

Electricity Committee

Subcommittee on Nuclear Issues

Out of Site!

Accessing the Nuclear Decommissioning Trust Fund to Accelerate Decommissioning

Nuclear Power Plant Decommissioning Trust Funds

February 2018

NARUC 2018 Winter Policy Summit, Washington, DC



*All you need in radioactive and hazardous waste
management*

Talking Points

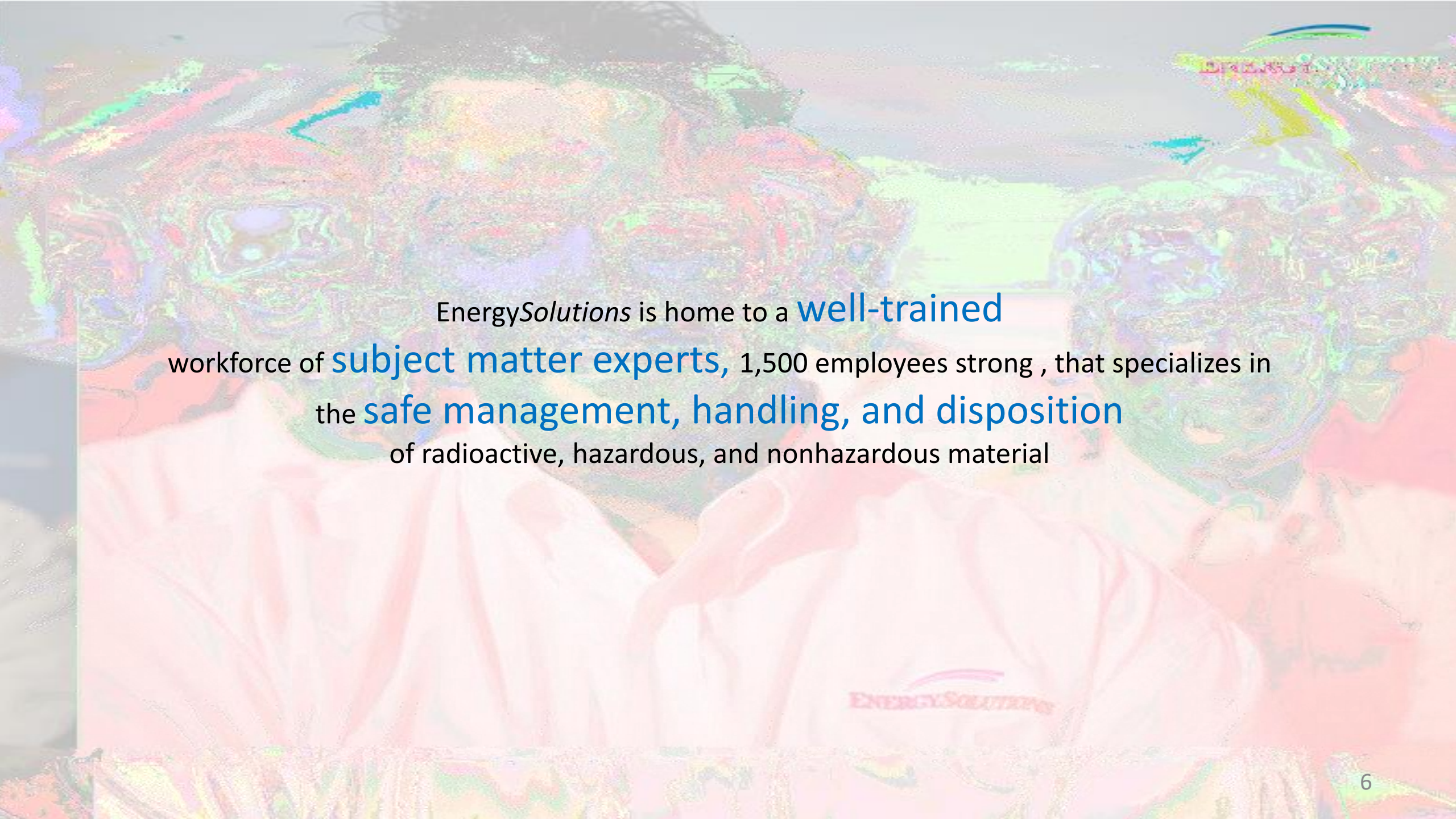


- Purpose and Disclaimer
- Company Overview
- NAURUC and State PUC/PSC Interest
- Decommissioning Trust Fund Management – Regulated Plant
- Decommissioning Trust Fund Management – Merchant Plant
- On-Site Low-Level Waste Storage
- Methods of Funding Stored Wastes – Regulated Plant
- Methods of Funding Stored Wastes – Merchant Plant
- Conclusion

