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United States Nuclear Regulatory Commission
Protecting People and the Environment

The Role of Science in Shaping Nuclear Policy Issues

HPS- Baltimore-Washington Chapter
Commissioner William C. Ostendorff
Nuclear Regulatory Commission

February 24, 2011

Personal Background

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United States House of Representatives
House Armed Services Committee

U.S. Department of Energy
National Nuclear Security Administration
NNSA

THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine

What we do

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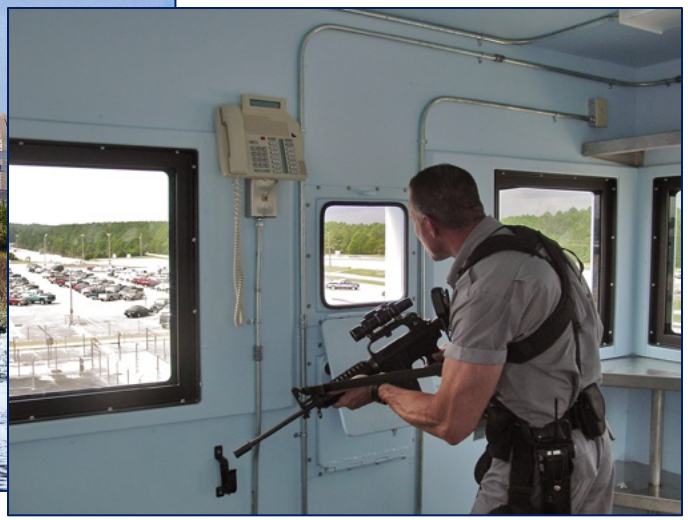
Safety

Security



Environment

Where we are located

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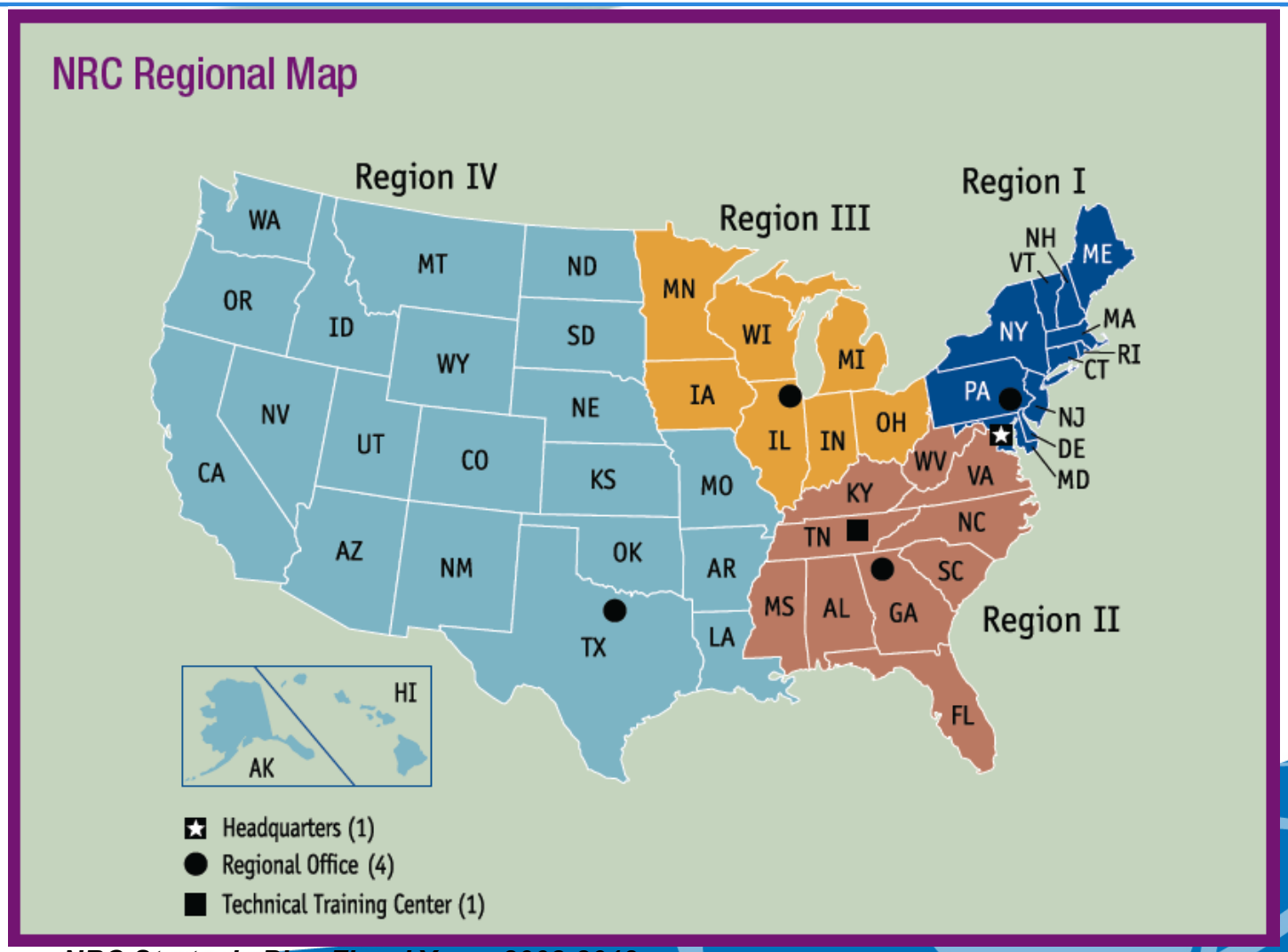

