

Nuclear Third Party Liability Law - Developments in India

14th Regional Conference of the German Branch of INLA
29 September, 2015 - Nürnberg

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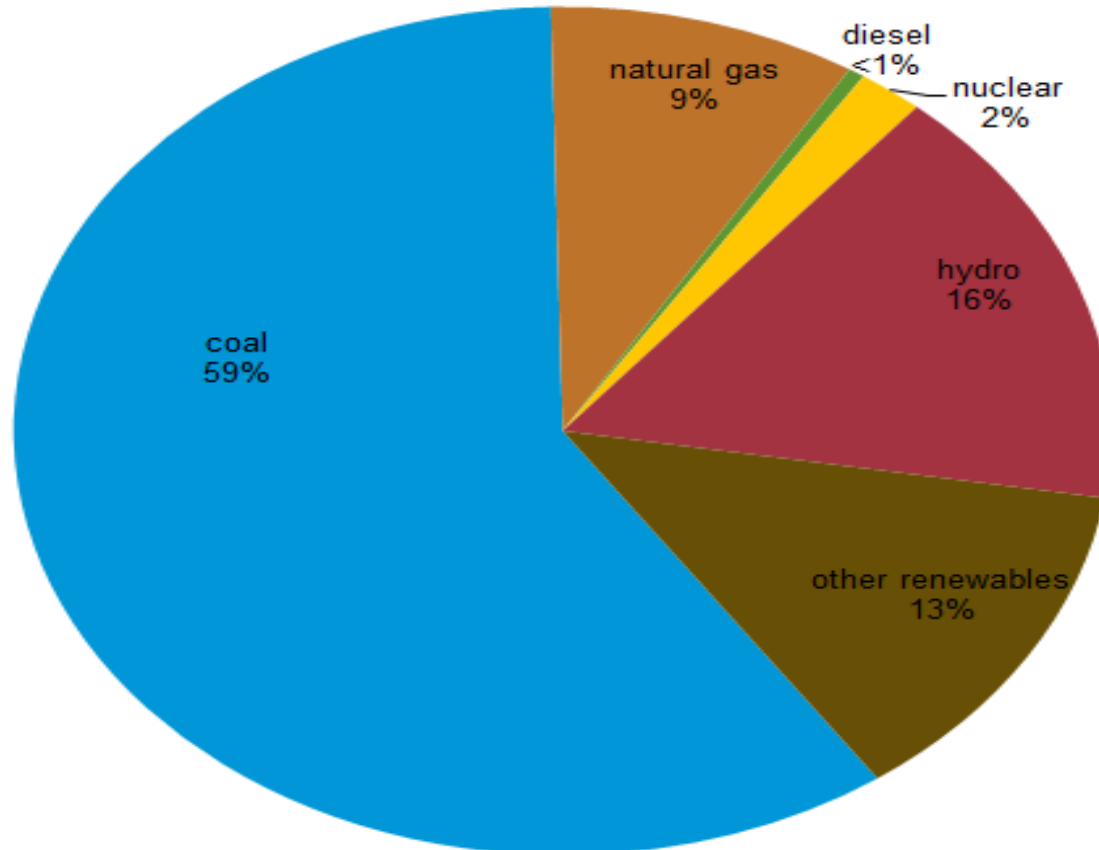
India's engrossing story - structure


- I. Current & projected NPPs & foreign participation
- II. Civil Nuclear Liability for Nuclear Damage Act, 2010 & Rules, 2011
- III. Creation of the India Nuclear Insurance Pool (INIP)



