



The **Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India Act, 2025** ("SHANTI Act") aims to modernise India's civil nuclear framework under a single unified statute. It repeals and replaces the Atomic Energy Act, 1962 and the Civil Liability for Nuclear Damage Act, 2010. It consolidates nuclear regulation, licensing, safety, liability, and compensation into a single comprehensive statute and introduces private sector participation with enhanced regulatory oversight. The Act applies to nuclear energy production, radiation use, waste management, transport, and ancillary activities across India.

Key Objectives

- Expand nuclear power generation to meet India's clean energy targets (e.g., 100 GW by 2047).
- Open nuclear energy activities to private Indian companies and joint ventures under strict licensing and safety regimes.
- Modernise the liability and compensation framework for nuclear damage.
- Strengthen the regulatory authority with statutory and enforcement powers.

INSIGHTS

SHANTI ACT 2025 — Nuclear Energy Law at a Glance

KEY LEGAL PROVISIONS

Scope & Definitions (Section 1 & 2)

The Act applies to nuclear energy production, radiation use, waste management, transport, and ancillary activities across India. It outlines the meaning of critical terms such as "Nuclear Installation", "Operator", "Radiation Activity", "Nuclear Damage" and "Safety Authorisation".

Licensing & Participation (Section 3)

Who can undertake nuclear energy activities?

- Central Government
- Government companies
- Indian private companies
- Joint ventures notified by the Central Government

Note: Foreign companies or direct foreign ownership remain restricted; no specific foreign participation or FDI provisions are included.

Activities requiring licence (Section 3 (2))

- Building, owning, operating, and decommissioning nuclear plants
- Fabrication, transport, trade, and storage of nuclear fuel
- All radiation-related operations with safety authorisation.

Reserved Government Functions (Section 3(5))

- Uranium or isotopic separation.
- Spent fuel reprocessing and high-level waste management.
- Heavy water production.
- Other strategic facilities notified by Central Government.

Regulatory Framework (Sections 17-24)

Atomic Energy Regulatory Board (AERB) is the Authority which is granted statutory status with expanded powers of inspection, enforcement, and safety compliance.

- Composition: Chairperson, 1 whole-time member and up to 7 part-time expert members.
- Appointments via search-cum-selection committee; fixed tenures; enhanced independence.
- Key responsibilities include setting up safety standards, radiation limits, emergency protocols, and quality assurance.



Mechanism for Compensation & Claims (Sections 54 -60)

The Act creates a dedicated, fast-track claims mechanism rather than reliance on general civil courts.

- Section 54-55: Claims Commissioner for individual claims.
- Sections 56-57: Establishes Nuclear Damage Claims Commission for claims above specified thresholds.
- Section 60: Appeals lie to the Appellate Tribunal (Electricity) and ultimately to higher courts.

Safety, Enforcement & Penalties

The Act places emphasis on continuous safety compliance and risk-based preventive regulation. It also includes monetary penalties & imprisonment for safety non-compliance, distinguishing minor versus grave violations.

It is pertinent to note that the Act enables modification, suspension, or cancellation of licences for non-compliance.

Strict no-fault liability for operators is retained. Operators are liable irrespective of negligence.

Civil Liability for Nuclear Damage (Sections 11-16)

Operator Liability (Section 11)

Operators are strictly liable for nuclear damage caused by incidents at installations or involving materials transported from them.

Non-Liability & Exceptions (Section 12)

Operators are not liable for damages from:

- Grave natural disasters of exceptional character.
- Acts of armed conflict, insurrection, or terrorism.
- Damage to the installation itself or transport means at the time of incident.

Liability Limits (Section 13)

- Total operator liability for each nuclear incident is capped at the SDR equivalent of 300 million, subject to notification.
- Tiered liability amounts based on installation category appear in the Second Schedule.
- Government may seek funds under the Convention on Supplementary Compensation where necessary.

Government Liability (Section 14)

Central Government is liable for:

- Any excess over operator liability.
- Incidents at government-owned installations.
- Incidents due to specified exempt causes.
- Government may establish a Nuclear Liability Fund to meet obligations.

Insurance Requirements (Section 15)

Operators must obtain and maintain insurance or other financial security covering their liability caps before operations commence (except for Central Government-owned installations).

Right of Recourse (Section 16)

Operator's right of recourse against suppliers exists only:

- Where explicitly provided in contract.
- When the incident is caused by deliberate acts.

The Act introduces a tiered liability structure based on the size and type of nuclear installation. This is a pragmatic shift from the prior flat cap system.

The SHANTI Act, 2025 represents a transformative overhaul of India's nuclear energy governance, opening the sector to regulated private participation while modernising liability norms, strengthening the regulatory framework, and aligning nuclear power with India's long-term clean energy strategy. By unlocking private capital and technical expertise, the Act seeks to accelerate the deployment of nuclear capacity, including Small Modular Reactors (SMRs) and other advanced technologies. This positions nuclear energy as a stable, low-carbon complement to renewable sources and a critical pillar in achieving India's net-zero and energy security objectives, all while balancing public safety with investor confidence.



ANUSHA SONI
Partner



CHANDAN GOSWAMI
Partner



T. SHREYASHI
Partner

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