

FARAZ KHAN

Anagram Partners

faraz.k@anagrampartners.in

India's renewable energy sector is witnessing a regulatory shift that increasingly favours reliable and demand-focused power delivery over the mere addition of installed capacity. Recent developments across connectivity and general network access ("**GNA**"), deviation settlement ("**DSM**"), battery energy storage systems ("**BESS**") and state-level electricity banking are part of the same regulatory change. Renewable power must not only be installed but must also be capable of being connected, scheduled, stored and delivered in a manner that supports grid stability and customer demand.

Introduction: the shift from renewable capacity to renewable delivery

For much of the last decade, the central legal and business challenges in Indian renewable energy projects were land, tariff, power purchase agreements ("**PPA**"), permits, financing and commercial operation. Those issues remain foundational. What is changing is the weight that regulation now places on the quality and reliability of power generated from renewable energy.

A renewable platform is now judged not only on its megawatts, but on its ability to preserve connectivity, comply with connectivity conditions, forecast and schedule accurately, integrate storage where required, and price state-specific banking savings correctly.

This changes diligence for investments and M&A in the sector. It should no longer stop at land title, approvals, PPA terms and tariff approval. Connectivity status, pre-commissioning change-in-control restrictions, DSM exposure, BESS eligibility for subsidy and waiver, and accurate determination of potential cost-savings from banking facilities made available by states are becoming increasingly relevant in determining valuation, conditions precedent, indemnity and price adjustment related issues.

Connectivity and GNA: grid access as a core project asset

Connectivity is no longer a routine implementation approval - it is now a core project asset, on par with land rights, offtake arrangements and grid delivery. The third amendment¹ to the CERC (Connectivity and General

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¹ Central Electricity Regulatory Commission (Connectivity and General Network Access to the Inter-State Transmission System) (Third Amendment) Regulations, 2025 ("**GNA Third Amendment Regulations**").

Network Access to the Inter-State Transmission System) Regulations, 2022 (“**GNA Regulations**”) has placed grid access and connectivity to the inter-state transmission system (“**ISTS**”) at the centre of project execution. The GNA Regulations now shape the commercial judgment on several core project choices, including project location, the mix between solar, wind and storage, grid-access timing, bank guarantee exposure and pre-commissioning changes in control.

The third amendment to the GNA Regulations introduces time-specific grid access rights, which are among its more consequential changes. A project's right to inject power into the grid now depends not only on its connectivity quantum but also on the time of day at which it is permitted to do so.² Under this framework, the National Load Despatch Centre (“**NLDC**”) declares solar hours weekly for each state or part-state based on anticipated solar insolation, and the remaining time blocks are non-solar hours.³ Whether a project has ‘solar-hour access’ or ‘non-solar-hour access’ determines when it has the right to inject power into the grid and in what quantity.⁴ This means that a solar project and a wind or BESS project connected at the same ISTS substation will have different access rights and, therefore, different revenue profiles. Structuring of projects is directly impacted since site selection, technology mix, BESS capacity, hybridisation decisions and bid commercials must now be calibrated to the time blocks the project can actually access and not merely the aggregate connectivity quantum.

The third amendment to the GNA Regulations also requires developers to be disciplined in meeting land-related milestones.⁵ Where a developer seeks to implement a project at different land parcels from those submitted at the time of application, the amended regulations require a formal application to the Central Transmission Utility of India Limited (“**CTUIL**”) ⁶, cure of any document deficiencies within prescribed timelines, and continued possession of the original parcels until CTUIL confirms acceptance of the substitution.⁷ The substitution may be sought only once and, critically, it does not reset the project's point of connectivity or the outer timeline for its start date.⁸ For renewable energy developers, land needs to be monitored across the project's lifecycle. Delays in curing deficiencies or completing land substitution may compress timelines for financial closure and potentially put the commercial operation date (“**COD**”) at risk.

Further, objective financial consequences have been introduced for the withdrawal of connectivity or GNA applications, depending on the stage at which the applicant exits the process, including the potential forfeiture of application fees and bank guarantee exposure.⁹ Separately, CERC's proposed framework for milestone-extension compensation remains in draft form. Under the proposed milestone extension charge framework, extensions for delays in land acquisition, financial closure or commissioning would not be treated as routine schedule flexibility, but as regulatory relief to be obtained for a price.¹⁰ Further, CERC has offered relief to

2 Regulations 2.4, 13.1 and 62.1 of the GNA Third Amendment Regulations.

3 Regulation 2.4 of the GNA Third Amendment Regulations.

4 Regulations 2.4 and 13.1 of the GNA Third Amendment Regulations.

5 Regulation 13.1 of the GNA Third Amendment Regulations.

6 For ISTS-connected projects, land substitution is processed through the CTUIL, acting as the ‘Nodal Agency’; Regulation 2.1(ab) (i) of the GNA Regulations, 2022.

