The creation and development of MDEP
(Multinational Design Evaluation Programme)

4th Conference on New Reactor Design Activities

London
September
12-13, 2017

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Introduction

- Former ASN President (until November 2012)
- Co-founder and first MDEP Chairman (2006-2012)
- Not a neutral point of view
- Belief in collective initiatives

- Focus on the foundation of MDEP: context, motivations and ambitions
- MDEP achievements presented by Gary Holahan
The context in 2000-2005

- « Nuclear Renaissance » in Western countries: EPR, AP1000
- Cooperation between the Regulatory Bodies of the vendor/recipient countries
- Convergence of Regulatory Practices → convergence of Regulatory Requirements
- Generation IV International Forum (GIF)
- Single certification in the long term
In this context, two approaches

- **USNRC**
  - Nils Diaz: to extend worldwide the US certification

- **Europe**: Regulatory Bodies of France, Finland and other countries
  - Example of the cooperation between ASN and STUK
  - While maintaining and assuring national responsibility
Frank and open discussions

• New Reactor Design: EPR + AP1000
• Regulatory Bodies: USNRC, ASN + STUK + other European RB
• Relations USNRC/ASN:
  – Quite excellent on technical issues
  – Different views (resident inspectors, PSA/Deterministic approach)
• A lot of frank and open discussions with my US counterparts.

Creation of MDAP (Multinational Design Assessment Programme) in 2005
A step-by-step development

• From MDAP to MDEP
• A one-year pilot project conducted in 2006-2007 to assess the feasibility of the programme
  – Focused on Severe Accidents, Digital Instrumentation and Controls and Emergency Core Cooling Systems
• Initial two-year programme approved in 2007
• Specific recommendations and structure identified and approved in 2008
• Converted into long-term programme in 2009
Expected outcomes of the initial programme

• Setting up an enhanced co-operation among regulators:
  – To improve the effectiveness and efficiency of regulatory design reviews
  – To raise the safety assessment quality and the safety level
  – To facilitate convergence of regulatory requirements
Evolution of Motivations and Ambitions

• To go as far as possible on cooperation, sharing, harmonization and convergence of the reactor design review

• Maintaining two complementary categories of working groups:
  – Design-specific WGs, including technical experts subgroups
  – Issue-specific WGs

  Possibility of cross-cutting activities

• In depth examination:
  – IRRS / Regulatory Bodies
  – OSART and WANO / Operators
  – ? / Design
MDEP Challenges

• Active involvement of Regulators, Vendors and Operators
• Innovative approaches and limited routine works
• Keep the initial impetus and structure going
Conclusion

• 10 years of strong international commitment on the new reactor design safety evaluation

• Clear interest for a collective initiative

• Complementary approaches:
  – Design-specific WGs
  – Issue-specific WGs

• Pride of being a co-founder of MDEP