

# Vermont Yankee Decommissioning Update

Texas Low-Level Radioactive Waste  
Disposal Compact Commission

October 1, 2015



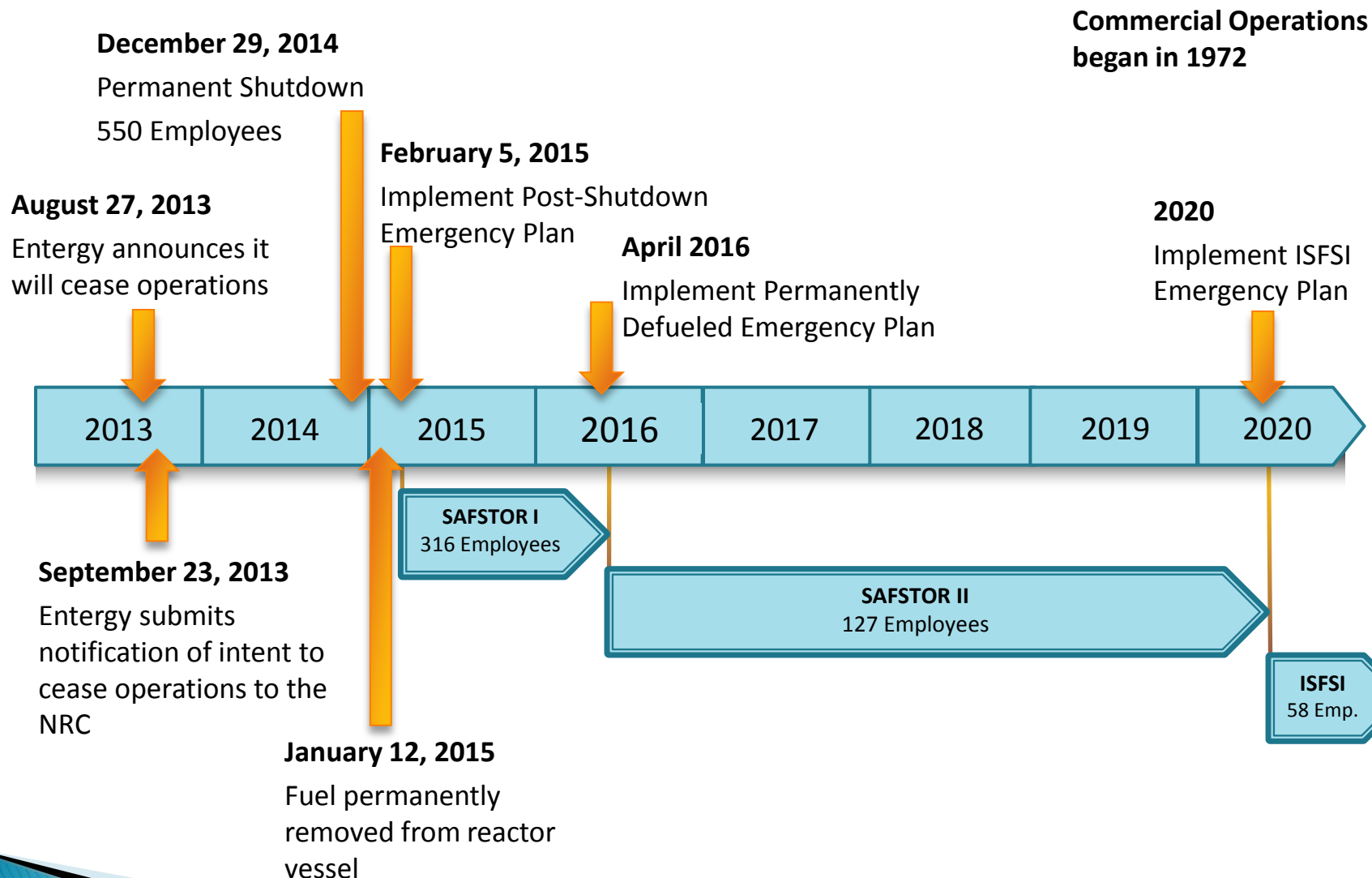
# Introductions

Joseph R. Lynch  
Manager, Government Affairs  
Entergy Nuclear Vermont Yankee, LLC (ENVY)

