



World  
Nuclear  
Association

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# Agenda

- WNA
- CORDEL Working Group
- Standardization
  - Benefits for safety
  - Benefits for industry and regulators
- Harmonization for regulators
  - 3 Phase Roadmap – Proposal for a Dialogue
- Standardization – Governments and IAEA
- CORDEL Action plan 2011

# World Nuclear Association



# The CORDEL Working Group



## Cooperation in Reactor Design Evaluation and Licensing (CORDEL)

- Founded in January 2007
- Main aim: **promoting international standardization**
- Membership:
  - all major vendors, utilities interested in new build, service companies and observers from int'l organisations
- **International standardization** means that each vendor's design can be built by a vendor, and ordered by a utility, in every country by adapting national regulations which have been "harmonized" to a set of international requirements and standards



# ***CORDEL – commitment from industry***



***13 April 2010, 12 Leading Nuclear Companies' CEOs published a letter of support for CORDEL:***

- John Ritch, DG, **WNA**
- Anne Lauvergeon, CEO, **Areva**
- Hugh MacDiarmid, CEO, **AECL**
- Henri Proglio, CEO, **EDF**
- Wulf H Bernotat, CEO, **E.On**
- Christopher Crane, President & CNO, **Exelon**
- Jack Fuller, CEO, **GE-Hitachi**
- Masaharu Hanyu, President, **Hitachi-GE**
- Akira Sawa, Director, Nuclear Systems, **Mitsubishi Heavy Industries**
- Ichiro Takekuro, CNO, **Tokyo Electric Power Co**
- Yashuharu Igarashi, CEO, Power Systems **Toshiba**
- Aris Candris, CEO, **Westinghouse**

## Recipients:

- Yukiya Amano, DG, **IAEA**
- André-Claude Lacoste, Chairman, **Multinational Design Evaluation Program (MDEP)**
- Luis Echávarri, DG, **OECD-NEA**
- Andrej Stritar, Chairman, **ENSREG**

cc: Laurent Stricker, Chairman, **WANO**

# *Standardization - Benefit for Safety*



- Challenge to nuclear industry to improve nuclear safety and effectiveness of **all stakeholders for New Build NPP**

- Fleets of standardized designs offer a broad basis for construction and operation experience feedback

- Design improvements could be implemented across the fleet (effective example in current French fleet)

- Recent lessons learned for new NPP design and licensing

**Standardized advanced plants will bring additional safety layers in all stages: design, construction, operation and decommissioning**

# Standardization - Benefits for the industry and regulators



Standardization will

- reduce strain on resources (regulators/designers)
- reduce investment risks, time and cost in licensing and construction
- foster joint supplier oversight
- enable project neutral manufacturing of components for standardized designs
- improve transparency of regulatory practices
- gain public confidence
- facilitate establishment of nuclear power programmes in emerging countries in safest and efficient manner



# Harmonization - regulatory regimes



Harmonization of regulation – absolutely necessary for standardization!

## Keeping in mind that:



- Sovereignty of each country's regulator has to be respected
- Regulators are bound by law to apply their national safety requirements and licensing procedures
- Combination and “piling up” of the requirements to be avoided



