

Legislative Brief

The Civil Liability for Nuclear Damage Bill, 2010

The Bill was introduced in the Lok Sabha on May 7, 2010 by the Ministry of Science and Technology and Earth Sciences.

The Bill was referred to the Standing Committee on Science & Technology, Environment & Forests (Chairman Dr. T. Subbarami Reddy) on May 13, 2010. The Committee is scheduled to submit its report within two months.

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July 5, 2010

Highlights of the Bill

- ◆ The Civil Liability for Nuclear Damage Bill, 2010 fixes liability for nuclear damage and specifies procedures for compensating victims.
- ◆ The Bill fixes no-fault liability on operators and gives them a right of recourse against certain persons. It caps the liability of the operator at Rs 500 crore. For damage exceeding this amount, and up to 300 million SDR, the central government will be liable.
- ◆ All operators (except the central government) need to take insurance or provide financial security to cover their liability.
- ◆ For facilities owned by the government, the entire liability up to 300 million SDR will be borne by the government.
- ◆ The Bill specifies who can claim compensation and the authorities who will assess and award compensation for nuclear damage.
- ◆ Those not complying with the provisions of the Bill can be penalised.

Key Issues and Analysis

- ◆ The liability cap on the operator (a) may be inadequate to compensate victims in the event of a major nuclear disaster; (b) may block India's access to an international pool of funds; (c) is low compared to some other countries.
- ◆ The cap on the operator's liability is not required if all plants are owned by the government. It is not clear if the government intends to allow private operators to operate nuclear power plants.
- ◆ The extent of environmental damage and consequent economic loss will be notified by the government. This might create a conflict of interest in cases where the government is also the party liable to pay compensation.
- ◆ The right of recourse against the supplier provided in the Bill is not compliant with international agreements India may wish to sign.
- ◆ The time-limit of ten years for claiming compensation may be inadequate for those suffering from nuclear damage.
- ◆ Though the Bill allows operators and suppliers to be liable under other laws, it is not clear which other laws will be applicable. Different interpretations by courts may constrict or unduly expand the scope of such a provision.

PART A: HIGHLIGHTS OF THE BILL¹

Context

The Civil Liability for Nuclear Damage Bill, 2010 seeks to create a mechanism for compensating victims of nuclear damage arising from a nuclear incident. There are currently 19 nuclear reactors in the country.² The Statement of Objects and Reasons of the Bill states that it is being enacted to provide for liability arising out of a nuclear incident, and also due to the “necessity of joining an international liability regime.”

There are three major international agreements which form the international framework of nuclear liability: (a) The Paris Convention of 1960³, (b) The Vienna Convention of 1963⁴, and (c) The Convention on Supplementary Compensation for Nuclear Damage of 1997. India is not a party to any of these conventions presently. India has also signed some agreements with other countries (including USA, UK, Russia, France, and Canada) for co-operation in use of nuclear energy for civilian purposes.⁵ The India-France agreement explicitly states that India has to create a civil nuclear liability regime for compensating damage caused by incidents involving nuclear material and nuclear facilities.⁶

Though there are more than four hundred nuclear reactors operating worldwide⁷, there have been only three major accidents in nuclear reactors in which human lives have been lost⁸. However, damage caused in a major nuclear accident (such as Chernobyl⁹) may be huge. The objective of this Bill is to provide quick compensation in the event of a nuclear incident. International agreements have certain common features to address this issue¹⁰:

- Fixing no-fault liability* on operators and requiring them to take insurance or provide financial security.
- Limiting no-fault liability in time and amount.
- There is a process for expeditious distribution to victims by fixing which court/ authority has jurisdiction.

Key Features

The Bill provides for civil liability for nuclear damage, appointment of authorities to assess claims and damages and related matters. The main features of the Bill are:

- It defines nuclear incidents and nuclear damage, nuclear fuel, material and nuclear installations.
- It specifies the persons to be held liable for nuclear damage, and the financial limit of the liability for a nuclear incident.
- It specifies the procedure for claiming compensation.
- It specifies penalties for not complying with the provisions of the Bill.

Some important provisions of the Bill are explained in Table 1.

