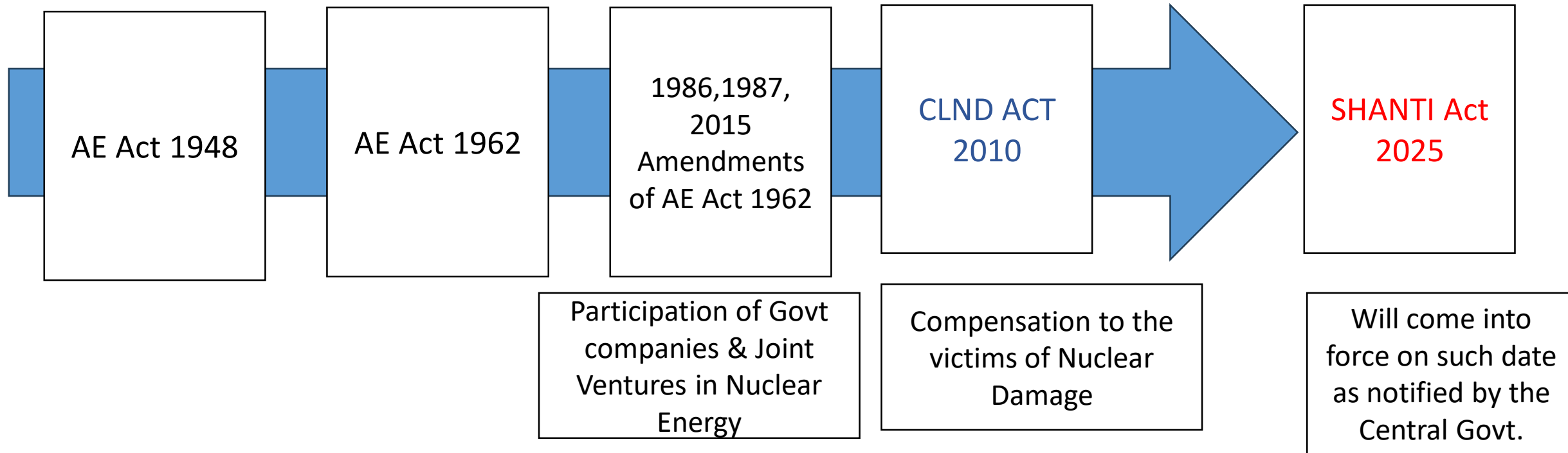


Sustainable Harnessing and
Advancement of Nuclear Energy for
Transforming India
Act, 2025- **SHANTI ACT-2025**

Evolution of India's Legal Framework



Objectives

- To enable participation of the private sector in nuclear power production
- Enable research and development
- Robust regulatory regime (AERB)
- Pragmatic liability regime
- Conformation to international conventions

Preamble

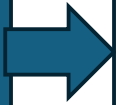
- To provide for the promotion, development, and use of nuclear energy for nuclear power generation, for application in health care, industry, agriculture, and welfare of the nation
- Nuclear power is a viable, clean, low-carbon, baseload power generation source
- India's developmental aspirations and achieving Sustainable Development Goals.
- National Target of Net zero emissions

Entities Permitted

- Department of Government of India or any institution or authority or corporation established by it, or
- A company (as per Companies Act, 2013); or
- A joint venture among any of the aforesaid
- Any other person as notified by the Central Government

Activities permitted

License by
Central
Government



- (a) Build, Own, Operate or Decommission a nuclear power plant
- (b) Nuclear fuel fabrication including enrichment (U-235) up to a threshold value, or use, production and processing of other prescribed substances;
- (c) Import, export, acquire or use of prescribed equipment, prescribed substances (including nuclear fuel);
- (d) Transport and storage of prescribed substances (including nuclear fuel and spent nuclear fuel);
- (e) Export or import any technology or software

Safety
Authoriza
tion by
AERB



Grant of License: Central Government

- Financial, technical, management and other organizational capabilities
- Life management, decommission, quality assurance, radioactive waste management, liability
- Refusal- entities inimical to national security, health and safety of the public

Safety Authorisation: AERB

- Stage wise
- safety codes, standards

Government Supervision and Accounting

- Source or Fissile material will be under Government of India supervision and will be properly accounted for
- Appropriate safeguards will apply as specified by Central Government
- Spent fuel shall be either delivered to the Central Government or repatriated to the country of origin, if such agreement exists.
- Heavy water after its intended use shall be delivered back to the Central Government.