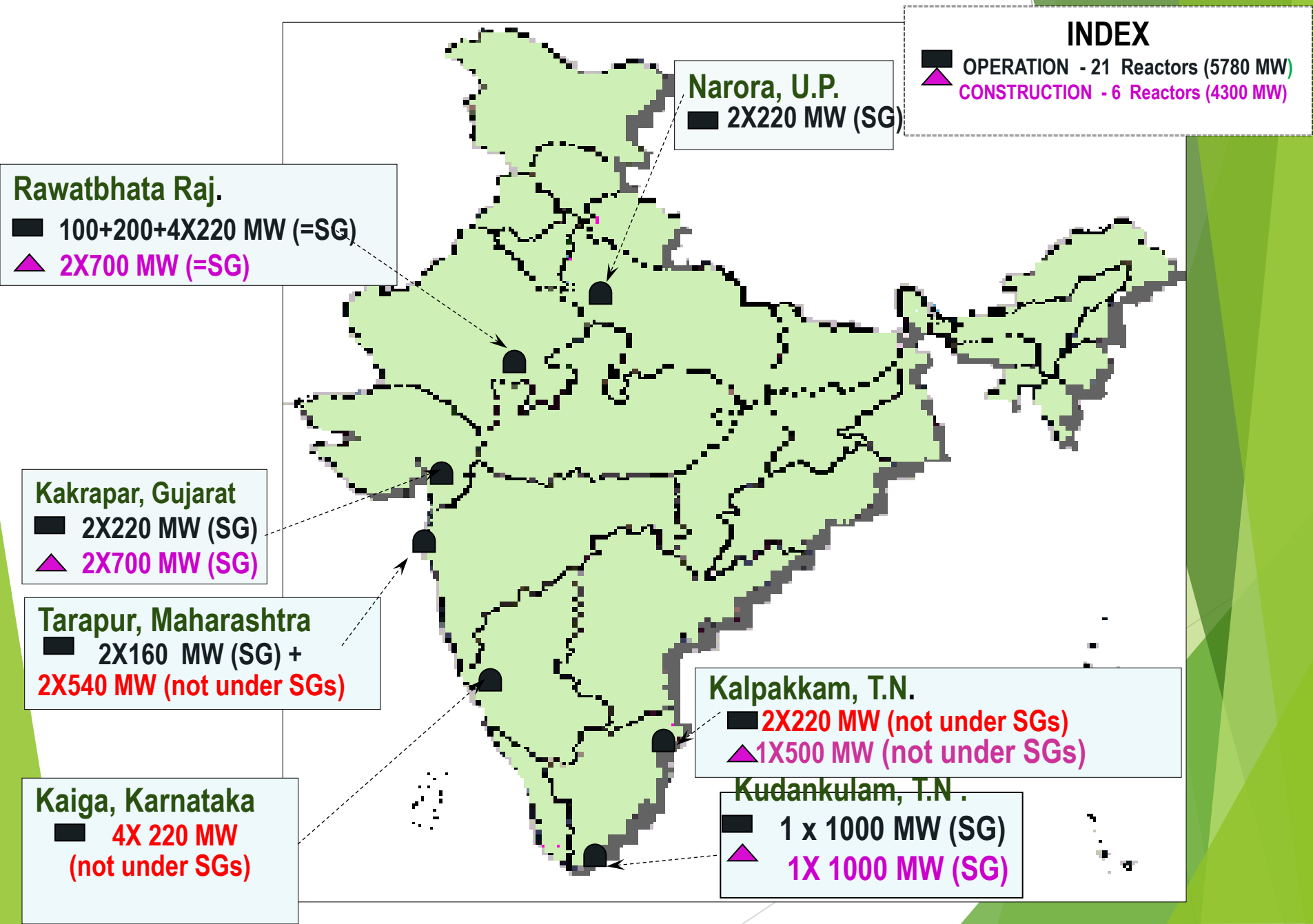
I. India's installed power capacity

India installed power capacity, May 2014



 Note: Includes utility-based power facilities, not captive power plants.
Source: U.S. Energy Information Administration, India's Central Electricity Authority.