Table 1: Main provisions of the Civil liability for Nuclear damage Bill, 2010

Subject	Provision
Application of the Bill	The Bill applies to (a) the whole of India, (b) in and over the territorial waters of India, including economic zones, (c) ships and aircrafts registered in India, and (d) artificial islands and installations under India's jurisdiction.
Nuclear incident	<ul style="list-style-type: none"> ▪ An occurrence or series of occurrences having the same origin and causing nuclear damage; or, ▪ Arising out of preventive measures taken to contain damage causing grave and imminent threat. <p>The Atomic Energy Regulatory Board has to notify each nuclear incident within 15 days of its occurrence, unless the gravity of threat and risk involved is insignificant.</p>
Nuclear damage	<ul style="list-style-type: none"> ▪ It includes (a) loss of life or personal injury, and (b) loss of, or damage to property caused by a nuclear incident. ▪ It also includes damage caused to the environment and economic loss caused due to environmental damage. These losses will be included to the extent notified by the central government.
'Operator'	An operator is any person so designated by the central government. He is responsible for damage caused by a nuclear incident.
Cases where the operator is liable	<ul style="list-style-type: none"> ▪ Damage is caused by a nuclear incident in that nuclear installation. ▪ Damage is caused by nuclear material coming from, or originating in a nuclear installation, and before its responsibility has been assumed by another operator. ▪ Damage is caused by nuclear material sent to that installation, and after the operator has assumed charge of the nuclear material. ▪ Exceptions: (a) grave natural disasters, (b) armed conflict, (c) civil war, or (d) terrorism, or (e) damage suffered by person due to his

* Liability may be “fault” liability or “no-fault” liability. No-fault liability means that liability can be imposed on a person regardless of whether he was at fault. There is no requirement for proving that the person intentionally or negligently committed the action which caused damage. To impose “with fault” liability, intent or negligence has to be proved. Also, liability may be either civil or criminal. Civil liability results in compensation to victims, whereas criminal liability also includes a fine and imprisonment.

	own negligence or acts of commission or omission.
Liability amounts	<ul style="list-style-type: none"> ▪ The maximum amount of liability for each nuclear incident shall be 300 million Special Drawing Rights (SDR is an artificial currency used by the IMF which is defined in terms of a combination of five currencies. SDR300 million equals approximately Rs 2100 crore at current exchange rates). ▪ The maximum liability on an operator is Rs 500 crore; this amount can be changed by a central government notification but cannot be reduced below Rs 100 crore. The central government will cover any liability higher than this up to SDR 300 million. In case the plant is owned by the central Government, it will bear the entire liability. ▪ The operator cannot begin operating the nuclear installation without getting an insurance policy or financial security to cover his liability. (except where the nuclear installation is owned by the central government)
Recourse against party actually causing damage	<p>The operator has a 'right of recourse' when:</p> <ul style="list-style-type: none"> ▪ There is an express contract in writing giving the operator such a right. ▪ The nuclear incident has occurred due to a deliberate or negligent act of the supplier, or his employee, and ▪ The incident has been caused by a deliberate act or omission of a person done with intent to cause damage.
Persons who can claim compensation	<ul style="list-style-type: none"> ▪ Any person suffering nuclear damage has a right to claim compensation. ▪ An application can be made by (a) person sustaining injury, (b) owner of damaged property, (c) legal representative of a deceased person, or (d) an authorised agent. ▪ An application is required to be made within three years from the date of the person having knowledge of nuclear damage. This right expires after ten years from the date of notification of the nuclear incident.
Persons who will assess compensation	<p>The Bill allows the central government to create two authorities by notification:</p> <ul style="list-style-type: none"> ▪ <u>Claims Commissioner</u>: The Commissioner will invite applications for claiming compensation once a nuclear incident has been notified. ▪ <u>Nuclear Damage Claims Commission</u>: The Commission can be established by the central government if it thinks that (a) the compensation may exceed Rs 500 crore, or (b) it is necessary that claims will be heard by the Commission and not the Claims Commissioner, or (c) that it is in public interest.

Sources: Civil Liability for Nuclear Damage Bill, 2010; PRS.

PART B: KEY ISSUES AND ANALYSIS

We discuss the following issues.

- Entry of private operators in the nuclear power generation sector.
- Adequacy of the liability limit and the financial security covering the operator's liability.
- Assessment of compensation due for nuclear damage.
- Compliance with international agreements (if such compliance is a necessity).
- The time-period over which compensation can be claimed by victims.
- Determining the nature and extent of fault liability for those actually responsible for causing damage.