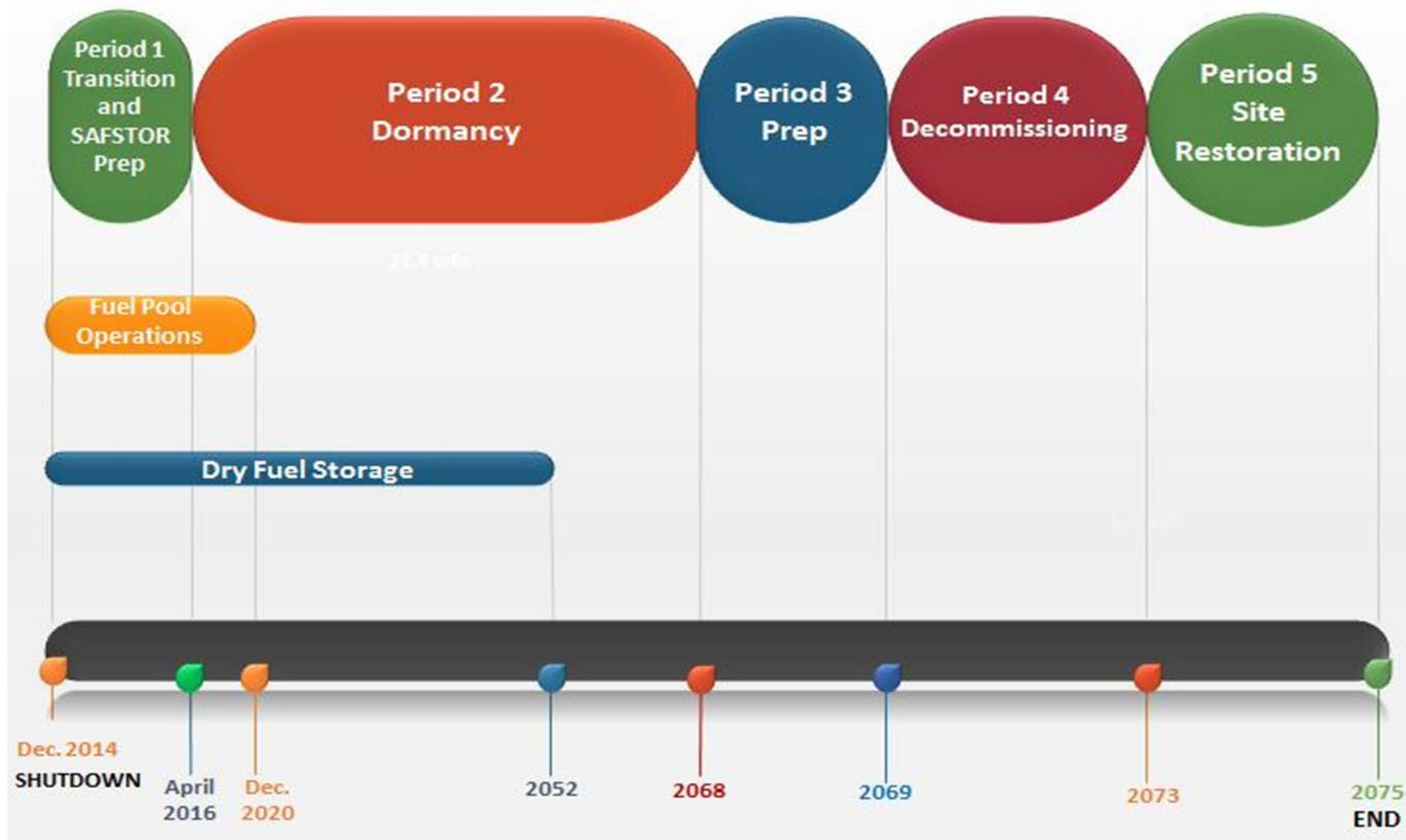
# VY Current Plant Status & Milestones

- ▶ Vermont Yankee Nuclear Power Station (VYNPS) ceased power operations on December 29, 2014 after 633 days of continuous power operation – a record for the VY site.
- ▶ On January 12, 2015, all nuclear fuel was removed from the reactor and placed in the Spent Fuel Pool (SFP).
- ▶ On January 12, 2015, VYNPS certified to the NRC that the reactor had permanently ceased operations and was permanently defueled.
- ▶ VYNPS is in full compliance with all NRC regulations related to the permanent cessation and decommissioning of nuclear facilities.
- ▶ The Nuclear Regulatory Commission (NRC) continues to provide oversight & governance over VYNPS decommissioning process as part of its Decommissioning Inspection Program.
- ▶ **The focus of VYNPS and its employees continues to be our ongoing commitment to safety.**

