RIC 2005 – Session G3
Research Activities – New Reactors

Research Support of Licensing Decisions

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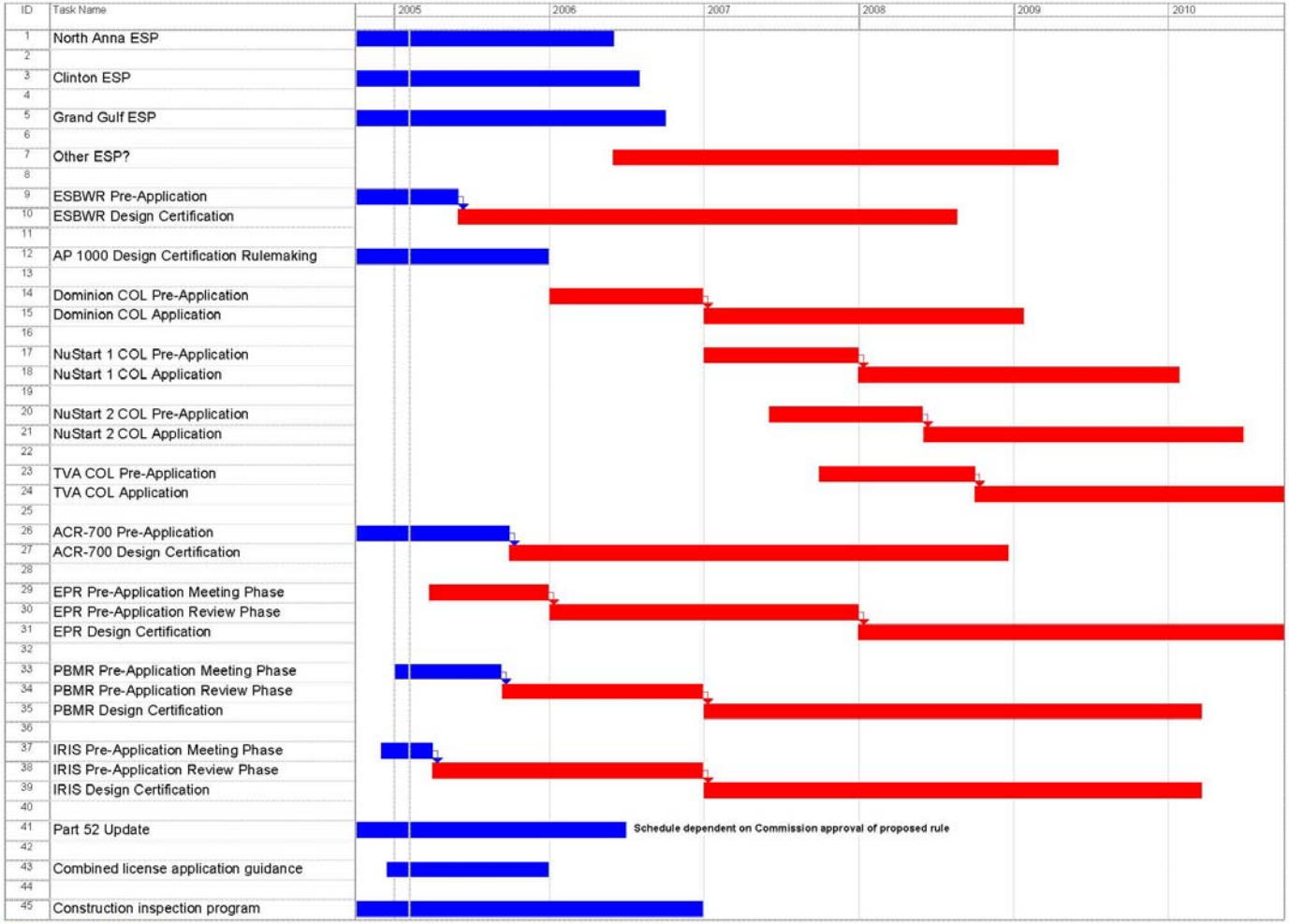
New Construction Prerequisites (from the regulator's perspective)

