



U.S.NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

NEW and ADVANCED REACTORS LICENSING UPDATE

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Terms of Reference

“Part 52 Update Rule” (August 2007)

“LWA Update Rule” (October 2007)

“CONSTRUCTION”

“PHASED REVIEW” (DC→ESP→LWA→COL)

[design, siting, limited construction, license]

“FINALITY”

“ITAAC”

“103(g) FINDING”

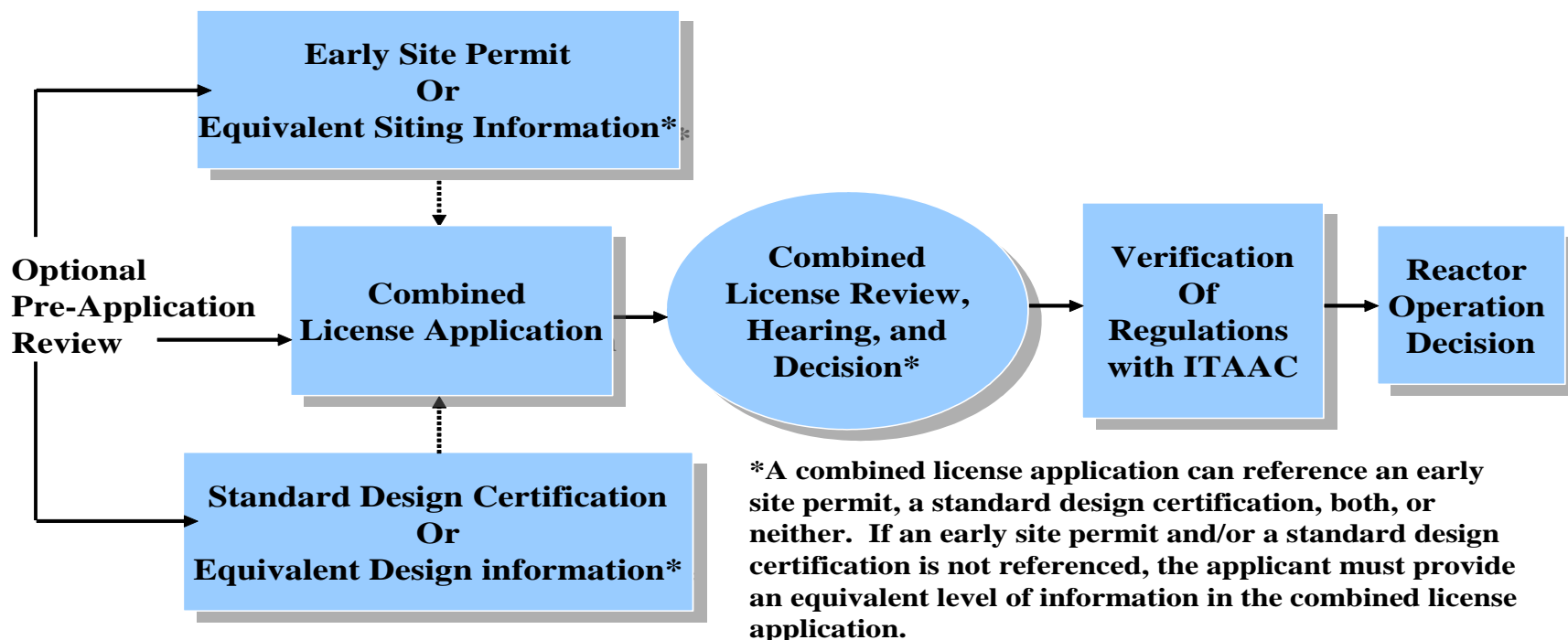
“INCENTIVIZING” DEVELOPMENTS

- Revised NRC Licensing Process
(10 CFR Part 52)
- DOE’s NP 2010 Program
- Energy Policy Act of 2005

Part 52 Licensing Processes

- Licensing Processes:
 - Early Site Permit (ESP)
 - Design Certification (DC)
 - Combined License (COL)
- Provide a predictable licensing process
- Resolve safety and environmental issues before authorizing construction
- Provide for timely & meaningful public participation
- Encourage standardization of nuclear plant designs
- Provide regulatory stability to nuclear plant licensees

Part 52 Licensing Process



NEW AND ADVANCED REACTORS

- **NEW:** Large Light Water-Cooled Reactors (LWRs) for Base Load Electricity Generation
- **ADVANCED:** Small Modular Reactors and Advanced Technologies