# CORDEL Roadmap – Dialogue with Stakeholders



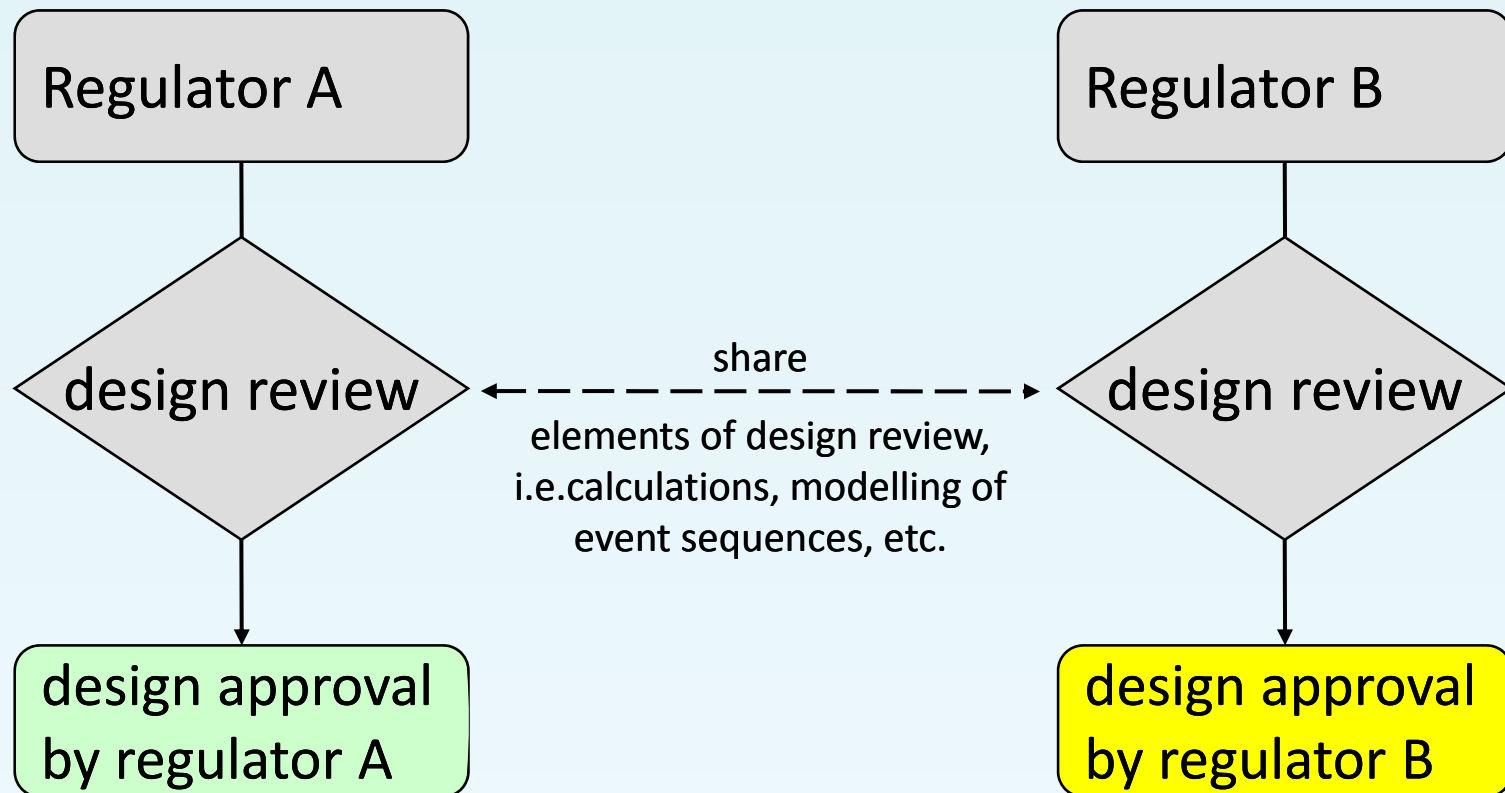
“Internationalisation” of **DESIGN APPROVAL** process