Entry of private operators

Clauses
6(2) and
7

The Bill sets a cap on total liability at 300 million SDR for each nuclear incident, and limits liability of the operator to Rs 500 crore. It also states that for nuclear power plants owned by the central government, the entire liability is that of the government. Currently, all nuclear power plants are owned by the government or government owned entities (such as NPCIL). This proposed law may be necessary to safeguard suppliers from no-fault liability if the government needs to import equipment and fuel.

However, in such a situation, limiting the operator's liability would not be a requirement, since the government would be liable for the entire amount (either directly or through a fully owned company). A cap on the operator's liability is required only if private sector participation is permitted; that would require an amendment to the Atomic Energy Act, 1962. The government has not indicated any such plans. However, under current law, joint ventures between private and government companies are permitted if the government holds the majority stake. The government has not announced any plans for forming such joint venture companies.

Liability of the operator and the central government

Clause
6(1)

The total liability for a nuclear incident is limited

Regardless of the extent of damage, the total liability would be limited to SDR 300 million. This amount may not be sufficient to provide adequate compensation in case of a major incident. More than six lakh people were affected in Chernobyl⁹. More than five lakh people were affected after the chemical leakage in Bhopal in the Union Carbide incident (not a nuclear incident).¹¹ For that incident, the Supreme Court required Union Carbide to provide compensation of 470

million dollars and asked the government to meet any further liability.¹² Many other countries which are major producers of nuclear energy do not have a cap on the overall liability for nuclear damage (See Table 2).

Table 2: Liability of the operator and the government in the top 10 nuclear power generating countries, and India.

Country	Total generation (MW(e))	Operator's Liability (USD million)	State Compensation (USD million)	Total Liability* (USD million)
United States	1,00,683	11,900	Unlimited	Unlimited
France	63,130	861	300	1,161
Japan	46,823	Unlimited	Unlimited	Unlimited
Russia	22,693	No amount specified	Unlimited	Unlimited
Germany	20,480	Unlimited	2,500	Unlimited
South Korea	17,705	474	Unlimited	Unlimited
Ukraine	13,107	237	Unlimited	Unlimited
Canada	12,569	71	Unlimited	Unlimited
United Kingdom	10,137	228	50	278
Sweden	9,041	474	198	672
India**	4,189	109	345	454

Sources: Various Sources¹³; PRS.

* Values have been converted into USD in source document as of December 2009.

** The values for India have been taken from the Bill and calculated at current exchange rates.

Clause
6(2)

The operator's liability is lower than in several other countries

The liability of the operator has been capped at Rs 500 crore (USD 109 million at current exchange rates). This means that if the nuclear damage exceeds this amount, the central government is liable to compensate victims subject to a cap of 300 million SDR. Several countries which are major producers of nuclear power have a higher limit on the liability of the operator (See Table 2).

Insurance cover

Operators need to take insurance or provide financial security covering their liability. A higher insurance cover implies higher electricity costs. Our calculations indicate that the electricity cost would go up by about 1 paise for insurance cover of Rs 500 crore by a 500 MW power plant assuming the international premium rate of 0.3% - 0.5% per annum.

India's access to international funds may be blocked

The Statement of Objects and Reasons of the Bill lists four international conventions and states the need to enact a legislation that enables joining an appropriate international liability regime. The Convention on Supplementary Compensation of 1997 creates an international pool of funds which can be accessed in case liability due to nuclear damage exceeds SDR 300 million.¹⁴ Clause 6(1) of the Bill limits the total liability for a nuclear incident at SDR 300 million. This implies that India will not be able to utilize funds available under the Convention as the additional compensation under that Convention is only available if the liability exceeds this amount.

Payment of compensation

In situations where the damage exceeds the upper limit set by the Bill, there is no criteria to determine the manner in which those suffering damage will be compensated. The Bill does not mention in what priority payment of claims for compensation will be made, or in what proportion if any, claims for compensation will be made. Some other countries such as Brazil and Belgium specify that in such cases the government will have the right to reduce the compensation for each victim on a proportional basis.¹⁵

Clause 17

Variance with international agreements

The Bill permits the operator to take recourse against the supplier. This may be an impediment if India wants to join international agreements on civil liability for nuclear damage.

