

# **3 New England Yankee Companies Spent Nuclear Fuel Storage & Transportation**

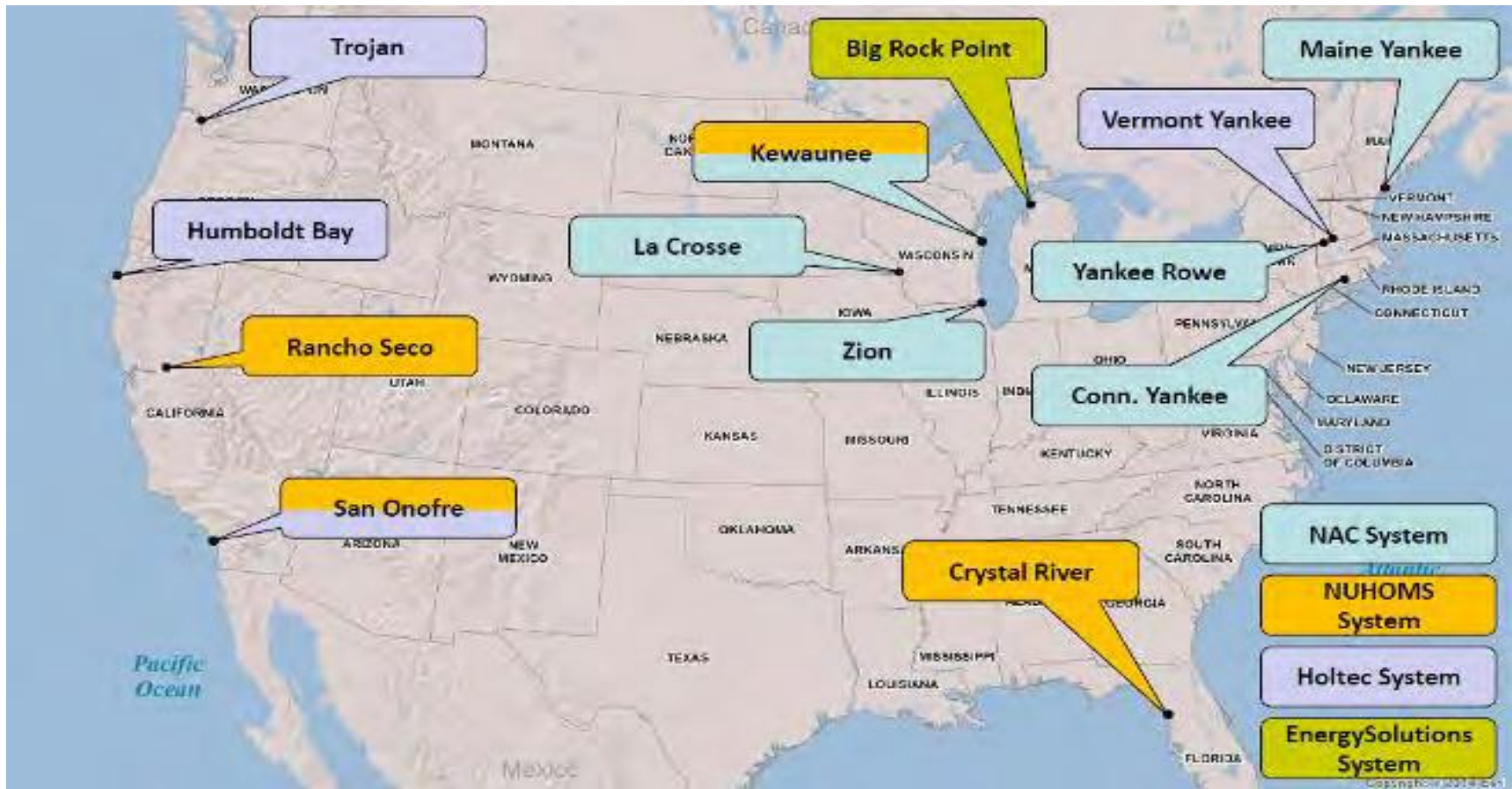
**ANNUAL NECPUC SUMPOSIUM**

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Bob Capstick, Director of Regulatory Affairs