Source: NRC Strategic Plan Fiscal Years 2008-2013

The National Landscape-US New Reactor Applications

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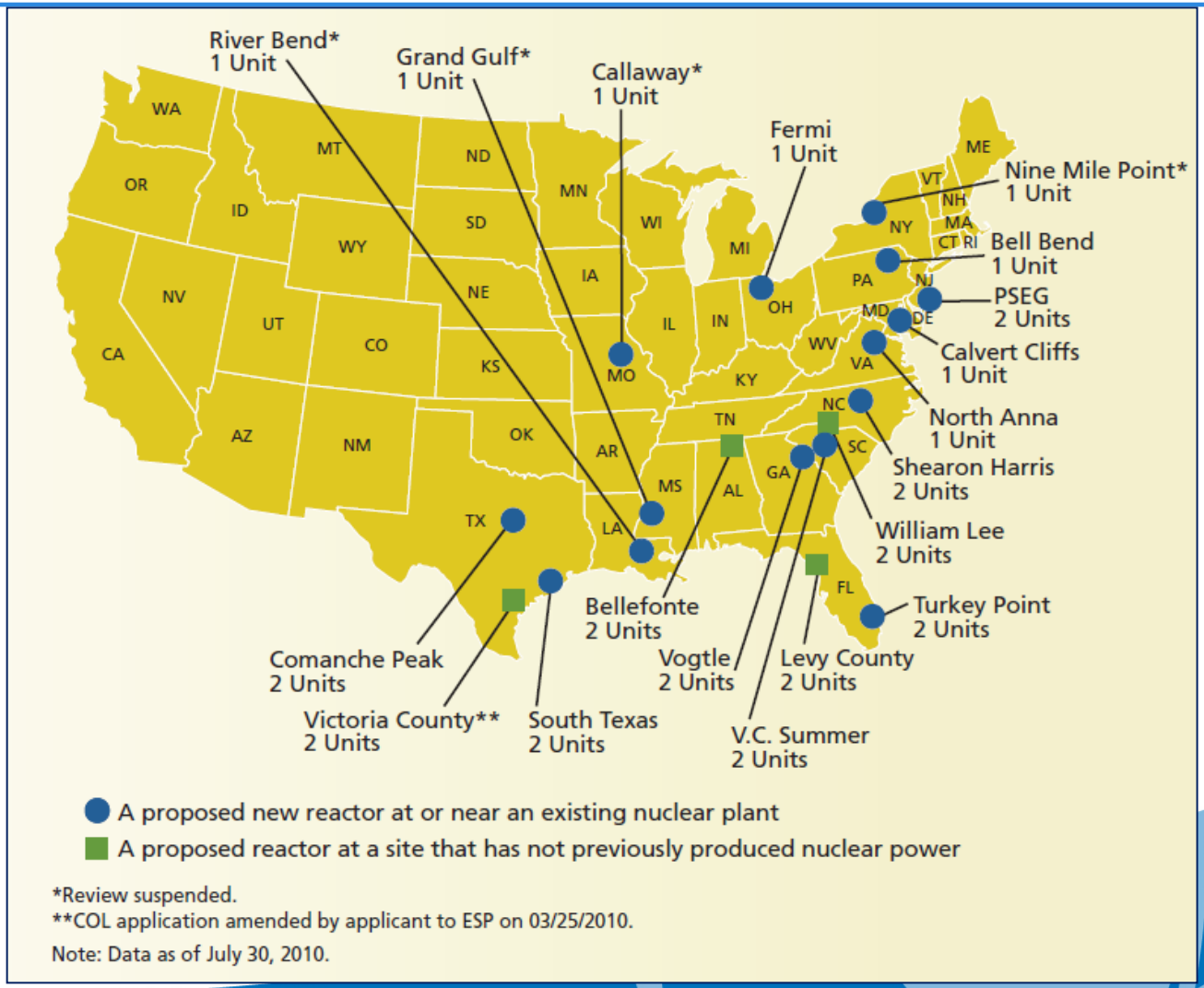

