



# “The Way We Are”

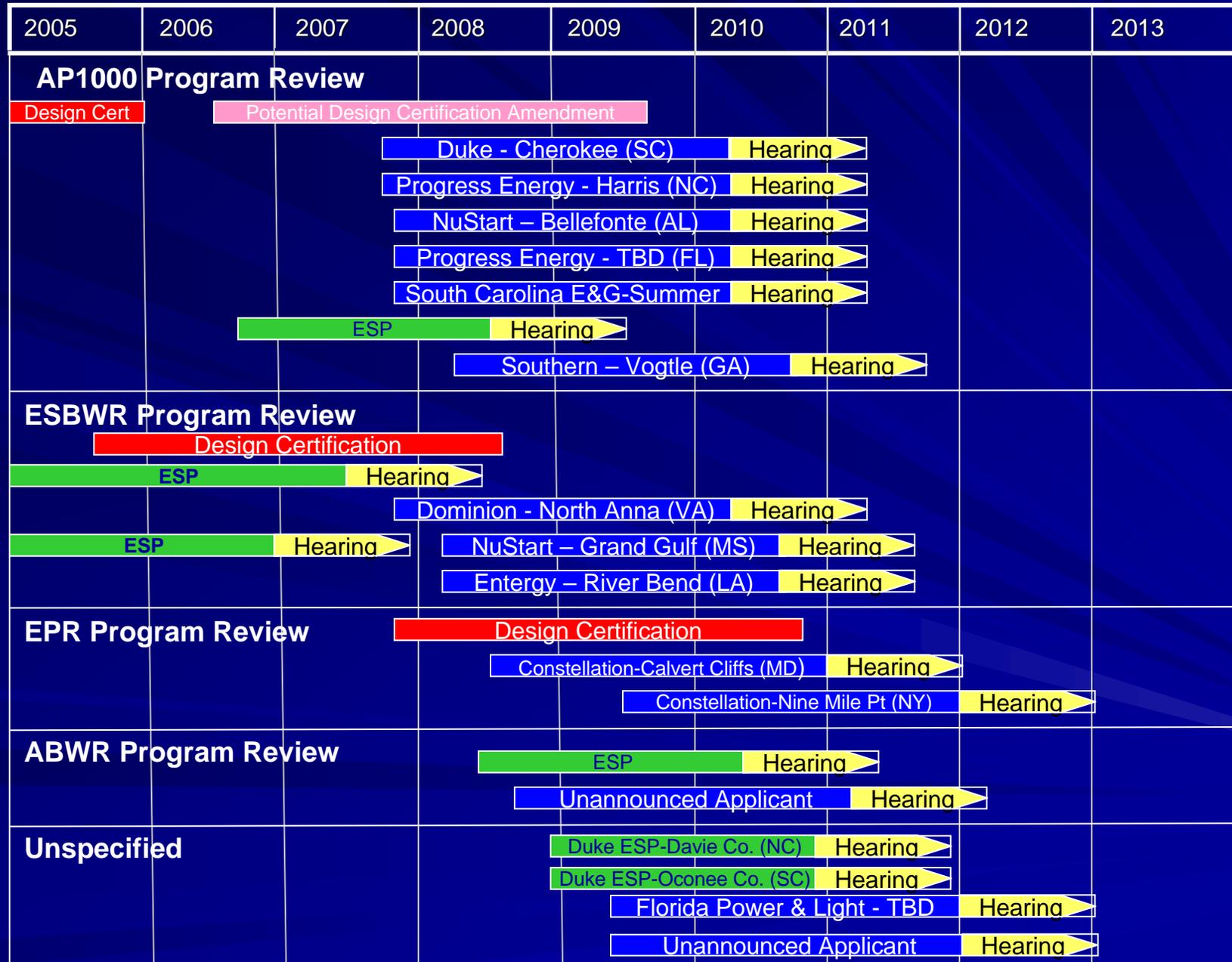
Chairman Nils J. Diaz  
U.S. Nuclear Regulatory Commission