I. Nuclear Power Plants in India



I. NPPs - projected growth

Gorakhpur, Haryana
 ● 4X700 MW

Bhimpur, M.P
 ● 4X700 MW

Rawatbhata Raj. .
 ■ 100+200+4X220 MW
 ▲ 2X700 MW

Mahi-Banswara, Raj.
 ● 4X700 MW

Chhaya Mithi Viridi, Guj.
 ● 6X1000 MW

Kakrapar, Gujarat
 ■ 2X220 MW
 ▲ 2X700 MW

Tarapur, Maharashtra
 ■ 2X160+2X540 MW

Jaitapur, Maharashtra
 ● 6X1650 MW

Kaiga, Karnataka
 ■ 4X 220 MW
 ● 2X 700 MW

Narora, U.P.
 ■ 2X220 MW

Chutka, M.P
 ● 2X700 MW

Haripur, W.B
 ● 6X1000 MW

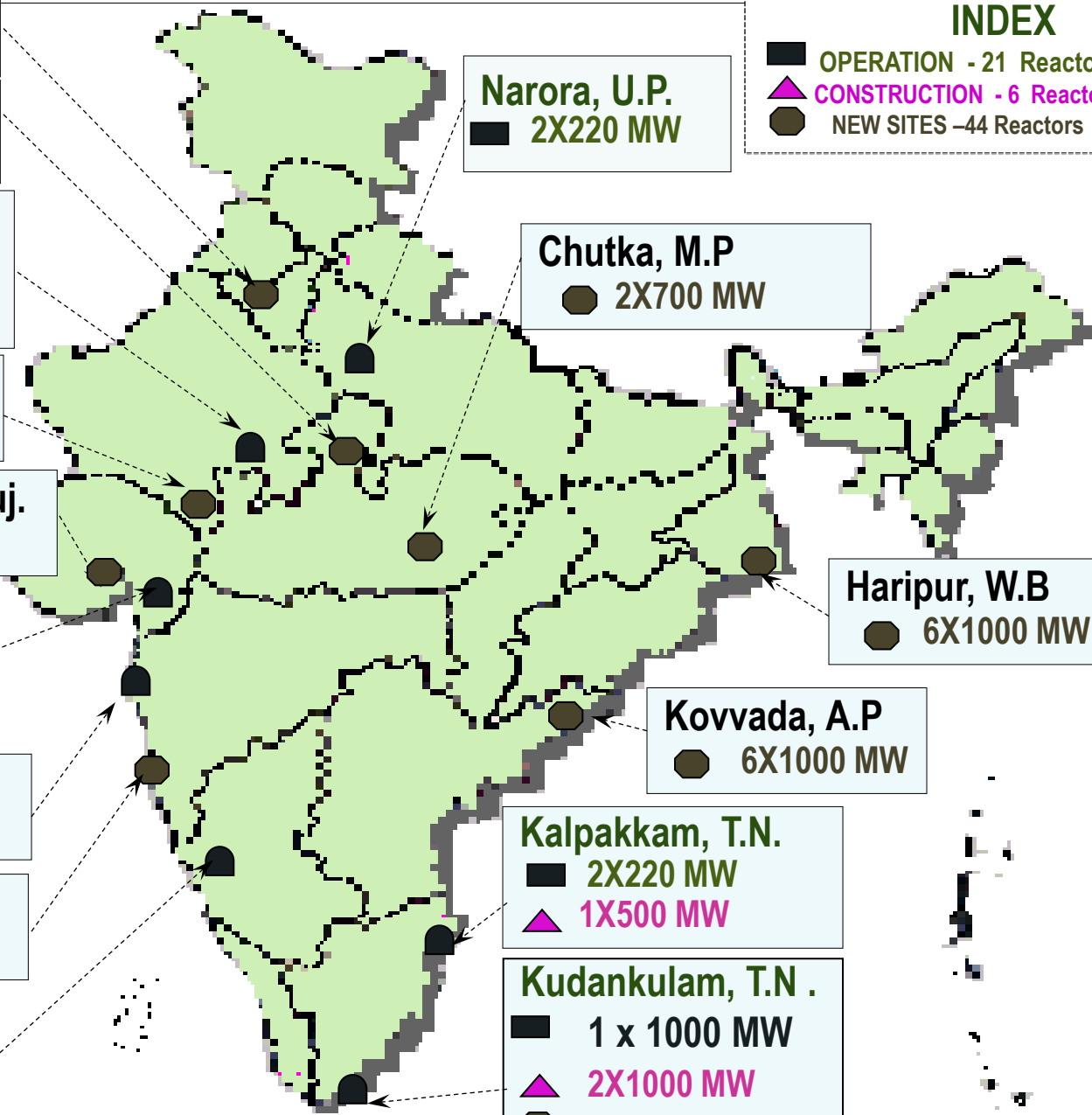
Kovvada, A.P
 ● 6X1000 MW

Kalpakkam, T.N.
 ■ 2X220 MW
 ▲ 1X500 MW

Kudankulam, T.N .
 ■ 1 x 1000 MW
 ▲ 2X1000 MW
 ● 4X1000 MW

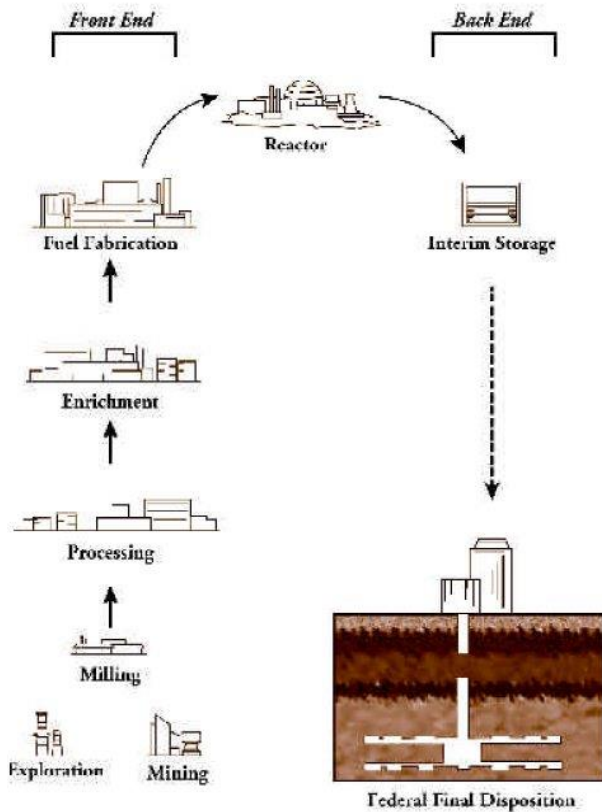
INDEX

- OPERATION - 21 Reactors (5780 MW)
- ▲ CONSTRUCTION - 6 Reactors (4300 MW)
- NEW SITES - 44 Reactors (Proposed)

