
Bringing common nuclear regulatory regimes to the region

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Section one: Nuclear law and regulation

Nuclear law and regulation

- ▶ IAEA Milestones: Legal and regulatory infrastructure development
- ▶ One of the most highly regulated and politically sensitive sectors
- ▶ Importance of a transparent and internationally compliant legal system
- ▶ Legal infrastructure for nuclear power - three complementary layers:
 - International law
 - National law and regulation
 - Procurement arrangements and project documentation
- ▶ Opportunities exist for harmonisation in emerging nuclear markets

Section two: International legal regime for nuclear power

Purpose of international nuclear instruments

- ▶ Deal with global issues:
 - Non-proliferation of nuclear weapons
 - Transboundary consequences of a nuclear accident
- ▶ Set minimum international standards: nuclear safety and physical protection
- ▶ Practical significance: international third party liability regime for nuclear damage and importance for the international supply chain
- ▶ International instruments only achieve their purpose if obligations are given effect in national legislation
- ▶ If adopted on a national level, international/regional harmonisation is achieved naturally

Liability for third party nuclear damage

- ▶ Emerging nuclear states need to rely on the international nuclear supply chain
- ▶ Affects operators, reactor suppliers, component part suppliers, carriers, civil works contractors, lenders, insurance industry and regional inter–state relations
- ▶ Key principles
 - The operator of a nuclear installation is exclusively liable for nuclear damage (the “channelling principle”)
 - Strict (no fault) liability is imposed on the operator (subject to limited exceptions)
 - Liability is limited in amount: a minimum amount is set and each state may set a maximum amount and liability is limited in time
 - Operator must maintain insurance or other financial security covering an amount equal to its liability
 - Exclusive jurisdiction is granted to the courts of the installation state

Section three: National law and regulation

Key provisions of a national nuclear law

- ▶ Establishment of the national nuclear regulatory authority
- ▶ Licensing and permitting regime
- ▶ Enforcement, assessment and inspection
- ▶ Security and safeguards
- ▶ Physical protection and safety
- ▶ Emergency preparedness and response
- ▶ Transport of radioactive material
- ▶ Import and export controls
- ▶ Waste management and spent fuel management
- ▶ Decommissioning
- ▶ Civil liability for nuclear damage
- ▶ Criminal and civil offences and penalties

Focus on licensing and permitting

- ▶ Primary mechanism through which the nuclear regulator exercises control over the nuclear new build process; monitors and implements safety standards
- ▶ For a new regulator regulating the first nuclear new build, licensing process will be the first challenge
- ▶ National regulator requires significant levels of competence and experience to properly assess licence applications
- ▶ Ability to utilise international experience and resources: regulator of supplier state or experienced regulator such as US NRC
- ▶ One key area: reactor design certification

