

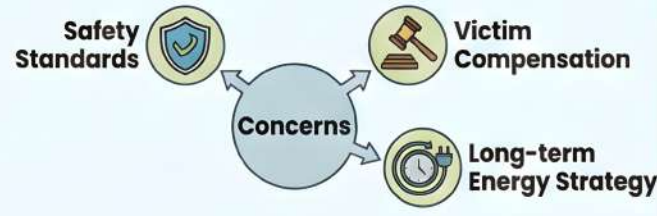


SHANTI (Sustainable Harnessing of Advancement of Nuclear Technology for India)



Context

The SHANTI (Sustainable Harnessing of Advancement of Nuclear Technology for India) Act 2025, have triggered concerns regarding safety standards, victim compensation, and long-term energy strategy.



About

Traditionally, nuclear power plants in India have been owned and operated only by state-owned Nuclear Power Corporation of India Ltd (NPCIL) and its fully-owned subsidiary Bharatiya Nabhikiya Vidyut Nigam (BHAVINI).

SHANTI Act, 2025

It was passed in December 2025, It represents a landmark overhaul of India's nuclear governance.

It consolidates the sector's legal framework by repealing the Atomic Energy Act, 1962 and the Civil Liability for Nuclear Damage Act (CLNDA), 2010.

SHANTI Act, 2025 Replaced ~~Atomic Energy Act, 1962 and Civil Liability for Nuclear Damage Act (CLNDA), 2010~~

Key Objectives & Pillars

100 GW Target

The Act provides the legal foundation to reach India's goal of 100 GW of nuclear capacity by 2047.

Private Sector Integration

For the first time, private Indian companies and joint ventures can build, own, and operate nuclear power plants under strict government licensing.

Regulatory Independence

It grants statutory recognition to the Atomic Energy Regulatory Board (AERB), making it more independent and accountable to Parliament rather than just the executive.

Small Modular Reactors (SMRs)

The Act facilitates the deployment of Bharat Small Modular Reactors (BSMRs) to support industrial decarbonisation.

Major Provisions

Dual Permit System:

Entities must obtain a licence from the Central Government for construction/operation and a separate safety authorisation from the AERB for radiation-related activities.

Reserved Strategic Domains:

The Central Government retains exclusive control over sensitive "fuel cycle" activities, including uranium enrichment, spent fuel management, and heavy water production.

Dispute Resolution:

Establishes the Atomic Energy Redressal Advisory Council. The Appellate Tribunal for Electricity (APTEL) serves as the appellate authority, with further challenges possible in the Supreme Court.

Concerns raised over SHANTI Act

The **Fukushima Daiichi nuclear disaster** exposed weaknesses in reactor containment design and emergency preparedness.

The **Chernobyl disaster** involved structural design flaws, including a positive power coefficient and inadequate emergency shutdown systems.

The **Three Mile Island accident** revealed significant control room design failures and communication lapses by suppliers.