Activities reserved for Central Government

- (a) Fuel Enrichment above a threshold and isotopic separation of prescribed substance;
- (b) Management of spent fuel, including, reprocessing, recycling, separation of radionuclides contained therein and management of high-level radioactive waste arising thereof or any such activity as the Central Government may consider necessary;
- (c) Heavy water production and its upgradation by isotopic separation;

Non-Power Applications

Any person may

- (a) manufacture, possess, use, transfer by sale or otherwise, export or import any radioactive substances and radiation generating equipment
- (b) establish, operate or decommission a radiation facility (medicine, industry, research & agriculture)

Safety
Authorisation by
AERB



License
for



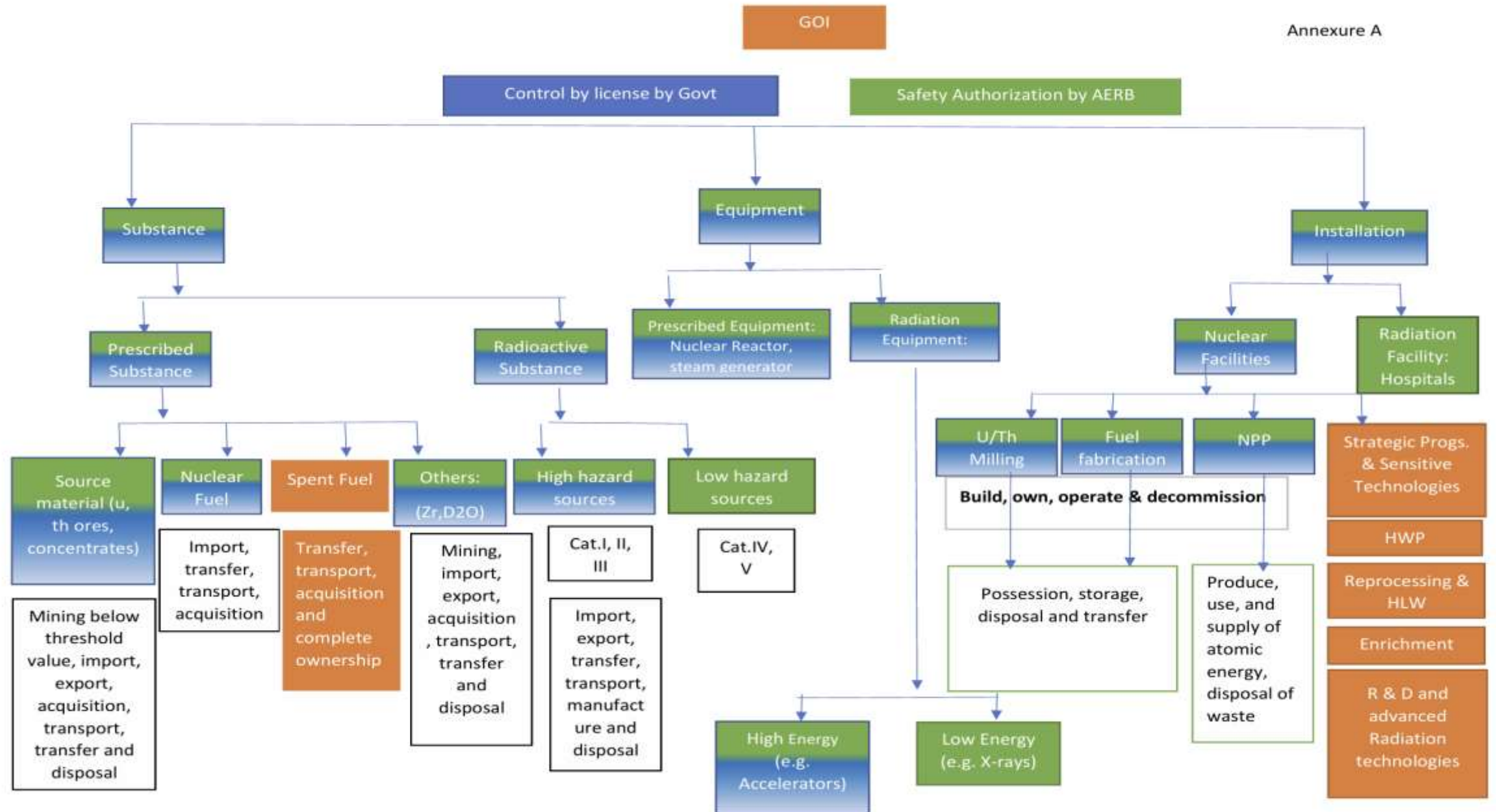
import/export/manufacture of high hazard radiation sources/high energy equipment (if notified)