Disclaimer

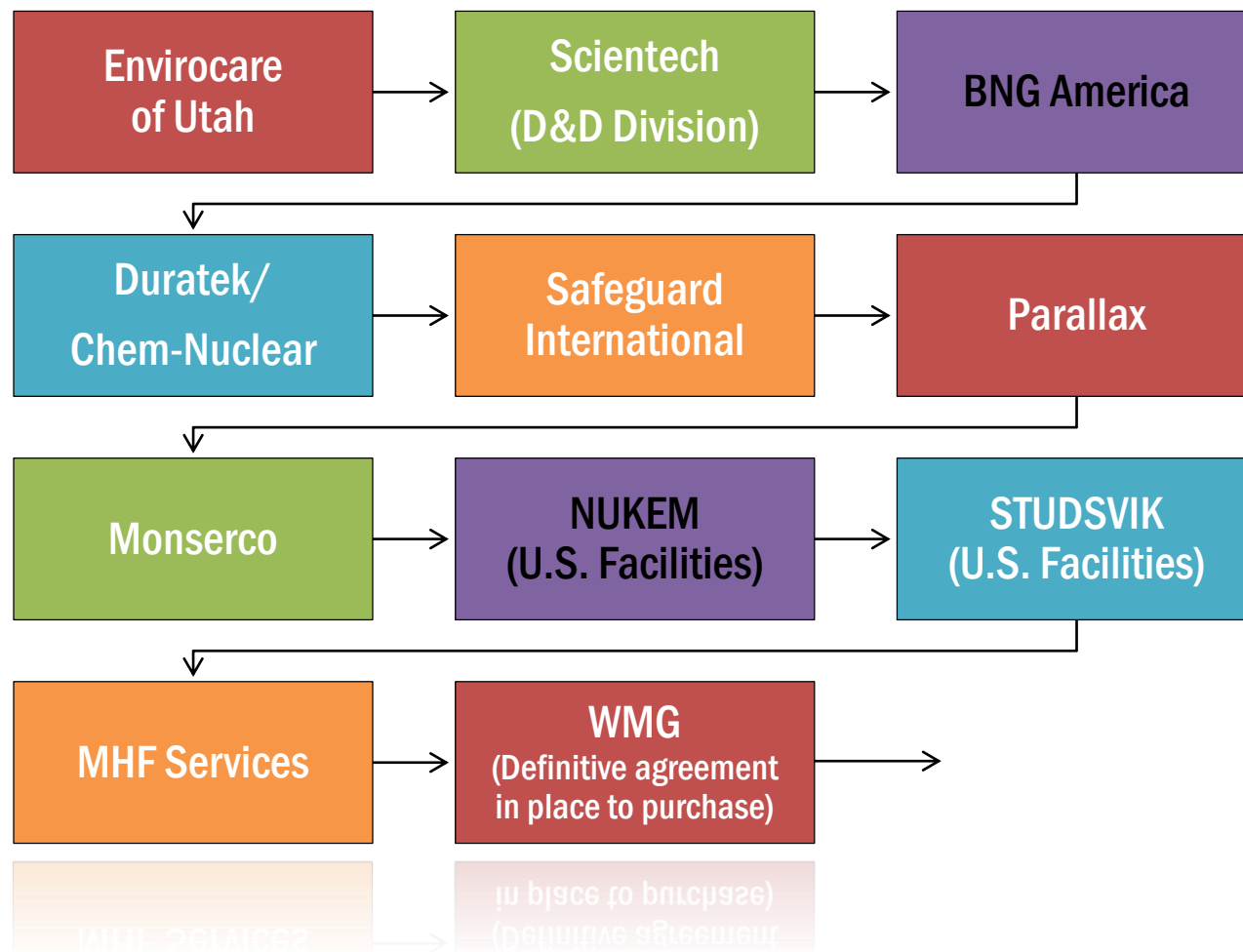
EnergySolutions is not:

- Speaking on behalf of any utility or other company
- Here to discuss any specific project
- Proposing anything specifically associated with either of EnergySolutions' Low-Level Radioactive Disposal Facilities in Utah or South Carolina
- Suggesting any actions to be taken by NARUC or any State PUC/PSC

