

Vermont Yankee Nuclear Power Station Decommissioning

Scott State, P.E., - NorthStar, CEO

Steven Scheurich, Entergy - VP, Nuclear Decommissioning

January 24, 2017

Agenda

- Purpose of Meeting
- Current Status of Vermont Yankee
- Overview of NorthStar Approach and Teaming Partners
- Technical Qualifications
- Financial Assurance
- Other License Transfer Requirements
- Conclusion
- Next Steps

Purpose of Meeting

- Intent to initiate decommissioning of Vermont Yankee Nuclear Power Station (VYNPS) ahead of previous schedule
- Proposed License Transfer Application for VYNPS
- Introduce NorthStar and Teaming Partners
- Provide an overview of the decommissioning approach, including technical qualifications, financial assurances, organization structure and decommissioning schedule

Current Status of Vermont Yankee

- Current staffing level at VY: ~150 FTE's
- Target ISFSI only status by end of 2018
- Commitment to open & transparent communication:
 - Public: VT Nuclear Decommissioning CAP
 - Employees: Entergy, NorthStar & Teaming Partners
 - Regulatory: NRC, State of Vermont

As-Submitted Dec. 2014 PSDAR Decommissioning Timeline:

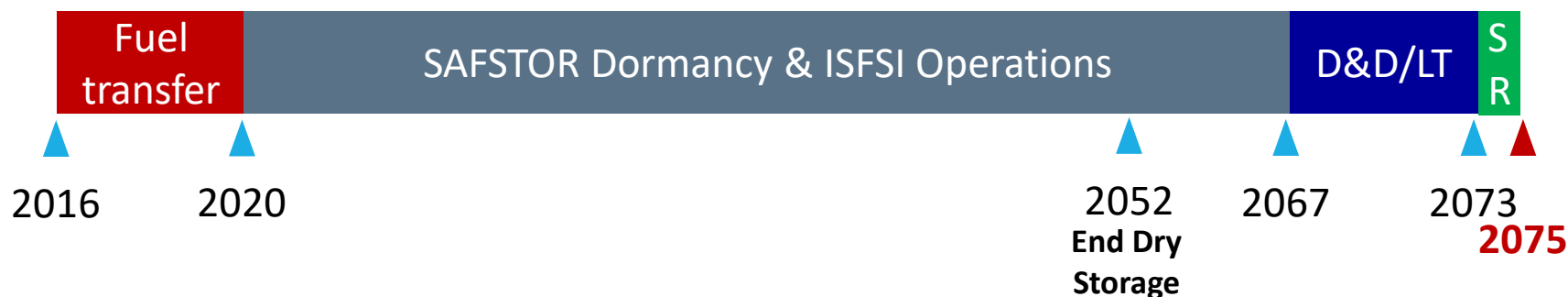
Dec 2014	VYNPS Shutdown
Jan 2015	Reactor Permanently Defueled
2015-2020	Planning, Preparations and Deactivation; ISFSI expansion and fuel transfer
2021-2067	SAFSTOR Dormancy Period
2052	DOE completes removal of all spent nuclear fuel
2068-2073	Dismantling & Decontamination
2073	License Termination
2075	Site Restoration

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NorthStar's Decommissioning Timeline

Timeline under Entergy ownership

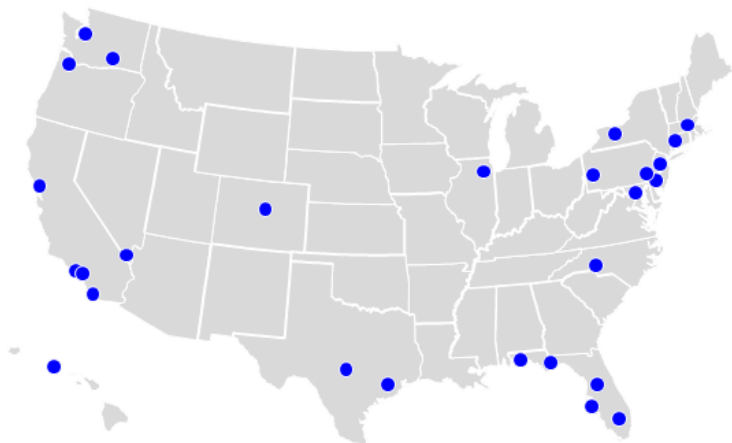


Proposed Timeline under NorthStar License Transfer Application



About NorthStar Group Services, Inc.

