

Bidder Proposal Overall Feasibility Evaluation Summary
Revision 4, Dated
9/18/2018
DRAFT

CR3 ACCELERATED DECOMMISSIONING PROJECT

EVALUATION	Weight												
		Eval Score	Weighted Score	Comments	Eval Score	Weighted Score	Comments	Eval Score	Weighted Score	Comments	Eval Score	Weighted Score	Comments
TECHNICAL	20%												
TERMS	10%												
TOTAL COST OF OWNERSHIP	70%												
TOTAL EVALUATION RESULTS	100%												

QUALITATIVE ASSESSMENT (UNMONITIZED RISKS / OPPORTUNITIES)	- Maximum Risk Transfer - Viable Decommissioning Cost Estimate	- Duke Retains Decommissioning Trust Fund - Viable Decommissioning Cost Estimate - Spent Fuel Management Risk remains with Duke	- Does Not Pass Technical & Terms Minimum Gate Criteria and did not provide firm offer (Budgetary Estimate Only)	- Does Not Pass Minimum Gate Criteria For All 3 Evaluations
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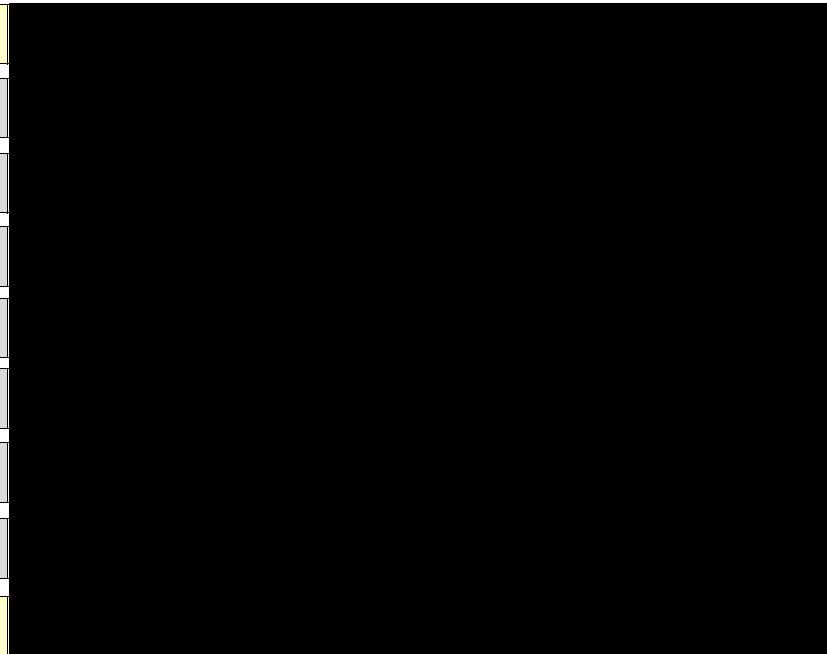
RECOMMENDATION	Proceed with [REDACTED] for on-site presentation.
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Notes:
LS1 Model = LaCrosse
LS2 Model = Zion

Bidder Proposal Technical Feasibility Evaluation Summary
Revision 4, Dated
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CR3 ACCELERATED DECOMMISSIONING PROJECT

Criteria Items	TECHNICAL EVALUATION MATRIX	Weight
A	TECHNICAL APPROACH	15%
B	PROGRAMS: Capabilities; Existing/New Program; Approach to Establishing	15%
C	D&D EXPERIENCE	20%
D	REGULATORY MANAGEMENT EXPERIENCE	20%
E	RADIOLOGICAL / HEALTH PHYSICS / WASTE HANDLING PROGRAMS & EXPERIENCE	20%
F	SAFETY PERFORMANCE: INDUSTRIAL, ENVIRONMENTAL	5%
G	SCHEDULE	5%
TOTAL MATRIX EVALUATION RESULTS		100%



	Meet minimum evaluation gate criteria score of 60		✓	✓	⊘	⊘
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Notes:
 LS1 Model = LaCrosse
 LS2 Model = Zion

Bidder Proposal Terms Feasibility Evaluation Summary
Revision 4, Dated
9/18/2018

DRAFT

CR3 ACCELERATED DECOMMISSIONING PROJECT

Criteria Items	TERMS MATRIX											Comments
		Weight	Rating	Score	Rating	Score	Rating	Score	Rating	Score		
A	TERMS											
A1	Adherence to the Commercial Terms - Acceptance Level of Duke Energy Terms - Proposed Trust Fund Drawdown Terms / Investment Strategy - Proposal meets commercial minimums and has acceptable financial risk level - Financial Credit / Stability											
A2	Corporate Responsibility - Local Companies - Business Diverse Contractor Utilization - Sustainability											
TERMS SUBTOTAL												

	Meet minimum evaluation gate criteria score of 60		✓	✓	⊘	⊘	
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Ratings Scale
5 = Excellent (A)
4 = Very Good (B)
3 = Good/Nominal (C, default rating)
2 = Fair (D)
1 = Poor (E)
0 = Unacceptable (F, this rating disqualifies the vendor and should only be applied for Critical requirements)

NOTES:
Ratings and Scores - Enter a rating for each criteria list item, the score will automatically be calculated. [Score = Rating/5 x Weight].
Maximum possible Total Score = 100.
LS1 Model = LaCrosse
LS2 Model = Zion

Bidder Proposal Cost of Ownership Feasibility Evaluation Summary

Revision 4, Dated

9/18/2018

DRAFT

CR3 ACCELERATED DECOMMISSIONING PROJECT

COST OF OWNERSHIP (in 000's)	
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Total Cost of Ownership Feasibility Analysis	
Bidder Offer	
Owner Cost / Adjustments	
Total Cost of Ownership	
Nuclear Decommissioning Trust Fund	
Nuclear Decommissioning Trust Fund Beginning Balance (Net Taxes)	
Current DOE Claim 80% (Jan-14 thru Feb-18)	
Future DUKE DOE Claims - Spent Fuel Management - 90%	
Adjusted Nuclear Decommissioning Trust Fund Balance	
Feasibility based on Adjusted NDTF Balance (See Calc Above)	

Nuclear Decommissioning Trust Fund Activity - BIDDER	
Beginning Trust Fund Balance to BIDDER	
Net NDTF Earnings (Based on 2.5% Return thru 2038)	
Decommissioning Cost Estimate (Escalated + Adjustments)	
DOE Recovery to BIDDER - Spent Fuel Management	
Trust Fund Remaining Balance to BIDDER Post D&D	

Nuclear Decommissioning Trust Fund Activity - DUKE ENERGY	
Beginning Trust Fund Balance Remaining With DUKE	
Current DOE Claim 80% (Jan-14 thru Feb-18)	
Net NDTF Earnings (Based on 2.5% Return thru 2038)	
Bidder Decommissioning Cost Estimate (Escalated + Adjustments)	
Owner Cost (Escalated + Adjustments)	
DOE Recovery to DUKE - Spent Fuel Management	
Trust Fund Remaining Balance to DUKE Post D&D	

Ratings Calculation		
Variance to Largest Remaining Balance to DUKE		
% of decrease from Largest Remaining Balance to DUKE		
Cost of Ownership Evaluation Score	Weight	90%
RFP Compliance Score		10%
Total Weighted Evaluation Score		100%

Notes:

- 1 - [REDACTED]
- 2 - [REDACTED]

Ratings Calculation

Largest Remaining NDTF Balance to Duke Post D&D is given an evaluation score of 100.
Scores for remaining bids are reduced from 100 based on percentage of decrease in Remaining NDTF Balance to Duke increase when compared to largest balance.

LS1 Model = LaCrosse
LS2 Model = Zion

Bidder Proposal Technical Evaluation Matrix Revision 0, Dated 06/11/2018

CR3 ACCELERATED DECOMMISSIONING PROJECT										
(DGC; LS1; LS2; AA; Other)										
<i>Instructions: Enter Rating in the white cells for each Criteria Item and each Bidder. Scores will be calculated automatically. See Ratings scale and Notes below.</i>										
TECHNICAL EVALUATION MATRIX										Comments
	Weight	Rating	Score	Rating	Score	Rating	Score	Rating	Score	
TECHNICAL APPROACH	15%									
Proposed approach and schedule to conduct D&D Due Diligence	2%									
Reactor Vessel and Internals Segmentation and Storage of HLW	2%									
Removal and Disposal of Large Components	2%									
ISFSI Operations	2%									
Site and Nuclear Security	2%									
Removal of All Sub-Surface Structures, Systems and Components (SSC)	2%									
License Transfer and License Termination	2%									
Site Restoration	1%									
TECHNICAL APPROACH SUBTOTAL	15%									CALCULATED SUBTOTAL
PROGRAMS: Capabilities; Existing/New Program; Approach to Establishing	15%									
Emergency Preparedness	1.0%									
Engineering	1.0%									
Chemistry	1.0%									
Fire Protection	1.0%									
Nuclear Oversight / Nuclear Safety Culture / Corrective Actions / Quality Program	2.0%									
Operations / Maintenance / Work Control	2.0%									
Security / Nuclear Security	3.0%									
Site License and Nuclear Regulatory Affairs	3.0%									
Site Support Services / Utilities Management / Training	1.0%									
PROGRAMS SUBTOTAL	15.0%									CALCULATED SUBTOTAL
D&D EXPERIENCE	20%									
The prime contractor has commercial nuclear decommissioning project management experience.	5%									
The prime and subcontractors have experience in performing D&D activities.	5%									
The prime and subcontractors have experience in license termination/release for unrestricted use activities.	5%									
The prime and subcontractors have experience in performing site restoration activities.	5%									
D&D EXPERIENCE SUBTOTAL	20%									CALCULATED SUBTOTAL
REGULATORY MANAGEMENT EXPERIENCE	20%									
The contractor has commercial nuclear decommissioning licensing experience.	5%									
The contractor commits to stakeholder engagement to ensure regulatory approvals and community engagement.	5%									
The contractor has state regulatory management experience.	5%									
The contractor has environmental management experience.	5%									
REGULATORY MANAGEMENT EXPERIENCE SUBTOTAL	20%									CALCULATED SUBTOTAL