# Vermont Yankee Emergency Plan Timeline



# VY PSDAR Timeline



# Decommissioning Schedule

Decommissioning Activity	Start	End	Approximate Duration (Years)
<b>Transition from Operations</b>			
Plant Shutdown	12/29/14	–	–
Preparations for SAFSTOR Dormancy	12/29/14	4/30/16	1.3
<b>SAFSTOR Dormancy</b>			
Dormancy Period w/Wet Fuel Storage	2016	2020	4.2
Dormancy Period w/Dry Fuel Storage	2020	2052*	32.5
Dormancy Period w/No Stored Fuel	2053	2067*	15

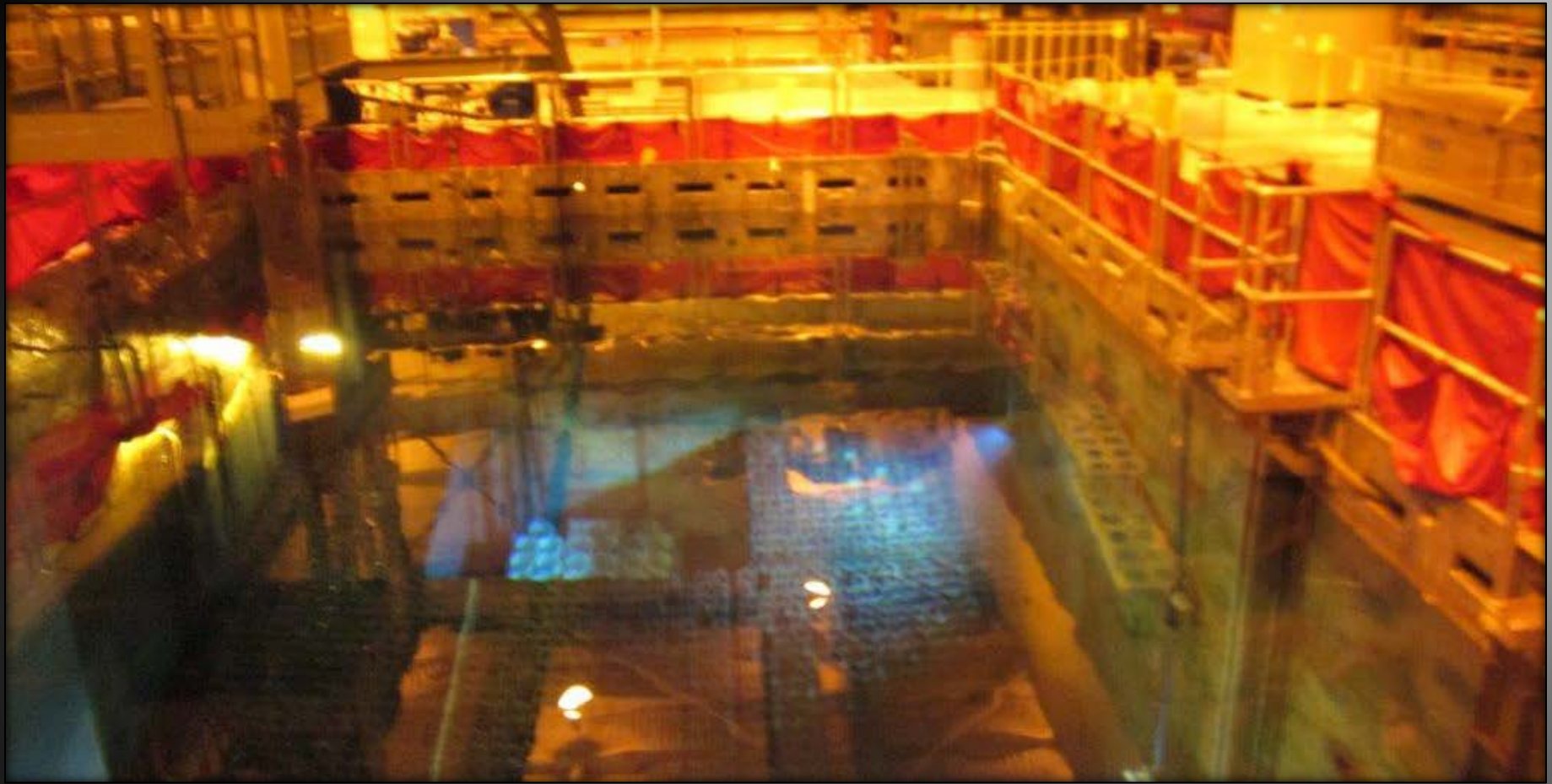
\* May be sooner if NDT funds are adequate to complete decommissioning, including any remaining spent fuel management activities.

