

The Nuclear Renaissance and Energy Independence from a Regulatory Viewpoint

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The Nuclear Renaissance and Energy Independence from a Regulatory Viewpoint

- Current status and direction
- Potential new missions
- Regulatory “Lessons Learned”

Current Status

- South Carolina has a long history of nuclear operations
- Over 50% of State's electricity generation from nuclear power
- DHEC oversees environmental permits at
 - Savannah River Site
 - Barnwell Low Level Waste Disposal Site
 - 7 Nuclear Reactors at 4 Power Plants
 - Potential for 4 new reactors

Direction

- Need for protection of
 - Security
 - Environment
- Has yielded some similar DOE and DHEC directional concepts in
 - Energy
 - Recycling

Energy

- DHEC supports DOE's investment in clean energy and renewable fuels
 - Reduces foreign oil dependence
 - Reduces emissions from power plants and mobile sources
- DHEC strongly encourages alternative fuels
 - Participation in Southeast Alternative Fuels Task Force and Southeast Diesel Collaborative
 - Work with local government through Early Action Compacts
 - Support of State initiatives, such as school bus fleet transition to B20 biodiesel
 - Installation of ethanol station at Bull Street office

Recycling

- The Global Nuclear Energy Partnership is high tech recycling
- Vastly different in technical scope from current recycling activities advocated by DHEC
- However, foundational concepts are similar
 - Turn waste into energy
 - Minimize waste for disposal

Global Nuclear Energy Partnership Initiatives

- 2 Siting Studies in South Carolina for
 - Consolidated Fuel Treatment Facility
 - Advanced Burner Reactor
- South Carolina factors
 - Existing facilities, infrastructure, workforce
 - Well prepared communities
 - Mixed Oxide Fuel potential synergies
 - Over 3600 MTU of spent commercial fuel in SC for feedstock

Global Nuclear Energy Partnership Challenges

- New facilities would have to meet environmental standards
- Nuclear facilities typically trigger air, waste management and water regulations
- Most significant media is usually water due to quantity needs

Water Significance

- Quantity is now an issue for the southeast
 - 3 states in EPA Region 4 have water quantity permitting programs
 - SC is exploring water-sharing agreements with our neighboring states
- Senate Bill 428 introduced this session
 - Would set foundation for withdrawal permitting
- Benefit
 - Withdrawal permit offers protection for quantity usage

Regulatory “Lessons Learned”

- Ensure facilities are in place before commercial spent fuel is consolidated for storage
- Arrange for waste management at the outset to preserve greatest operating flexibility

Conclusion

- New missions offer tremendous opportunities for South Carolina provided that the environment and public health are fully protected.