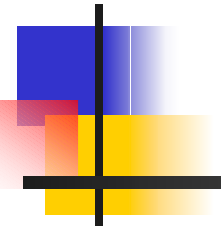
**RIC 2003**

Session Number T11

**International Issues and Perspectives**



# Major Regulatory Issues and Perspectives in Korea

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# Current Status of NPPs in Korea

- In Operation : 18 units (14 PWRs, 4PHWRs)
- Under construction : 2 units (KSNP: 1000MWe)
- CP review : 4 units (KSNP)
- CP application in Preparation : 2 units (APR-1400)
- Planned : 2 units (APR-1400)

☞ NPPs in operation by 2015 : 28 units

- KEDO LWRs : 2 units (KSNP), Completion unclear
- Design Development on-going: SMART (330MWt)
  SMART-P(65MWt)

# Major Challenges

- Licensing Regulatory Issues
  - Continued Construction of New NPPS
  - Aging of Operating NPPs
  - License Renewal/Life Extension
- Regulation of PWRs and PHWRs(CANDU)
- Public Confidence in Nuclear Regulation
- Radwaste Disposal Site Selection

# Licensing Regulatory Issues-I

- Continued Construction of New NPPs
  - Challenge: KSNPs standardized but continuing step-by-step improvement
    - Introduction of first-of-a-kind design features in NPPs (Digital Plant Protection System,..)
  - Perspectives:
    - Improvement of regulatory evaluation capability (V&V of Software,…)
    - Feedback of operational experience (SG flow distribution plate,…)

# Licensing Regulatory Issues-II

- Aging of Operating NPPs
  - Challenge: Material degradation and Increase of components failures (SG tube degradation, piping wall thinning,…)
  - Perspectives:
    - Development of Systematic Aging Management Program by Periodic Safety Review
    - Improvement of early detection capability of aging
      - Upgrade NDE(ECT, UT) evaluation technology

# Licensing Regulatory Issues-III

- License Renewal/life Extension
  - Challenge:
    - Design life expires : 30 – 40 years
    - Licensing system for extended operation is not established
    - Local community and NGOs oppose to extended operation
  - Perspectives: Several options are available
    - Lawmakers submitted a bill for stipulation of license term
    - Utilize the PSR for continued operation
    - Life extension through administrative order

# Regulation of PWRs and PHWRs(CANDU)

- Challenge:
  - Differences in design concept, regulation practices, and applicable code & standards, between PWRs and PHWRs
  - Run-out of PHWR dedicated engineers
- Perspectives:
  - Introduction of PWR-oriented regulation system
    - Safety Analysis Report to PWR standard format
    - Conversion of OP&P to Tech. Spec. similar to PWR
    - Conduct of Periodic Safety Review
  - Special R&D budget allocation for PHWR

# Public Confidence in Nuclear Regulation

- **Recent Opinion Poll** (1995, 2002, 2003 )
  - Major Results
    - Highest credit (53%) is given to NGOs whereas the Government receives relatively low credit(13%).
    - This trend is getting worse across the three surveys.
    - “Expertise” is the most important in regulation (55%)
    - Regulatory control should be strengthened (90%)

# Public Confidence in Nuclear Regulation

## Initiatives taken by Government

- Policy change in nuclear safety information from responsive to proactive
  - **“Open-if-you-request” ⇨ “Open-for-your-information”**
  - “Public Center of Nuclear Safety Information” was established at KINS
  - Provide the information on “Safety Performance Indicators” and “Nation-wide Environmental Radiation Levels” on internet
- “Safety First” campaign
  - Annually on the 6th September as “Nuclear Safety Day”
  - Monthly on the 1st Tuesday as “Nuclear Safety Alert Day”

# Radwaste Disposal Site Selection

- Series of setbacks and failures in selection of radwaste disposal site due to Strong public opposition since 1986 in Korea
- Four candidate sites were announced in Feb. 2003(2 west, 2 east coast)
- Final selection be made by March 2004
  - General election is scheduled for April 2004

➔ This issue will decide the future of Korean Nuclear Industry

➔ Typical PA issues