7 Regulation 13.1 of the GNA Third Amendment Regulations; Regulation 5.10(a)-(e) of the GNA Regulations, 2022.

8 Regulation 13.1 of the GNA Third Amendment Regulations; Regulations 5.10(f)-(g) of the GNA Regulations, 2022.

9 Regulation 3.1 of the GNA Third Amendment Regulations; Regulation 3.7.1-3.7.6 of GNA Regulations, 2022.

10 Draft CERC Order in Petition No. 5/SM/2026 on procedure for levy of compensation charges for extension of connectivity milestones.

existing connectivity holders issued a Letter of Award ("**LOA**") by central Renewable Energy Implementing Agencies ("**REIA**") between 1 January 2019 and 31 May 2025, who have been unable to sign a PPA as of 10 July 2026.¹¹ Such holders may elect, on a one-time basis, to exit the LOA route while retaining connectivity, substitute the LOA with an eligible PPA, or surrender connectivity with the return of the applicable connectivity related bank guarantees. Entities that choose instead to remain under the GNA Regulations continue to be subject to the revocation provisions applicable to LOA-based connectivity holders.¹²

For developers, connectivity strategy is no longer just about holding a place in the queue. Missed milestones, if not duly dealt with, or application withdrawal now carry costs: bank guarantee exposure, higher charges and commissioning risk. For acquirers, connectivity deserves the same scrutiny as any other project asset. Diligence should cover the status of the application, timely compliance with milestones, risk of charges for delay, bank guarantee exposure, whether grid access will actually be available when the project is ready to start operations, any election made or available under the LOA relief framework, and any risk of revocation or withdrawal.

In short, the GNA amendments aim to ensure that connectivity - a scarce resource - stays with developers with the experience and expertise to execute within defined timelines, and not with opportunistic applicants who hold a queue position but cannot commission on time.

Change of control: Prior approval for pre-COD transactions

The third amendment to the GNA Regulations also requires 'control'¹³ of a connectivity grantee to be retained from the date of connectivity application until commissioning.¹⁴ Renewable projects are commonly held through project SPVs, and connectivity is generally obtained at SPV level. CTUIL's procedure for change in control approval¹⁵ applies to connectivity grantees that have not achieved commissioning for their full connectivity quantum and recognises that control may be acquired directly or indirectly.

A platform sale at the holding-company level can therefore still require CTUIL approval, if it changes control over one or more uncommissioned project SPVs holding connectivity. Any pre-COD transaction that changes control of a project SPV, or of a holding company controlling such an SPV - whether by share acquisition or otherwise - should include CTUIL approval as a condition precedent.

Deviation Settlement Mechanism: from generation volume to scheduling accountability

The CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2024 ("**DSM Regulations**") tighten the deviation settlement framework for wind, solar and wind-solar hybrid projects through two changes that compound each other. First, from 1 April 2026, the revenue-neutral tolerance band narrows to 5% for solar and wind-solar hybrid projects and 10% for wind projects.¹⁶ Second, DSM Regulations commence the

11 CERC Order dated July 10, 2026 in Petition No. 11/SM/2026 on the mechanism for connectivity granted on the basis of an LoA pending execution of a PPA.

12 Regulation 24.6(1)(a)(i) of the GNA Regulations revokes connectivity for the relevant capacity if COD is not achieved by the scheduled COD or such extended date for commissioning permitted by the REIA or the distribution licensee.

13 As per Explanation to Regulation 11A(6) of the GNA Regulations, 2022, the term 'Control' has the meaning ascribed to the term under the Companies Act, 2013 and where investment is made under the foreign direct investment (FDI) route, the term 'Control' has the meaning ascribed to the term under the Foreign Exchange Management Act, 1999, or the rules and regulations framed thereunder.

14 Regulation 28.7 of the GNA Third Amendment Regulations; Regulation 11A(6)(a)-(b) of the GNA Regulations, 2022.

15 Regulation 16; Detailed Procedure under the CERC Connectivity and GNA Regulations, 2022.

16 Regulation 8(4), Note 1(ii) of the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters)

move away from measuring deviation by reference to available capacity and towards measuring it against scheduled generation.¹⁷ The two changes have a cumulative effect. The band within which a generator can deviate without financial consequence narrows, while the base against which deviation is measured also contracts, as it shifts from available capacity to the generator's own scheduled generation.