One of the reasons for enacting the Bill is to join an international nuclear liability agreement (as stated in the Statement of Objects and Reasons). The three major international agreements on civil liability for nuclear damage provide for a right of recourse against the person actually causing damage only if (a) there is a written contract, or (b) if the damage results from an act or omission of someone with intent to cause damage (Table 3). However, the Bill provides an additional right of recourse against suppliers of nuclear material if damage has been caused by their wilful act or negligence. This clause is additional to the requirements under these international agreements and may prevent India from becoming a party to any

of these agreements. Most countries do not provide for a right of recourse against suppliers of nuclear material (Table 3); South Korea and Japan provide for recourse against suppliers, but they are not parties to these conventions¹³.

Table 3: Right of recourse provided in some countries and under the three major international treaties.

International Agreement/ Law of a country	Right of Recourse
Vienna Convention, 1963	Only, (a) if it is fully expressed in writing, and (b) If the damage results from an act or omission done with intent to cause damage, against the person who caused the damage.
Paris Convention, 1961	Only, (a) against someone for an act of commission or omission with intent to cause damage, and (b) If there is a clear contract giving such a right.
Convention on Supplementary Compensation, 1997	Only, (a) if it is fully expressed in writing, and (b) If the damage results from an act or omission done with intent to cause damage, against the person who caused the damage.
Brazil, Canada, France	There is no provision giving a right against the supplier.
Japan	Right of recourse exists against third party causing damage.
South Korea	Provides for recourse against supplier in case of willful act or omission.

Sources: Various legislations and international agreements¹⁶; PRS.

Clause 2(f)

The extent of damage caused will be notified by the government in some cases

The Bill states that for (a) economic loss arising from loss of life or personal injury, (b) costs of measuring damaged environment, and (c) loss of income resulting from damage caused to the environment, the extent of damage will be notified by the central government. The extent of damage suffered in these cases is being determined by the government which is also the party liable to pay compensation in some cases. There may be a conflict of interest if the same party that is liable to pay compensation for damage also has the power to determine the extent of damage caused. Also, there is no independent or judicial authority which will assess the damage suffered, as the jurisdiction of civil courts in these cases is barred. Thus, a core judicial function of determining a fair amount of compensation will be performed by the executive; this could violate the constitutional scheme of separation of powers.

Clause 18

The time limit specified for claiming compensation may be inadequate

Claims for compensation can be filed within ten years of the date of notification of a nuclear incident. This may be inadequate in cases where the effects of radiation are discovered after a substantial period of time. In some cases the effects of damage may also be discovered only in the next generation of those exposed to nuclear radiation. Some countries provide for a period greater than ten years for claiming compensation (Table 4).

Table 4: Time limits for claiming compensation in some countries

Country	Time-limit
Germany	More than 10years; claims brought before 10 years will have priority.
South Korea	For loss of life and injury - within 30 years.
Netherlands	For "damage to persons" - within 30 years.
Romania	For loss of life and injury - within 30 years.

Sources: Legislations of various countries¹⁷; PRS.

Clauses 5, 46

Liability under other laws is not clearly defined

The Bill explicitly states that (a) compensation to be paid by an operator under this Bill shall not reduce his liability under any other law, and (b) this Bill will not override any other law in force in India that the operator can be held liable under. However, the Bill does not clearly define what type of laws will be applicable. Differing interpretation by courts may constrict or unduly expand the scope of these provisions. Some laws under which those involved in nuclear power generation may be liable for nuclear damage are mentioned in Table 5 below:

Table 5: Types of liability under some relevant legislations in India

Law	Types of Penalties
Environment Protection Act, 1986	Imprisonment for up to five years, and fines.
Water Act, 1974 and Air Act, 1981	Imprisonment for up to six years, and fines.
Indian Penal Code, 1860	Imprisonment and fines for offences such as criminal negligence, public nuisance, and culpable homicide.
General principle of liability in tort law	Compensation to the extent of damage caused. Exemplary damages can also be awarded.

Sources: Environment Protection Act, 1986; Water Act, 1974; Air Act, 1981; Indian Penal Code, 1860; PRS.