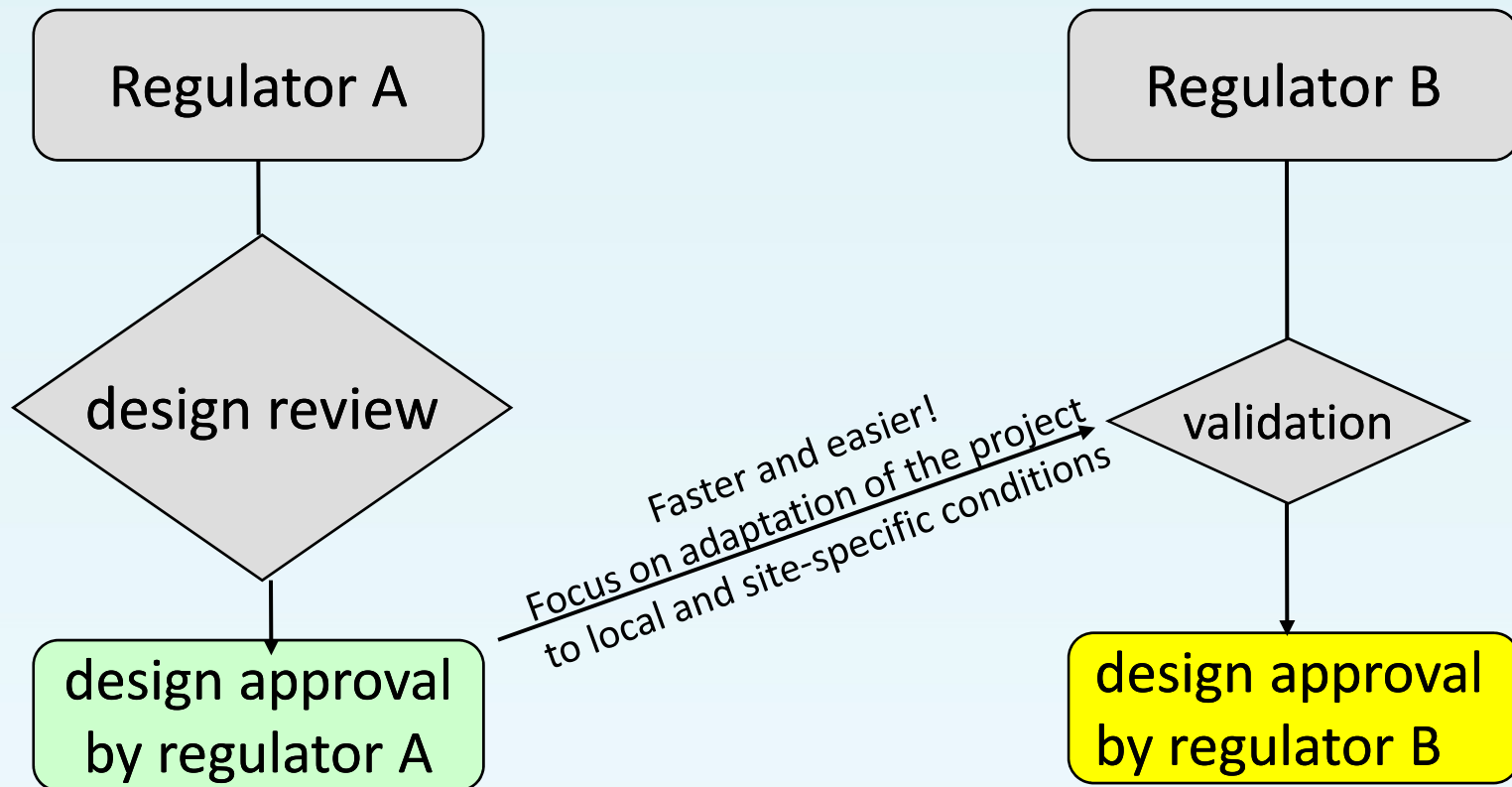
International “harmonization” of

- » national licensing processes
- » safety requirements
- » applicable Standards and Codes