Nationwide Branch Network



Corporate Headquarters – New York City

- Regional offices in Boston, Chicago, Denver, Orlando, New Jersey, and Seattle

- Founded 1986
- Over 25 Offices Nationwide
- Over 3,500 full time employees
- Safety – 2016 EMR 0.69
- Average Annual Revenues - \$650M
- Projects Completed >100,000
- The NorthStar Team has completed over 300 Nuclear and Power Plant Projects in the last 15 years
- #1 Demolition and #1 Facility Abatement Contractor as ranked by Engineering News Record *(based on annual revenue)*
- Largest Demolition Contractor in the World as ranked by Construction & Demolition Recycling Magazine *(based on annual revenue)*

NorthStar Team: Roles & Responsibilities



Owner & Lead

Owner and Decommissioning Lead Partner

- World's Largest Turnkey Decommissioning & Facility Services Contractor
- Abatement & Demolition Contractor
- Extensive nuclear experience
- NorthStar CEO, Scott E. State, P.E. – Chief Nuclear Officer for owner

Teaming Partners



Vessel and Internals Segmentation / Spent Fuel Support

- World's leading nuclear fuel and services provider
- Leading expertise in vessel and internals segmentation
- BWR experience: Wuergassen Reactor 320-ton RPV



Engineering and License Transfer / Termination Support to Owner

- Founded in 1898 – 100% Employee Owned
- Over 5,300 professionals – 35 offices worldwide
- Annual Revenue over \$2.5 billion




Waste Management, Packaging, Transportation and Disposal

- Licensed for Class A, B, C & Exempt Low-Level Radioactive Waste
- Texas Compact disposal site
- Pending application – Centralized Interim Storage Facility

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NorthStar Team: Expertise and Experience

		Expertise	Experience
	World's Largest Turnkey Decommissioning & Facility Services Contractor	D&D*, Asbestos & Hazardous Materials Abatement, Facility Demolition	35+ Years Specialty Contractor Services 95% of all projects require regulatory approvals to complete
	World's Leading Nuclear Fuel & Services Provider	Vessel & Internals Segmentation Spent Fuel Support	20+ Years Reactor D&D <u>Project Team Experience</u> - Wuergassen BWR - Yankee Plants
	Global Full-Service Engineering & Environmental Solutions Firm	Environmental Engineering & License Transfer/ Termination Support	Founded in 1898 Cimarron, Tronox Over 5,300 professionals
	Nation's Leading Radioactive & Hazardous Waste Services Provider	Waste Management, Packaging, Transportation & Disposal	Class A, B, C & Exempt LLRW Facility TX Compact & Federal Waste Disposal Facilities

* Decontamination (radiological) & Decommissioning

NorthStar Team: Expertise and Experience

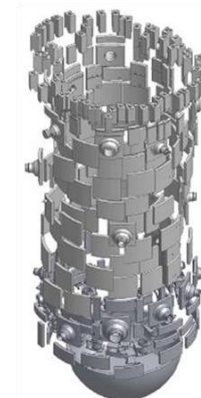
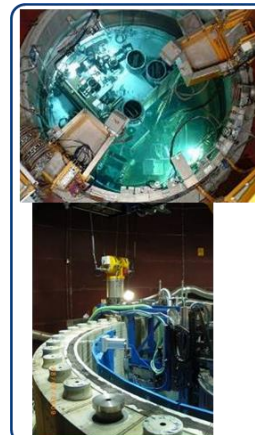
	Major Utility Clients	Decommissioning Experience
	 	<u>Nuclear Power Plants</u> <ul style="list-style-type: none"> • Maine Yankee • Yankee Rowe • Connecticut Yankee • Stade PWR • Wuergassen BWR • Rancho Seco • Millstone I
	 	<u>Research Reactors</u> <ul style="list-style-type: none"> • University of Buffalo • University of Illinois • University of Arizona • University of Washington • Dounreay Fast Reactor
	 	<u>Department of Energy</u> <ul style="list-style-type: none"> • Hanford 308-A Reactor • Hanford 309 Reactor (<i>Plutonium</i>) • Hanford 340 Waste Vault (<i>Plutonium</i>) • Y-12 National Security Complex Bldgs. 9769 & 9211 • Savannah River Site – K Cooling Tower • Pit 9 Facilities • Environmental Management Program Support
	 	