CORDEL's proposal for standardisation of reactor design

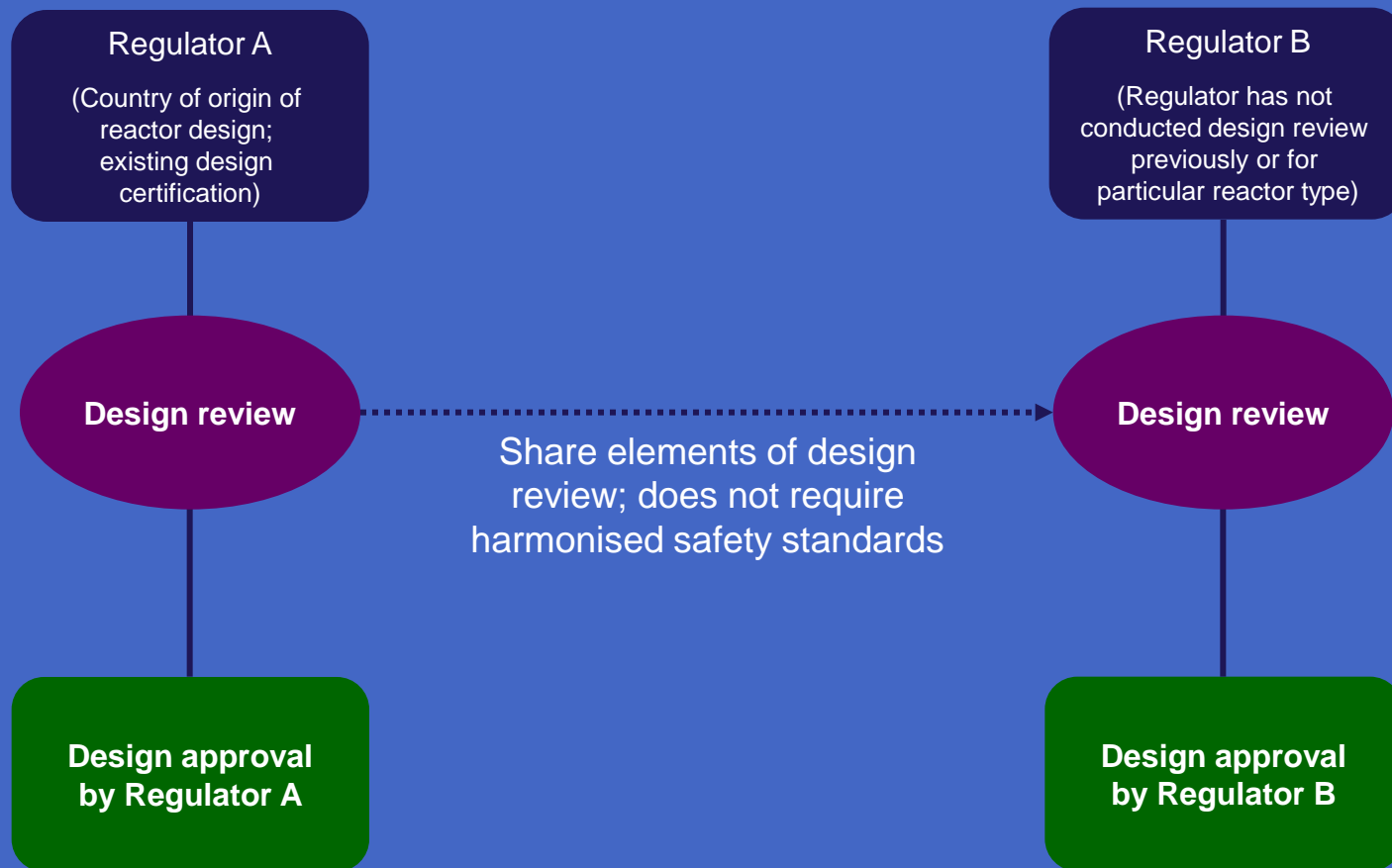


- ▶ International movement towards standardisation of reactor design: Multinational Design Evaluation Programme and World Nuclear Association's CORDEL working group
- ▶ CORDEL: Legal and regulatory actions to facilitate standardisation of reactor design:
 - Step one: Share design assessment - information exchange between national regulators
 - Step two: Validate and accept design approval- one regulator accepts another regulator's design approval
 - Step three: International design certification - future international agreement/designated international organisation
- ▶ All steps are useful for human resource constraints in emerging nuclear countries

CORDEL's proposal for standardisation of reactor design (continued)



