SESSION 7 - INDUSTRY INITIATIVES ON NEW REACTOR DESIGNS, UTILITY'S BENEFITS

• Utility's benefits from a standardized plant concept and large installed base of similar plants are evident

• Plant level benefits: operational experience feedback, review of disturbances, ageing mechanisms, organisational topics, etc. → improved safety

• Utility benefits as service / equipment purchaser: competent service / equipment suppliers who have large enough installed base for gathering experience and expertise → improved safety and better economic efficiency

* Example: TVO's experience with OL1/2
SESSION 7 - INDUSTRY INITIATIVES ON NEW REACTOR DESIGNS, TVO SITUATION:

- TVO has now OL3 EPR project ongoing
- TVO is preparing for OL4 project with five different reactor alternatives included in the feasibility studies
- Finnish licensing requirements control the work; it is important to be able to freeze the regulatory requirements in the beginning of the project
- Multinational co-operation brings collective expertise in evaluation of new plant designs, especially certain areas such as severe accidents

  - Potential benefits of multinational authority co-operation could be for licensing procedures, e.g. enhance manufacturer certification and approval of off-the-shelf components (serial manufactured)
  - Requirements which significantly affect the structures, systems and components are important to be harmonised
  - In any case, in each country, the prevailing conditions (site related requirements, environmental conditions, seismicity) must be taken into account in the design and sizing of the structures and equipment -> this should not affect the plant concept itself
SESSION 7 - INDUSTRY INITIATIVES ON NEW REACTOR DESIGNS

• What TVO is doing/enhancing with respect to Industry Initiatives for OL4 nationally:

  • licensing plan
  • regulatory requirements – YVL Guides are being renewed
  • “approvable” plant concept in the beginning of licensing
  • harmonization of licensing and project activities

• International regulatory co-operation and harmonization of requirements as well as utility co-operation is needed for longer perspective
THANK YOU