Bidder Proposal Technical Evaluation Matrix Revision 0, Dated 06/11/2018

TECHNICAL EVALUATION MATRIX		Weight	Rating	Score	Rating	Score	Rating	Score	Rating	Score	Comments
RADIOLOGICAL / HEALTH PHYSICS / WASTE HANDLING PROGRAMS & EXPERIENCE		20%									
Radiological Protection Program		4%									
Technical Approach to Waste Packaging, Staging, Transportation and Disposal		4%									
Technical Approach to Water Processing		4%									
The prime and subcontractors have experience in the management and shipping of hazardous and radioactive waste.		4%									
Part 37 Security Plan		4%									
RADIOLOGICAL PROGRAMS SUBTOTAL		20%									CALCULATED SUBTOTAL
SAFETY PERFORMANCE: INDUSTRIAL, ENVIRONMENTAL		5%									
The contractor has an acceptable EHS management system and performance history.		1%									
The contractor has an acceptable safety program and performance history.		1%									
The contractor has an acceptable environmental program and performance history.		1%									
The contractor's and subcontractors safety record is acceptable in accordance with Duke-Energy policy. (Green, Yellow, Red)		1%									
The contractor has an effective Human performance observation program.		1%									
SAFETY PERFORMANCE SUBTOTAL		5%									CALCULATED SUBTOTAL
SCHEDULE		5%									
The contractor proposes a project schedule and has identified appropriate milestones that are reasonable and achievable with respect to meeting specification requirements. (Shortest reasonable duration)		1%									
The contractor commits/guarantees to adhere to the schedule estimate.		1%									
The contractor has demonstrated through past projects their competence in schedule estimates and schedule management.		1%									
The contractor schedule does not unnecessarily extend dates which in turn would incur additional costs for Duke Oversight.		1%									
The contractor schedule does not front-end-load simpler tasks but addresses complex tasks first, and implements site restoration after license termination.		1%									
SCHEDULE SUBTOTAL		5%									CALCULATED SUBTOTAL
TOTAL MATRIX EVALUATION RESULTS		100%									TOTAL

Date _____

<p>Ratings Scale 5 = Excellent (A) 4 = Very Good (B) 3 = Good/Nominal (C, default rating) 2 = Fair (D) 1 = Poor (E) 0 = Unacceptable (F, this rating disqualifies the vendor and should only be applied for Critical requirements)</p> <p>Projects - [redacted] Engineering - [redacted] Security - [redacted] Licensing - [redacted] Safety - [redacted] Operations - [redacted] RP/Environmental - [redacted]</p>
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NOTES:

Criteria List Items and Weights - Prior to performing bidder equipment evaluations, criteria items and weights should be modified by the Technical Team as appropriate for the specific scope being evaluated. Ensure that the Total Matrix Evaluation Results **Weight** column total =100%. [Unprotect this worksheet as needed for editing.]

Ratings and Scores - Enter a rating for each criteria list item, the score will automatically be calculated. [Score = Rating/5 x Weight]. Maximum possible Total Score = 100%.

A1 Critical Items - Items in the Duke Specification or Statement of Work that are determined to be "Critical" non-negotiable requirements which may not be omitted or modified. Failure of a bidder to meet all A1 Critical spec requirements results in a "0" Unsatisfactory rating (bidder disqualified).

A2 Non-Critical Items - Items in the Duke Specification or Statement of Work that are determined to be desired but "negotiable" (may be modified or deleted by revising Duke Specification or Statement of Work).

Additional contractor Safety Program evaluations will be performed in the Commercial review process.

Crystal River Unit 3 (CR3) Decontamination & Decommissioning

1 – Executive Summary

CR3 has been pursuing a path to place the plant into long term dormancy or SAFSTOR. This model allows 60 years to complete the Decontamination and Dismantlement (D&D) process or until 2073. At the time this strategy was selected, the estimated cost to complete the immediate decommissioning process was greater than the projected funds in the Nuclear Decommissioning Trust (NDT). The CR3 team has made significant progress towards the conditions required to place the unit in SAFSTOR including the movement of all fuel into an Independent Spent Fuel Storage Installation (ISFSI). We are on track to complete the remaining requirements for SAFSTOR by August 2019.

In parallel, a team conducted a process to determine the feasibility of moving to an accelerated D&D model. After extensive due diligence and negotiations, the team determined that a transaction could be structured to make an accelerated D&D model a viable option and selected Accelerated Decommissioning Partners, LLC (ADP) for final contract negotiations. ADP is a consortium of NorthStar Group Services and Orano USA (formerly part of Areva).

ADP will receive a fixed amount of \$540 million to complete all decommissioning activity including the dismantlement of the existing plant structures, the disposal offsite of any wastes and the restoration of the land to allow it to be repurposed. This will be structured as a lease of the retired generation and ISFSI facilities to ADP with Duke Energy Florida (DEF) retaining ownership of the land and property. ADP would acquire direct ownership of the spent fuel and dry shielded canisters. ADP will be the licensed owner and operator, effectively transferring risk of performance to them.

ADP will have all responsibilities for project execution with the exception of a change in end state requirements as set by the State of Florida. This includes responsibility for unknown site conditions risks. However, if the cost of addressing an emergent issue results in insufficient funding in the allocated portion of the NDT to complete the decommissioning process, DEF would retain the option to return the site to a SAFSTOR plan.

DEF will retain title to the CR3 NDT and make disbursements as work is completed.

[REDACTED]

The successful completion of this transaction is expected to provide significant benefits to customers by mitigating environmental and financial risks of continuing a SAFSTOR path and by providing the opportunity to return the retail portion of unused funds in the NDT to customers sooner than in a SAFSTOR model.

Closing the transaction is contingent on receiving approval from both the Florida Public Service Commission (FPSC) and the US Nuclear Regulatory Commission (NRC), as well as receiving a favorable private letter ruling from the Internal Revenue Service (IRS). The FPSC approval process is expected to take between 6 and 9 months to complete after contract signing. The NRC license transfer process is expected to take between 8 to 12 months after the contract is signed. The IRS issuance of a Private Letter Ruling (PLR) is likewise expected to take between 8 and 12 months after the contract is signed.

During the transition period between contract signing and transaction closure, ADP will perform planning and other non-physical work that facilitates them assuming responsibilities at closure. The costs for these efforts are included in the [REDACTED] of \$540 million; however, if the transaction does not close, DEF is only obligated to reimburse ADP for costs associated with activities that would have otherwise been performed for decommissioning or to support the SAFSTOR model.

This whitepaper is based on best-available information and is subject to final contract negotiations, pricing, and schedule.

Recommendation to Management

The team is still finalizing contract terms and conditions. The recommendation is to authorize the execution of the transaction with ADP on terms consistent with the TRC whitepaper with submission to the Board at the May 1st meeting for approval and authorization to execute the agreement.