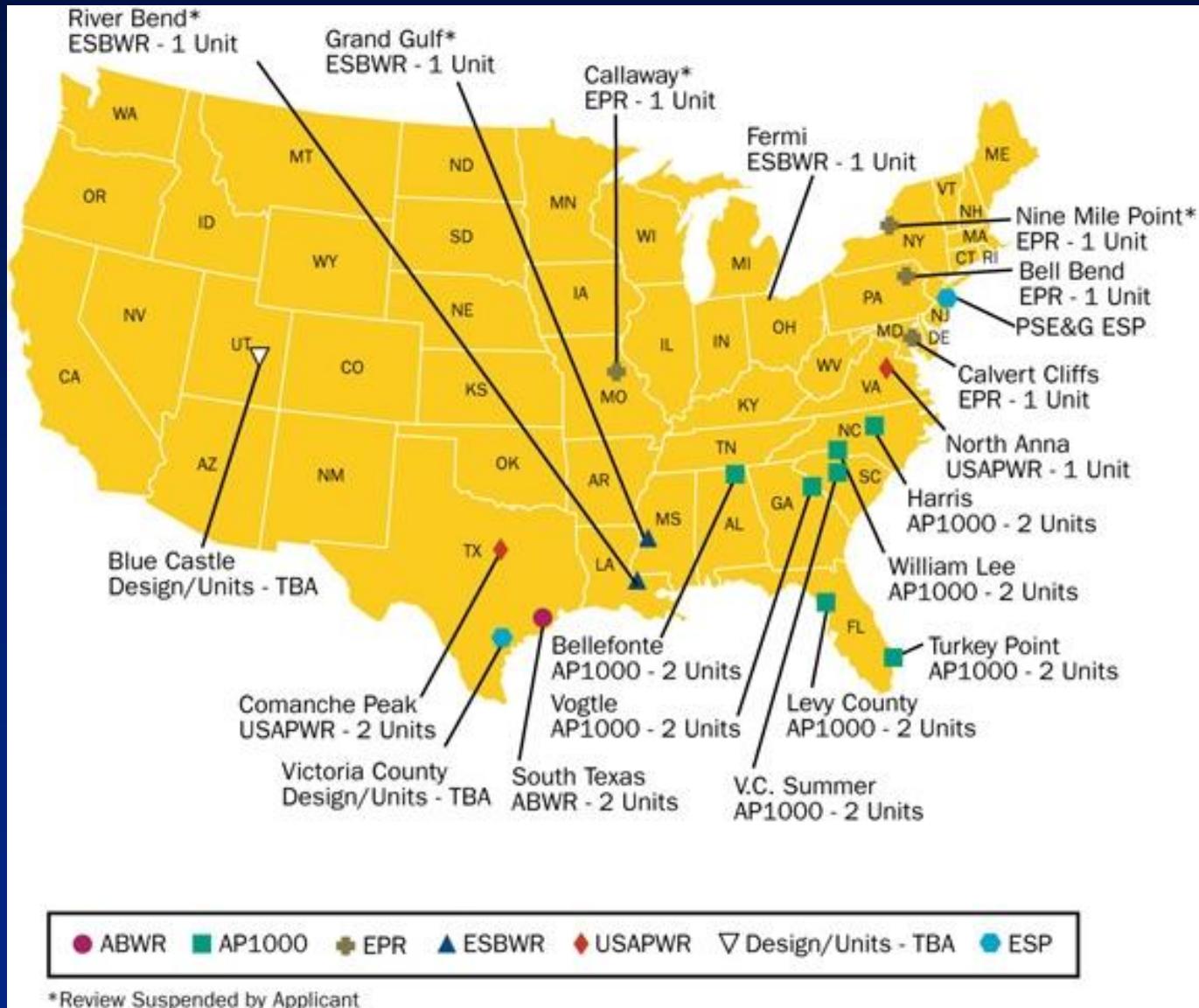
Completed New Reactor Actions

- 4 Early Site Permits Approved
 - Clinton, North Anna, Grand Gulf, and Vogtle
- 4 Designs Certified
 - Westinghouse AP600 and AP1000
 - GE Advanced Boiling Water Reactor
 - C-E System 80+
- 1 Limited Work Authorization (LWA)

