



# **Challenges Facing the NRC on Reactor License Renewal and International Collaborations**

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# Challenges for the Nuclear Industry and Regulator

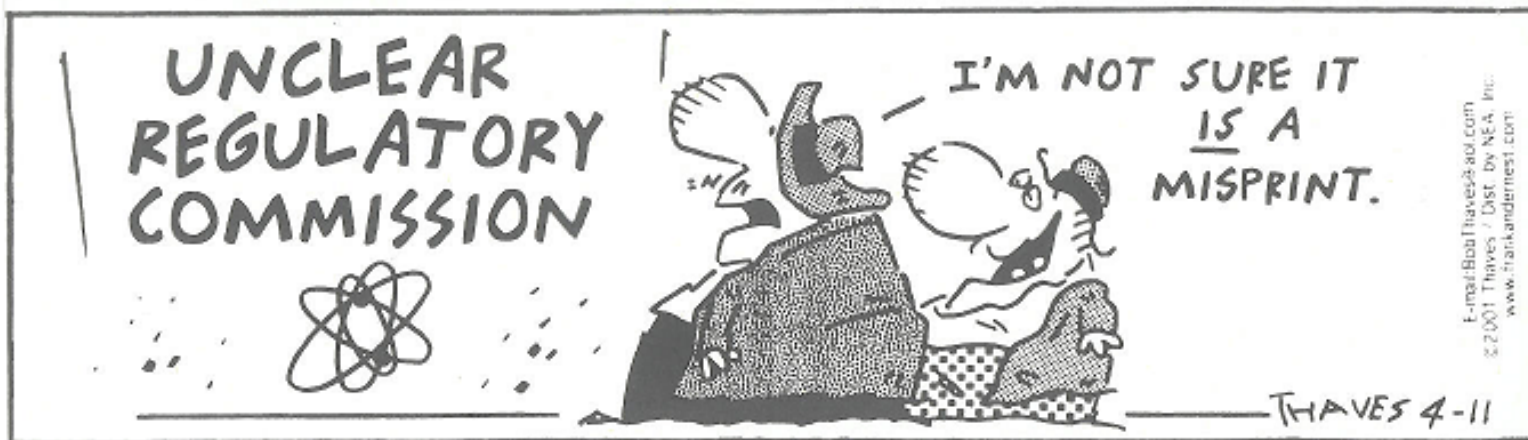
- Public Confidence
- Materials Aging
- Availability of Skill Sets
- Maintain safety at facilities