# Decommissioning Schedule (Cont'd)

Decommissioning Activity	Start	End	Approximate Duration (Years)
<b>Preparations for Dismantling &amp; Decontamination (D&amp;D)</b>			
Preparation for D&D	2068	2069*	1.5
<b>Active D&amp;D</b>			
Large Component Removal	2069	2070*	1.3
Plant Systems Removal & Building Decontamination	2070	2073*	2.5
License Termination	2073	2073*	0.7
<b>Site Restoration</b>			
Site Restoration	2073	2075*	1.5
Total – Shutdown to Completion of License Termination	–	–	59

\* May be sooner if NDT funds are adequate to complete decommissioning, including any remaining spent fuel management activities.





## Spent Fuel Management >>



# Current Dry Fuel Storage Status

- Thirteen (13) Dry Fuel Storage Casks are safely loaded and stored on the first of two (2) Independent Spent Fuel Storage Installation (ISFSI) pads.
- Application for a second ISFSI pad was submitted on June 30, 2014 to the Vermont Public Service Board (PSB) seeking a Certificate of Public Good (CPG). Approval expected in May 2016
- An additional forty-five (45) Dry Fuel Storage Casks for a total of fifty-eight (58) will be loaded and stored on the two pads.
- Current plan is to transfer all spent fuel to Dry Cask Storage by the end of 2020.

# Independent Spent Fuel Storage Installation (ISFSI)



# Independent Spent Fuel Storage Installation (ISFSI)





# Irradiated Fuel Management Plan

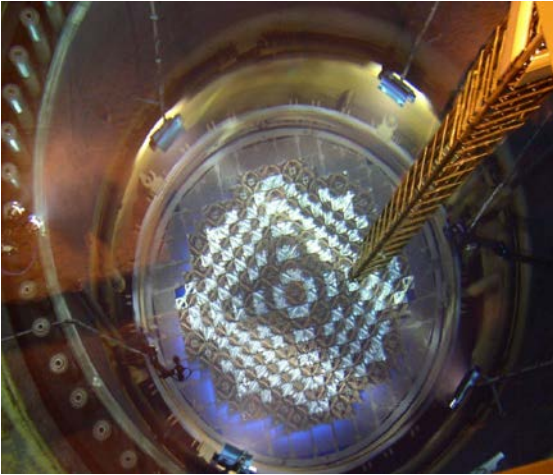
## Requirements/Guidance

- ▶ 10 CFR 50.54 (bb)
- ▶ NRC review is conducted in accordance with its standard process

## Irradiated Fuel Management Plan Content

- ▶ Written notification submitted to USNRC on December 19, 2014 discussing changes to the VY Program for Management of Irradiated Fuel.
- ▶ Program by which VY intends to manage and provide funding for the management of all spent nuclear fuel until it is transferred to the Department of Energy for ultimate disposal.
- ▶ Describes Vermont Yankee's plan to move the fuel from the Spent Fuel Pool (Wet Storage) to the ISFSI (Dry Storage).

# VY Irradiated Fuel Management Program Overview



- The Spent Fuel Pool currently stores 2,996 spent fuel assemblies at VY.
- The thirteen (13) Dry Cask Storage Casks contain 884 spent fuel assemblies.
- A total of 3,880 spent fuel assemblies are stored at VY.
- Current Program assumes that DOE will begin moving fuel from VY in 2026.
- Current Program assumes that DOE will complete fuel removal from the site by 2052.
- The Program describes the strategy for funding the management of the spent nuclear fuel.