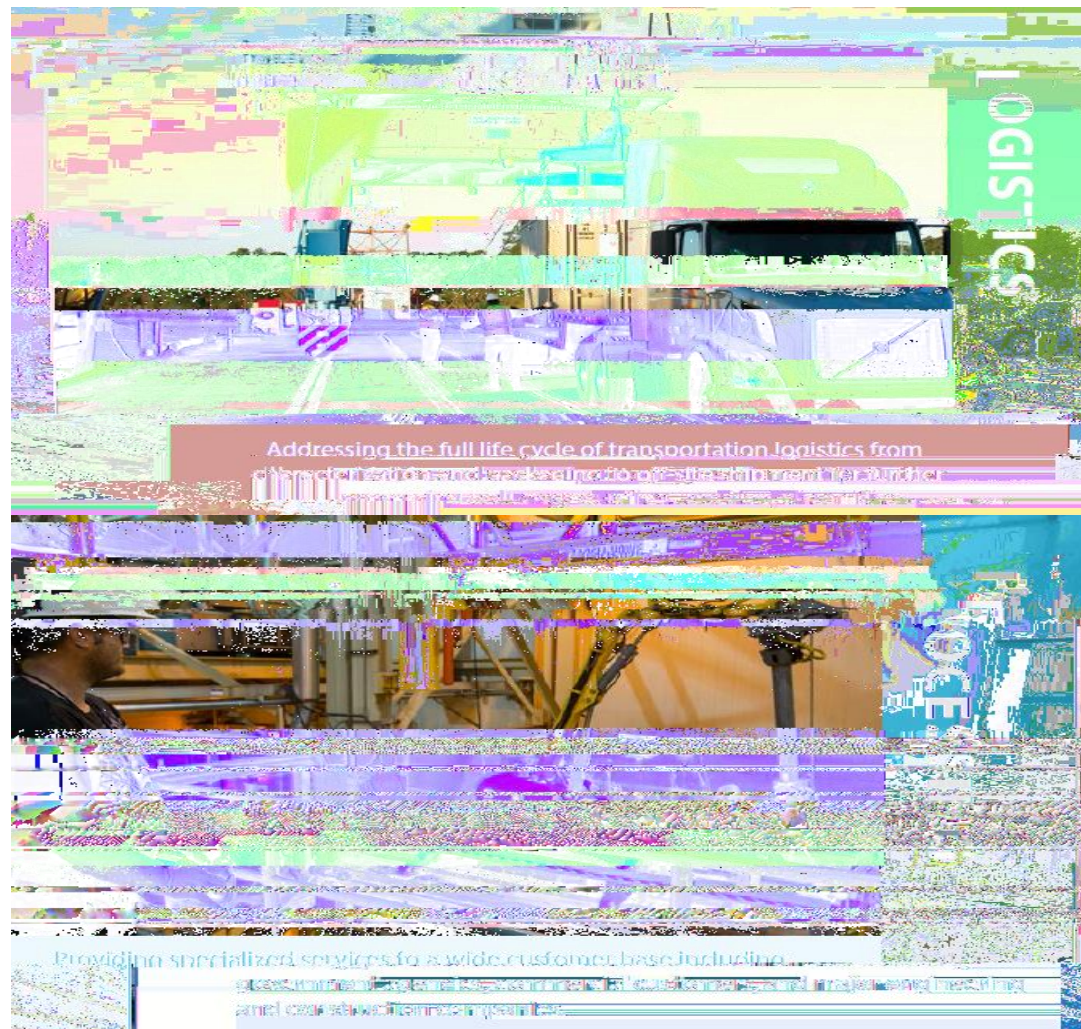


EnergySolutions is home to a **well-trained**
workforce of **subject matter experts**, 1,500 employees strong , that specializes in
the **safe management, handling, and disposition**
of radioactive, hazardous, and nonhazardous material