Project Description

Business Unit	Generation Operations Support			
Executive Sponsor	Dhiaa Jamil			
Transaction Sponsors	Ron Reising and Catherine Stempien			
Project Location	Crystal River Unit 3 in Citrus County, Florida.			
Investment Date	July 2, 2020 (projected closure date)			
Completion Date	N/A			
Transaction Costs*	Estimate:	\$540 Million	Variance from Current Financial Plan**:	N/A
Direct Project Costs*	Estimate:	\$540 Million	Variance from Current Financial Plan**:	N/A
Existence of Enterprise Risks	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Cost Estimate Class	[Class I, II, III, IV or V] Class I			

* Costs are in 2018 dollars

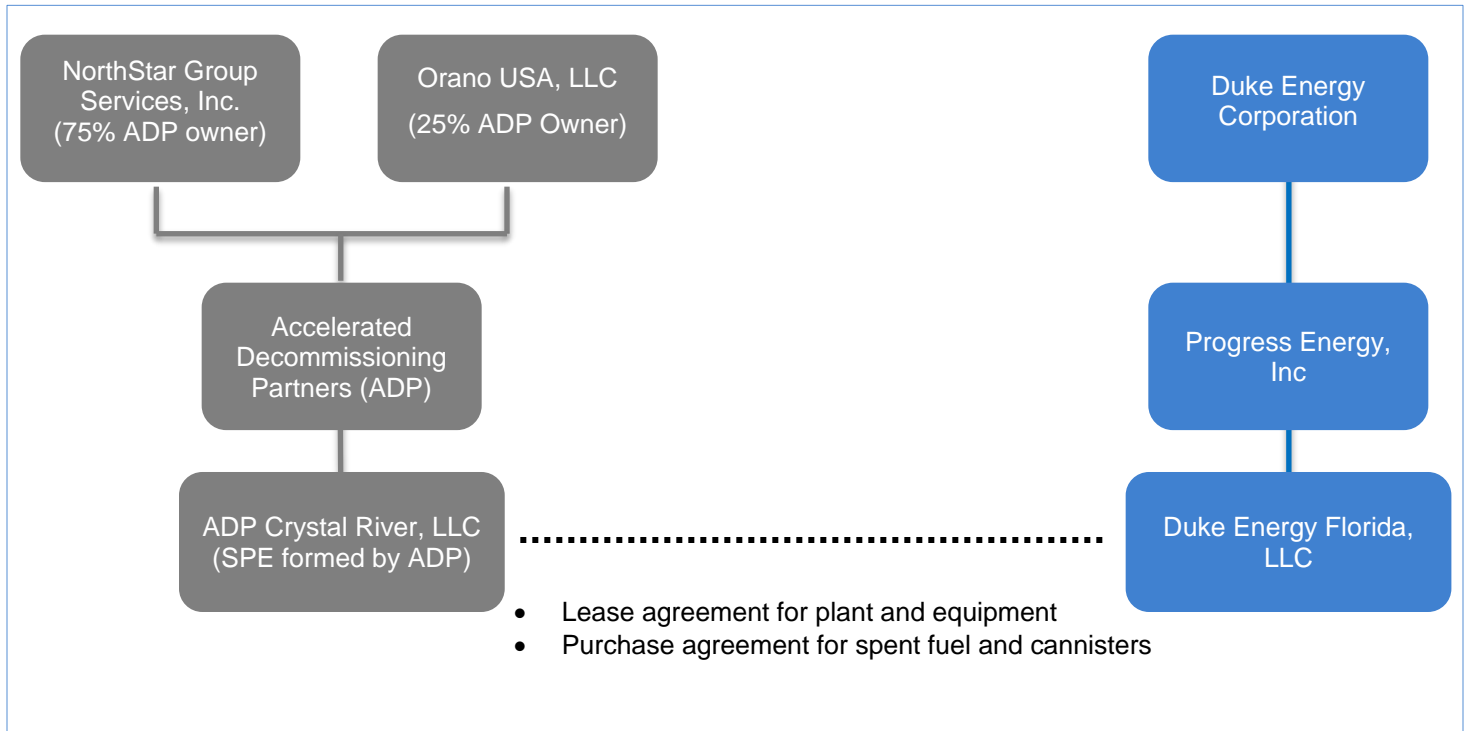
**Amount to be funded from the NDT

Document Version Control

Whitepaper Version: FINAL	TRC Meeting Date: Tuesday, March 19, 2019
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2 – Transaction Description

The formation of the counterparty entering into contract with DEF is depicted below.



2.1 – Strategic Rationale

Prior to placing the plant in SAFSTOR dry dormancy, DEF decided to explore the viability of an accelerated D&D strategy. Potential benefits from accelerating D&D include:

- Mitigates environmental and safety risks from the plant sitting dormant for an extended time
- Relieves DEF of the long-term obligation and liability for the continued maintenance of the property
- Reduces the risk of regulatory changes including loss of availability of radioactive waste disposal sites
- Mitigates financial risks which include:
 - Cost escalation rates that exceed the NDT rate of return
 - Significant reduction in the value of the NDT due to market conditions
- Leverages workers with plant specific knowledge (knowledge transfer to D&D vendor)

The primary rationale for remaining in SAFSTOR is that financial and project execution conditions, including technological advances, could improve in the future reducing the risk of D&D.

Any transaction must demonstrate that it benefits the customers from a risk mitigation and financial perspective; this includes potential impacts on the NDT. Any transaction would require approval from the NRC and the FPSC.

In summary, a third party is prepared to perform the D&D now, instead of waiting 60 years, with the costs capped and accepting the environmental liabilities.

2.2 – Background

CR3 has been pursuing a path to place the plant into long term dormancy or SAFSTOR. This model allows 60 years to complete the Decontamination and Dismantlement (D&D) process or until 2073. At the time this strategy was selected, the estimated cost to complete the decommissioning process was greater than the projected funds in the Nuclear Decommissioning Trust (NDT). The CR3 team has made significant progress towards the conditions required to place the unit in SAFSTOR including the movement of all fuel into an Independent Spent Fuel Storage Installation (ISFSI). We are on track to complete the remaining requirements for SAFSTOR by August 2019.

In parallel, a team conducted a process to determine the feasibility of moving to an accelerated D&D model. After extensive due diligence and negotiations, the team determined that a transaction could be structured to make an accelerated D&D model a viable option and selected Accelerated Decommissioning Partners, LLC (ADP) for final contract negotiations. ADP is a consortium of NorthStar and Orano.

2.3 – Scope

DEF will submit a license transfer application (LTA) to the NRC whereby ADP will become the licensed Owner and Operator of CR3. ADP will be required to comply with all applicable Federal, State, and Local laws, statutes, rules and regulations, zoning, guidelines, interpretations, acts, requirements, permits, codes and standards, and licenses.

ADP will have full responsibility for:

Spent Fuel Management

Program management, engineering, security and emergency planning until the DOE picks up the fuel (assumed to be 2037) or ADP transfers it to an interim storage facility

Plant D&D

- Physical D&D:
 - Remove structures, systems, and components (SSCs) from the facility
 - Pack and ship radioactive waste off-site
 - Pack and ship non-radioactive hazardous waste off-site
 - Reduce residual radioactivity to levels permitting unrestricted release of the site
- Partial License Termination:
 - After completion of the plant D&D, ADP will file for a partial license termination
 - NRC license terminated to ISFSI only, with site boundary reduced to the ISFSI-only Owner Controlled Area in accordance with 10 CFR 72.104 and 72.106
- Site Restoration:
 - All designated buildings, structures, and pavement/asphalt removed
 - Within the power block (all areas at berm elevation 119') entire area except ISFSI cleared to three (3) feet below grade level
 - Outside of the power block (all areas not at berm elevation 119') areas made permeable to existing grade
 - Firing range structures removed and area remediated
 - West settlement pond remediated, including influent and effluent piping, and filled to grade
 - Site restored such that vegetation can grow providing erosion control restore the site

ISFSI D&D

- Ship spent fuel (DOE pickup or otherwise) and Greater Than Class C (GTCC) waste off-site
- Physical D&D:
 - Remove structures, systems, and components (SSCs) from the facility
 - Pack and ship non-radioactive hazardous waste off-site
 - Reduce residual radioactivity to levels permitting unrestricted release of the site
- Final License Termination:
 - After spent fuel and GTCC waste is removed from the site, ADP will file for Final License Termination
 - NRC license terminated in accordance with 10 CFR 72.104 and 72.106
- Site Restoration
 - All ISFSI buildings, structures, and pavement/asphalt removed
 - ISFSI area cleared to three (3) feet below grade level
 - Site restored such that vegetation can grow providing erosion control restore the site
 - Site released for repurpose and reuse
 - All affected environmental permitting amended/approved/closed as required
- DEF will then have possession of the site for unrestricted constructive reuse.

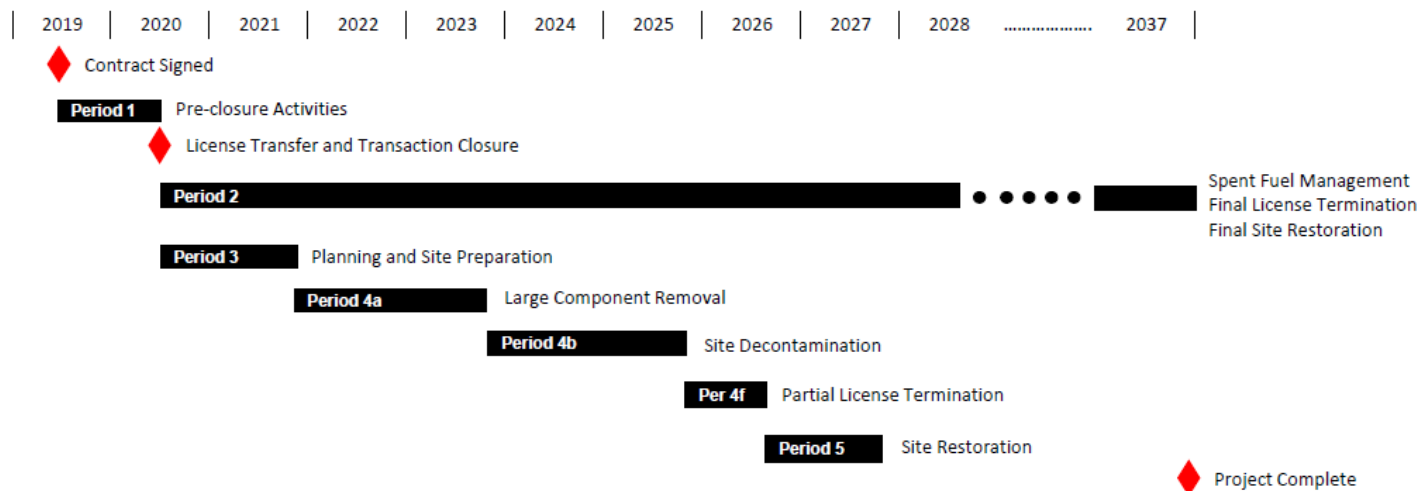
2.4 – Schedule & Milestones

The project timeline assumes transaction closure on June 26, 2020, and reflects ADP's post-contract milestones, including their assumption for DOE fuel pickup.