Yankee Atomic, Connecticut Yankee, Maine Yankee

# Locations of Shutdown Commercial Nuclear Power Plant Sites



# The 3-Yankee Sites

- Connecticut Yankee, Yankee Rowe, and Maine Yankee all began operation in the 1960's and were permanently shutdown in the 1990's.
- All 3 Yankee are Stranded Assets with New England electric ratepayer impacts.
- By 2005, all Spent Nuclear Fuel (SNF) & High Level Waste (HLW) was moved to stand-alone Independent Spent Fuel Storage Installations (ISFSIs) in dry canister systems licensed for Storage & Transport – and by 2007, all had completed decommissioning and removal of the nuclear power plant and environmental restoration of the sites.
- However, until DOE fulfills its contractual & statutory obligations under the Nuclear Waste Policy Act of 1982 to remove this material, the ISFSIs can't be decommissioned and the NRC licenses terminated.
- Until then, the three single-asset companies are required to stay in business and are responsible for storing the SNF & HLW waste in accordance with federal regulatory requirements at an average cost per company of about \$10 million/year.



Connecticut Yankee



Yankee Rowe

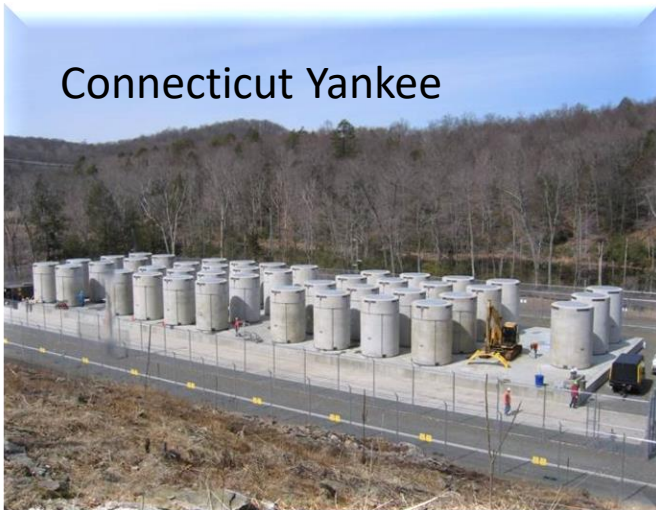


Maine Yankee



# The 3 Yankee Company ISFSIs

Connecticut Yankee