History



Core Capabilities

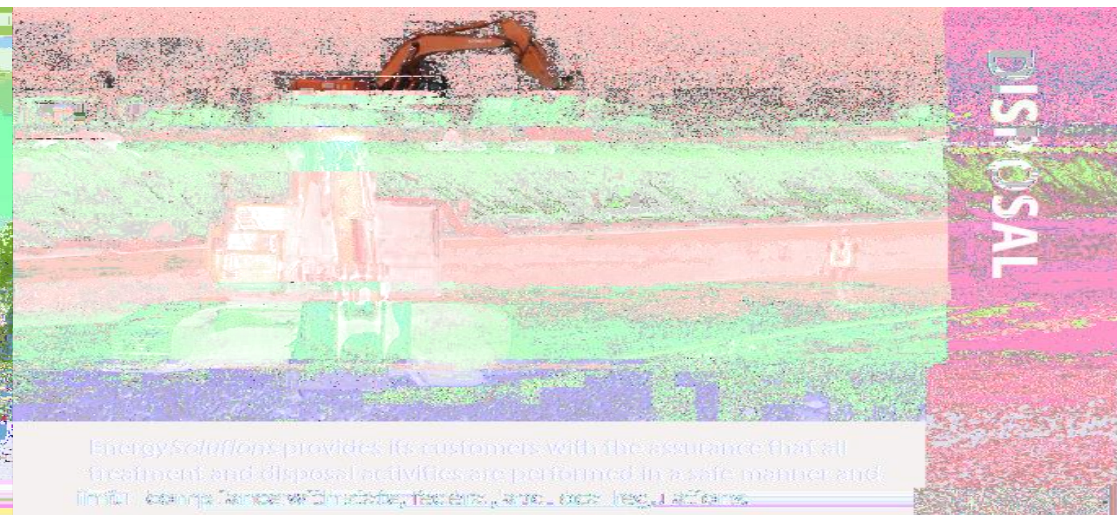


LOGISTICS

Addressing the full life cycle of transportation logistics from procurement and warehousing to distribution and installation.

PROCESS

Providing specialized services to a wide customer base including power generation, water resources, industrial, and construction.



DISPOSAL

Energy Solutions provides its customers with the assurance that all treatment and disposal activities are performed in a safe manner and in full compliance with state, federal, and local regulations.

Decommissioning Services

World class nuclear **decommissioning** services delivered from a platform of **vertically integrated capabilities**

- Planning
- Cost estimating
- Characterization
- Large component disposition
- Waste operations
- Spent fuel management
- Dismantlement and demolition
- License termination plan
- Final site survey
- Site restoration
- Decommissioning Trust Fund (DTF) Management

Decommissioning Trust Fund Management Experience: *ZionSolutions*



- 7 years' experience with DTF trustee
- Management of certified cash withdrawal requests with trustee
- Coordination of fund management SME resources
- Operations under the Zion Master Trust Agreement
- Tax activities within a Qualified Decommissioning Trust
- Integration of investment liquidation, cash withdrawal, project payables and reporting
- Working with NRC financial assurance and reporting as a licensee
- Provisions for SNF dry cask storage cost recovery from the DOE
- Documentation of incremental costs of onsite SNF management

What is NARUC's Interest ?

NARUC's Interest

- Help members understand the details of the DTFs
- Plants are closing within NARUC member's jurisdictions
- NARUC members desire to learn more about DTFs for plants that are closing, as well as, those that have received 20-40 year license extensions
- Storage of Radioactive Waste is a big public concern and a regulatory issue
- NARUC members need to understand and get involved with the NRC's latest decommissioning regulation rulemaking efforts

NARUC's Interest – Storage of Waste

- Spent Fuel will remain in storage until DOE can arrange regional interim storage (southwest) or final storage (Yucca Mountain)
- Most low-level radioactive waste (LLW) is being disposed at licensed radioactive disposal sites in Utah, South Carolina, Texas, or Washington
- But, many Nuclear Plants are storing large component waste on-site rather than disposing due to NRC DTF restrictions that are thought to be their only option

NARUC's Interest – NRC Decommissioning Regulation Revisions



- NRC's proposed decommissioning rule per SECY-14-0118 are scheduled to be promulgated and published in the Federal Register November, 2018. Final rule is not scheduled to be published until February, 2020. New rule to address:
 - Graded approach to emergency preparedness
 - Lessons learned from the plants that have already (or are currently) going through the decommissioning process
 - The advisability of requiring a licensee's Post-Shutdown Decommissioning Activity Report (PSDAR) to be approved by the NRC
 - The appropriateness of maintaining the three existing options (Decom, SafeStor, Entombment) for decommissioning and the timeframes associated with those options
 - The **appropriate role of State and local governments and non-governmental stakeholders in the decommissioning process**
 - Any other issues deemed relevant by the staff