Period	Key Project Activities / Milestones	Start	Finish
1	BOD Transaction Approval		5/1/2019
	Finalize and Award Contract	2/28/2019	5/31/2019
	Prepare and Submit License Transfer Application	3/27/2019	6/1/2019
	NRC License Transfer Review and Approval	6/15/2019	6/26/2020
	FPSC Petition Submittal, Review and Approval	6/1/2019	4/1/2020
	IRS PLR Submittal, Review and Approval	6/1/2019	6/1/2020
	Transaction Closure		7/2/2020
3	Planning and Site Preparation	7/2/2020	10/23/2021
4a	Large Component Removal	10/24/2021	8/27/2023
4b	Site Decontamination	8/28/2023	8/25/2025
4f	Partial NRC License Termination	8/26/2025	4/21/2026
5	Partial Site Restoration	4/22/2026	6/15/2027

Period	Key Project Activities / Milestones	Start	Finish
2	Spent Fuel Management	7/2/2020	5/4/2037
	Spent Fuel Picked Up By DOE	1/1/2035	5/4/2037*
	Final NRC License Termination	6/1/1937	10/02/2037
	Final Site Restoration	10/5/2037	12/25/2037
	Project Complete		12/31/2037

* DOE pickup of Spent Fuel estimated in 2037 congruent with industry expectations for permanent storage facility approval (i.e., Yucca mountain).



2.5 – Contractor/Vendor/Technology Selection

ADP is a joint venture between NorthStar and Orano. This joint venture combines NorthStar’s demolition and environmental remediation expertise with Orano’s core competencies in nuclear component dismantling and spent fuel management.

The ADP team includes Waste Control Specialists, LLC (WCS) which offers a state-of-the-art, high-capacity low level radioactive waste disposal facility and the only facility in the United States that can directly dispose of class A, B and C waste from nuclear power plants. The cost of waste disposal is one of the largest projects costs. With WCS as part of the ADP team and a sister company to NorthStar, potential increases in waste disposal costs can be mitigated by the ADP team. These costs could be absorbed by WCS and not passed back to the project, preserving funding to pay for other project costs and maintaining the project contingency. Other bidders would need to pay WCS for higher waste disposal costs. Additionally, the ADP consortium has the equipment and experience to self-perform almost all work on the project and will rely very little on subcontractors.



Financial assurance of the contractual commitments is supported by various means including performance bonds, credit enhancement mechanisms, and parent guaranties.

ADP team decommissioning experience is highlighted in Appendix 2.

2.6 – Contractual Structure, Compliance & Legal Discussion

The contract would be for a fixed cost of \$540 million to complete all D&D activities including restoration. The contract also covers the operation of the ISFSI facility along with the dismantlement of the ISFSI facility and restoration of the land after the fuel is off site.

ADP will be the licensed owner operator and would be responsible for all project execution risks with the exception of a change to end state condition requirements by the FDEP. ADP's responsibilities include risks such as escalation of projects costs and the amount and characterization of contaminated wastes. This transfer of risk to ADP also includes responsibility for unknown site conditions. The only risk that remains with DEF, and will not be transferred to ADP, is the risk of a change to DEF's current understanding of end state condition requirements. However, if the cost of addressing an emergent issue results in insufficient funding to complete the decommissioning process, there is the potential to return the site to a SAFSTOR plan with NRC approval. ADP's bid is based on these end state condition requirements. To the extent those requirements change, however, and result in higher costs than ADP has assumed in its bid, then DEF would be obligated to fund the increased cost from the owner cost portion of the NDT. DEF notes that it currently faces the risk that the FDEP will change its end state condition requirements, so this transaction does not change or increase that risk.

The transaction will be structured with DEF retaining ownership of the plant land and structures. ADP will lease the structures, including ISFSI. ADP will directly own the spent fuel and canisters.

DEF will assign its contract with the DOE for acceptance of spent fuel. The assignment will be structured to enable DEF to recover its cost incurred through the date the transaction closes. ADP will pursue its cost to manage the spent fuel \ ISFSI from the DOE under this contract, and ADP will be entitled to retain any such recovery for costs incurred after the date the transaction closes.

DEF will retain ownership of the Decommissioning Trust Fund. DEF will create a "sub account" and include an amount equal to the contract price (\$540 million) in that "sub account". ADP will be able to direct the investment strategy for these funds based on investment policies and guidelines acceptable to DEF. ADP's strategy is to limit the investment to low risk investments such as treasuries to reduce the potential impact from market risks. DEF will only disperse money from the NDT to ADP upon receipt of a certificate of completion from ADP. Although DEF will authorize disbursement based on the certificate of completion, DEF will retain the ability to audit the certificates and to validate that the work was performed through a third party. DEF will contest any item the third party identifies as not being complete. DEF will perform a true-up with disputes reviewed quarterly and an annual audit. Disputed invoice totals will not be allowed to exceed [REDACTED]

ADP will not have rights to use additional funds in the NDT beyond the total contracted amount of \$540 million. DEF will use any additional funds in the trust as a separate reserve to mitigate unforeseen circumstances if necessary. The retail portion of the funds that are not needed will be returned to customers.

The contract will be contingent on DEF obtaining a private letter ruling from the IRS that the transaction structure constitutes a services arrangement, whereby DEF remains the tax owner of the facility and, as a result, can continue to hold the qualified trust fund.

ADP will form a SPE, ADP Crystal River, LLC (ADPCR) as the counter party in the transaction. Significant provisions have been included in the contract to support the financial assurance that ADPCR can meet its contractual obligations. These include the items listed below.

- Parent company guarantees
- \$50 million separate liquidity account consisting of:
 - Initial cash funding of \$20 million by the parent (ADP)
 - Escrow portion of milestone payments (6% of payment) until fund reaches \$50 million
 - [REDACTED]
 - Deposited in provisional trust (bankruptcy remote entity)
 - \$30 million released to ADP upon reaching ISFSI only end-state condition and filing partial license termination; remaining funds (\$20 million) released to ADP when ISFSI-only state is achieved
 - DEF NDT is beneficiary in event of default
- Environmental insurance:
 - \$30 million previously unknown contamination (non-radiological)
- Performance bonds
 - Each ADP partner or any subcontractor will be required to secure a performance bond for their scope of work. The bond is a guarantee that the subcontractor will complete their scope according to the agreed upon contract price

Indemnifications and Environmental Liabilities – To Be Completed

Off-Site (outside of CR3 Licensed Site) liabilities:

- Radiological liabilities
 - ADPCR will take responsibility for these liabilities (post-closing)
 - The ANI insurance policy will be transferred to ADPCR
 - This policy provides coverage for any offsite radiological event including during transportation of radiological material
 - DEF will remain an insured party under the policy
- Non-Radiological
 - DEF would retain responsibility for these liabilities except for contamination caused by ADPCR, its affiliates or subcontractors

On-Site (CR3 Facility and NRC Licensed Site) liabilities:

- ADPCR takes liability for all on-site environmental liabilities, both radiological and non-radiological

Other Key Contractual Terms

- DEF will have a seat on the SPE board with veto rights on limited key decisions
 - Resume SAFSTOR strategy
 - Voluntary filing for bankruptcy
 - Any amendment that would change DEF's rights
- DEF will have option of stepping in, if the SPE is unable to complete decommissioning
 - If an event of default occurs, DEF would be able to either take over the membership interests of the SPE or assign them to another contractor (subject to NRC license transfer approval)
 - Examples of default events (to be negotiated) would be (i) material failure to perform covenants that is not cured after notice; (ii) bankruptcy of one of the parent companies; (iii) failure of one or more parent companies to meet obligations to the SPE under a guaranty or support agreement; (iv) suspension of material decommissioning work for one year or more without consent of DEF; (v) suspension of decommissioning work by NRC for 6 months or more; and (vi) intentional and knowing falsification of a certificate requesting disbursement of funds.