CERC's order dated 31 March 2026 on the value of the "X" factor takes the same approach further. Under the order, the X factor transitions from 100% in FY27 to 0% from FY32, progressively shifting the deviation computation for wind and solar sellers from an available-capacity basis to a scheduled-generation basis.¹⁸ This trajectory was adopted by the CERC despite various opposing comments and alternative suggestions from renewable energy participants during the public consultation process.¹⁹ The regulatory intent is therefore to bring renewable generators in line with the same forecasting and scheduling discipline that applies to conventional generators.

Pending writ proceedings have, for now, limited coercive action against petitioners in certain forums. The Delhi High Court has granted interim protection against coercive action for various renewable energy players who have filed a petition opposing the enforcement of the DSM Regulations.²⁰ The Karnataka High Court has restrained enforcement of Regulations 6(2)(b) and 8(4) against petitioners²¹ and the Madras High Court has granted similar petitioner-specific interim protection.²² However, it is arguable that these 'no coercive action' orders protect only the petitioners involved in each such proceeding. They do not, of themselves, prevent CERC from bringing the DSM Regulations or the 31 March 2026 order into effect.²³ If the interim protections are vacated, there exists at least a theoretical risk that CERC may seek to apply charges or penalties from the date on which the DSM Regulations and the March 2026 order became operative, subject to the final orders of the relevant courts.

For renewable energy companies, litigation has bought time, best used for discussions among industry bodies, the CERC, the ministry of power and the ministry of renewable energy ("MNRE") to find a workable solution. Industry bodies and key industry players maintain that existing forecasting technology in India remains inadequate, and that imposing stricter DSM penalties under such limitations would unfairly penalise developers, particularly existing renewable energy projects, for factors beyond their control.²⁴ The MNRE has itself suggested a detailed study to determine the X factor, a more precise forecast baseline for measuring deviation, and stakeholder consensus before implementing the X-based trajectory.²⁵ Developers should nonetheless continue to strengthen forecasting and scheduling (including oversight of the qualified coordinating agency ("QCA") responsible for forecasting and scheduling), and project-wise DSM monitoring now, so that any future charges are mitigated rather than addressed

Regulations, 2024.

17 Regulation 6(1)-(2) of the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2024.

18 CERC Order in Petition No. 9/SM/2025, dated 31 March 2026, para 7.

19 CERC, Order in Petition No. 9/SM/2025, paras 8–20, 25–26 and 35–49, pp. 4–11, recording the public-consultation process and stakeholder objections and alternative proposals.

20 *Sustainable Projects Developers Association & Anr. v. Central Electricity Regulatory Commission & Ors.*, W.P.(C) 14783/2024, order of the Delhi High Court dated 20 November 2024

21 *National Solar Energy Federation of India v. Union of India*, W.P. No. 13260/2026, order of the Karnataka High Court dated 27 April 2026.

22 *M/s NTPC Green Energy Ltd. & Ors. v. Union of India & Ors.*, W.P.(MD) No. 15318/2026, order of the Madras High Court dated 8 June 2026.

23 CERC Order in Petition No. 9/SM/2025, dated 31 March 2026, paras. 70 and 86.

24 CERC Order in Petition No. 9/SM/2025, dated 31 March 2026, paras. 14.

25 CERC Order in Petition No. 9/SM/2025, dated 31 March 2026, paras. 13, 15 and 49.

retrospectively.

In the context of investments and acquisitions, target assets should be valued on the assumption that DSM costs will ultimately increase in line with the new DSM framework, irrespective of the interim relief that is currently available. Transaction documents should also deal specifically with DSM amounts for the pre-closing periods, preferably through a post-closing true-up supported by an escrow or holdback for DSM debits, and a corresponding pass-through mechanism for DSM credits.

For developers, PPAs should clearly state who bears DSM charges, who receives DSM credits, whether forecasting failure can be passed through to the offtaker, and what happens if the QCA defaults.

BESS: reliable and time-matched power delivery

Energy storage is being positioned as the missing link in India's renewable energy transition. The National Framework for Promoting Energy Storage Systems, 2023 recognises storage as an important enabler for renewable integration, DSM mitigation and grid stability, non-solar-hour value capture and 24x7 renewable power availability.²⁶ This policy direction is supported by amendments to the Electricity Rules, 2005,²⁷ which expressly bring energy storage systems within the 'power system' as defined in the Electricity Act, 2003²⁸ and include provisions enabling their deployment. Further, the Ministry of Power's procurement guidelines²⁹ promote storage by making BESS (i.e., battery-based energy storage systems) a power-sector product that can be separately procured without necessarily being co-located with a solar and/or wind plant. Implementing agencies can invite bids for storage capacity, contract with the storage developer, and then pass that capacity through to DISCOMs or end-buyers under back-to-back arrangements.