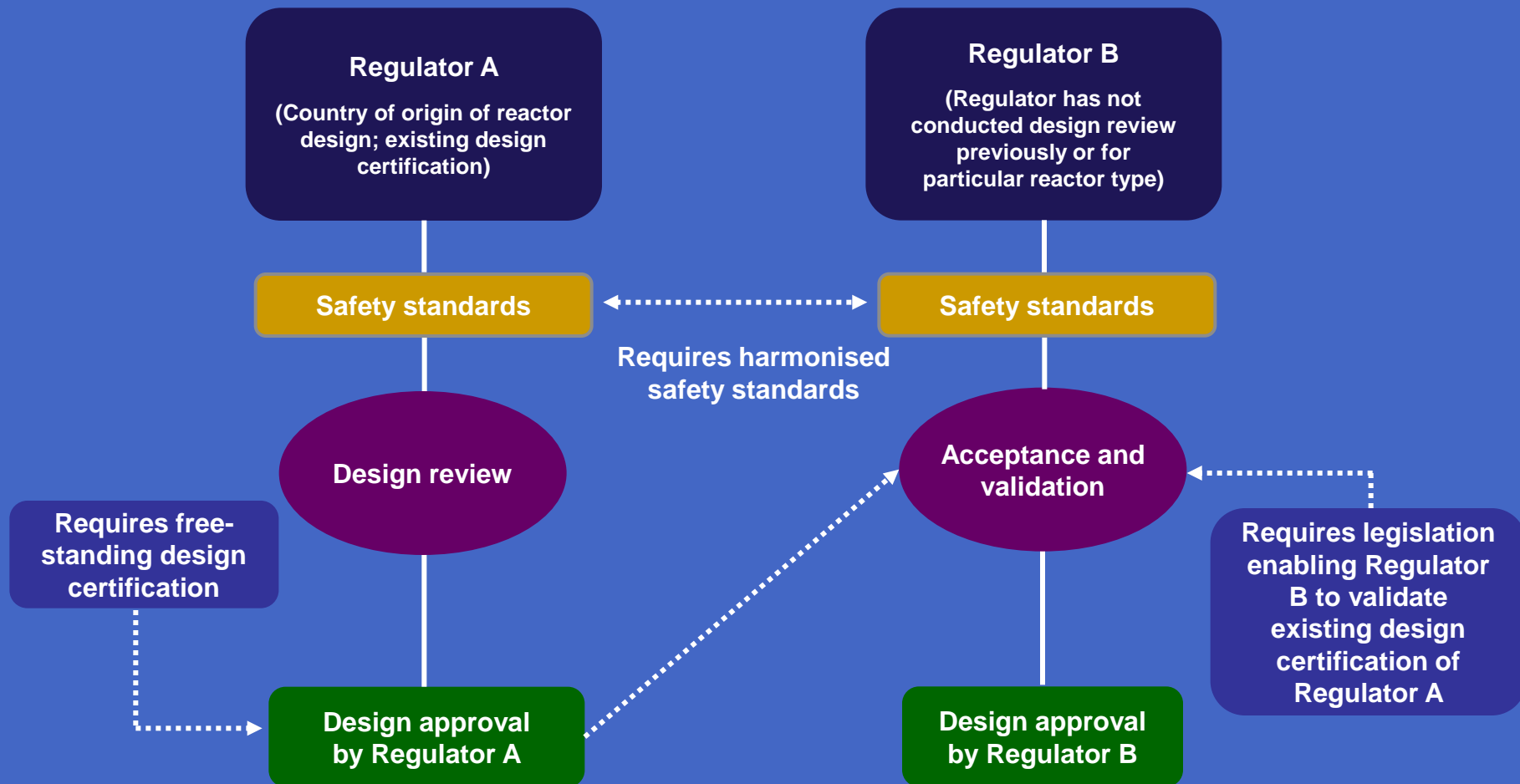
Step 1: Regulator A provides assistance:



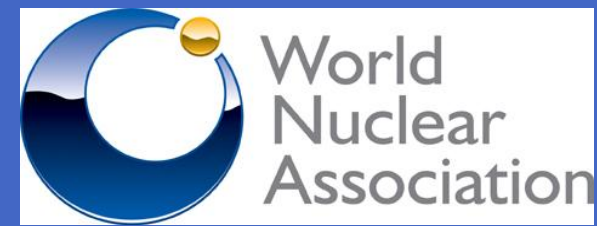
CORDEL's proposal for standardisation of reactor design (continued)



Step 2: Regulator B accepts design approval after validation



World Nuclear Association Nuclear Law and Contracting working group project



Project to develop implementing regulations for emerging nuclear countries:

- ▶ Project undertaken by the WNA through Nuclear Law and Contracting working group (includes representation of nuclear regulatory authorities and international agencies)
- ▶ First step is the development of a model licensing regime
- ▶ Key rationale: ensure more efficient use of existing human resources - regulatory authorities in emerging markets otherwise need to undertake everything "from scratch"
- ▶ NLC has linked with WNA's CORDEL working group on certain topics e.g. acceptance of reactor design certification in one country by another country
- ▶ Regulations for licensing and permitting will give legislative effect to national regulators' cooperation on reactor design certification

Section four: Conclusions

Conclusions

- ▶ A natural process of harmonisation: adoption of the international legal regime should be undertaken; obligations given effect through national legislation
- ▶ Overcoming human resource constraints through harmonisation: possibility to effectively utilise scarce human resources in key areas such as licensing and permitting of nuclear new build