Clause 36 Time-limit for central government to comply with awards for compensation

The Bill states that the insurer (to the extent of his liability) and the operator must deposit the amount to be distributed as compensation within the time limit specified in the award made by the Claims Commissioner. It does not state whether the Commissioner or the Commission can ask the Central Government to do so within a time-limit as well. This would be a factor where the damage exceeds Rs 500 crore and the central government is liable to pay the remaining amount.

Clause 36 Inconsistency on insurance cover required

Operators of nuclear installations (except those owned by the central government) are required to take out an insurance policy or other financial security covering the amount of their liability (Rs 500 crore) before they can operate nuclear installations. However, clause 36(a) of the Bill requires insurers to deposit the amount they have insured the operator for before the Claims Commissioner or the Commission if an award giving compensation is made. Clause 36 (b) then requires operators to deposit the 'remaining amount by which such award exceeds the amount deposited by the insurers. It is not clear as to how there can be any amount remaining if the entire liability of the operator needs to be insured.

Notes

1. This Brief has been written on the basis of the Civil Liability for Nuclear Damage Bill, 2010, which was introduced in the Lok Sabha on May 7, 2010. The Bill was referred to the Standing Committee on Science & Technology, Environment & Forests (Chairman Dr. T. Subbarami Reddy) on May 13, 2010.
2. NPCIL – Plants under operation, <http://www.npcil.nic.in/main/AllProjectOperationDisplay.aspx>
3. The 1960 Paris Convention on Third Party Liability in the field of Nuclear Energy.
4. The 1963 Vienna Convention on Civil Liability for Nuclear Damages.
5. India-United States: Agreement for cooperation between India and the United States of America concerning peaceful uses of nuclear energy; India-United Kingdom: Joint Declaration by India and the United Kingdom on Civil Nuclear Cooperation; India-France: Cooperation agreement between the Government of India and the government of the French republic on the development of peaceful uses of nuclear energy; India-Russia: India and Russia sign civil nuclear agreement (Original text not available).
6. Article 8 of the India-France agreement on the development of peaceful uses of nuclear energy.
7. World Nuclear Power Reactors & Uranium Requirements, <http://www.world-nuclear.org/info/reactors.html>.
8. Appendix 2: Serious nuclear reactor accidents, Safety of Nuclear Power Reactors, <http://www.world-nuclear.org/info/inf06app.html>
9. Background on Chernobyl Accident, <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/chernobyl-bg.html>
10. Chapter on Nuclear Liability and Coverage, Handbook on Nuclear Law, International Atomic Energy Agency, 2003.
11. Bhopal Gas Tragedy Relief and Rehabilitation, <http://www.mp.gov.in/bgtrrdmp/facts.htm>.
12. *Union Carbide Corporation v. Union of India* (1991)4SCC584, (Decided on October 3, 1991).
13. Nuclear Operator Liability Amounts & Financial Security Limits, AEN-Nuclear Energy Agency, December 2009; International Atomic Energy Agency Power reactor Information System; French Act on Transparency and Security in the Nuclear Field, 2006.
14. The Convention on Supplementary Compensation is not yet in force. A minimum of five countries with the capacity to generate 4,00,000 units of nuclear power will have to sign for the agreement to come into force. The Convention would create an international pool of funds where every member would contribute according to their generating capacity.
15. Civil Liability for Nuclear Damage and Criminal Responsibility for Acts Relating to Nuclear Activities, 1977; Bill on Third Party Liability in the Field of Nuclear Energy, 1981
16. The Paris Convention; The Vienna Convention; The Convention on Supplementary Compensation, 1997; Brazil - Civil Liability for Nuclear Damage and Criminal Responsibility for Acts Relating to Nuclear Activities, 1977; Canada - Nuclear Liability Act, 1970; France - Act on Third Party Liability in the Field of Nuclear Energy, 1968, amended in 1990; Japan - Law on compensation for nuclear Damage, 1961; South Korea - Act on compensation for nuclear damage, 1969.
17. Germany - Act on the Peaceful Utilisation of Atomic Energy and the Protection Against its Hazards, 2002; South Korea - Act on compensation for nuclear damage, 1969; Romania - Law on Civil Liability for Nuclear Damage, 2001; Netherlands - Nuclear Third Party Liability Act of 1979 (as amended in 1991).

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