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# ***Expectations for Finland Regulatory Review and Similarities to US Process***

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# Regulatory Pyramids

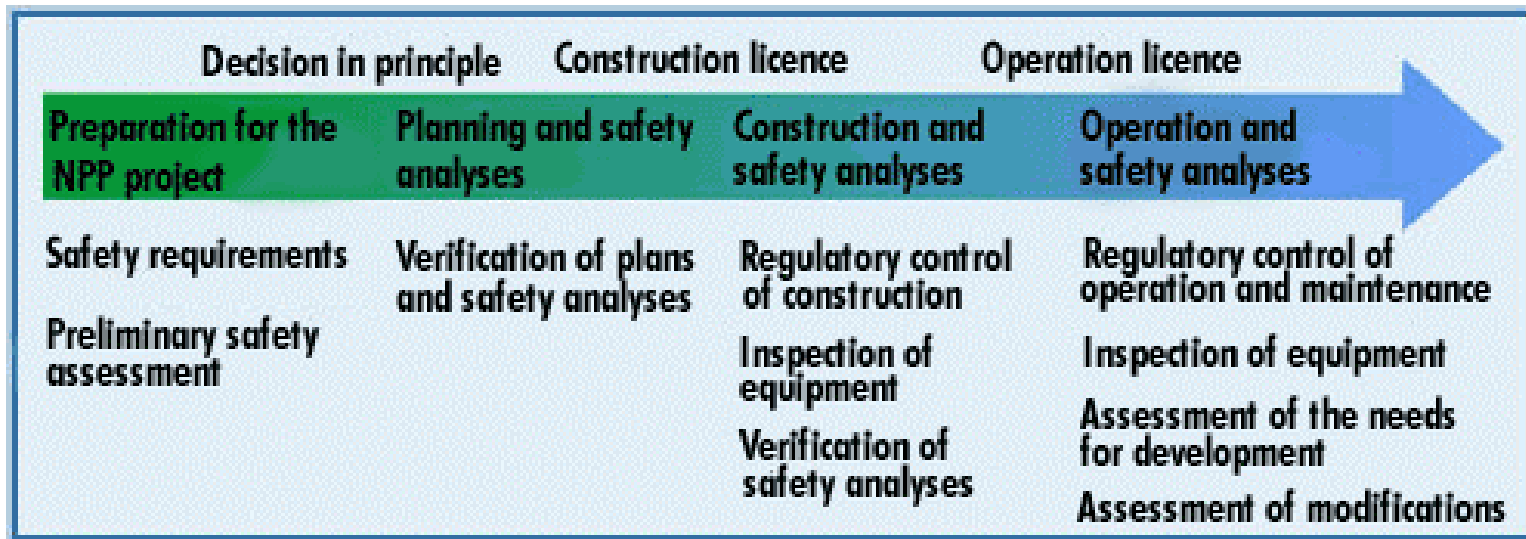


- > Legislation
  - Nuclear Energy Act
- > Regulations
  - Nuclear Energy Decree
  - Decisions of the Council of State
- > Guidelines
  - General Guides (YVL 1.x)
  - Systems, etc. (YVL x.x)



- > Legislation (Law)
- > Regulation (10 CFR)
- > Guidance
  - Regulatory Guides
  - Standard Review Plan
  - Generic Communications
  - Other

# Finland Process Overview



- > Decision in Principle (DIP)
  - need for energy
  - site suitability and environmental effects
  - fuel and waste
- > TVO applied for DIP December 2000.
- > Government (Council of State) approved in January 2002, based in part on STUK preliminary safety assessment.
- > Parliament ratified Government decision May 24, 2002



## ***“Two-Step” Licensing***



### > Decision in Principle

- Opportunity for public involvement

### > Construction Permit

- PSAR and other information. Specific reference to “intent” of US Regulatory guide 1.70, Rev 3 (1978)
- STUK will provide a safety assessment and provide a position on meeting legislative requirements

### > Operating License

- Opportunity for public involvement(?)
- FSAR and other information
- STUK will provide a safety assessment and provide a position on meeting legislative requirements
- Fixed-term, usually ten years

### > Construction Permit

- Opportunity for public involvement
- PSAR and other information.
- Last US PSAR approval 25 years ago, before TMI accident

### > Operating License

- Opportunity for public involvement
- FSAR and other information

### > 10 CFR 50 Process, not 10 CFR 52

# Experimental Bases for Design Analysis



- > Guide YVL 2.2, "Transient and accident analysis for justification of technical solutions at nuclear power plants"
  - > At PSAR stage, focus is on plant features which can not be modified at a later stage
  - > "The experimental correlations used in the calculations shall be justified by presenting the measurement data from which the correlations have been derived."
  - > "Physical models shall be verified by demonstrating their ability to depict suitable separate effects tests or integral tests for complete systems or NPP transients."
- > 10 CFR
    - 50.34, Contents of Applications; Technical Information
    - 50.46, Acceptance Criteria for ECCS for LWRs
    - 50, Appendix K, ECCS Evaluation Models
  - > Regulatory Guides
    - 1.157, Best-Estimate Calculations of ECCS Performance (May 1989)
    - Draft 1120, Transient and Accident Analysis Methods (Dec. 2002)
  - > Standard Review Plan
    - Section 15 (generally revised since 1996)
    - Draft 15.0.2, Review of Analytical Computer Codes (Jan. 2003)
  - > Past practice