	 	
	 	

NorthStar Team: Expertise and Experience



UNIVERSITY AT BUFFALO MATERIAL RESEARCH CENTER D&D
BUFFALO, NY

NUCLEAR EXPERIENCE



Wuergrass Reactor BWR, Germany

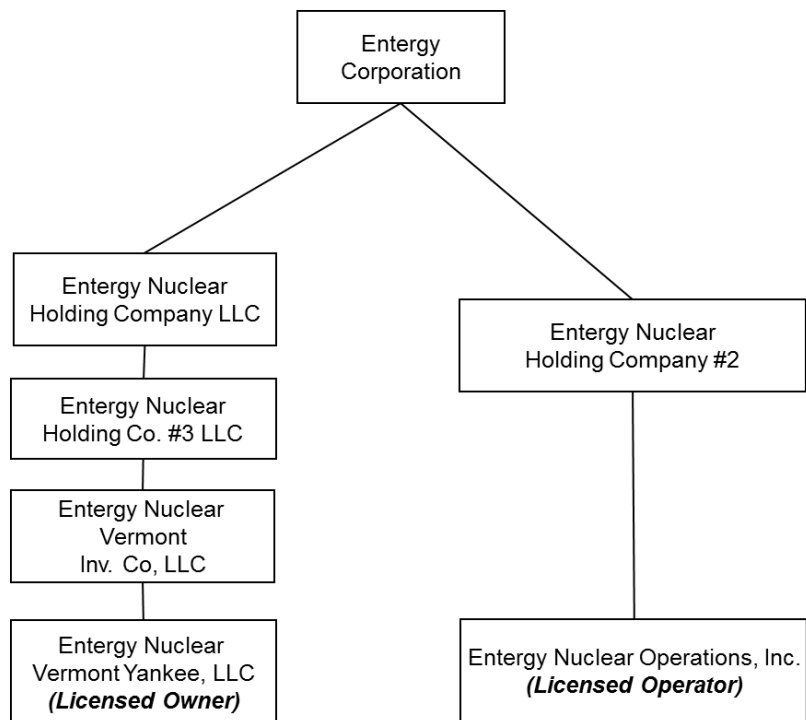


Uranium Fuel Production Facilities

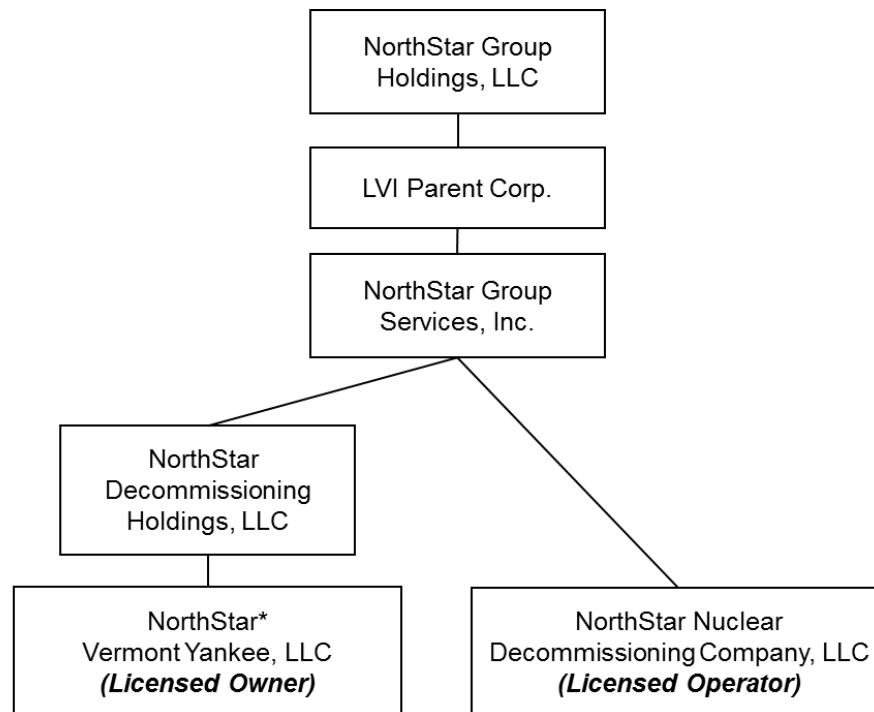


Technical Qualifications – Company Structure

Entergy Ownership

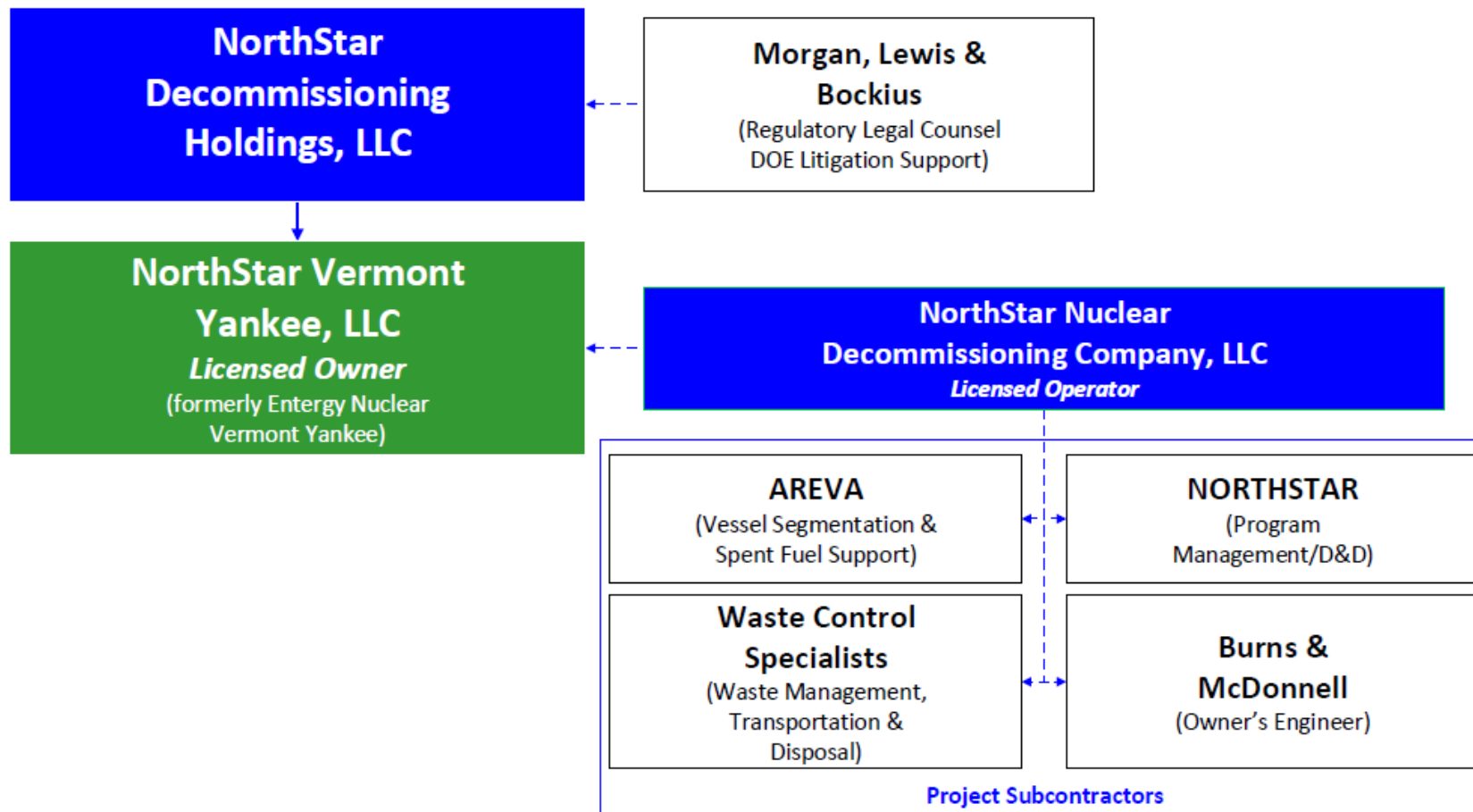


NorthStar Ownership

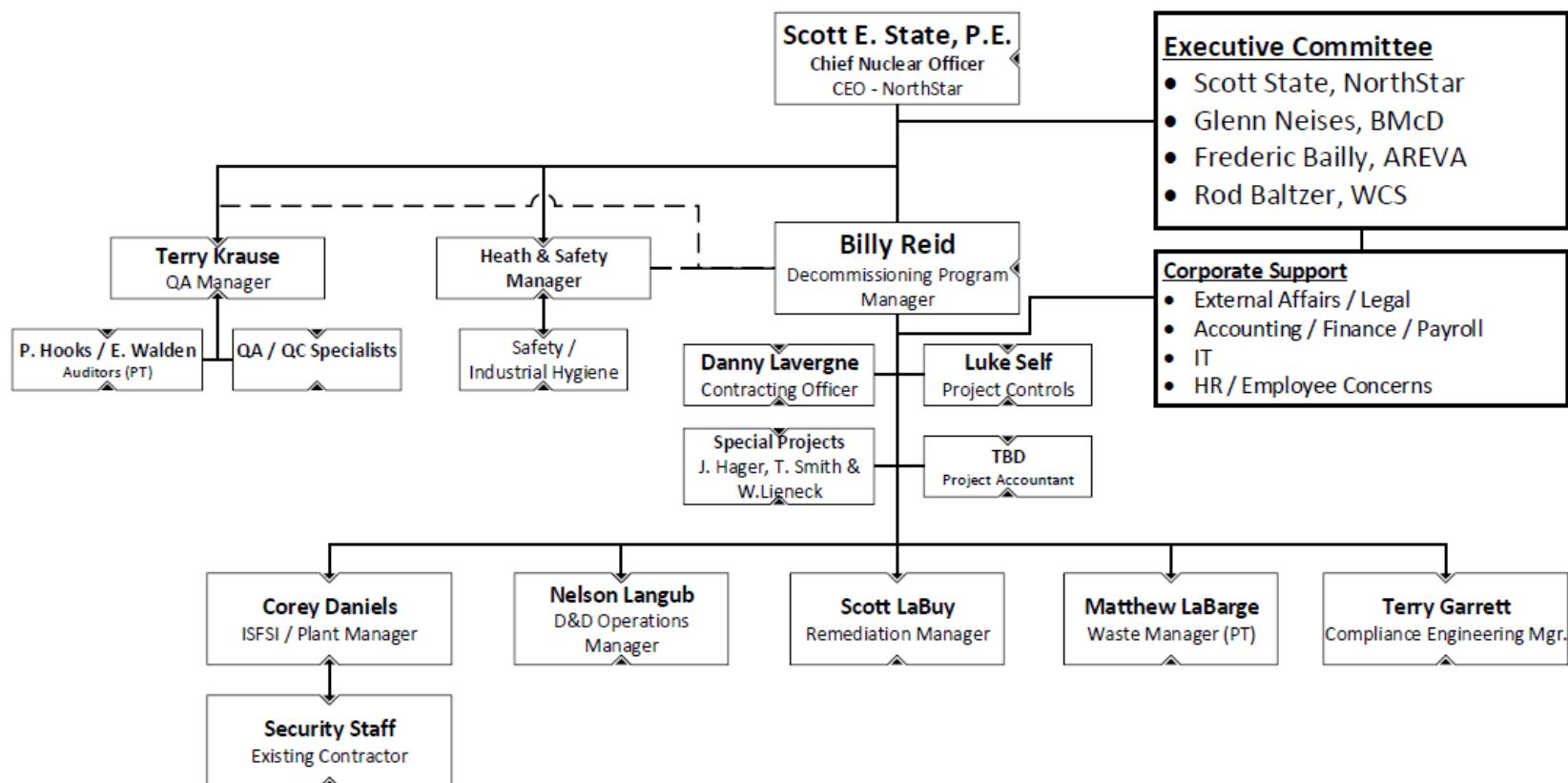


* Formerly known as Entergy Nuclear Vermont Yankee, LLC

Technical Qualifications – NorthStar Team Structure



Technical Qualifications – Decommissioning Organization



Target Project Schedule - Overview

	NorthStar Ownership (Target 12.31.2018)			Partial Site Release (Target 12.31.2026)								License Termination (Est. 12.31.2052)	