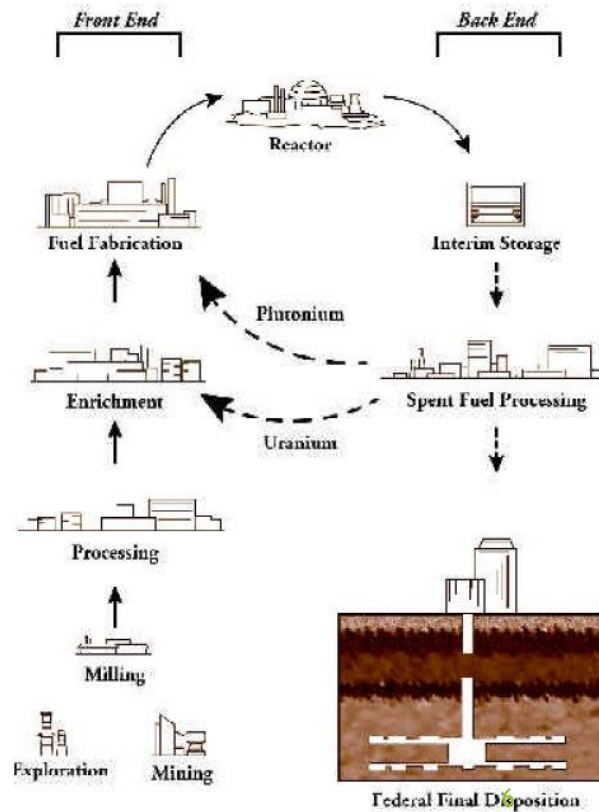


I. India follows a closed fuel cycle

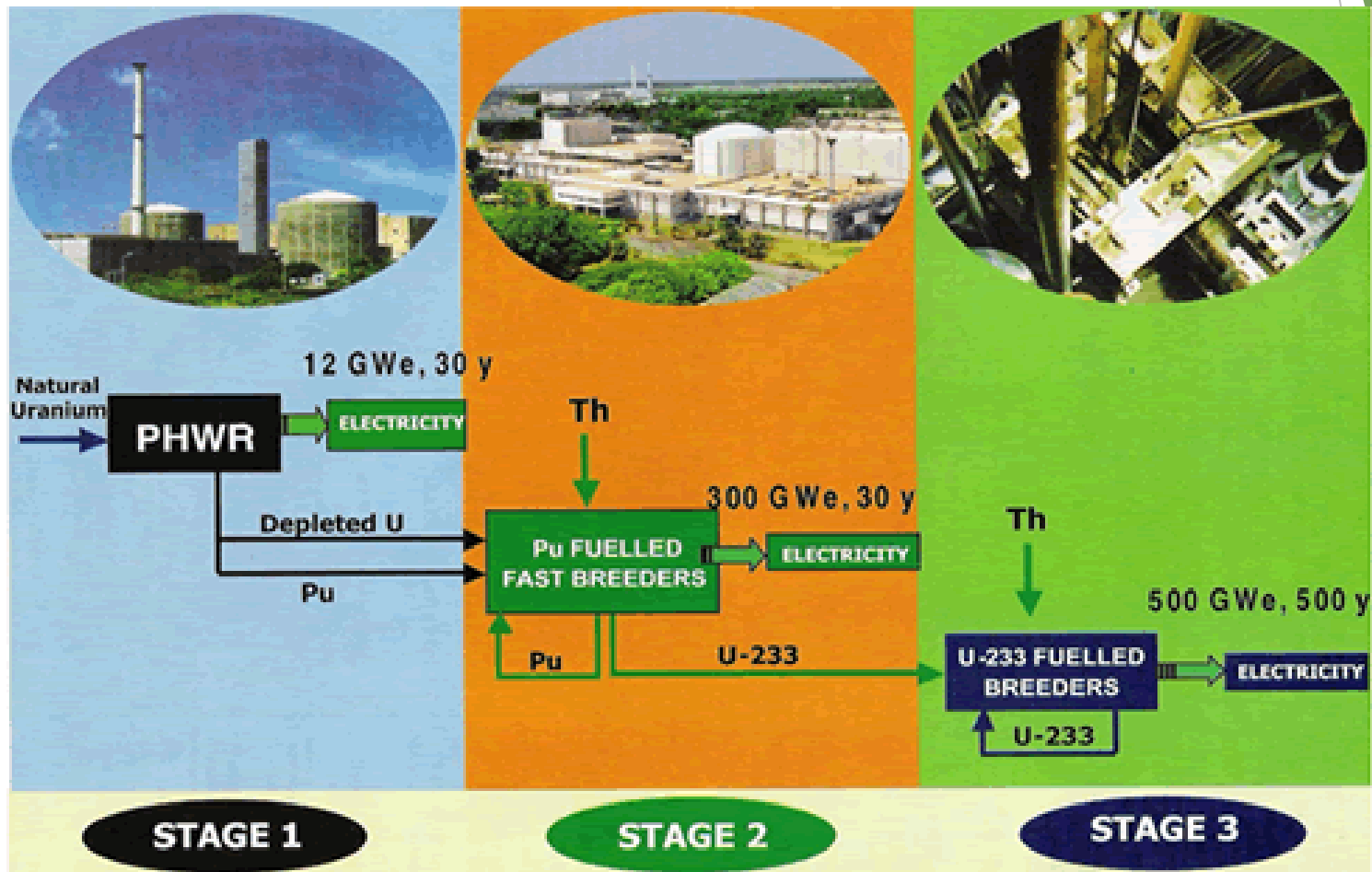
ONCE-THROUGH FUEL-CYCLE FOR NATURAL URANIUM REACTORS



CLOSED FUEL-CYCLE FULL RECYCLE OF PLUTONIUM AND URANIUM



I. India's unique 3-stage program



I. Ending 30+ years of nuclear trade isolation & safeguards

- ▶ 18 July, 2005: Indo-US Joint Statement, in which India was recognized as “a responsible State with advanced nuclear technology” (praised for its non-proliferation record), followed by a “separation plan” (Communication to the IAEA - 25 July, 2008 - INFCIRC/731).

- ▶ The **India Safeguards Agreement** was signed with the IAEA on February 2, 2009, in which an “**item specific**” approach is adopted. India has offered to place 14 thermal power reactors (total 22 nuclear facilities) under the IAEA Safeguards between 2006 and 2014 (INFCIRC/754).

- ▶ February, 2015: 14 NPPS = safeguards (INFCIRC/754/Add.7).

- ▶ Essentially 8 NPPs (Indian PHWRs) + FBRs, are excluded from safeguards; part of India’s declared strategic nuclear program.⁸

I. Int'l developments - a new chapter

- ▶ **On September 6, 2008: NSG members grant India a "waiver"** from its guidelines restricting transfer of technology to nuclear non-NPT States.
- ▶ This enabled India to sign **bilateral agreements on civilian nuclear energy technology cooperation** (France, the US, UK and Canada); and **Uranium supply agreements** (e.g. Russia, Mongolia, Kazakhstan, Argentina, Canada and Australia).
- ▶ Prior to this breakthrough, **India's NPPs had some of the lowest load factors (avg. 50% in 2008-2009, whereas current avg. 85-90%).**

I. Foreign participation

➤ NPCIL is now looking at setting up projects either based on *designs developed by NPCIL for PHWRs*, or in technical cooperation with *foreign vendors for LWRs*.