at the

Nuclear Energy Assembly  
San Francisco, California  
May 18, 2006

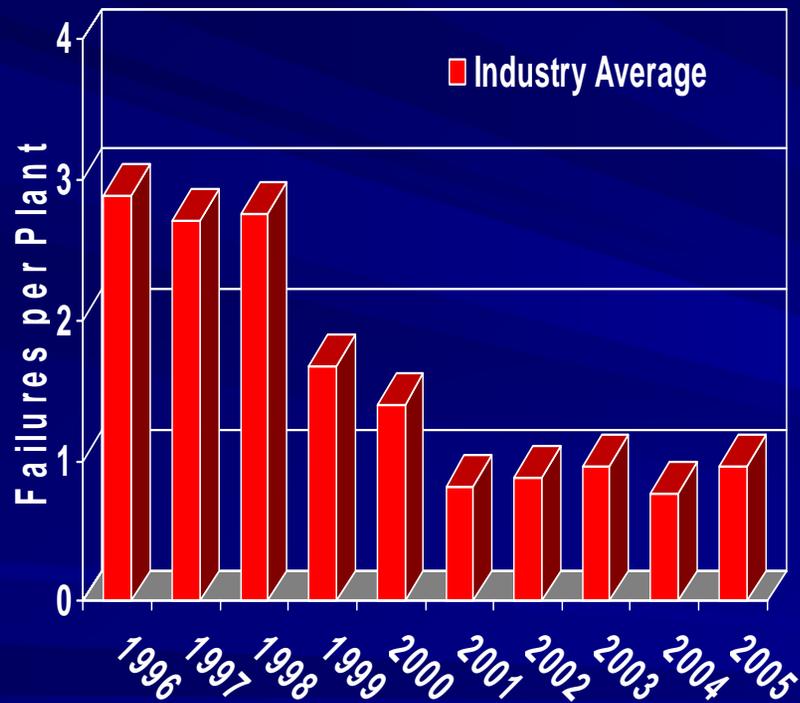
# New Plant Licensing Applications

## An Estimated Schedule

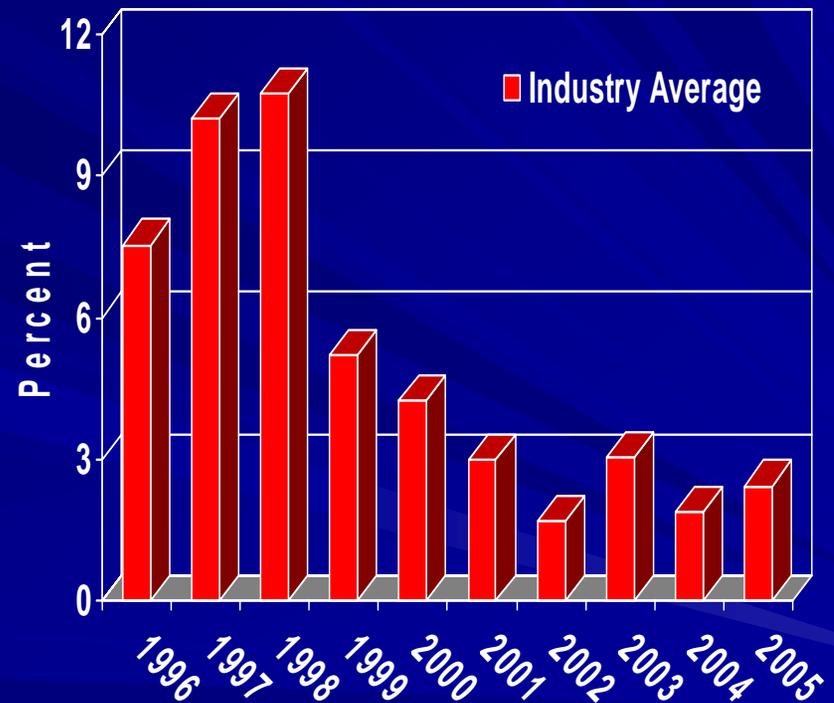


# Industry Performance: (Safety System Failures and Forced Outages)

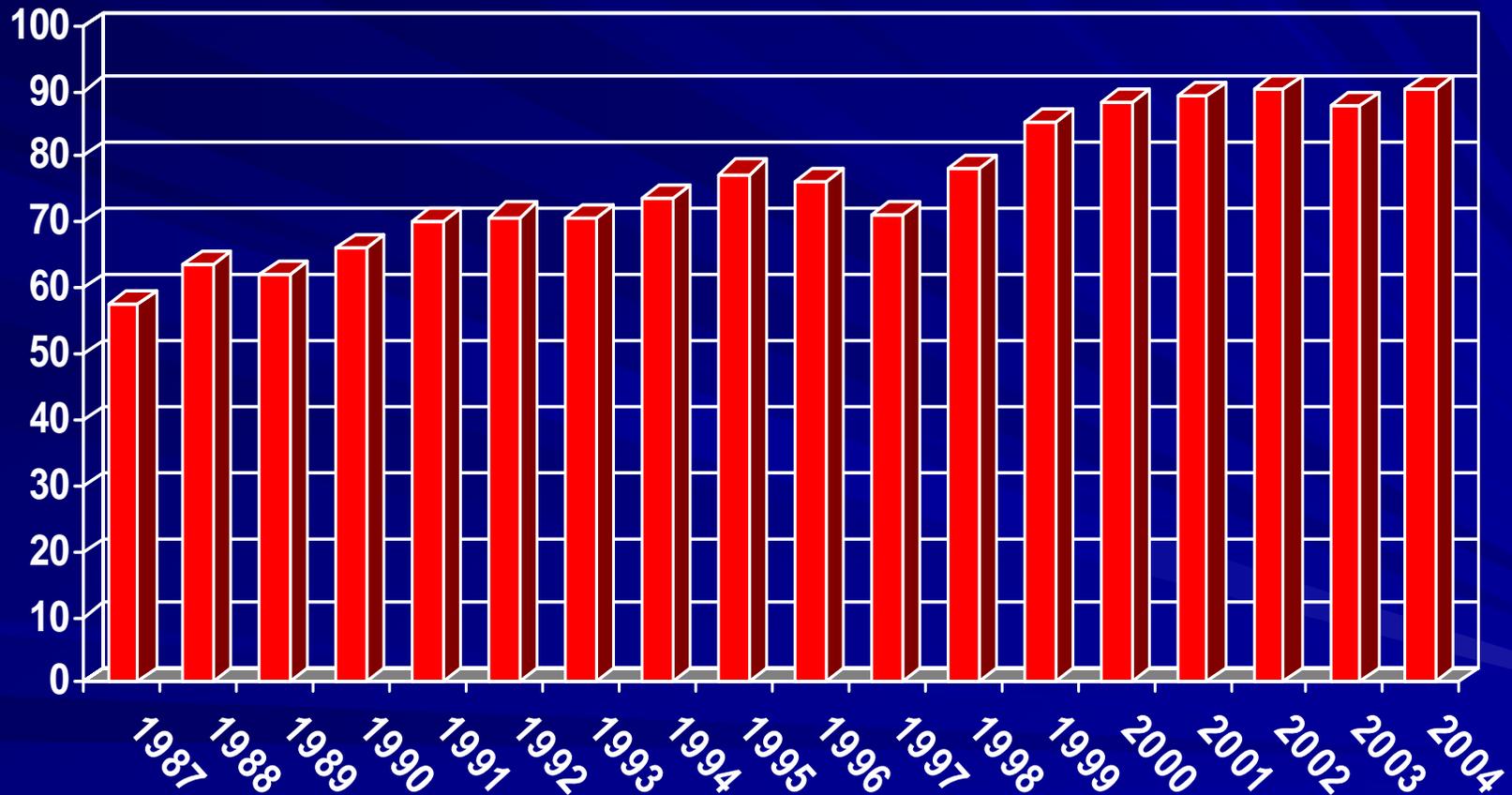