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027 to 2051	2052
Dry Fuel Storage Program (Fuel on ISFSI - Dec. 31, 2018)	Completed by Entergy												ISFSI Decommissioning & License Termination
Large Component Removal		Engineering & Planning		Complete - March 2022									
Decontamination & Decommissioning		Pre-Closing Work		Complete - December 2026									
Spent Fuel Management				ISFSI Operations and Management (2019 thru 2026)								ISFSI Only Operations Period (2027 thru DOE Fuel Pick-up)	

Target Project Schedule

– Regulatory Commitment for Partial Site Release is 12.31.2030

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Financial Assurance for Decommissioning

- Minimum Nuclear Decommissioning Trust (NDT) balance satisfies 10 CFR 50.75(e)(1)(i) as a prepayment method of providing decommissioning financial assurance
- NDT to be retained by NorthStar Vermont Yankee, LLC
 - Financially qualified in accordance with 10 CFR 50.33(f)(2)
 - NDT fund meets prepayment method based upon updated DCE
- Minimum NDT balance at license transfer ensures ability to start D&D no later than 2021 and ensures partial site release and site restoration by 2030
 - Contract milestones and project schedule penalties (\$25 million irrevocable LOC tied to project start and completion milestones)

NRC Required and Additional Financial Assurances

Nuclear Decommissioning Trust/DCE

(10 CFR 50.75 Financial Assurance)

Guaranteed Fixed Payment

(Risk owned by NorthStar Team and
Bonding Companies)