➤ Foreign participation to be allowed in activities such as construction of NPP, fuel supply, maintenance, etc., but not to be allowed in the nuclear power generation business.

➤ Note 1 : India insists on reprocessing rights on all imported fuel; to enable it to reprocess spent fuel and use it in the FBRs in accordance with its closed fuel cycle approach.

➤ Note 2: the Atomic Energy Regulatory Board (AERB) insists that any reactor to be set up in India, must be licensed in the country of origin.

I. India - CSC

- ▶ Convention on Supplementary Compensation for Nuclear Damage, 1998 (CSC); entered into force **15 April, 2015**:
 - ▶ 7 Parties: Argentina, Japan, Montenegro, Morocco, Romania, UAE & US.
 - ▶ India signed on 27 October, 2010, but not yet ratified → major suppliers may want to wait for ratification before entering market.
 - ▶ India = Annex State → countries which declare that their domestic law complies with the CSC's Annex.
 - ▶ Key aspect: Art. XIII: jurisdiction over actions concerning nuclear damage from a nuclear incident shall lie only with the courts of the Contracting Party within which the nuclear incident occurs.

II. CLND Act & Rules - operator liability

- ▶ Civil Liability for Nuclear Damage Act, 2010 & Civil Liability for Nuclear Damage Rules, 2011.
- ▶ S. 2(m) of the Liability Act defines “operator” as: *“in relation to a nuclear installation, means the Central Government or any authority or corporation established by it or a **Government company** who has been granted a license pursuant to the Atomic Energy Act, 1962, for the operation of that installation”*.
- ▶ As per the Atomic Energy Act, 1962, a **government company** = in which not less than 51% of the paid up share capital is held by the Central Government → **JVs with private companies possible as minority shareholders (reality: other PSUs)**.
- ▶ S. 4 CLND Act: liability principles
 - ▶ S. 4(1): the operator of the nuclear installation shall be liable for nuclear damage caused by a nuclear incident → legal channeling.
 - ▶ S. 4(2) recognizes the principle of joint and several liability where there is more than one operator.
 - ▶ S. 4(4) reflects the principle of strict and no-fault liability of the operator.

II. CLND Act - Amount of liability

- ▶ S. 6(1): the maximum amount of liability in respect of each nuclear incident shall be **SDRs 300 million (about USD 420 million)**, or such higher amount as may be notified by the government (cf. Art. 4 Annex CSC).

- ▶ S. 6(2) of the CLND Act further outlines the liability of an operator for each nuclear incident as follows:
 - a) In respect of nuclear reactors having thermal power equal to or above ten MW, **Rupees 1,500 Crores (about USD 237,5 million)**;
 - b) In respect of spent fuel reprocessing plants, Rupees 300 Crores (about **USD 47.5 million**);
 - c) In respect of the research reactors having thermal power below ten MW, fuel cycle facilities other than spent fuel reprocessing plants and transportation of nuclear materials, Rupees 100 Crores (about **USD 15.85 million**).

II. CLND Act & Rules - Central Government

- ▶ Section 7(1): The Central Government shall be liable:
 - where the liability exceeds the amount of liability of an operator determined under S. 6(2);
 - i. *up to the amount specified under S. 6(1) → differential amount = USD 182,5 million;*
 - ii. *after that Govt. could rely on CSC Funds.*
 - events prescribed under S.5 of the CLND Act:
 - i. a grave natural disaster of an exceptional character; or
 - ii. act of armed conflict, hostility, civil war, insurrection or terrorism.
- ▶ Section 7(2): Nuclear Liability Fund to be set up, by charging a levy from operators → being finalized.

II. CLND Act & Rules - Insurance

- ▶ Section 8: insurance & financial liability
 - ▶ S. 8(1) of the Liability Act makes it mandatory for the operator to take out an insurance policy or other financial security, or combination of both, to cover his liability determined under S. 6(2).
- ▶ Currently: insurance policies only provided for “cold zone” (where no nuclear reaction takes place) and NPCIL relies on **bank guarantees** by way of financial security, for which it pays an annual fee.

II. CLND Act & Rules - S. 17(b)

- ▶ Section 17 of the Liability Act states that the “operator of the nuclear installation, after paying the compensation for nuclear damage in accordance with Section 6, shall have a right of recourse where-
 - a) such right is expressly provided for in a contract in writing;
 - b) *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;*
 - c) the nuclear incident has resulted from an act of commission or omission of an individual done with the intent to cause nuclear damage.”