## Safety System Failures



## Forced Outage Rate

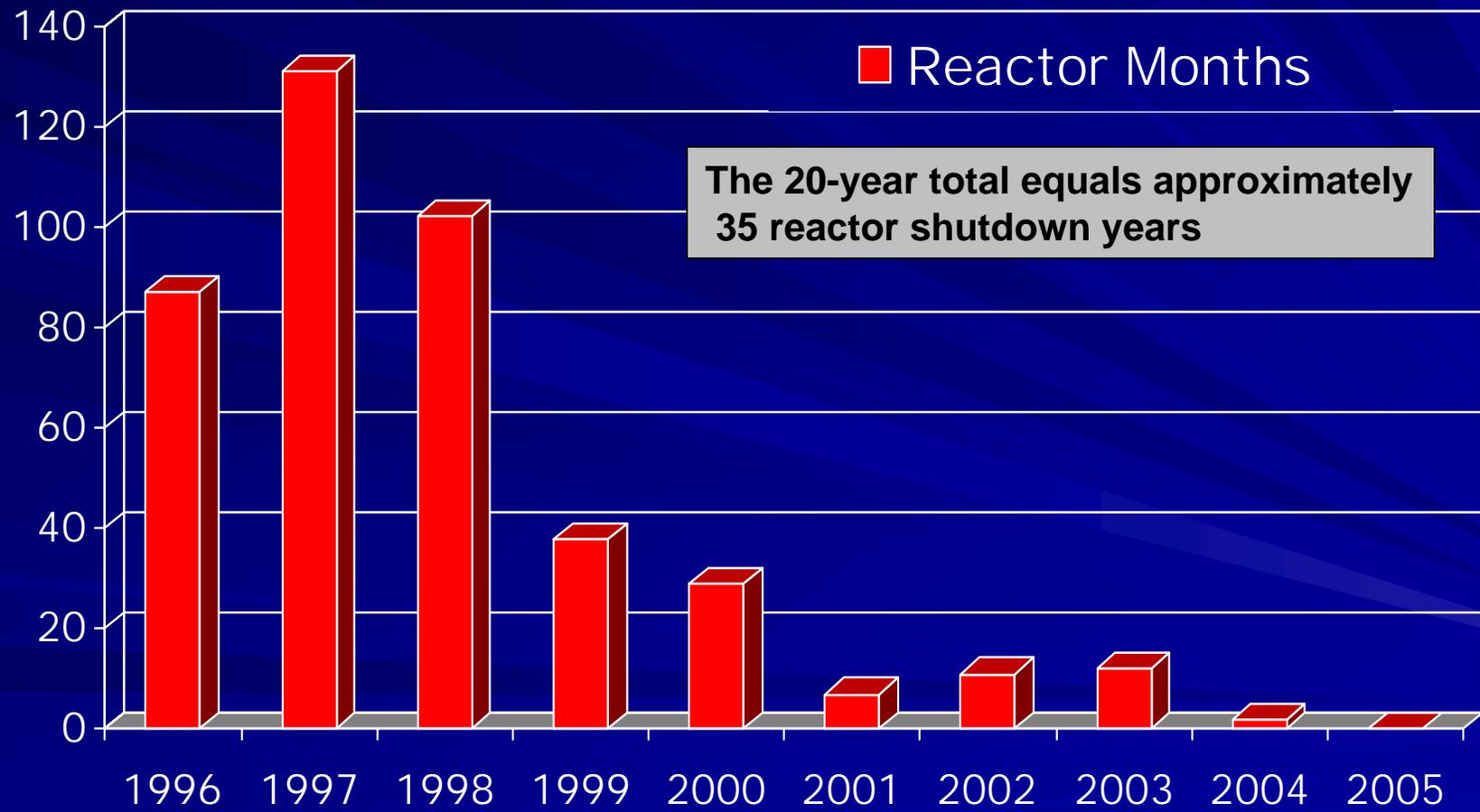


# Reliability: Percent Capacity Factor



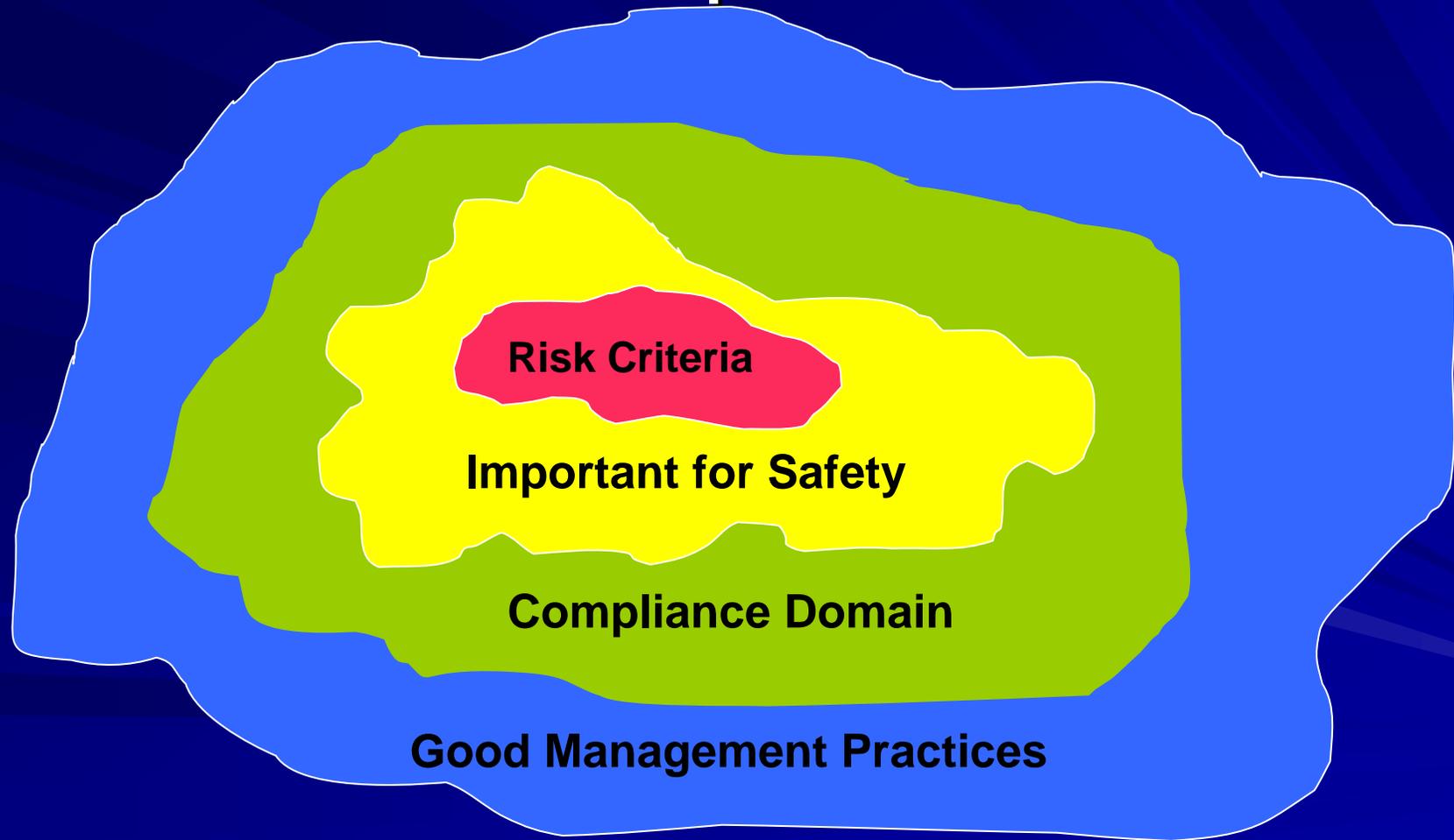
Source: DOE/EIA Monthly Energy Review

# Operating Experience: Unplanned Reactor Shutdowns (6 months or longer)



# Safety and Compliance...

