluating whether the minimum utilization has been met. For example, RHGS projects might experience lower-than-expected generation in the initial months after commissioning.

DISCOMs should support the provision that allows RHGS operators to maintain connectivity based on **average maximum injection during any time block of a day over the year**, instead of a strict

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annual 50% requirement. This approach provides flexibility to the generator while ensuring that transmission assets are used effectively.

5. Addressing Potential Disputes

The implementation of these provisions may lead to disputes between RHGS operators and other stakeholders regarding the allocation or revocation of transmission capacity. To minimize such disputes, DISCOMs should advocate for:

- **A clear and fair appeals process** for RHGS operators who believe that their connectivity has been unfairly reduced.
- **Transparent criteria** for determining underutilization, including provisions for force majeure events or other external factors that could impact RHGS generation.

6. Impact on Consumer Costs

Efficient utilization of transmission capacity by RHGS can help DISCOMs maintain **lower consumer tariffs** by reducing the need for additional infrastructure investments. By mandating minimum utilization, this proposal can ensure that transmission costs are kept in check, which is particularly important as RE penetration increases.

DISCOMs should actively support measures that optimize transmission asset usage to avoid higher tariffs and ensure more reliable power supply.