# Phase 1: Share design assessments/reviews

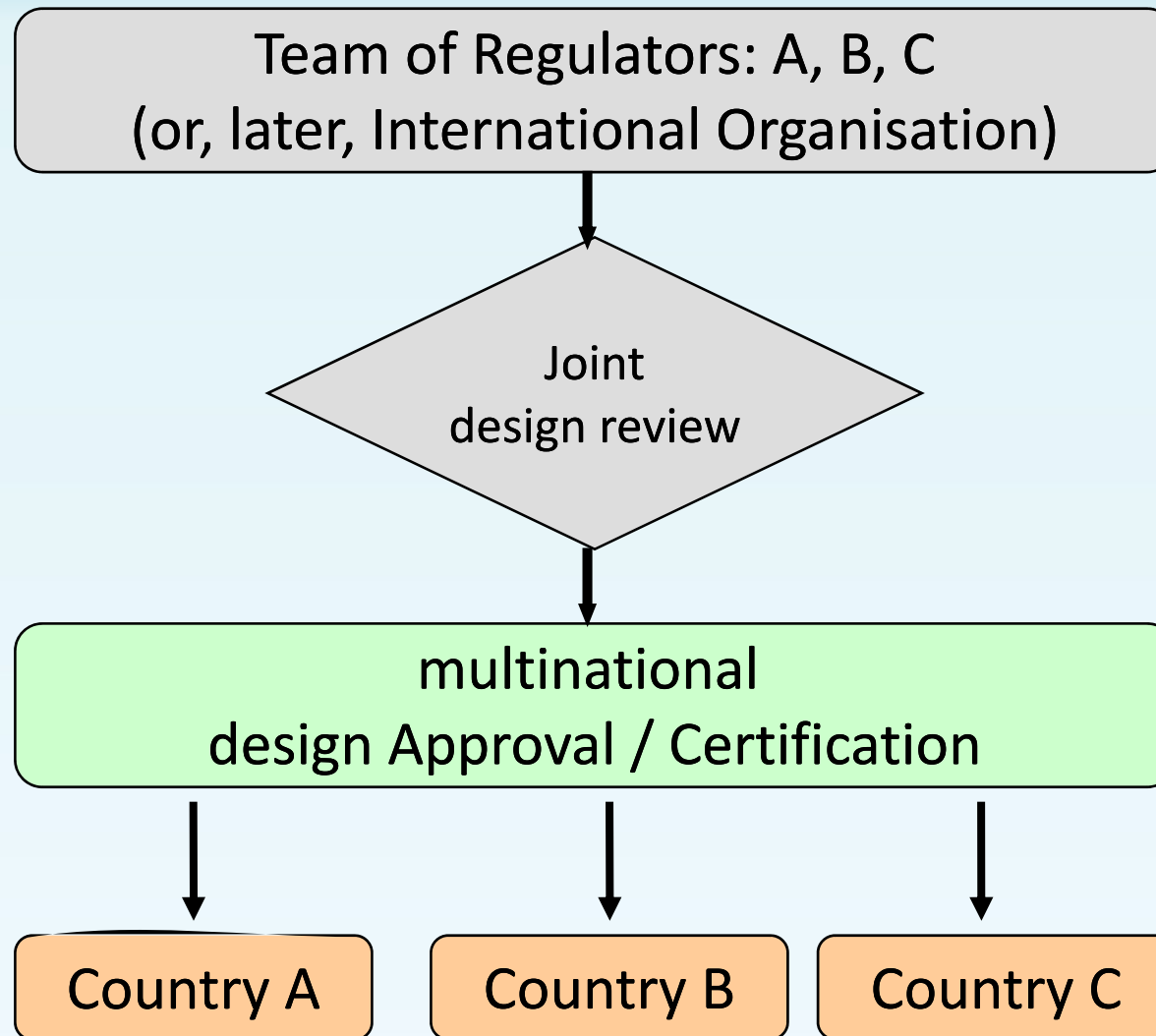


# Phase 2: Validate & accept design approvals of other countries



Not “automatic” but through a “validation”.  
Examples: transport casks for waste, aviation industry’s Type Certification

# Phase 3: International Design Certification



# Standardization: Governments and IAEA



- Recent Ministerial Meeting at IAEA on Fukushima – new direction and enhanced roles for nuclear organizations
- International harmonization of regulations may require
  - some changes in national legislation
  - creation of inter-governmental agreements
- This new international framework would be beneficial for all – established and emerging nuclear countries or those with a small nuclear program
- IAEA is the most appropriate platform to coordinate inter-governmental initiatives
- Legal power of IAEA Safety Standards should be reviewed
- IAEA regulatory peer reviews (IRRS) – good basis for harmonisation

# ***CORDEL - (Vendor and Operators) Action Plan 2011***



- **Interaction with MDEP** & other regulatory initiatives
- **IAEA safety standards:** continuous participation in revision
- **Design Change Management Task Force (TF):** develop institutional mechanisms in the industry to enable compliance with standardization throughout standard fleet's lifetime
- **Standards and codes TF:** cooperation with SDOs of various countries in convergence of industry codes
- **Probabilistic safety goals TF:** promotion of harmonization of industry's methodologies and values
- **Licensing and permitting TF:** industry interests – efficiency & risks reduction; also in support of emerging markets
- **SMRs TF:** encouraging commercial development



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