2.7 – FPSC Regulatory Requirements & Considerations

Rule 25-6.04365, Nuclear Decommissioning, of the Florida Administrative Code (F.A.C.) requires that there are sufficient funds in the decommissioning trust fund at the time of decommissioning to meet all required expenses at the lowest possible cost to utility customers¹. The cost for D&D will be paid from the NDT, with the retail portion of any excess funds returned to the customers², and the retail portion of any deficits collected from the customers. Our analysis shows there is adequate funding to complete the decommissioning process. In the event that there are unforeseen circumstances that require additional funding, there are financial assurance mechanisms provided by ADP, insurance protections, and additional reserve funding; all supporting performance assurance.

In the event an emergent issue(s) is so significant that additional funds, beyond those mentioned above, are required to complete the project – a return to SAFSTOR is an option. This would provide additional time for the NDT funds to grow and provide sufficient funding to complete the project. Alternatively, DEF could request additional funding from customers. In this scenario, DEF would have to demonstrate that the actions to date have been prudent and that the proposed actions are prudent.

DEF will request FPSC approval of this transaction. This approval is expected in 6 to 9 months after contract signing and petition submitted.

2.8 – Environmental Issues & Discussion

The post D&D site end-state criteria for release for unrestricted use is:

- No more than 25 millirem per year (NRC and FDEP)
- All affected environmental permits amended/approved/closed as required, with final site storm water control system designed and implemented

¹ FPSC ORDER NO. PSC-02-0055-PAA-EI

^{2e} 18CFR35 Subpart E §35.32 (7)

The end state conditions are set by the NRC and the State of Florida. The Florida Department of Environmental Protection (FDEP) requirements are consistent with the NRC recommendation. FDEP has confirmed in writing the requirements to be 25 mrem of background radiation, reduction of structures to be 3 feet below grade and the ability to re-use non-radioactive concrete for fill.

ADP will be responsible for conducting its operations at CR3 in compliance with all laws, including applicable environmental laws and permits. DEF's goal is to transfer certain environmental permits applicable to CR3 to ADP. To the extent that CR3 is covered by permits applicable to the entire Crystal River Energy Complex (CREC), DEF will attempt to remove any CR3 requirements into separate permits, which will be done in a manner that does not impact the other CREC facilities. If we are not able to obtain separate permits, ADP will operate under the existing permits and must comply with all permit requirements, and the risk of ADP's noncompliance may be mitigated through indemnification and insurance.

2.9 – Accounting Issues

Accounting conclusions related to the Asset Retirement Obligation (ARO) and related Regulatory Asset, and consolidation of ADPCR are pending receipt of regulatory orders and finalization of legal agreements. Depending on evaluation results, the ARO and related Regulatory Assets will either be completely removed from DEF's balance sheet or will be required to be remeasured due to the change in D&D approach. No material impact to the income statement is expected. With respect to consolidation, accounting will need to review the ADPCR Limited Liability Company Agreement which will not be drafted until after Board of Directors approval to fully understand DEF's continued involvement. Based on the transaction structure as currently described it is not anticipated that DEF will be required to consolidate ADPCR.

2.10 – Tax Issues

At contract signing, DEF will pursue a Private Letter Ruling (PLR) from the Internal Revenue Service (IRS) that the transaction structure constitutes a services arrangement, whereby DEF remains the tax owner of the facility and, as a result, can continue to hold the qualified trust fund. Obtaining a favorable PLR is a condition of closing.

2.11 – Insurance Issues

Off-Site (outside of CR3 Licensed Site) liabilities:

- Radiological liabilities
 - ADP will take responsibility for these liabilities (post-closing)
 - The ANI insurance policy will be transferred to ADP
 - This policy provides coverage for any offsite radiological event including during transportation of radiological material
 - DEF Energy will remain an insured party under the policy
- Non-Radiological
 - DEF would retain responsibility for these liabilities except for contamination caused by ADP, its affiliates or subcontractors

On-Site (CR3 Facility and NRC Licensed Site) liabilities:

- ADP takes liability for all on-site environmental liabilities, both radiological and non-radiological

Additional Insurance

- NEIL coverage to insure against property damage accident claims
 - Coverage is necessary for ISFSI and any consequential environmental impacts as a result of an accident
- General liability insurance
 - Standard coverage for major services/construction contracts
- Environmental pollution insurance (██████████ coverage)

3 – Analysis

3.1 – Alternative Analysis

The alternative analysis is comparing the accelerated decommissioning approach with remaining on the SAFSTOR path. The proposed transaction is with an experienced and qualified counter party and shows clear financial viability with adequate funds in the NDT to complete the project. It also demonstrates effective mitigation of project execution and financial risks relative to the SAFSTOR model as outlined below.

- Mitigates environmental risks from the plant sitting dormant for decades
- Mitigates risk of regulatory changes
 - Includes availability of waste depository sites
- Mitigates financial risks, providing cost certainty
 - Cost escalation rates relative to NDT rate of return
 - Significant devaluation of the trust fund at the time of project execution
- Reduced risk reduces the potential need for additional funding from customers
- Has the potential to return the retail portion of any excess NDT funds to customers sooner
- Transaction terms effectively transfer project execution risk to ADP

These benefits demonstrate a clear advantage to pursue the accelerated D&D strategy versus remaining with SAFSTOR.

3.2– Project Costs & Reserves

ADP Cost (in 2018 dollars)	\$	540,000
Owner Cost (in 2018 dollars through 2037)	\$	
Total Cost	\$	

NDT Value		
NDT Value (Net Taxes as of 2-15-19)	\$	651,000
Unallocated NDT Funds		
Post-closing Balance (June 2020)	\$	
DOE Recovery (June 2022)	\$	131,409
2022 Balance	\$	219,383
2038 Balance *	\$	350,699

* Retail portion of unused funds would be returned to customers when spent fuel is no longer at CR3 site. Post-closing NDT rate of return conservatively assumed at 2% net of taxes.

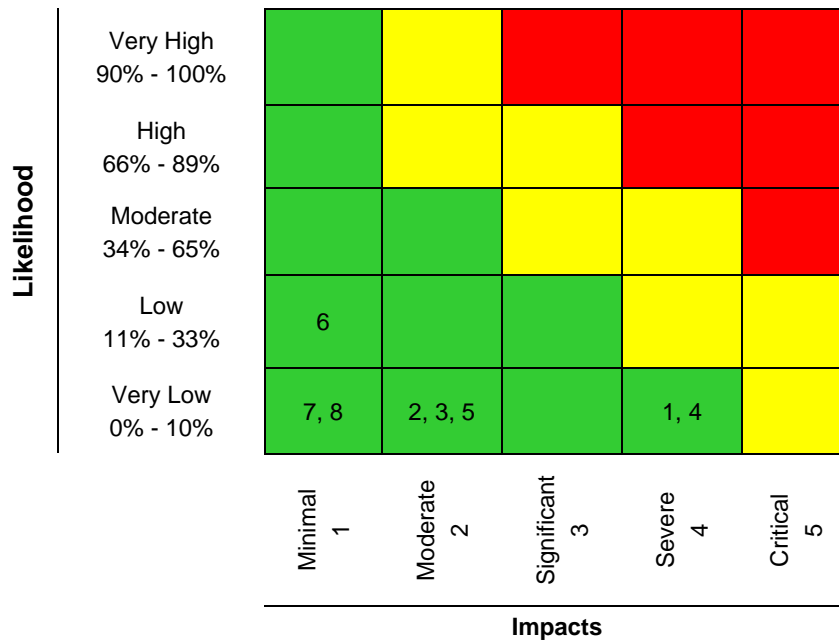
3.3– Key Assumptions

The key assumption is that there is adequate funding in the NDT to close the transaction. This assumption is valid given the current value of the NDT. However, a significant drop in market value could cause a delay in the ability to close the transaction. To ensure adequate funds are in the NDT at the time regulatory approvals are received (see discussion below), Treasury is currently evaluating hedging strategies to ensure sufficient NDT value greater than the value of the contract cost and estimated owner's cost prior to receiving recovery from the Department of Energy for failure to take possession of spent fuel. The hedge is expected to consist of a put option which would protect against downside risk below a predetermined level and a call option that would effectively limit upside gain beyond a predetermined level. In evaluating the structure of the hedge, Treasury plans to include a contingency to cover potential increased owner costs or tracking errors related to the options. The analysis assumes that spent nuclear fuel is picked up by the DOE in 2038 and that all SFM costs are recoverable from the DOE per the standard contract.

4 – Risks & Mitigations and Stakeholder Discussion

4.1 Risks & Mitigations

Risk Matrix



Risk Description		Impact	Mitigation
1.	Unknown-Unknowns	F	Significant reserve funding exists to mitigate risk exposure
2.	NRC Approval Not Obtained	F	Risk probability is very low due to NRC issuing license at VY. Go to SAFSTOR
3.	FPSC Approval Not Obtained	F	Pre-contract ground work with intervenors. Establish rigorous financial assurance protections in the contract. Go to SAFSTOR
4.	FDEP End-State Conditions Change	F	If impact exceeds available funding, then go to SAFSTOR
5.	ADP Insolvency	F	DEF has voting rights to prevent voluntary bankruptcy. DEF has step-in rights should ADP become insolvent.
6.	CR3 D&D Activities Impact to Operating Units	F	Contract terms will contain penalties for interference whereby the vendor will be responsible for direct cost not consequential damages
7.	Cost Escalation Exceeds Estimate	F	This is an ADP risk
8.	Reputational risk	R	Thorough selection and due diligence process. Selected counter party has significant experience. Contract is structured to provide significant financial assurance.