Source: NRC Information Digest 2010-2011

The National Landscape- Small Modular Reactors

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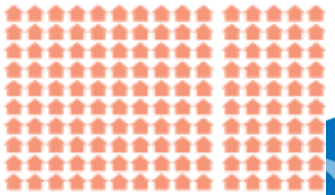
	Toshiba 4s Nuclear Battery	Hyperion Power Module	NuScale Power Plant	TerraPower TWR	*Conventional nuclear reactor*
CORE VESSEL					
TYPE	Sodium-cooled fast neutron reactor	Liquid-metal cooled fast-neutron reactor	Light-water thermal reactor	Traveling-wave reactor, which uses depleted uranium	Pressurized water or boiling light-water thermal reactor
REFUEL	Every 30 yrs.	Every 8 to 10 yrs.	Every 2 yrs.	Every 40 yrs.	Every 18 mos. to 2 yrs.
● = 10,000 POWER OUTPUT	 Enough for about **10,000 households**	 Enough for about **25,000 households**	 Enough for about **45,000 households**	 Enough for about **50,000 households**	 Varies, some can power **1.5 million households**

Source: Washington Post, September 14, 2010

Global Nuclear Development

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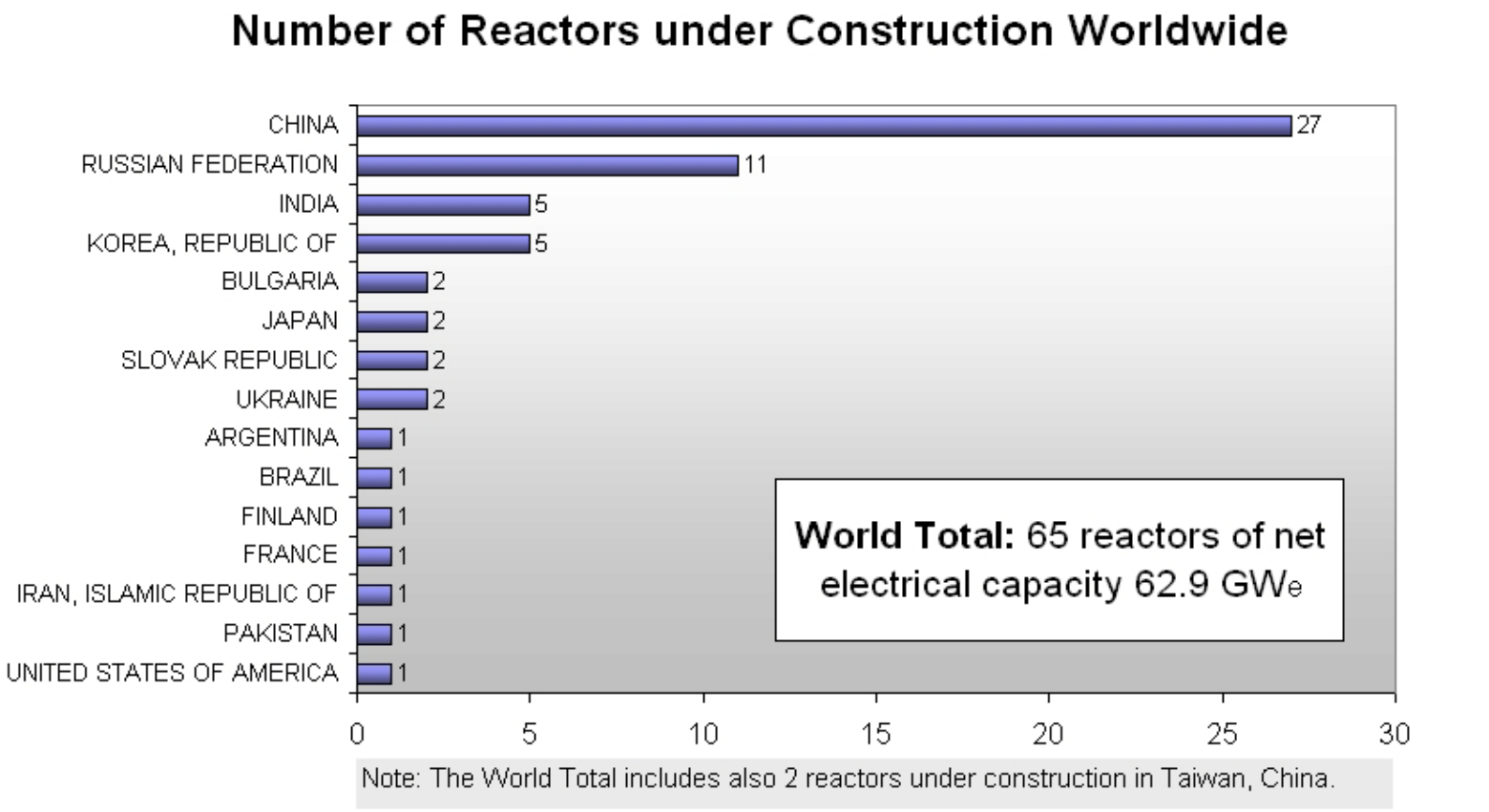

Source: IAEA Power reactor Information Database, 02/01/2011

The National Landscape- The Fuel Cycle

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- Construction of the National Enrichment Facility in Eunice, NM
- Smith Ranch-Highland In Situ Recovery Wellfield, Converse Co., WY

Regulatory Philosophy

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NRC principles of good regulation…

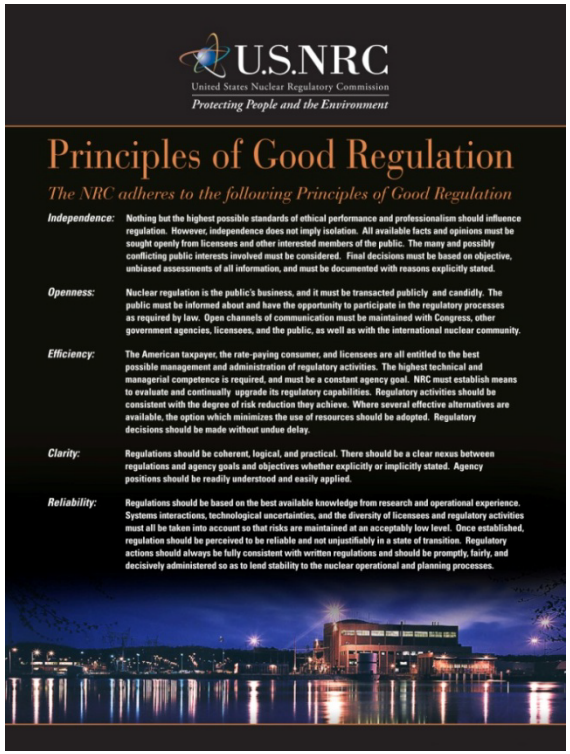
Independence

Openness

Efficiency

Clarity

Reliability



How Can the U.S. Remain a Leader in Nuclear Technology Safety?