It was Compliance vs. Safety



# 10 CFR 50.59

## “Minimal Increase Principle”

- “probability of ... may increase”
- “possibility for ... may be created”
- “margin of safety ... is reduced”



- “would result in more than minimal increase....”
- “would create....”
- “would result in...limit...being exceeded....”
- “would result in departure from a method....”

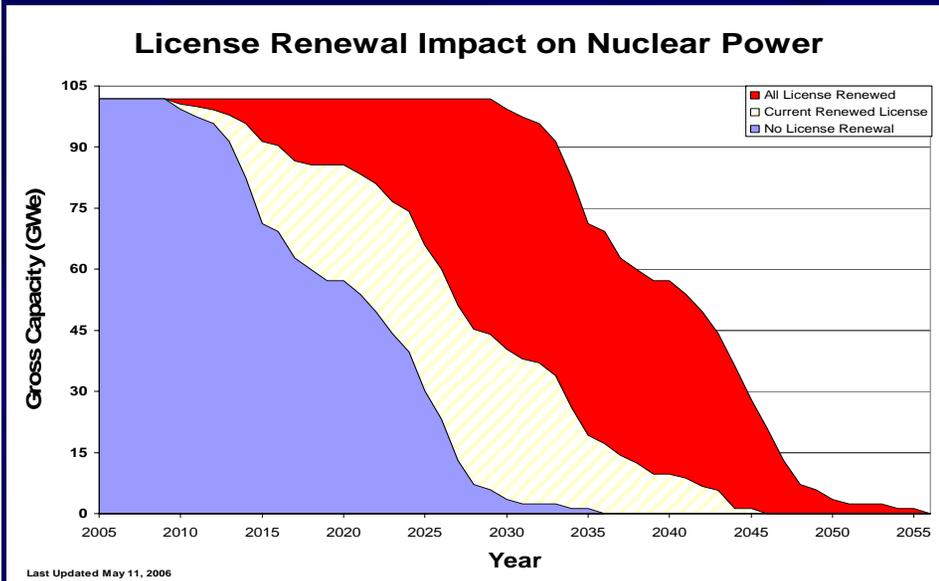
- Risk-informed changes are enabling shorter, more safety focused outages.
- The risk-informed Maintenance Rule provides for safer configuration controls during plant operation and maintenance.