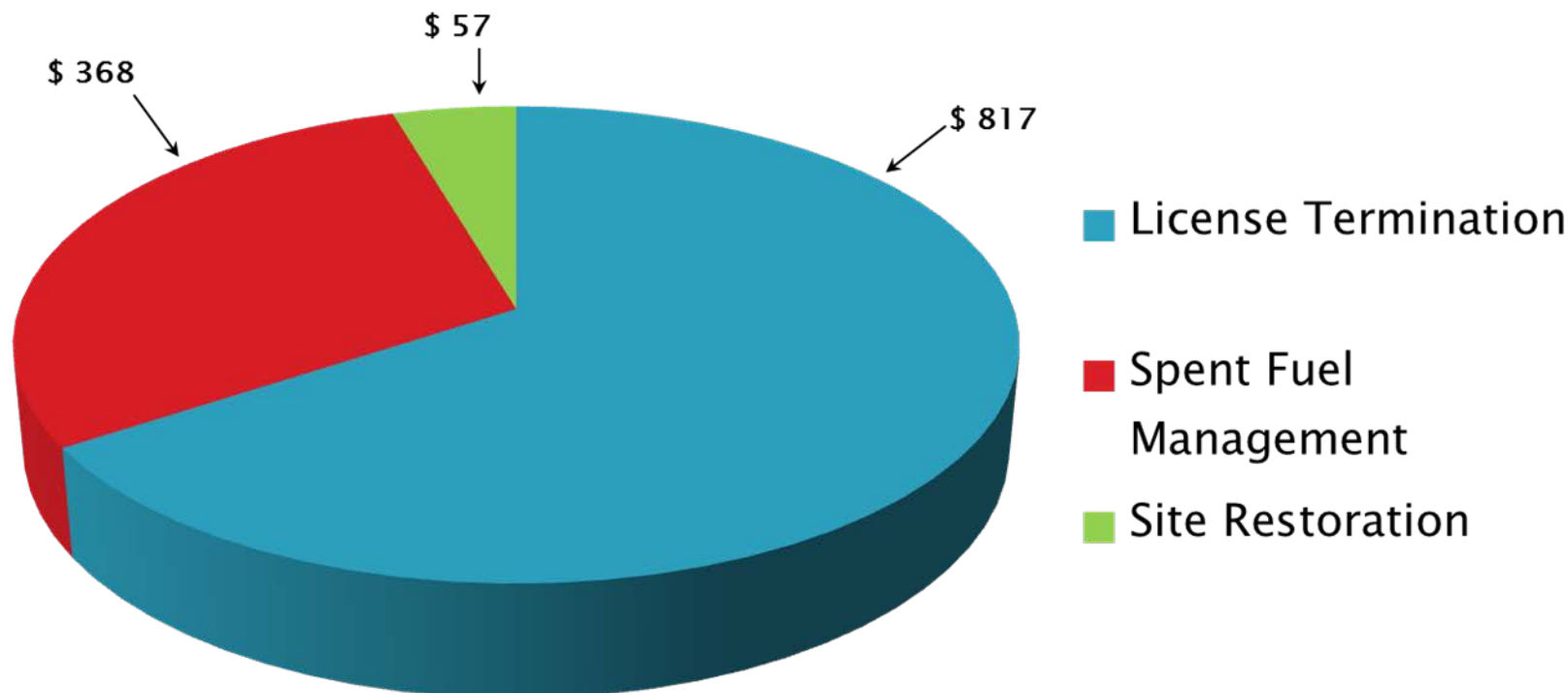


## Decommissioning Cost Estimate >>



# Decommissioning Cost Estimate Breakdown

Total Cost Breakdown (2014 \$ in Millions)



Total Cost = \$ 1.242B

# Decommissioning Cost Estimate and Nuclear Decommissioning Trust (NDT)

## ▶ Spent Fuel Management - \$368 Million

- Operational costs - \$225 Million
  - Transfer to dry storage - \$143 Million
- ENVY is funding the “transfer to dry storage”
  - Funding Spent Fuel Management reduces impact on NDT



Decommissioning Project Status / Issues >>

# VY Decommissioning Update

*The focus of Entergy Vermont Yankee (VY) and its Employees continues to be our ongoing commitment to Safety.*

- ▶ Decommissioning Preparation Activities
  - System Draining/Lay-Up
  - Building Power and Services Removal - Ongoing
  - Security Modifications/Enhancements Ongoing
- ▶ Completed Select Structure/Building Removal
- ▶ Next Emergency Plan Drill – October 21, 2015
  - Part of ongoing training and Emergency Response Organization (ERO) qualifications.
- ▶ Work with State of Vermont to establish Site Restoration Standards pursuant to the “2013 Settlement Agreement”
- ▶ Completion of Second ISFSI Pad and Commence Transfer of Remaining Spent Fuel from Pool to Pad. Contingent on receiving a Certificate of Public Good (CPG) by May of 2016.

# Communication and Outreach

- ▶ Nuclear Decommissioning Citizens Advisory Panel (NDCAP)
- ▶ Stakeholder Outreach: Speaking Engagements, Community Involvement, and Facility Tours
- ▶ SAFSTOR Matters – Monthly Cable TV Show
- ▶ Vermont Yankee Decommissioning website:  
[www.vydecommissioning.com](http://www.vydecommissioning.com)



# SAFSTOR MATTERS

## BCTV 2015 *Series of the Year*



Decommissioning Overview



Emergency Planning



Spent Fuel Management



Economic Impact



Decommissioning Update



Decommissioning  
Maine Yankee



# Questions?



Joseph R. Lynch  
Manager, Government Affairs  
Entergy Nuclear Vermont Yankee,  
LLC (ENVY)

Work: (802)-258-4107

Cell: (508)-728-1421

Email: [jlynch4@entergy.com](mailto:jlynch4@entergy.com)