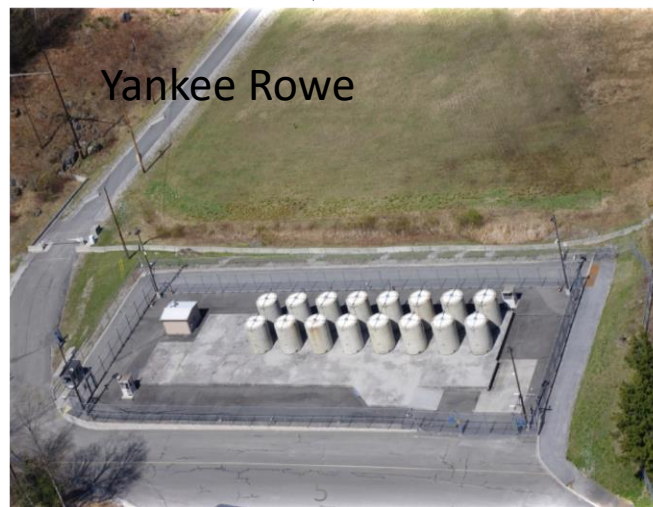


15 Spent Fuel Dry Casks  
1 GTCC Dry Cask  
NAC canister system

Maine Yankee



40 Spent Fuel Dry Casks  
3 GTCC Dry Casks  
NAC canister system



Yankee Rowe

60 Spent Fuel Dry Casks  
4 GTCC Dry Casks  
NAC canister system

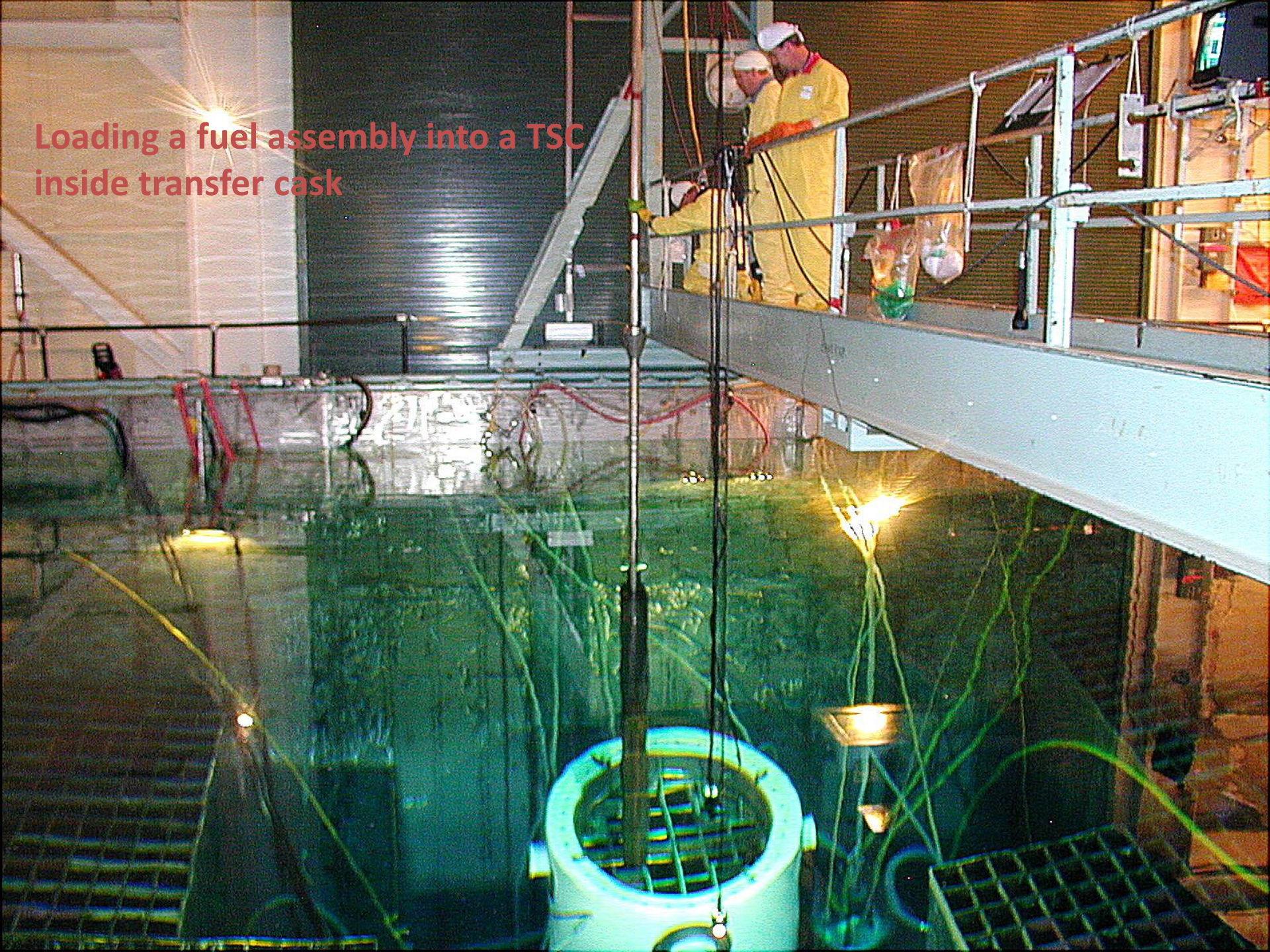








Loading a fuel assembly into a TSC inside transfer cask





# Transfer Cask lift, Transfer to VCC, and Transfer to the ISFSI Pad







# Future Transportation from the Sites

- In preparation for SNF shipments, DOE is designing rail cars to meet the Association of American Railroad Standard for SNF/HLRW rail shipment.
- DOE “Preliminary Evaluation of Removing Used Nuclear Fuel from Shutdown Sites” September 30, 2016 (Report No. FCRD- NFST-2016-000478; PNNL-22676 Rev. 8) <https://curie.ornl.gov>.
- US DOE “Initial Site-Specific De-Inventory Report for Maine Yankee” April 21, 2017 (Report No.: RPT-3016127-002)
- When DOE begins meeting its obligation, equipment will have to be mobilized to transfer SNF & HLW canisters to transportation casks (which DOE has yet to procure).
- Rail, barge and truck were all used during plant decommissioning to ship large radioactive components from the 3 Yankee sites.