Mining of Uranium and Thorium

- Any Person allowed below the threshold value (consistent with the prevailing mining laws)
- Above the threshold value – Only Government Companies
- Separate safety authorization from AERB

Research, development and innovation

- Research & development and innovation in nuclear energy and radiation for peaceful purpose – allowed
- R&D in activities reserved for Central Government- not allowed
- Adherence to safety and security shall be ensured
- Grant of patent for peaceful purpose – allowed



Nuclear Power Production

- Tariff for supply of electricity from Nuclear Power Plants will be based on norms and mechanisms specified by the Central Government
- Norms & Mechanisms will be based on the cost of fuel, cost of spent fuel management, decommissioning cost etc.

The Central Government shall frame the National Nuclear Energy policy consistent with the National Electricity Policy prepared under the Electricity Act 2002.

Civil Liability for Nuclear Damage

- Liability of operator of Nuclear Installation
- Operator Needs to maintain financial securities or insurance
- Limit of Liability specified by GOI as separate schedule which can be changed by notification

*Aligned with International liability regime
(CSC)*

Civil Liability for Nuclear Damage

- Fair, adequate, and prompt compensation: any person who has suffered nuclear damage as a result of a nuclear incident shall be entitled to claim and receive fair, adequate, and prompt compensation;
- No-fault liability: the liability of an operator shall be strict and without fault;
- Accessibility of claims mechanisms: proceedings shall be simple, time-bound, and accessible to all persons who have suffered nuclear damage;
- Enforcement of awards: awards shall be final and binding on all parties, and shall be enforced effectively, to ensure timely relief to claimants;

Existing Liability

Operator Liability	1500 Cr
Government's Liability (above 1500 Cr)	Upto 300 million SDR (INR 3600 Cr approx)
Beyond Government's Liability	Funds from Convention on Supplementary Compensation

Proposed Liability (Graded approach)

Sl. No.	Categories of nuclear installation	Limit of operator's liability (INR) in crore
1.	Reactors > 1200 MWe	3000
2.	Reactors > 500 MWe - 1200 MWe	1500
3.	Reactors > 250 MWe - 500 MWe	750
4.	Reactors > 50 MWe - 250 MWe	300
5.	Reactors < 50 MWe, fuel cycle facilities	100

Nuclear Liability Fund

Regime	National fund required?	Notes
Paris Convention (1960)	✗ No	Relies on operator insurance and state guarantee if needed.
Vienna Convention (1963 / 1997)	✗ No	Same principle; allows but doesn't mandate a fund.
CSC (1997)	✗ No	Only mandates supplementary compensation; no standing fund.
India – CLND Act (2010)	✓ Yes	Section 7 explicitly creates “Nuclear Liability Fund.”

Presently capped at Rs 2000 Crore- which needs to be increased through collection from tariff

Operator's Right to Recourse

The operator of the nuclear installation, after paying the compensation for nuclear damage in accordance, shall have a right of recourse where:—

- *such right is expressly provided for in a contract in writing; or*
- ***the nuclear incident has resulted as a consequence of an act of supplier or his employee, which includes supply of equipment or material with patent or latent defects, or sub-standard services;***
- *the nuclear incident has resulted from the act of commission or omission of an individual done with the intent to cause nuclear damage.*

Civil Liability for Nuclear Damage

- No liability for suppliers unless contracted
 - Increased Safety features in new designs
 - Stringent framework for quality control of the supplied components
 - Provision of inspection of the manufacturing sites

Doing away with supplier liability does not affect the compensation amount to be paid to the victim of nuclear incident.