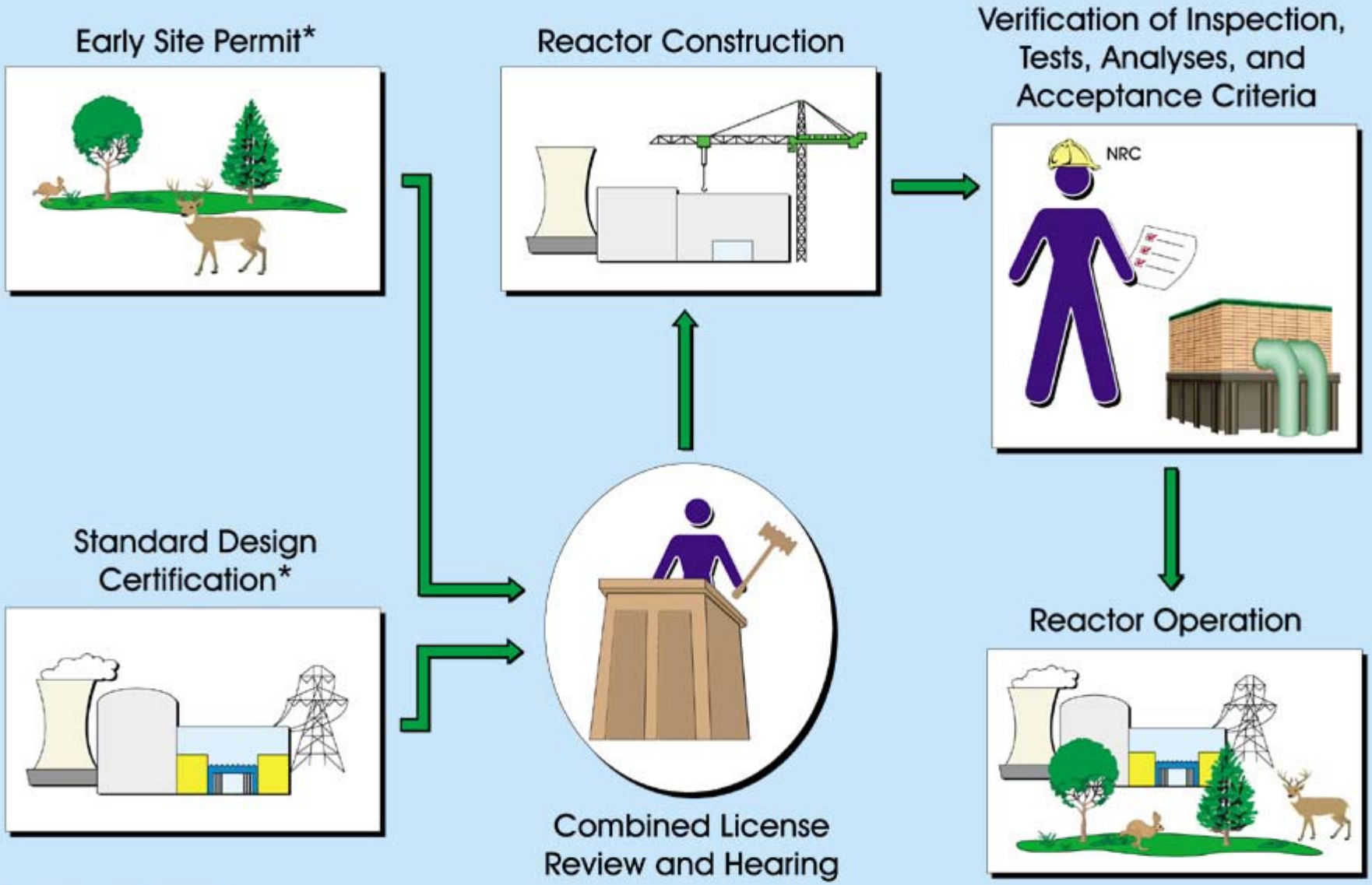
- Maintain safety of licensed plants
- Predictable licensing process
- Meaningful public participation
- Enhanced safety for future plants
- Independent and credible regulator

Current and Upcoming New Reactor Licensing Activities



Blue: current activities
Red: upcoming activities

Combined Licenses, Early Site Permits, and Standard Design Certifications



** or equivalent process*

Research Support Needs

- Identification of knowledge gaps
- Analysis tools
- Confirmatory testing
- Licensing review support

How Research Helps NRC Address Regulatory Challenges

- Early site permits
  - Application of existing technical requirements to a new regulatory product
  - Little research needed
- Advanced LWR design certification
  - Research needed to develop tools for independent assessment of new features affecting plant safety
- Non-LWR design certification
  - Research is essential to understanding of unfamiliar technologies and innovative safety features