The policy support has both a supply-side and a demand-side element. On the supply side, qualifying co-located BESS projects commissioned on or before 30 June 2028 may benefit from a waiver of ISTS charges on transmission.³⁰ Viability Gap Funding ("VGF") supplements project economics by subsidising a portion of the upfront capital cost of selected BESS projects. The first and second VGF tranches together cover approximately 43 GWh of BESS capacity, with the second tranche providing approximately INR 5,400 crore for projects aggregating approximately 30 GWh. Neither benefit is unconditional. The ISTS waiver is available only to projects that satisfy the prescribed eligibility criteria and conditions, while VGF under the March 2024 scheme is disbursed in tranches tied to financial closure, land possession, COD and post-COD milestones.³¹

On the demand side, the Energy Storage Obligation requires distribution licensees and other obligated entities to meet a minimum portion of their electricity requirement through renewable energy backed by storage. The obligation is 2.5% in FY27 and is

26 Ministry of Power, National Framework for Promoting Energy Storage Systems, pp. 1-2 and paras 2.1, 2.5 and 5.14, 22 August 2023.

27 Rule 18 of the Electricity (Amendment) Rules, 2022.

28 Section 2(50) of the Electricity Act, 2003.

29 Ministry of Power, Guidelines for Procurement and Utilization of Battery Energy Storage Systems as part of Generation, Transmission and Distribution Assets, along with Ancillary Services, 2022.

30 Regulation 13(2)(b)(ii) and Table 2 of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020, as substituted by Regulation 5(2) of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) (Fourth Amendment) Regulations.

31 Ministry of Power, Government of India, Sanction Order F. No. 42-26/1/2022-RCM (Part 1), Scheme for Viability Gap Funding for Development of Battery Energy Storage Systems, 15 March 2024, para. 2(ii), and attached Operational Guidelines, paras. 2.1, 2.4–2.6 and 5.1–5.6; Ministry of Power, Government of India, Annual Report 2025–26, ch. 9, p. 44.

set to increase to 4% by FY30.³² Rising ESO levels will therefore progressively expand procurement requirements for storage-linked renewable power and should support demand for projects that can deliver during peak and non-solar hours.

For developers, BESS can improve the project's ability to supply power during peak and non-solar hours, enable a project to bid for customised 'round-the-clock' and 'firm and dispatchable renewable energy' demand, reduce deviation exposure, and improve grid utilisation.³³ Projects with integrated storage capacity will, as a result, increasingly attract greater interest from acquirers. However, these benefits are not automatic. Developers must ensure that COD and PPA milestones are met and eligibility conditions are complied with for each project.³⁴

Energy banking and open access: state-specific economics, not a generic renewable benefit

Energy banking remains important for supplying electricity to commercial and industrial (C&I) and other captive users -but it is no longer a generic renewable benefit that can be assumed across states. Banking rules, charges, settlement cycles and withdrawal restrictions are state-specific and materially affect PPA pricing. Banking is not uniform across states. Each state has its own rules on who can bank power, what it costs, how long the benefit lasts, when the power can be used, and what happens if it remains unused. Beyond tariff, the economics of a renewable energy generating station depend on savings generated from energy banking.

In this article, we analysed energy banking regulations and recent developments in three states with significant renewable energy capacity and activity: Maharashtra, Gujarat and Rajasthan. Each state has adopted banking provisions under open access regulations framed by its respective State Electricity Regulatory Commission.

The Rajasthan Electricity Regulatory Commission notified its open access regulations with effect from 21 May 2025³⁵, codifying the earlier suo-motu banking framework from 2020³⁶ into formal regulations. The Gujarat Electricity Regulatory Commission introduced energy banking for renewable energy in 2024 under its Green Energy Open Access Regulations. While the Maharashtra Electricity Regulatory Commission ("**MERC**") allowed banking since 2016³⁷, MERC's 2025 Multi-Year Tariff Order³⁸ shifted solar banking to a time-restricted, slot-based framework, limiting the use of banked solar energy to the same solar hours. Although the Bombay High Court³⁹ later quashed the enforcement of the order, a substantially similar restriction was reinstated following further proceedings in 2026.⁴⁰ Pursuant to the 2026 order, the use of banked power has again been restricted to the same time-slot in which it was generated, undermining the very purpose of banking. Key provisions applicable to electricity banking in Maharashtra,

32 Ministry of Power, Government of India, Order F. No. 09/13/2021-RCM, Renewable Purchase Obligation (RPO) and Energy Storage Obligation Trajectory till 2029–30 (22 July 2022), para. 15 and table, p. 3.