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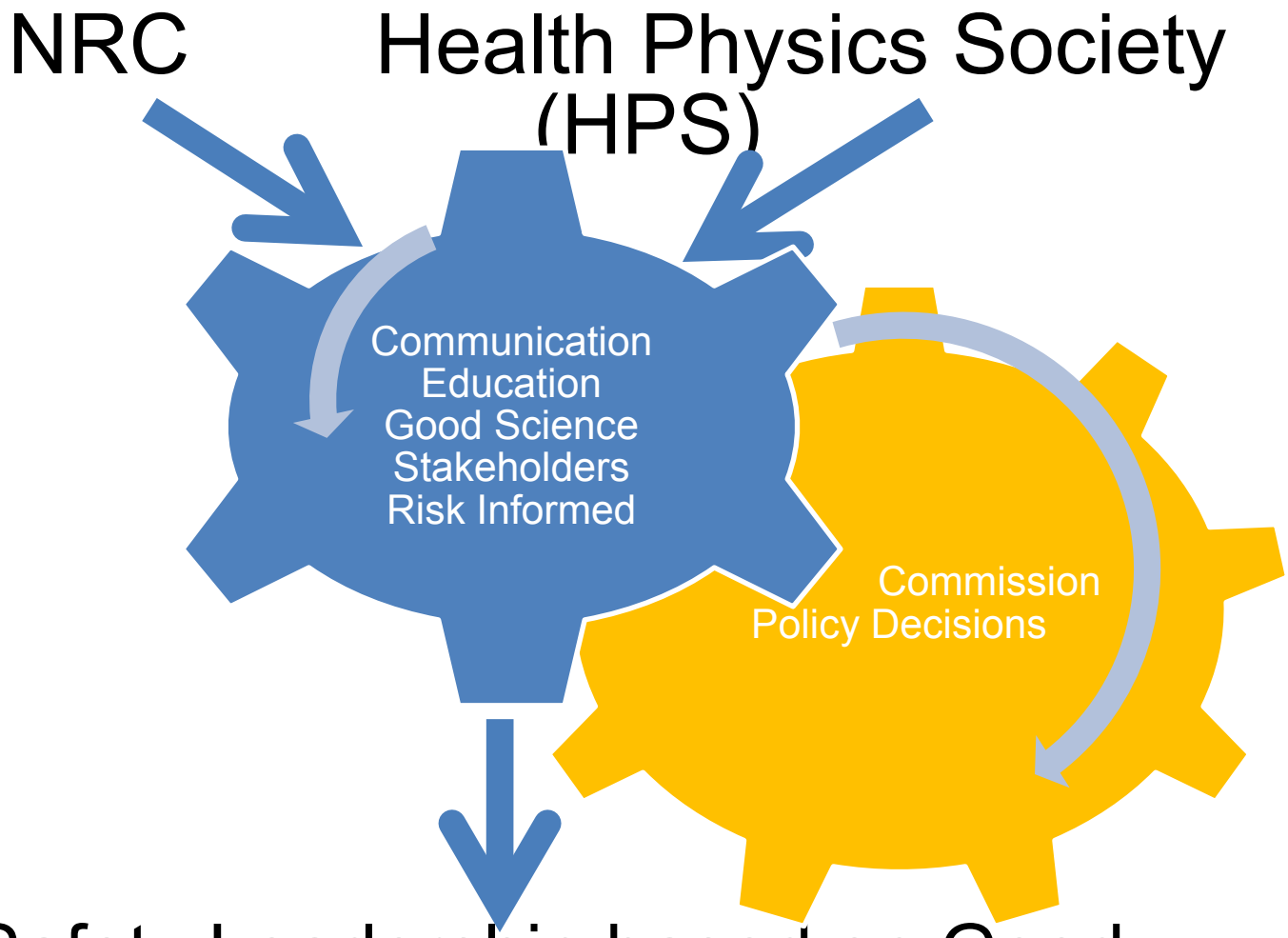
- US leadership in nuclear science and technology will promote safety
- Access to the best available knowledge
- Risk informed/performance based regulation
- Full stakeholder engagement
- Communication and education