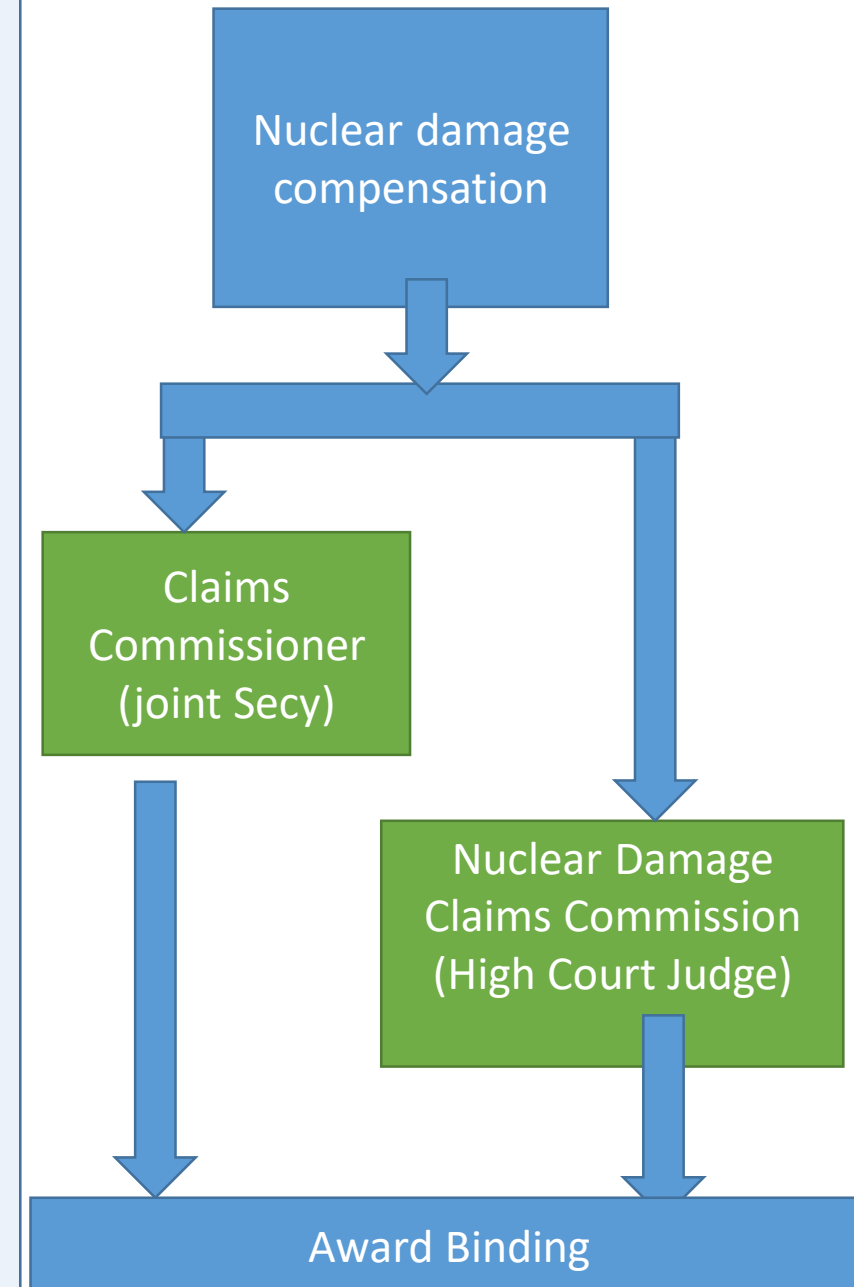
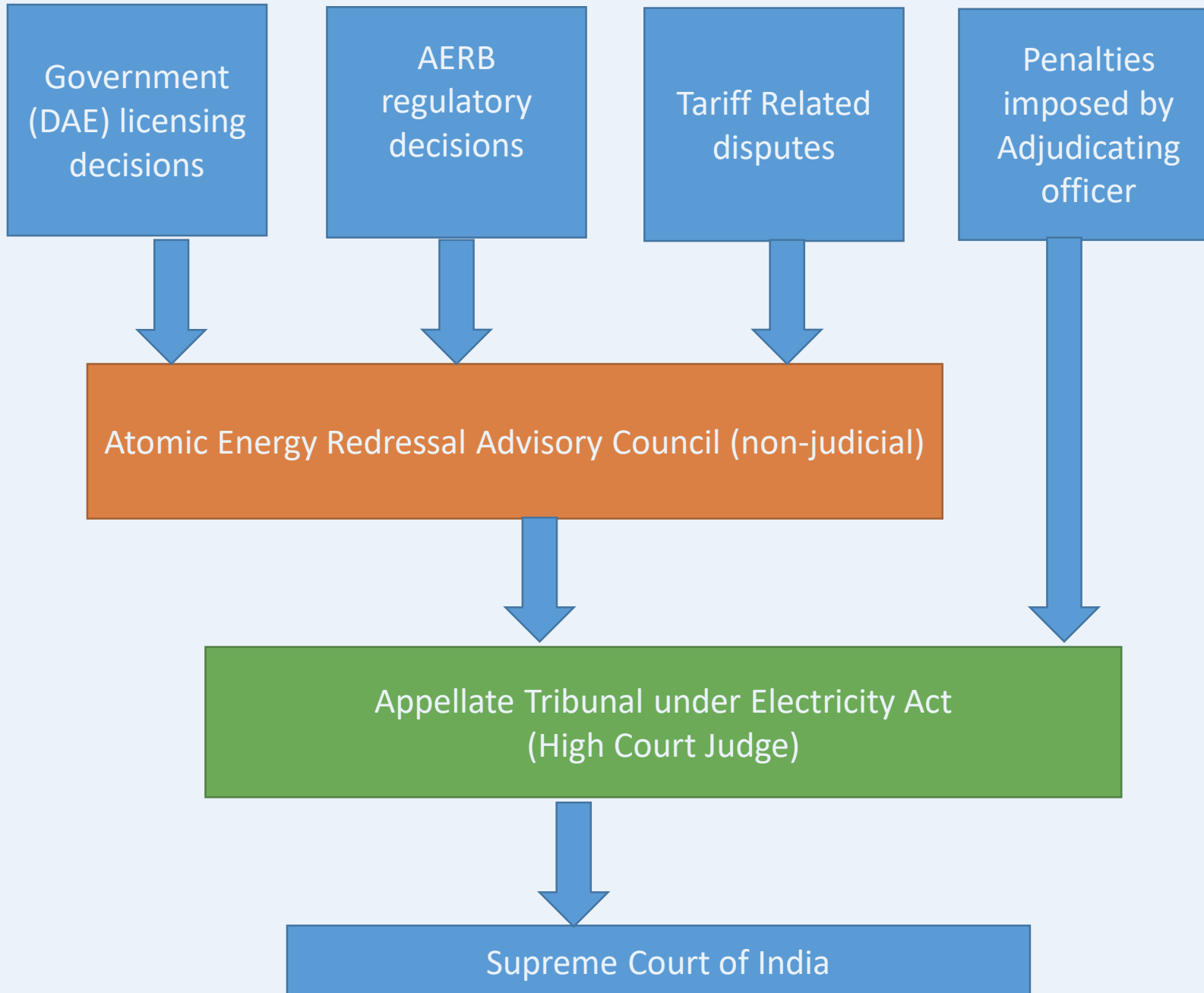
Atomic Energy Regulatory Board