Impacts Explanations

F = Financial; R = Reputational; O = Operational, Legal and Compliance

Enterprise Risks

There are no known enterprise risks.

4.2 – Stakeholder Discussion

Stakeholder	Discussion of Interest & Impact	Assessment
Customers	Well-funded vendor to perform work with significant financial performance assurance. <ul style="list-style-type: none"> ▪ Mitigate financial and hazardous waste risk ▪ Return funds sooner than SAFSTOR ▪ Potential to remove fuel from Florida sooner than anticipated by DOE (2038) ▪ Repurpose and reuse land 	F
Community	Local community positively impacted by removal of radiological hazards and non-radiological hazardous waste. Potential to remove fuel sooner than anticipated by the DOE (2038) Local community impacted positively by additional workers needed during project phase. Local community negatively impacted by about 50 fewer DEF employees participating in charitable giving campaigns and nonprofit volunteerism.	N
Employees	Employees negatively impacted by reducing DEF headcount through accelerated decontamination and dismantlement (D&D). (The Aug. 1, 2019, CR3 organization has about 50 employees whereas the D&D model would have no DEF employees.) Employees positively impacted by possible opportunity to leave DEF and work for the D&D vendor.	N
Shareholders	Shareholders are positively impacted by mitigating risk that could damage reputation in Florida. Shareholders are positively impacted by repurposing land after fuel offsite	F
Regulators	The Nuclear Regulatory Commission (NRC) will review and adjudicate the transfer of the nuclear operating license from DEF to the vendor and will monitor D&D performance. The Florida Department of Environmental Protection (FDEP) will review and adjudicate permits and monitor D&D performance. The NRC and FDEP are generally favorable of D&D facilities removing hazards from the environment. The Florida Public Service Commission will continue interfacing with DEF, monitoring the sufficiency of the nuclear decommissioning trust fund (which DEF will manage) and receiving routine reports about the decommissioning project.	F
Note: Favorable (F); Unfavorable (U); Neutral (N)		

Stakeholder Engagement Plan

A Stakeholder Engagement Plan is being finalized consisting of major contracting milestones and specific work plans.

The below timeline for detailed work plans assumes the Duke Energy Board of Directors approves the contract at the May 1 board meeting.

Communications work associated with expediting CR3's decommissioning plan and entering into an agreement with a vendor is categorized in four phases as follows:

Description	Communications Lead	Communications Support	Timeline
Phase I: Select vendor and enter into and complete contract negotiations	DEF	Vendor	December 2018 – May 2019
Phase II: Publicly announce contract agreement	DEF	Vendor	TBD
Phase III: Establish transition team and introduce vendor to stakeholders (DEF holds license)	DEF and vendor (joint ownership)	DEF and vendor (joint ownership)	June 2019 – June 2020
Phase IV: Receive approval of license transfer from Nuclear Regulatory Commission and FPSC, close deal (Vendor holds license)	DEF and vendor (joint ownership)	DEF and vendor (joint ownership)	June 2020

After the deal closes in March 2020, ADP will hold the Nuclear Regulatory Commission license and therefore be responsible for their own outreach, including media and community engagement. However, in the contract, DEF will require ADP to keep DEF informed of emergency and reportable events in real-time. DEF will also require ADP to submit monthly and quarterly reports and undergo annual audits. DEF will use this information to validate performance, ensure financial sufficiency and inform internal stakeholders of the project's status.

5 – Assessment of Adhere to Corporate Governance

Fully complied with all corporate governance.

TRC Review Schedule

Milestone	Due Date	Date Completed	Compliance (Y/N)
TRC Whitepaper	February 18,2019	February 18,2019	Y
TRC Scrub Team Meeting	February 20, 2019	February 20, 2019	Y
TRC Scrub Team Final Sign-Off	March 6, 2019	March 6, 2019	Y
TRC Final Materials	March 11, 2019	March 11, 2019	Y
TRC Meeting	March 19, 2019	March 19, 2019	Y
Board of Directors Materials	April 12, 2019		
Board of Directors Meeting	May 1, 2019		

Project Management Center of Excellence (PMCoE) Review

This transaction structure is not a PMCoE project, it leases the site to the counterparty. The counterparty will become the NRC licensed owner and operator and will have responsibility to complete the D&D project. DEF will not have significant ongoing role.

Appendix 1 – Summary of Contracts

The following contracts are anticipated to be established with ADPCR for the CR3 D&D:

1. Decommissioning Services Agreement
2. Spent Fuel Purchase and Sales Agreement
3. Lease
4. Pledge Agreement
5. Pre-Closing Decommissioning Services Agreement

The following outlines the terms of the agreement:

Crystal River Unit 3 Decommissioning Key Terms

Owner:	Duke Energy Florida, LLC (“DEF”)
The Project:	<p>The performance of all activities necessary to decommission the Crystal River Nuclear Plant Unit 3 (“CR-3”) and related ancillary facilities (collectively, the “CR-3 Facility”) and Independent Spent Fuel Storage Installation (“ISFSI”) at the “CR-3 Site,” located on the Gulf of Mexico in Citrus County, Florida except certain portions of the CR-3 Facility as described below in the section titled “Transaction Structure,” including obtaining NRC approval of partial license termination to reduce the NRC licensed area at the CR-3 Site to ISFSI only and to release all other land in the CR-3 Site licensed area from the NRC License on or before [insert date] (the “End Date”), assuming Closing (as defined below) occurs on [insert date], and to operate and maintain the ISFSI until spent nuclear fuel and greater than Class C (“GTCC”) waste is removed from the CR-3 Site and final NRC license termination is achieved.</p> <p>CR-3 shares the CR-3 Site with the larger Crystal River Energy Complex (“CREC”), which includes other structures, such as four fossil-fueled units, that are not intended to be decommissioned as part of the Project, some of which will continue operating during the decommissioning of the CR-3 Facility. The CR-3 Facility discussed herein means CR-3 and the associated buildings and structures, including underground structures such as piping between buildings. Aspects of the CR-3 Facility that will not be decommissioned as part of the Project (the “Excluded Facilities”) include:</p> <ul style="list-style-type: none"> • the Switchyard • any other facilities identified in the Transaction Documents <p>ADP-NRC Licensee will achieve NRC license termination for the portions of the CR-3 Site related to the CREC and unrelated to CR-3 that will not be decommissioned (unless otherwise agreed), including the fossil-fueled units, two large cooling towers, coal delivery and storage areas, ash storage area, office buildings, warehouses, barge handling docks, and railroad.</p>
ADP NRC Licensee and Parent Companies:	<p>ADP Crystal River, LLC (“ADP NRC Licensee”) and, its Parent Companies: Accelerated Decommissioning Partners, LLC, NorthStar Group Services, Inc., and Orano USA LLC (“Parent Companies”)</p>