The HPS is uniquely positioned to be a key player

Overview



U.S. Safety Leadership based on Good Science

Recent Commission Policy Issues

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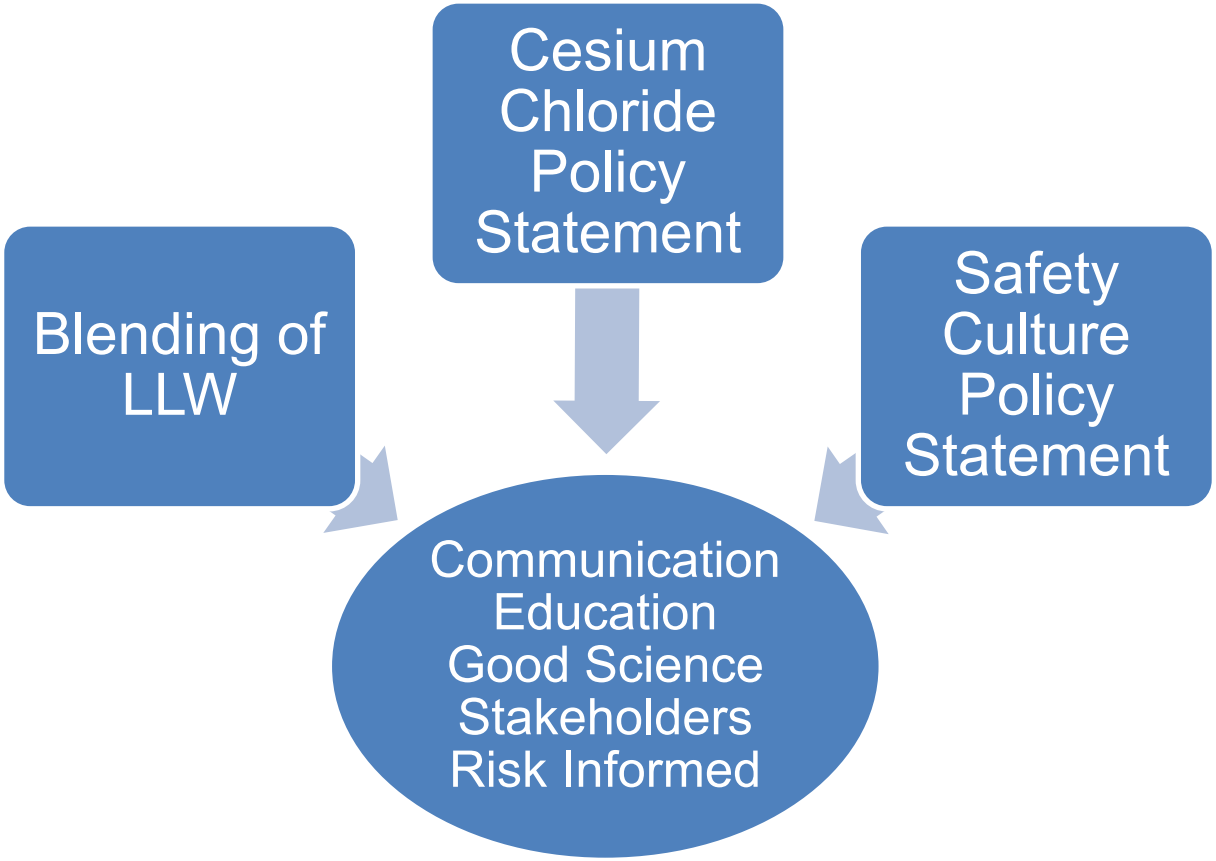

Risk Informed Decisions Based on Good Science

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- Risk informed decisions promote efficiency
- The Commission's recent decision on blending was risk-informed
- HPS provided valuable input

Communication and Education

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- Communication and education promote credibility and openness
- These principles align with HPS's mission
- These principles impacted the Commission's decision on the cesium chloride policy statement

Stakeholder Involvement

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- Stakeholder involvement promotes openness
- Development of the safety culture policy statement required extensive stakeholder input
- HPS provided valuable input

Upcoming Commission Policy Issues

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Conclusions

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- U.S. leadership in nuclear science and technology will ensure domestic and international safety
- The HPS is uniquely positioned to assist the NRC to make decisions based on principals of good regulation
- The HPS and the NRC have complementary roles