Decommissioning Trust Funds

Utilities are required by NRC regulations, state PUC/PSC requirements, and DOE per the Atomic Energy Act to establish and maintain a DTF that, by the time of active decommissioning, is fully funded for:

1. Removal of all radioactivity and license termination – NRC
2. Restoration/Greenfield of remaining property – State PSC/PUC
3. Spent/Used fuel - DOE

NRC only restricts access to the “radiological fund” until plant shuts down, NRC has no issues with plant’s D&D Plan, and the plant begins active decommissioning

Decommissioning Trust Funds – Both Regulated and Merchant Plants



- Utilities are required to report the status of their DTFs to the NRC in accordance with 10 CFR 50.75(f) on a biennial basis. **These reports are publically available** through www.nrc.gov website
- Utilities typically conduct a detailed decommissioning cost estimate (DCE) every five (5) years to support the DTF. **These reports are proprietary**
- Many utilities comingle the funds and report only one (1) fund that includes their radiological and site restoration (greenfield) funds
- NRC Controlled - Once commingled and reported the site restoration fund portion can't be accessed until the plant shuts down and their decommissioning plan has been submitted
- State PSC/PUC Controlled - If reported separately, the regulating State PSC/PUC can control the **Site Restoration Fund**, commonly referred to as the **Greenfield Fund**, throughout the life of the nuclear plant

Decommissioning Trust Funds – Merchant Plants



- Merchant Utility Controlled - If reported separately, the Utility controls the Site Restoration Fund (Greenfield Fund), throughout the life of the nuclear plant
- Since the Site Restoration Fund is not controlled by a State PUC/PSC and is not directly funded by ratepayers, the utility has the flexibility on the use of the fund during operations
- Although, merchant utilities are reluctant to tap into site restoration funds or establish a sub-account without ratepayer funding guarantees
- Exceptions exist in some states if merchant settlements between PSC/PUC and utility restrict the Site Restoration Fund collection, management, and use

Using DTFs for Disposal of Stored waste

Stored Waste – Funding for Disposal



Reasons for storage:

- Not willing to incur operating expenses related to disposal on something that will eventually be covered by DTF and not aware how DTF's can be used for disposal
- Do not want to pay for it twice
- Management aversion to large disposal expenses
- Perceived safety risks related to pre-transport on-site handling and processing of Large Components
- Plant lacks knowledge about the available D&D expertise to conduct processing, packaging, transport and disposal safely

Stored Waste Large Components – Funding for Disposal



Reasons for early disposal:

- Public goodwill gained from disposal efforts
- Long term cost benefit analysis shows that for ratepayers the cost to build mausoleum, store until plant shutdown, and pay during D&D is greater than disposal today
- Environmentally, it is the right thing to do
- While NRC says storage is safe, NRC's preference is disposal over storage
- Concerns about having the right disposal space available at a reasonable price at the time of D&D (scarcity is a real issue)
- Disposal now will reduce ratepayer liability going forward

Regulated Plant Precedence for Early Large Component Disposal



- Using Site Restoration funds approved by the State PSC/PUC
 - North Carolina Utility disposed of eight (8) SGs that were in storage
- Establishing a DTF subaccount approved by State PSC/PUC – method **originally recommended and endorsed by the NRC**
 - Michigan Utility – eight (8) SGs disposed
 - Texas Utility – collecting for disposal of eight (8) SGs

Merchant Plants – DTFs for Early Stored Waste Disposal



- Most or all the DTFs were collected from ratepayers while regulated
- As Utilities and nuclear power plants converted from regulated to non-regulated merchant plants, settlements between PSC/PUC and utility varied greatly from one state and another
- Many non-regulated Utilities have settlement agreements that were established with State PSC/PUCs that impact their DTF
- Some State PSC/PUCs still regulate the use of DTFs even after a Utility became merchant
- Some settlements with merchant plants still have the DTFs being collected from ratepayers
- Some settlements require any DTF surplus to be returned to ratepayers following decommissioning

Conclusion

- With PSC/PUC approval, regulated Utilities have available options to gain access to ratepayer funding for the disposal of their large components being replaced or in mausoleum storage
- Non-regulated merchant plants may also have available DTF funding options depending on settlement agreements or the management of their funds
- Through NARUC, State PUC/PSCs have now been briefed in the event that a utility where to pursue one of the funding options

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