33 Ministry of Power, National Framework for Promoting Energy Storage Systems, 2023, paras. 2.1, 2.5 and 5.14; Regulations 2.4 and 13.1 of the Central Electricity Regulatory Commission (Connectivity and General Network Access to the Inter-State Transmission System) (Third Amendment) Regulations, 2025.

34 Ministry of Power, Guidelines for Procurement and Utilization of Battery Energy Storage Systems as part of Generation, Transmission and Distribution Assets, along with Ancillary Services, 2022, Section IV and model-contract milestones.

35 Rajasthan Electricity Regulatory Commission (Terms and Conditions for Green Energy Open Access) Regulations, 2025.

36 Policy Directives issued by the State Government on 22nd January 2020 to the Rajasthan Electricity Regulatory Commission u/s 108(1) of the Electricity Act, 2003.

37 Regulation 20 of the Maharashtra Electricity Regulatory Commission (Distribution Open Access) Regulations, 2016.

38 MERC Review Order dated 25 June 2025 to the MERC MYT Order 75 of 2025, dated 28 March 2025.

39 *O2 Renewable Energy v. Private Limited and Ors. vs. Maharashtra Electricity Regulatory Commission and Ors.*, 2025:BHC-OS:19982-DB.

40 Review Order dated March 25, 2026, issued by MERC pursuant to the MYT Order dated 28 March 2025 and the Review Order dated 25 June 2025.

Gujarat and Rajasthan are set out in the table below.

State	Eligibility / structure	Banking charge	Settlement cycle	Key restrictions / treatment
Maharashtra ⁴¹	(i) Consumers having a contract demand / sanctioned load > 100 kW; (ii) Captive consumers	8% in-kind banking charge.	Monthly settlement; Unutilised banked energy lapses monthly; no carry-forward to subsequent months;	Time restricted drawal of banked energy; energy banked in non-peak hours cannot be used in peak hours.
Gujarat ⁴²	(i) Consumers having a sanctioned load > 100 kW; (ii) Captive consumers	INR 1.50/ kWh banking charge, extended until 30 June 2026. ⁴³	Monthly settlement; Unutilised banked energy lapses monthly; no carry-forward to subsequent months;	Banked energy capped at 30% of total energy from DISCOM; Risk of a further increase in banking charges.
Rajasthan ⁴⁴	Captive consumers	8% in-kind banking charge.	Annual banking cycle (April to March); Unutilised banked energy lapses annually	Banked energy capped at higher of (a) 25% of captive RE generated; or (b) 30% of total energy from DISCOM; no drawal during peak hours.

Where banking is stable, it can support captive or open access economics. For acquirers, any financial assumptions based on banking should be tested at the asset and PPA level because they can materially affect customer savings. Where the investment thesis depends on a favourable banking regime, the acquisition model should account for the downside of higher charges, shorter settlement cycles or loss of banking availability.

Conclusion

Indian renewable energy regulation is not moving away from capacity addition. It is adding the requirement to deliver time-based and grid-secure power as a second discipline. The shift is deliberate and gradual to ensure that the sector's growth momentum is preserved. At the same time, it steadily raises the standard. Connectivity must be

⁴¹ Regulation 20 of the Maharashtra Electricity Regulatory Commission (Distribution Open Access) Regulations, 2016.

⁴² Regulation 9 of the Gujarat Electricity Regulatory Commission (Terms and Conditions for Green Energy Open Access) Regulations, 2024.

⁴³ Regulation 2 of the Gujarat Electricity Regulatory Commission (Terms and Conditions for Green Energy Open Access) (Fourth Amendment) Regulations, 2026; Regulation 1(4) of the principal regulations.

⁴⁴ Regulation 11.8 of the Rajasthan Electricity Regulatory Commission (Terms and Conditions for Green Energy Open Access) Regulations, 2025.

preserved and used well, generation must be scheduled with greater accuracy, storage must be integrated to enable peak-hour delivery and to counter the tightening of banking regimes by the states.

Stricter regulation is becoming a market filter. Developers that protect connectivity, meet milestones, manage DSM exposure and master state-wise delivery economics will pull ahead of those that cannot. For acquirers, capacity, approvals and PPAs are necessary but no longer sufficient: the real diligence question is no longer “can this project generate power” but “can it store power, reliably deliver it, on time, and at the right price”.

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