

Plug the oversight gaps

THE SUSTAINABLE HARNESSING and Advancement of Nuclear Energy for Transforming India Act, 2025, brings about two fundamental shifts in our nuclear governance framework. First, it opens nuclear power generation to multiple participants, transforming state monopoly into a competitive market. Second, it establishes a statutory regulator by conferring legal status on the Atomic Energy Regulatory Board (AERB), which earlier functioned as a government delegate. By pairing market opening with statutory regulation, it aligns nuclear energy with the core architecture of regulated markets.

This piece examines the design of the regulator. While the Act incorporates regulatory best practices, including allowing the AERB to make regulations without prior government approval, it remains cautious and executive-centric. This caution is understandable in a high-risk sector, but need not undermine regulatory effectiveness. For example, a provision for periodic performance evaluation of the regulator would enhance its accountability, without altering the balance of powers.

Composition: In regulatory design, composition is the first line of defence against capture. On this count, the Act offers limited safeguards. The board comprises a chairperson, a whole-time member, and up to six part-time members (PTMs). The Act mandates no balance. A board dominated by PTMs risks weak continuity, limited engagement, and inadequate institutional memory in a sector that demands sustained, technically informed oversight. Conversely, a board composed almost entirely of WTM members may narrow perspectives and reduce the benefits of external expertise.

The Act does not mandate disciplinary diversity. It does not provide for representation or minimum expertise in key technical, legal, and risk disciplines. Consequently, the board may be shaped by select technical perspectives, limiting its ability to engage with the full spectrum of regulatory challenges. By leaving qualifications and experience entirely to executive prescription, the Act sets no statutory minima or transparent criteria. While flexibility has value, excessive discretion risks appointments getting driven by administra-

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tive convenience rather than competence. Taken together, the composition framework may not guarantee a strong, multidisciplinary, and independent regulator.

Jurisdiction: The government and the regulator shares jurisdiction. While the government retains responsibility for licensing the setting up of specified facilities and activities, the board's role is confined to issuing safety authorisations—a precondition for licensing—and recommending suspension, modification, or cancellation of licences. Licensing is central to oversight; its absence constrains regulatory effectiveness.

More significantly, the Act permits the government, in the interest of national defence and security, to exempt prescribed substances, facilities, activities, and associated premises from the AERB's authority. It authorises the government to form separate regulatory bodies for defence-related activities or for the design and development of advanced nuclear reactors, vesting them with safety, security, safeguards, and licensing powers for specified jurisdictions. While such flexibility is defensible, their breadth underscores that ultimate regulatory control in critical domains resides with the executive. Greater transparency and proportionality in the exercise of these powers would be essential to sustain confidence in the regulatory framework.

Independence: Although the board may determine the number and categories of personnel required, the provision of such personnel, along with their salaries, allowances, incentives, and service conditions, rests with the government. Even the appointment of consultants and

experts is subject to government-specified terms. This arrangement limits the board's ability to attract and retain specialised talent, undermining a key rationale for an independent regulator.

Financial autonomy is similarly constrained. The board's budget and annual report must be submitted to the Atomic Energy Commission, a government-constituted body. Unlike most modern regulators, the Act does not provide for a dedicated regulatory fund or a predictable stream of fee-based income, besides permitting government grants and a fee for safety authorisation applications. The absence of an independent revenue source may impair operational autonomy and long-term capacity.

The AERB's functional autonomy is institutionally dependent on the government. The Act enables, rather than entitles, the board to access research centres and labs, academic institutions, experimental and training facilities, and technical and scientific support and expertise linked to nuclear and radiation safety. For a regulator charged with safeguarding public safety, the ability to draw upon such resources should be an inherent right, not subject to executive permission.

Tenure design further affects independence. A three-year term for the chairperson and members allows for periodic review, but may be inadequate for building institutional depth. Longer tenures, coupled with clear removal protections and restrictions on post-tenure employment, enable regulators to develop expertise, assert authority, and take decisions insulated from short-term pressures.

Quasi-legislative: The Act grants the

AERB quasi-legislative authority to frame regulations, codes, and safety standards. But it doesn't mandate stakeholder consultation for making regulations, nor does it require placing regulatory documents before Parliament. In high-risk and capital-intensive sectors, such safeguards enhance transparency, discipline rule-making, and improve regulatory outcomes.

Equally concerning is the lack of a requirement for regulatory impact assessment. For a sector as complex and high-risk as nuclear energy, systematic evaluation of the economic, social, environmental, and safety implications of regulatory choices could greatly improve policy outcomes. Introducing such assessments would strengthen evidence-based decision-making and reinforce public trust in the evolving nuclear governance framework.

Quasi-judicial: Certain actions of the board, such as suspension or cancellation of authorisation and imposition of penalties, are quasi-judicial in nature. While the Act provides for appellate remedies, the board combines investigative, enforcement, and adjudicatory functions without clear internal separation or explicit safeguards such as show cause notices and adherence to principles of natural justice. Fusion of these functions heightens the risk of perceived bias, even where decisions are taken in good faith.

Conclusion: The Act marks an evolution in India's nuclear governance by placing the regulator on a statutory footing and clarifying its formal powers in a newly opened market. However, the design reflects caution more than commitment to independence and accountability. Weaknesses in composition, shared jurisdiction, constrained financial and staffing autonomy, and limited procedural safeguards limit the board's effectiveness.

As India moves towards a more diversified nuclear sector, regulatory credibility will matter as much as installed capacity. Investors value predictability, citizens expect uncompromising safety oversight, and international partners look for alignment with best practices. Strengthening the regulator's independence, capacity, and procedural legitimacy would enhance trust in the system and ensure the nuclear market delivers on safety and growth.

The SHANTI Act marks an evolution in India's nuclear governance by placing the regulator on a statutory footing