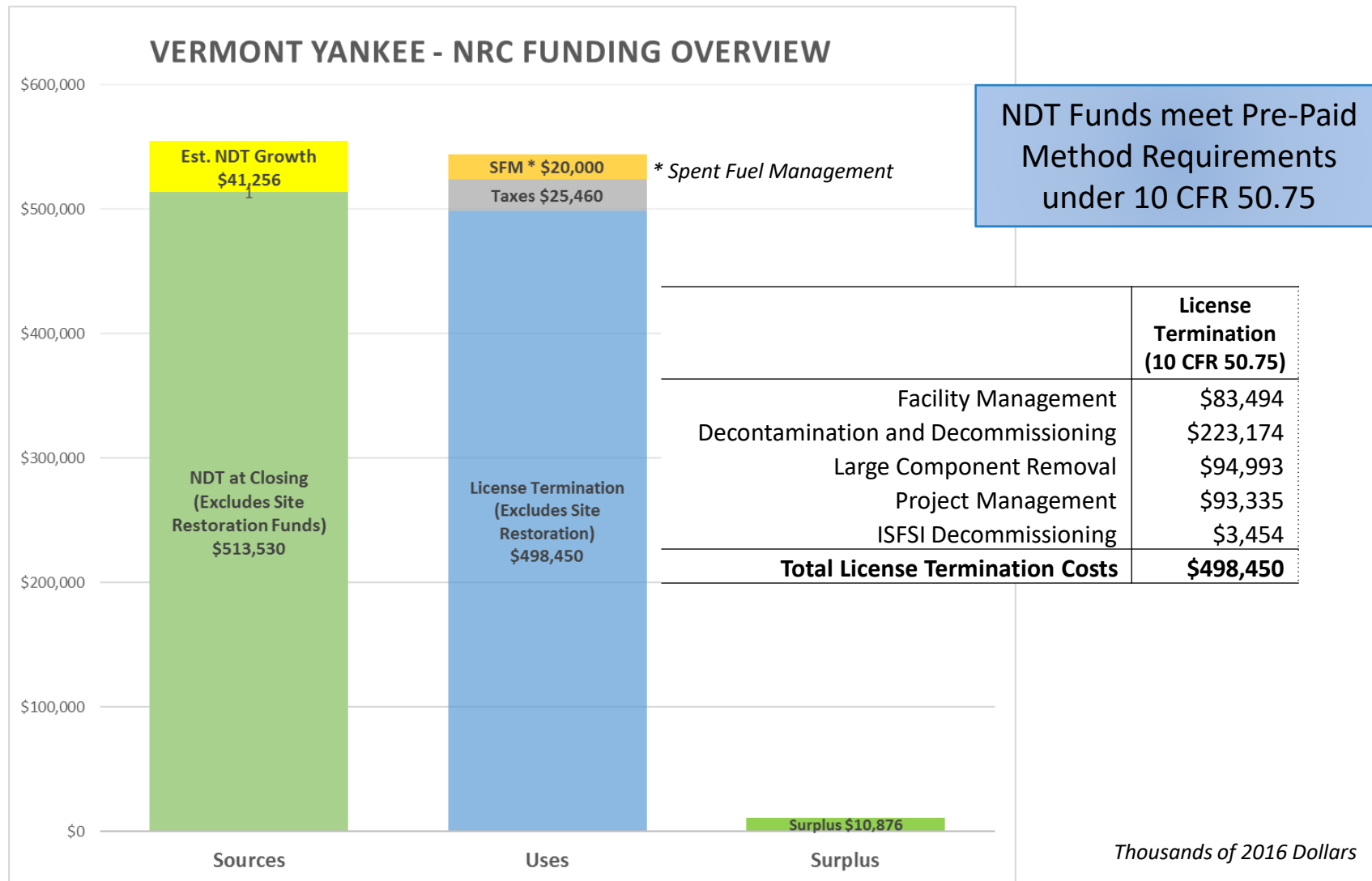
NorthStar
Corporate
Guarantee

Team Performance
Bonds
(Majority of D&D
Project Costs)

Team
Contractual
Commitments

\$125M
Support
Agreement

Funding Assurance Under 10 CFR 50.75



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Other License Transfer Requirements

Spent Fuel Management

- ENVY, under NorthStar ownership, will retain SNF rights and obligations pursuant to DOE standard contract
- NorthStar will be responsible for ISFSI decommissioning
- Spent fuel management funded by NorthStar
- ISFSI maintenance to be funded by using up to \$20 million of NDT funds at any one time under existing exemption augmented by annual recoveries of damages from DOE (10 CFR 50.54 (bb))
 - Further assured by \$125 million Support Agreement

Other License Transfer Requirements

Foreign Ownership and Control

- NorthStar's Board of Directors are all U.S. Citizens
- NorthStar and the licensee entities are not owned, controlled or dominated by any foreign person.

Insurance

- NorthStar NDC will obtain onsite property damage insurance and the offsite nuclear liability coverage
 - Discussions held with NEIL and ANI
 - Coverage will be in place on the effective date of transfer
 - VY exemptions on coverage amounts will continue to apply

Conclusion

License Transfer for Accelerated Decommissioning Approach

License Transfer satisfies NRC regulatory requirements and guidance

1. Technical Qualifications
2. Financial Qualifications and Decommissioning Funding
3. Foreign Ownership, Control, or Domination
4. Nuclear Insurance and Indemnity

License Transfer for Accelerated Decommissioning is in the public good for Vermont

1. Supports prompt decommissioning of VYNPS
2. Accelerates potential re-purpose of the site for economic development
3. NorthStar will be a fair partner to Vermont

Next Steps

Milestone	Target Date
File license transfer application with NRC	Feb 2017
NRC approval	Dec. 2017
Vermont Public Service Board approval	March 2018
Spent Fuel moved to ISFSI	3Q-2018
Transaction Close	End of 2018