**ON WHY WE TRUST THE NUCLEAR REGULATORY COMMISSION**

**NRC: Fuel rods mistakenly stored in safe place**

*from the Greenwich (Connecticut) Time*

FRANK & ERNEST® by Bob Thaves



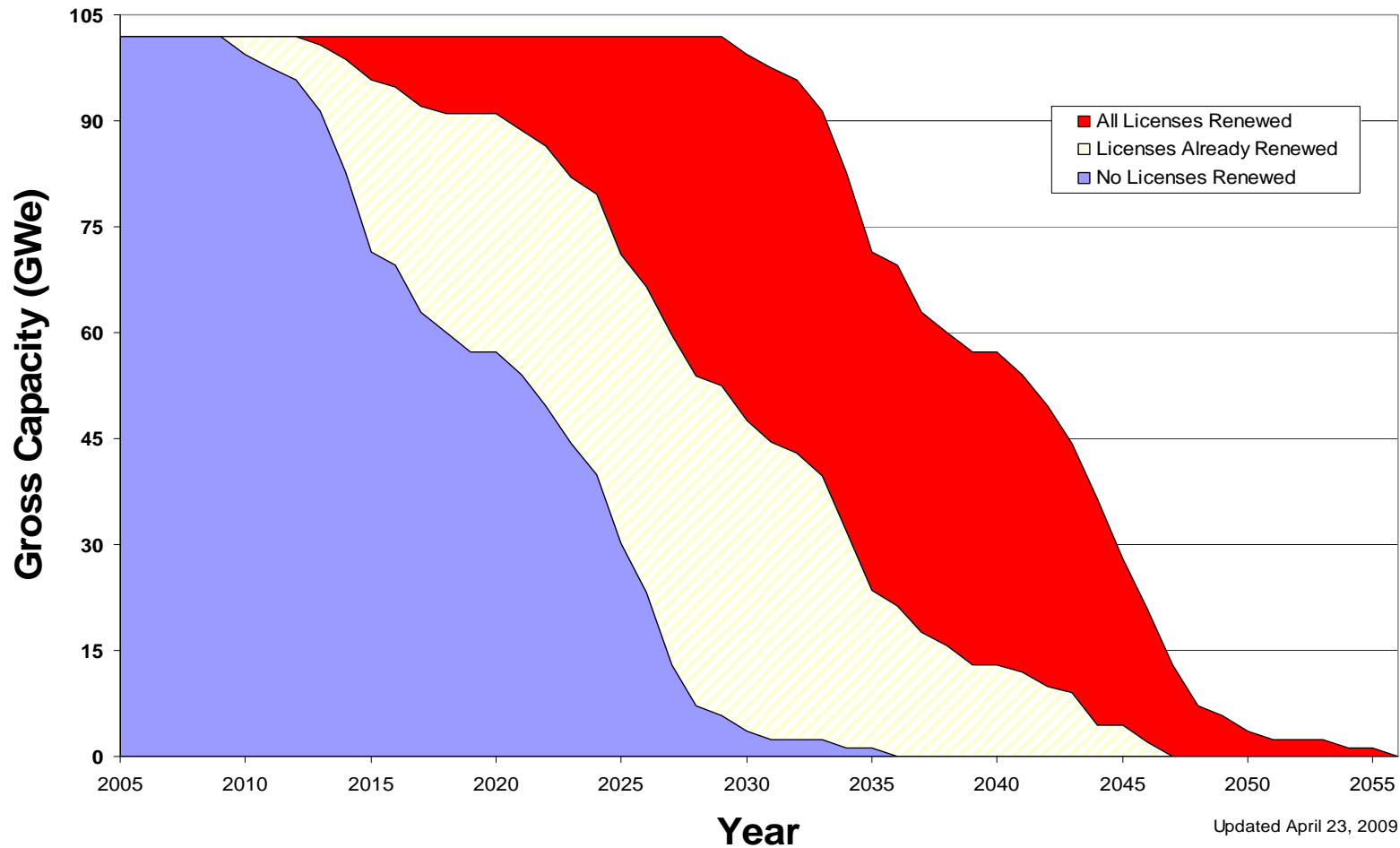


# License Renewal Lessons Learned

- 52 Licenses renewed (50%)
- 13 Applications currently under review for 20 units
- Key lessons learned
  - Public Interactions
  - Inspection of aging programs before extended life

# Generating Capacity – License Renewal

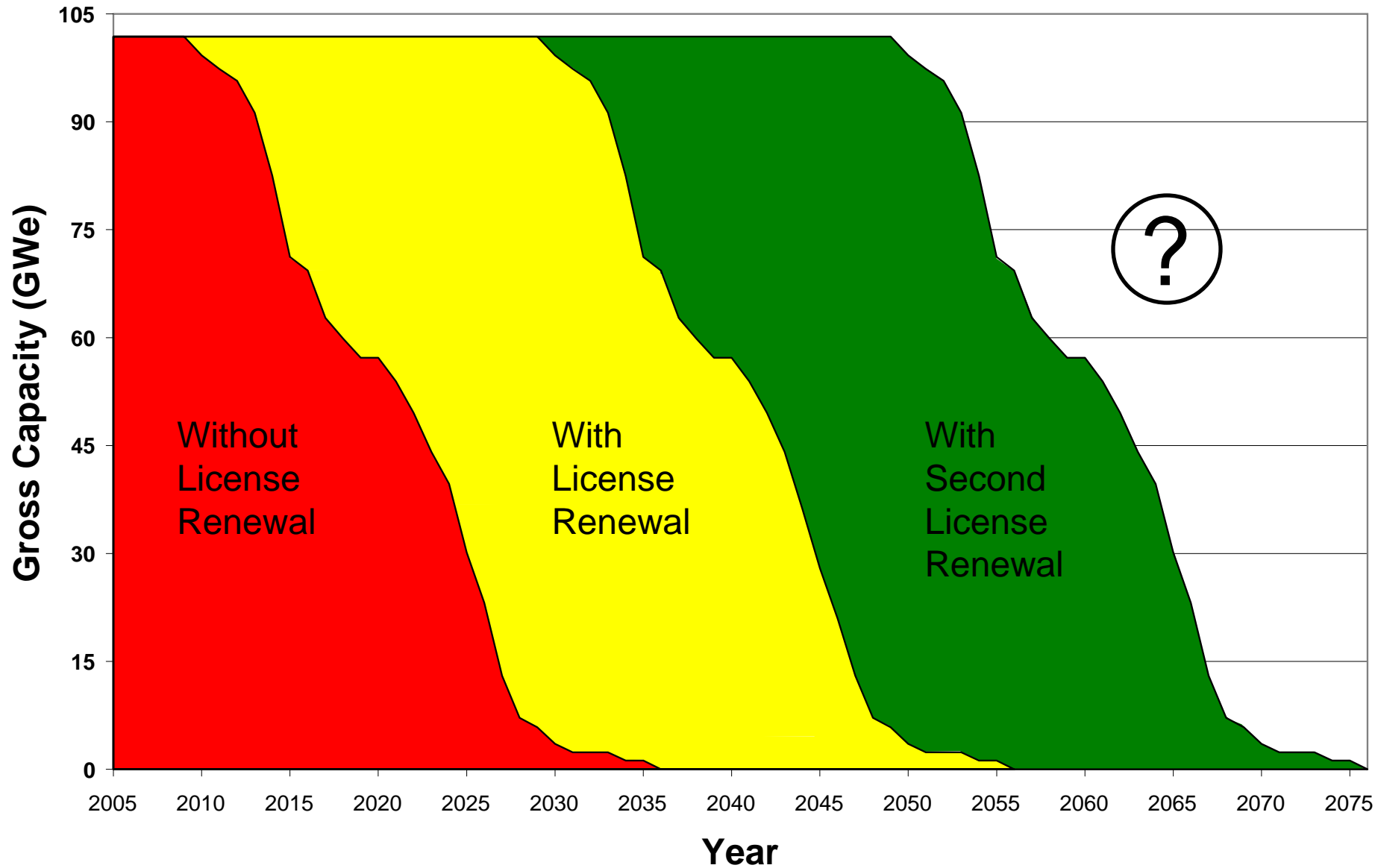
## License Renewal Effect on Nuclear Power Capacity



# Challenges to Life after 60

- Working with Department of Energy on technical issues for beyond 60
- Human Capital
- Research test and examination facilities require support
  - Chemical control programs
  - Transition to Digital I&C
  - Neutron Embrittlement
  - Annealing/Analysis of Reactor Vessel
  - Thermal Fatigue
  - Environmental Qualification of Components

# License Renewal Impact on Nuclear Power





# Challenges with Licensing New Reactors/Technologies

- Multiple Permits
- Construction Program
- Operator Licensing/Simulators
- Research
- Design Certification Timing
- International
  - Vendor inspections
  - MDEP
  - Codes/Standards