# Reactor Oversight Process

	<b>Pre-ROP</b>	<b>ROP</b>	<b>Improvements</b>
Inspections	Core/Reactive	Baseline/ Supplemental	Risk-informed/ Predictable
Performance Metrics	NONE	Performance Indicator/Self-Assessment Programs	Understandable/ Objective
Assessment	SALP (performed once every 12 to 18 months)	Action Matrix (continuous)	Understandable/ Objective
Significance Determination of Inspection Findings	Enforcement	Significance Determination Process (SDP)	Risk-informed, understandable, predictable, and repeatable

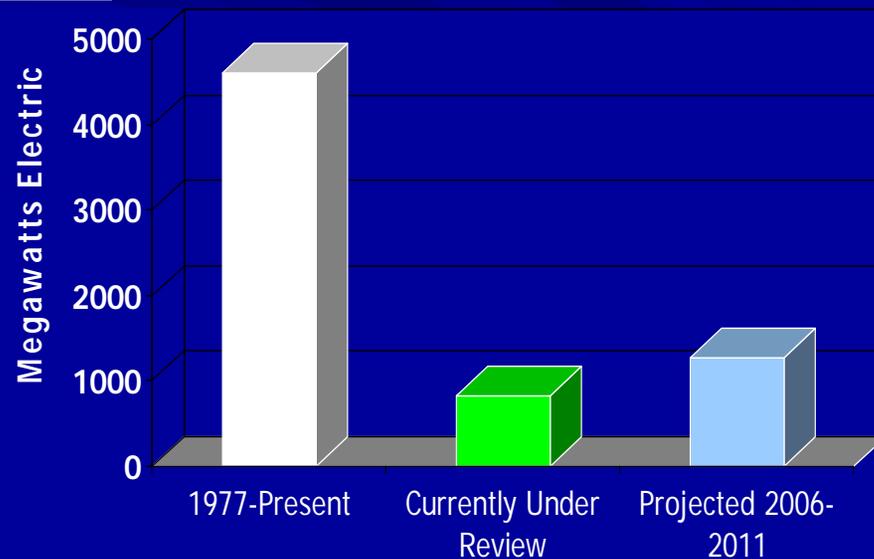


# License Renewals and Power Uprates



- 42 licenses renewed
- Equivalent to 840 reactor years

- 108 power uprates approved
- Added about 4600 MWe
- Equivalent to more than 4 new reactors



# Efficient Adjudication

- 1998 policy statement promoted efficient adjudicatory proceedings on license renewals and license transfers.
- 2004 revision of NRC's rules of practice in Part 2.
- Established model schedules for more effective and efficient adjudication.

# New Reactor Licensing (10 CFR Part 52 – Proposed)

- Proposed changes to facilitate improved plant licensing process, including amending design certification rules.
- Changes proposed to the limited work authorization process.

# Special Treatment Requirements (10 CFR 50.69)

- Ranks and treats structures, systems, and components in accordance with their safety significance.

# Risk-Informed Alternative to Fire Protection Requirements (10 CFR 50.48)

- Appendix R or NFPA-805?
- A chance for closure on fire protection issues.