- Constitution of Atomic Energy Regulatory Board under the Act
- Composition, Tenure, etc of the Board
- Officers & Employees of the Board
- Powers and Functions of the Board
- Recommendations to Central Government for notification of nuclear incident

Additional Responsibilities

- Framing Policies and strategies to oversee implementation
 - Safety security, safeguards
 - Spent fuel management, radioactive waste management
 - Quality assurance and control
- Providing services for environmental surveillance, radiation dosimetry, etc.
- Coordination with Government agencies for nuclear and radiological emergency preparedness and response.

Appeals, Claims & Dispute Resolution



Thank You

Reason for no supplier liability (unless contracted)

- Advanced safety features in new reactors
- Provision provided in the Act for Quality Assurance and Quality Control of component used in the Reactors
- Provision to inspect the site of manufacturing
- Components are required to adhere to safety requirements of regulator
- Not having supplier liability, public compensation is not affected.

Present Legal Framework

- **Atomic Energy Act 1962**

- to provide for the development, control, use of atomic energy for the welfare of the people of India and for the other peaceful purposes and for matters connected therewith

- **CLND Act 2010**

- to provide for civil liability for nuclear damage and prompt compensation to the victims of a nuclear incidents through a no-fault liability regime, channeling liability to the operator, appointment of claims Commissioner, establishment of claims commission and for matters connected therewith and incidental thereto