<p>Transaction Structure:</p>	<p>DEF and ADP NRC Licensee will enter into a Decommissioning Services Agreement, Spent Nuclear Fuel Purchase and Sale Agreement, Lease Agreement, Pledge Agreement, Pre-Closing Decommissioning Services Agreement and ancillary documents (collectively, the "Transaction Documents") whereby the parties will agree that:</p> <ul style="list-style-type: none"> • Subject to receipt of Required Regulatory Approvals (as described below), including approval of the NRC, the NRC license for CR-3 (NRC Operating License No. DPR-72, the "NRC License"), including licensed ownership, will be transferred to ADP NRC Licensee • Ownership and title to the spent nuclear fuel and dry shielded canisters will be transferred to ADP NRC Licensee • The Standard Contract for Spent Nuclear Fuel will be assigned to ADP NRC Licensee, and ADP NRC Licensee will have all rights to seek recovery of the ISFSI-related and any other spent nuclear fuel expenses from DOE <ul style="list-style-type: none"> ○ DEF's Standard Contract for Spent Nuclear Fuel requires that notice be provided to the Department of Energy within ninety (90) day of any assignment with transfer of title to spent nuclear fuel and/or high-level waste ○ DEF will retain all rights relating to claims for damages under the Standard Contract incurred prior to the Closing • DEF will retain title to and ownership of the CR-3 Site, including the property, plant and equipment ("PPE"), but will lease those portions of the CR-3 Site containing the CR-3 Facility, including the ISFSI, to ADP NRC Licensee until all spent nuclear fuel and GTCC waste is removed from the ISFSI and the CR-3 Site is removed from the NRC License through final license termination <ul style="list-style-type: none"> ○ The Lease Agreement shall provide for the right of ADP NRC Licensee to possess, salvage and dispose all PPE with full authority to act on behalf for DEF with respect to transferring title to PPE in connection with any salvage or disposal. ○ The Lease Agreement shall require that ADP NRC Licensee conduct prompt decommissioning of the CR-3 Facility • DEF will retain ownership of the CR-3 Nuclear Decommissioning Trust ("NDT") to use as compensation for the performance of decommissioning activities • ADP NRC Licensee will perform radiological decommissioning, environmental remediation and other activities relating to the decommissioning of the CR-3 Facility (other than the Excluded Facilities), including providing security for the ISFSI and performing other nuclear security functions at the CR-3 Site, reduce the NRC licensed area to ISFSI only, operate and maintain the ISFSI until all spent nuclear fuel and greater than Class C waste is removed from the ISFSI and the CR-3 Site, perform any decommissioning to release the ISFSI area of the CR-3 Site from the NRC License, complete site remediation of the CR-3 Site and obtain NRC approval of the release of all of the CR-3 licensed area from the NRC Licensee • DEF will control industrial site security for the CR-3 Site but will grant easements or licenses to ADP NRC Licensee so that ADP NRC Licensee has the ability to perform all activities required under the NRC License, the Decommissioning Services Agreement, the Spent Nuclear Fuel Purchase and Sale Agreement, the Lease Agreement and the Pre-Closing Decommissioning Services Agreement. • ADP NRC Licensee and DEF will define ADP NRC Licensee's post-Closing obligations to DEF, including ADP NRC Licensee's obligation to reduce the NRC licensed area to ISFSI-only by the specified End Date <p>ADP NRC Licensee will schedule and perform the decommissioning and other activities that ADP NRC Licensee will perform on the CR-3 Site so that its activities do not interfere with DEF's on-going operations on the CR-3 Site.</p> <p>Upon the transfer of the NRC License to ADP NRC Licensee and the Closing, ADP NRC Licensee shall be responsible for providing all NRC-mandated security and access control at the CR-3 Site in accordance with applicable Laws.</p>
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<p>End-State Conditions:</p>	<p>Means the achievement of all of the following:</p> <ul style="list-style-type: none"> • Environmental remediation of hazardous substances sufficient to comply with relevant environmental laws that result from or are identified during the decommissioning of those portions of the CR-3 Facility that are to be decommissioned as part of the Project • Removal of all CR-3 Facility structures and man-made improvements (other than the ISFSI and the other Excluded Facilities) to up to three feet below existing grade, unless otherwise required by applicable law or regulation, and backfill to achieve level grade • Environmental remediation of the areas of the CR-3 Site that are released from the NRC licensed area sufficient to discharge all Environmental Liabilities (defined below) • The NRC shall have amended the NRC License to cover only the ISFSI and the remainder of the CR-3 Site shall be released for unrestricted use, including the written approval granted by NRC pursuant to 10 CFR 50.83 to release all portions of the CR-3 Site (other than the ISFSI) by demonstrating compliance with the radiological criteria for unrestricted use specified in 10 CFR 20.1402
<p>Compensation:</p>	<p>The work will be performed for a [REDACTED] of \$540 million, as may be adjusted for all amounts paid by DEF to ADP-NRC Licensee under the Pre-Closing Decommissioning Services Agreement (the “Agreed Amount”). The work will be paid [REDACTED]. DEF will hold and manage the NDT, and ADP NRC Licensee will invoice once [REDACTED], and will provide lien waivers and other supporting documentation with each invoice. ADP NRC Licensee will certify that it has completed the [REDACTED]. DEF will have the right to dispute the requested payment amount, but must authorize release of the funds on the payment due date even if the dispute is not yet resolved. As of the Closing Date, the amount of funds in the NDT that will be available to ADP NRC Licensee to pay for ADP NRC Licensee’s decommissioning expenses will be equal to the Agreed Amount. In the event that DEF fails to direct the NDT Trustee to timely issue payment to ADP NRC Licensee, DEF will make payment for any incremental costs incurred by ADP NRC Licensee due to the lack of timely payment, including but not limited to hotel costs, demobilization and remobilization costs, interest expense, etc.</p> <p>DEF will have no obligation to pay, and ADP NRC Licensee will have no right to payments of, any amounts in excess of the Agreed Amount for the work</p>
<p>Schedule Requirements:</p>	<p>Contractor will perform the decommissioning activities in accordance with an agreed schedule (the “Schedule”) and obtain NRC approval of partial license termination to reduce the NRC licensed area at the CR-3 Site to ISFSI only and to release all other land in the CR-3 Site licensed area from the NRC License on or before the End Date</p> <p>The Schedule will include milestones for the completion of the decommissioning activities to be completed by ADP NRC Licensee under the Decommissioning Services Agreement, such as:</p> <ul style="list-style-type: none"> • Submittal to NRC of “License Termination Plan” information to amend the NRC License to ISFSI-only, e.g., site release criteria, survey plans, etc. [within __ months or __ years] after the Closing Date • Major Equipment Removal – pressurizers, steam generators, reactor coolant pumps, reactor vessel internals, and primary system loop piping – [within __ months or __ years] after the Closing Date • NRC approval of partial license termination reducing the NRC licensed area at the CR-3 Site to ISFSI only and releasing all other land in the CR-3 Site licensed area from the NRC License by the End Date (as adjusted if the Closing occurs later than [insert date]) <p>The parties will agree on (i) critical milestones, in addition to the End Date, which if missed will trigger certain consequences and (ii) events that will trigger adjustments to the Schedule.</p>

<p>Assumed Liabilities:</p>	<p>ADP NRC Licensee shall assume the following liabilities:</p> <ul style="list-style-type: none"> • All liabilities and obligations of DEF or its affiliates for the radiological decommissioning for the CR-3 Facility and the CR-3 Site, and eventually for termination of the NRC License, including without limitation any applicable obligations under local, state and federal law • All Environmental Liabilities other than Excluded Environmental Liabilities • All obligations under the NRC License <p>“Environmental Liabilities” means</p> <ul style="list-style-type: none"> • Any liability due to, arising out of or relating to the disposal, storage, transportation, discharge, release, recycling, or the arrangement for such activities of hazardous substances (broadly defined) from the CR-3 Site • The presence of hazardous substances in, on or under the CR-3 Site regardless of how the hazardous substances came to rest at, on or under the CR-3 Site • the failure of the CR-3 Site to be in compliance with any environmental laws • any other act or omission, or condition existing with respect to CR-3 or the CR-3 Site, which gives rise to any liability under environmental laws <p>“Excluded Environmental Liabilities” means:</p> <ul style="list-style-type: none"> • All Environmental Liabilities existing as of the Closing and not disclosed to ADP NRC Licensee that are known to, or should reasonably have been known (without independent investigation or inquiry) by, specified officers and employees of DEF or its affiliates • All Environmental Liabilities relating to the Switchyard or the other Excluded Facilities to be preserved for DEF, other than liabilities for radiological decommissioning
<p>Required Regulatory Approvals:</p>	<ul style="list-style-type: none"> • NRC approval for transfer of the NRC License and conforming amendments (naming ADP NRC Licensee as operator and owner licensee) <ul style="list-style-type: none"> ○ The parties will agree to submit information to the NRC regarding decommissioning funding financial assurance arrangements, including use of the NDT, in order to obtain approval for the license transfer ○ ADP NRC Licensee shall only be entitled to rely upon the amounts in the NDT equal to its [REDACTED] for purposes of satisfying all NRC requirements • State & Local approvals, as required • [REDACTED]
<p>Financial and Other Security:</p>	<p>ADP NRC Licensee is a special purpose entity formed by the Parent Companies for the purposes of the Project, and it shall:</p> <ul style="list-style-type: none"> • provide guarantees to DEF of the payment and performance, when due, of all obligations of ADP NRC Licensee, from each of its Parent Companies or their respective parent companies with a financial condition acceptable to DEF, in form and content to be agreed to by the parties (the “Parent Guaranty”) • at the Closing, cause the equity interests in ADP NRC Licensee to be pledge as collateral for the obligations of the Parent Companies (or their respective parent companies) under the Parent Guarantees <p>ADP NRC Licensee shall be structured to provide for “bankruptcy remoteness” from ADP NRC Licensee and its affiliates. At the Closing, a DEF representative will be appointed to the managing board of ADP NRC Licensee and the ADP NRC Licensee governing documents will be amended to include a unanimous vote requirement to approve specified actions of ADP NRC Licensee, including with respect to a voluntary bankruptcy filing and return to SAFSTOR. DEF’s right to have a representative on the managing board of ADP NRC Licensee will continue until the End-State Conditions are achieved. The structure shall be sufficiently robust such that at the Closing, outside counsel for ADP NRC Licensee will provide a legal opinion to the effect that ADP NRC Licensee would not be substantively consolidated in a bankruptcy of any of the Parent Companies or any of their respective affiliates (<i>i.e.</i>, a non-consolidation opinion)</p>