II. CLND Act & Rules - Rule 24

- ▶ **Value:** Liability Rules tried to limit the RoR by specifying in Rule 24(1) that with regard to the contract referred to in clause S. 17(a); such contract shall include a provision for RoR for not less than the extent of the operator's liability under S. 6(2) or the value of the contract itself, **"whichever is less"**.
- ▶ **Time:** Rule 24(2) further specifies that the provision for the RoR referred to in Rule 24(1) shall be for the duration of the **initial license** issued under the Atomic Energy (Radiation Protection Rules), 2004 (which is 5 years), or the **product liability period**, **"whichever is longer"**.
 - ▶ **Initial license:** from date of fuel loading into the reactor (or AERB specified)
 - ▶ **Product liability period:** from date of delivery / acceptance by operator.
- ▶ The **"product liability period"** is defined in Rule 24 as "the period for which the supplier has undertaken liability for patent or latent defects or sub-standards services **under a contract**".
 - ▶ Business practice: patent defects = 12 to 18 months / latent defects: 5 years.
Total: 6-6,5 yrs.

II. CLND Act & Rules - Rule 24 - definition supplier (Explanation 1(b))

- ▶ “supplier” shall include a person who:
 - ▶ (i) manufactures and supplies, either directly or through an agent, a system, equipment or component or **builds a structure on the basis of functional specification**; or
 - ▶ (ii) **provides build to print or detailed design specifications to a vendor** for manufacturing a system, equipment or component or building a structure **and is responsible to the operator for design and quality assurance**; or
 - ▶ (iii) provides quality assurance or design services.

II. Interpretation - def. supplier

- ▶ A company could be supplying a component or equipment in accordance with **drawings supplied** by another company, or could adhere to specified quality assurance plan. → Such an entity would be a **sub-vendor**, but not the lead vendor covered by the supplier definition.
- ▶ Similarly, there can be instances where an operator selects a standard product from a company catalogue. → In such cases, the company cannot be held responsible for the “wrong selection by the owner”.
- ▶ In some cases, the operator (NPCIL) itself may be supplier as it provides build to print or detailed **design specifications** to a vendor. *[See also: Q&A.10 - MEA's FAQ]* → to be contractually defined.
 - ▶ PHWRs = NPCIL
 - ▶ Other NPP suppliers in charge of complete design = lead vendor = supplier → if that design influenced by the operator → “joint suppliers” for the entire plant / or parts of the plant...
 - ▶ **Ideally: the operator should specify in the tender document who the supplier is for the tendered item.**¹⁹

II. Final chapter - denouement?

- ▶ Indo-US meeting: **25 January, 2015:** finalized the text of the **Administrative Arrangement** to implement the September, 2008, bilateral 123 Agreement (exchanged 20 March, 2015).
- ▶ Ministry of External Affairs posts its FAQ on 8 February, 2015 = “an authoritative understanding” by the MEA of the CLND Act & Rules.



II. MEA's FAQ (8 Feb 2015)

- ▶ Q&A.3: No proposal to amend the CLND Act or Rules.
- ▶ Q&A.4: India intends to ratify the CSC.
- ▶ Q&A.6: the CLND Act is “broadly in conformity” with the CSC & Annex.
- ▶ Q&A.8: S. 17(b) relates to product liability / service contracts, which are “ordinarily part of a contract between the operator and the supplier”. “Its operationalization will be through contract conditions agreed by operator and supplier”, and, therefore, is not contrary to Article 10(a) of the CSC Annex.

II. MEA's FAQ (8 Feb, 2015) cont'd

► Q&A- 9: Does Section establish a mandatory RoR?

- S. 17 “is not mandatory but an enabling provision”, it does not require an operator to include a RoR in its contract; nor to exercise the RoR (cf. A.G. opinion).
- But “there may be policy reasons for having a risk sharing mechanism”. “As a matter of policy, NPCIL, which is a public sector undertaking, would insist that the nuclear supply contracts contain provisions that provide for a right of recourse, consistent with Rule 24 of CLND Rules”.
- In this regard, the **India Nuclear Insurance Pool (INIP)** has been instituted to provide a source of funds through a market-based mechanism to compensate third parties for nuclear damage.