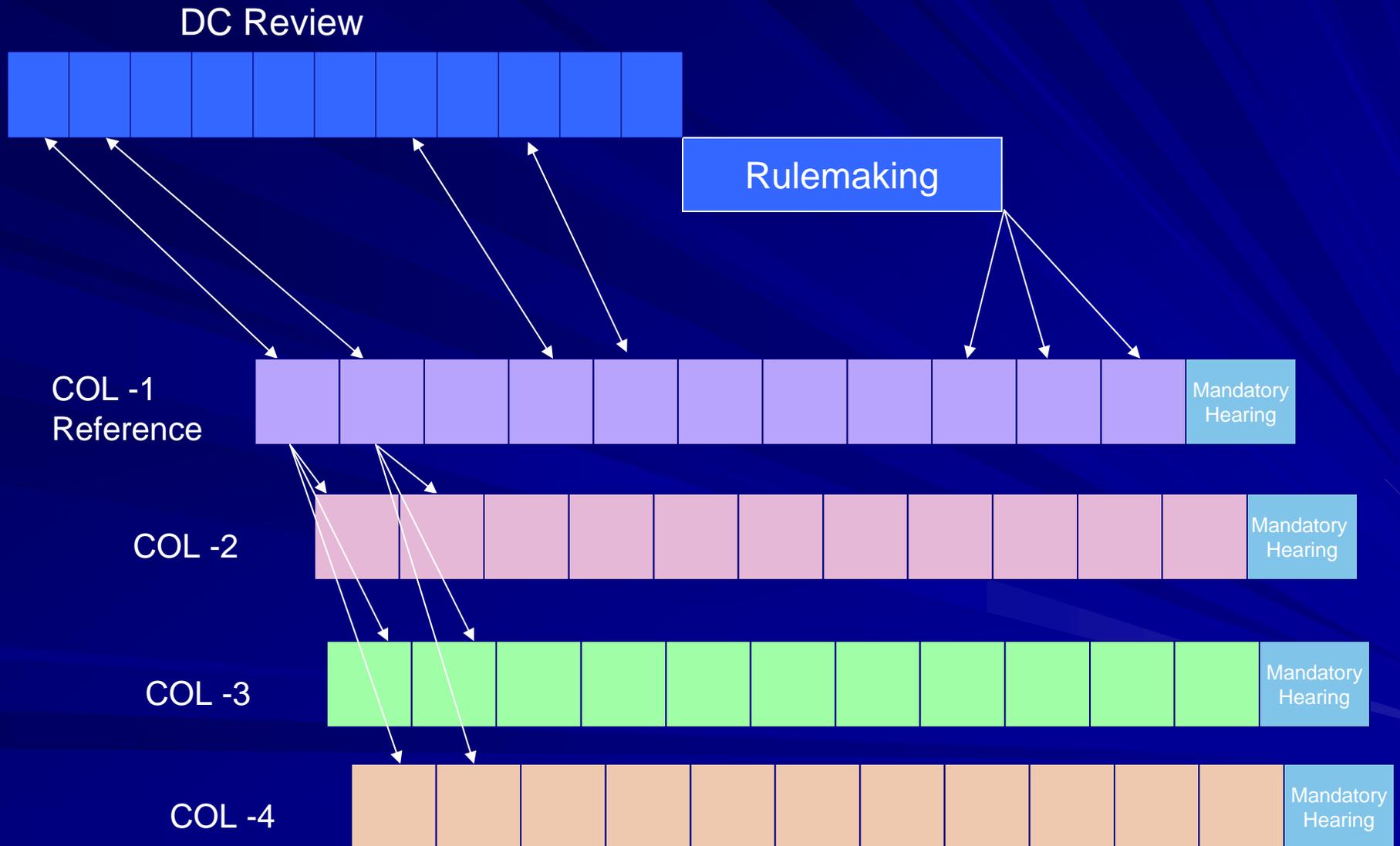
# LOCA Break Size (10 CFR 50.46a)

- A risk-informed option for the Large Break LOCA.
- A truly significant risk-informed addition to our regulations.

# Safety, Security, and Emergency Preparedness

- NRC has integrated safety, security, and emergency preparedness.
- Extraordinary efforts of almost 5 years have paid off: U.S. nuclear power plants are being operated safely and securely.

# Design-Centered Review Approach



# Quality of Applications: No application should be submitted before its time

- An effective, efficient, transparent, and predictable licensing process will rely on:
  - ✓ high quality applications at the front-end
  - ✓ appropriate use of requests for information throughout
  - ✓ holding applicants and the NRC accountable on both of these points
- “high quality” not “perfect”

Does the application contain the  
necessary and sufficient  
information for the review to be  
finished in a timely manner?