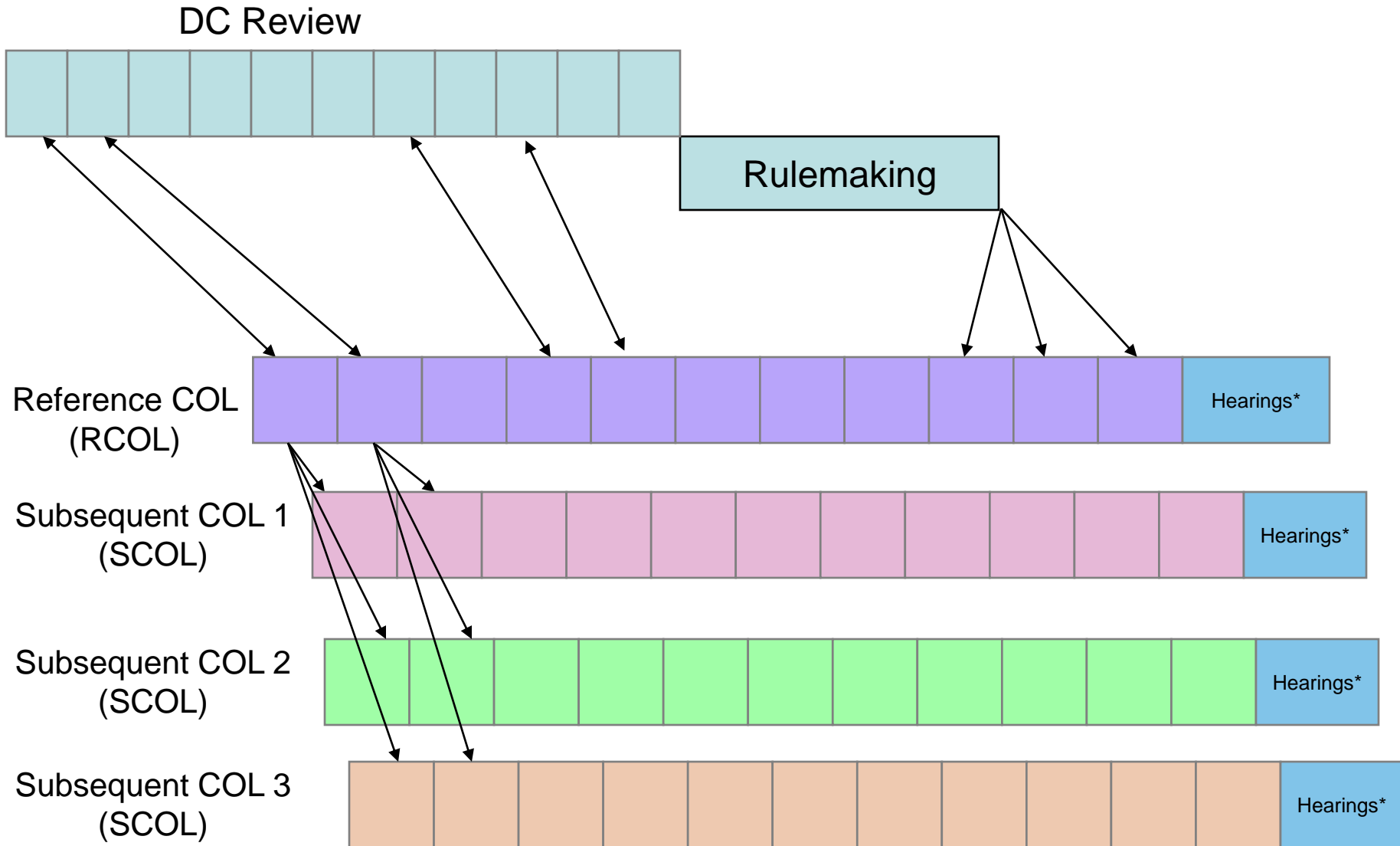


New Reactor Applications [December 2010]

- 18 Combined License Applications – 12 Active
 - If Schedules Hold - Issue Licenses Starting in CY2011
- 3 Design Certification (DC) Applications
 - GE-H Economic Simplified Boiling Water Reactor (ESBWR)
 - AREVA Evolutionary Power Reactor (EPR)
 - Mitsubishi U.S. Advanced Pressurized Water Reactor (US APWR)
- 2 Amended DC Applications
 - Westinghouse AP1000 Certification Amendment
 - STP/Toshiba ABWR Amendment for AIA
- 2 Early Site Permit Applications
- 2 Design Certification Renewal Applications



One Issue, One Review, One Decision



*The process for a COL includes an opportunity for a contested hearing by the ASLB and also a mandatory hearing that is uncontested before the Commission.

Licensing Basis Maintenance Combined License (COL)

- NRO/NRC “getting ready” for potential COL issuance
- Combined License process allows for a range of post-COL licensing actions

Potential Post-COL Licensing Actions

Post-COL License Amendments for:

- Proposed changes to License (i.e., technical specification changes to include as-built or as-procured information during construction)
- Proposed changes to Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Design Certifications (DCs) and COLs
 - changes to DC ITAAC also require an exemption under 52.63(b)(1)
- Proposed changes to FSAR or Tier 2 that exceed the threshold in the 50.59 or 50.59-like change process

Advanced Reactor Program

- Program principally addresses:
 - High Temperature Gas-Cooled Reactors [i.e., Next Generation Nuclear Plant (NGNP)]
 - Integral pressurized water reactors
 - Sodium-cooled fast reactors

Conclusions

- Regulatory processes are in place to handle the expected licensing actions in the near future.
- NRC is soliciting input/proposals/examples from NEI and the industry to support development of 52.98/50.59 guidance applicable to construction (vice operational) activities onsite.
- Early communication with the NRC is important to post-COL licensing actions planning and scheduling for FY 2012 and beyond.