II. MEA's FAQ (8 Feb, 2015) cont'd

- ▶ **S. 46 CLND Act:** “the provisions of this Act shall be in addition to, and not in derogation of, any other law for the time being in force, and nothing contained herein shall exempt the **operator** from any proceedings which might, apart from this Act, be instituted against such **operator**”.

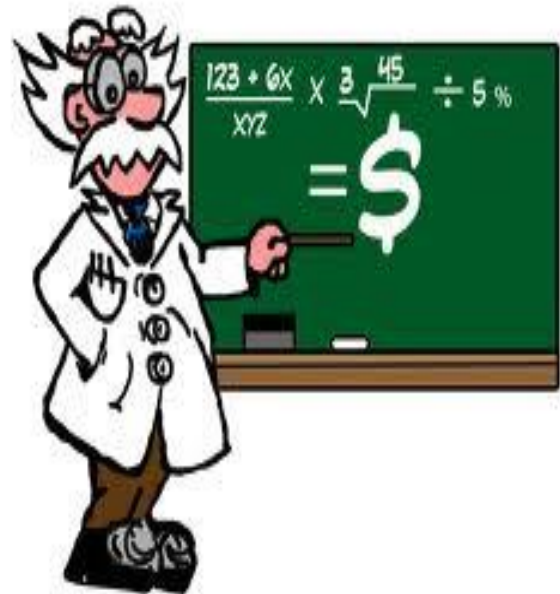
- ▶ **Q&A- 11-12&13:** Does S. 46 permit claims for compensation to be brought under other laws?
 - Against the **operator**? **Yes**
 - Against the **supplier**? **No** (see Parliamentary debates and amendments which were not adopted).
 - Can victims approach **foreign courts** against operator/suppliers? **No.**

III. India Nuclear Insurance Pool (INIP)

- ▶ INIP (27th nuclear insurance pool) - launched on 12 June, 2015.
- ▶ GIC - Re (General Insurance Corporation of India), the only re-insurer in the country, would be the administrator.
- ▶ Would cover all 21 NPPs operated by NPCIL, i.e. both under IAEA safeguards and AERB safeguards. Question of “blind underwriting”?
- ▶ Liability amount to be covered: Rs. 1,500 Crores (= Rs. 15 billion = USD 237.5 million). INIP participants - capacity:
 - ▶ 50% = GIC Re, 4 other Public Sector Undertakings & 7 private general insurers → now: about 2/3 of amount (Rs. 1,000Cr)
 - ▶ 50% = Government on a tapering basis → now: 1/3 (Rs. 500Cr.)

III. INIP

- ▶ INIP will cover the risks of the liability of the:
 - ▶ Operator under S. 6(2) of the CLND Act:
 - **Tier 1 Policy**; i.e. single “floater policy” which would cover 21 NPPs & any additional NPPs.
 - has been approved by the Insurance Regulatory and Development Authority (IRDA).
 - ▶ Suppliers under S. 17 of the Act = **Policy for the Supplier’s Special Contingency**
 - **Tier 2 Policy**: for turnkey suppliers;
 - **Tier 3**: other suppliers.
 - yet to be approved by the IRDA.



III. INIP - “risk management scheme for liability”

- ▶ INIP will be subrogated in the rights of the operator; and may exercise Right of Recourse (RoR). Similarly, INIP will be subrogated in the rights of the insured supplier. → operators/suppliers = “partners at managing risk together” (Q&A - 14).
- ▶ Suppliers not obliged to take out insurance → then INIP vs. supplier dispute of RoR before regular courts in India.
- ▶ Premiums will depend on risk appraisal, incl. factors such as risk probability, possible severity of damage and exposure to people and property around nuclear installations → **Matrix**: 1) criticality to safety; and 2) life span of equipment / quantities involved.
- ▶ Pricing principles: 2% of sum insured...?

INIP & its supplier insurance policies - an isolated novelty or paradigm shift?

- ▶ INIP policies still being finalized.
- ▶ Ad interim: NPCIL has extended Bank Guarantees → no supplier policies can be issued.
- ▶ Note: Interesting developments in terms of domestic implementation CSC in US → Notice of Proposed Rulemaking (NOPR) dt. 10.12.2014: “retrospective risk pooling program” → suppliers’ obligation for non-Price Anderson incidents → **risk-informed assessment formula** (risk factors: quantity of supplied goods & services; associated hazards, etc.)



Thank you & see you all in Delhi!
XXII INLA Congress:
Monday 7 - Friday 11 Nov, 2016