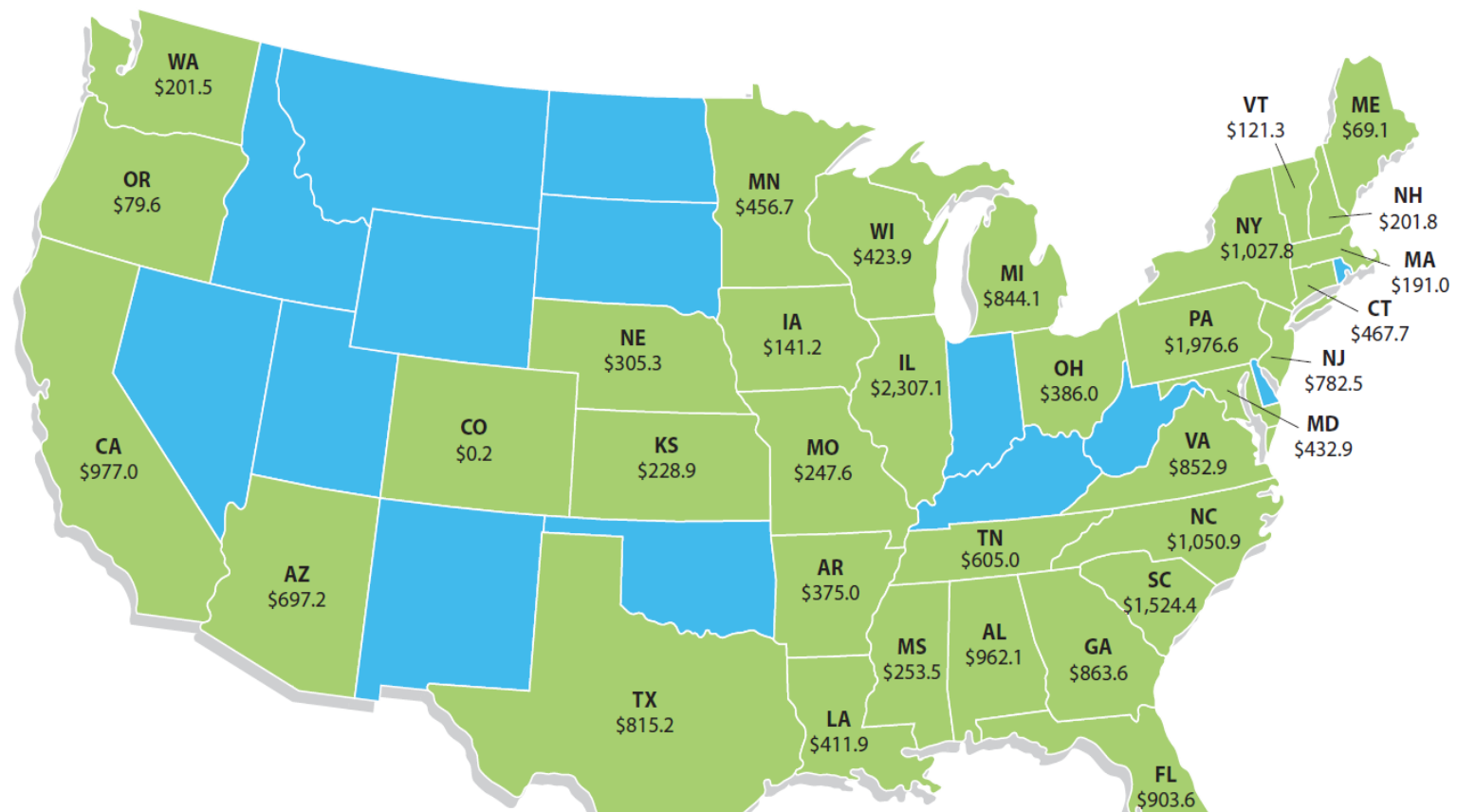
# Large Radioactive Components Shipped During Decommissioning



# New Englanders Have Met Their Obligation and Paid Over One Billion Dollars into the Nuclear Waste Fund (Source NEI)

## What Consumers Have Paid into the Nuclear Waste Fund

(in millions, as of December 31, 2014)





# DOE Spent Fuel Litigation Status

- The ongoing litigation between the three Yankee companies and the Department of Energy is being conducted in phases as an earlier U.S. Federal Appeals Court decision ruled that utility companies cannot receive damage awards for costs that have not yet been incurred.
- As a result, the three companies have, and expect to continue to litigate with the DOE every several years to request damages for costs incurred by the ratepayers for the federal government's failure to meet its statutory and contractual obligation to begin removing the SNF and HLW from the sites beginning in January 1998.
- The damages awards are disbursed in accordance with a Federal Energy Regulatory Commission approved agreement between the 3 Yankee companies and the state utility regulators in Maine, Massachusetts, and Connecticut.
- The total damages awarded to date for the Phase I, II and III lawsuits were \$471.8 million - the payments coming from the US Federal Judgment Fund (a permanent indefinite appropriation to pay court judgments against the US).
- The Phase IV case has just been filed and addresses damages for the 2013-2016 timeframe.