	<ul style="list-style-type: none"> • Under the Pledge Agreement, DEF will have the right (exercisable in its sole discretion) to take possession of and exercise voting control over the collateral (subject to applicable regulatory approvals, including the NRC) in the case of an event of default, including: <ul style="list-style-type: none"> ○ Bankruptcy of any Parent Company or any of their affiliates ○ Material default under any loan obligations of any of the Parent Companies or any of their affiliates which is not cured within applicable periods of grace or not waived by the applicable lenders ○ Any failure of a Parent Company to meet tangible net worth or other specified financial covenants, including but not limited to a failure resulting from a transfer of its assets to a transferee entity (third party or affiliated), unless the obligations of such Parent Company under its respective Parent Guarantee are assumed by a transferee whose financial condition is acceptable to DEF or ADP NRC Licensee posts additional financial assurance, as agreed in the Transaction Documents ○ The occurrence of an event of default under any Transaction Document <p>DEF may, based on a review of Parent Companies' financial condition prior to the Closing, require ADP NRC Licensee to post a letter of credit or provide additional financial security in addition to the Parent Guarantees as a condition to Closing, and as discussed above may require additional financial assurance post-Closing based on the financial condition of the Parent Companies.</p>
<p>Conditions to Closing:</p>	<p>Conditions to obligations of the parties to close the Decommissioning Services Agreement and Spent Nuclear Fuel Purchase and Sale Agreement and begin performing their respective decommissioning obligations as contemplated in the Transaction Documents (the "Closing") will include:</p> <ul style="list-style-type: none"> • No injunction, order or decree restraining consummation of transactions • Receipt of all Required Regulatory Approvals, without requiring DEF to provide any additional financial assurances • Execution and delivery of the other Transaction Documents by the parties • Compliance with covenants (customary, to be agreed upon) in all material respects and receipt of officer's certificates from each party certifying the same • Reps and warranties (customary, to be agreed upon) of each party that is qualified by materiality shall be true and correct, and all others shall be true and correct in all material respects as of the Closing, and receipt of officer's certificates from each party certifying the same • No material adverse effect has occurred with respect to either party or CR-3 • ADP NRC Licensee shall have provided the financial security and otherwise complied with its covenants as described under "Financial and Other Security," the pledge of the equity interests and delivery of a non-consolidation opinion
<p>Termination:</p>	<p>The Decommissioning Services Agreement will be terminable by the parties prior to the Closing:</p> <ul style="list-style-type: none"> • By mutual agreement • By any party if a non-appealable court order, statute, rule, order or regulation is issued prohibiting any of the transactions • By any party if any Required Regulatory Approval has been denied in a non-appealable order • By the non-breaching party if the other party materially breaches any of its representations, warranties or covenants • By DEF if an event of default of ADP NRC Licensee occurs • By any party if Closing does not occur within three months following receipt of all Required Regulatory Approvals, unless the party seeking to terminate is responsible for any failure to meet any this condition to Closing

	<ul style="list-style-type: none"> • By any party if Closing does not occur within one year following the date of signing of the Decommissioning Services Agreement, unless the party seeking to terminate is responsible for any failure to meet any this condition to Closing
Indemnification:	<ul style="list-style-type: none"> • Each party will indemnify the other for all losses [REDACTED] • [REDACTED] • [REDACTED] • [REDACTED] • [REDACTED]
Transaction Documents:	<p>The Transaction Documents will include:</p> <ul style="list-style-type: none"> • a Decommissioning Services Agreement • a Spent Nuclear Fuel Purchase and Sale Agreement • a Lease Agreement (and other rights to access the CR-3 Site as required for ADP NRC Licensee to perform its obligations under the NRC License) • a Pre-Closing Decommissioning Services Agreement <p>Depending on the structure of ADP NRC Licensee and other matters, the Transaction Documents may include:</p> <ul style="list-style-type: none"> • Parent Guarantee(s) from Parent Company(ies) • Pledge Agreement • Other documents as may be required and mutually agreed to by DEF and ADP NRC Licensee to implement the transaction, in each case in form and substance satisfactory to the parties
Assignment; Post-Closing Sale or Transfer:	<p>The Transaction Documents will not be assignable by ADP NRC Licensee without the consent of DEF.</p> <p>ADP NRC Licensee will not, without having obtained DEF’s prior written consent, transfer (or agree or apply to transfer): (i) the membership interests in ADP NRC Licensee, as applicable; or (ii) the NRC License, to any third party.</p> <p>DEF will retain the right to receive notice of and provide comment on any removal of any Spent Nuclear Fuel or GTCC waste from the CR-3 Site.</p>
Miscellaneous:	<p>Prior to the Closing, ADP NRC Licensee and DEF will establish a management committee made up of executives from each party that will remain in place and meet at least quarterly until achievement of the End-State Conditions, and no less than annually thereafter. This committee will meet for purposes of information sharing and tracking of satisfaction of the conditions to Closing, and Project execution following the Closing, including Project performance costs and trust fund performance.</p> <p>ADP NRC Licensee and DEF will perform their obligations under the various agreements in compliance with all applicable laws and permits, including the NRC License.</p> <p>During the decommissioning, DEF shall have reasonable access to any portions of the CR-3 Site controlled by ADP NRC Licensee, subject to the requirements of the NRC License, and to ADP NRC Licensee personnel, for purposes of monitoring the performance by ADP NRC Licensee of its obligations under the Transaction Documents.</p>

Appendix 2 – ADP Decommissioning Experience

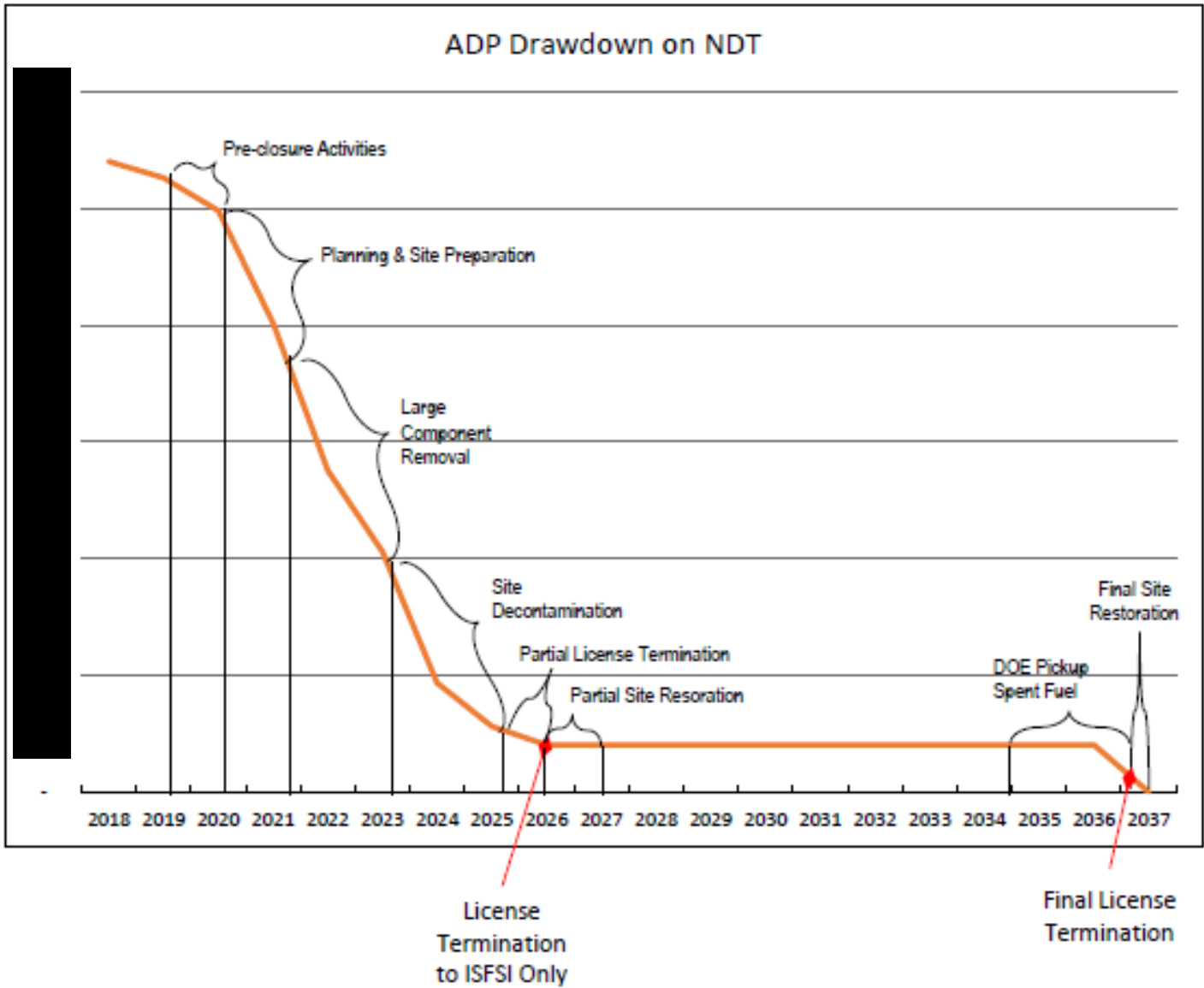
The ADP Team companies have performed several hundred small to medium size projects a year. NorthStar is the largest demolition company in the United States and executes hundreds of projects a year. Orano is a global supplier of nuclear materials and services and their list of projects is extensive

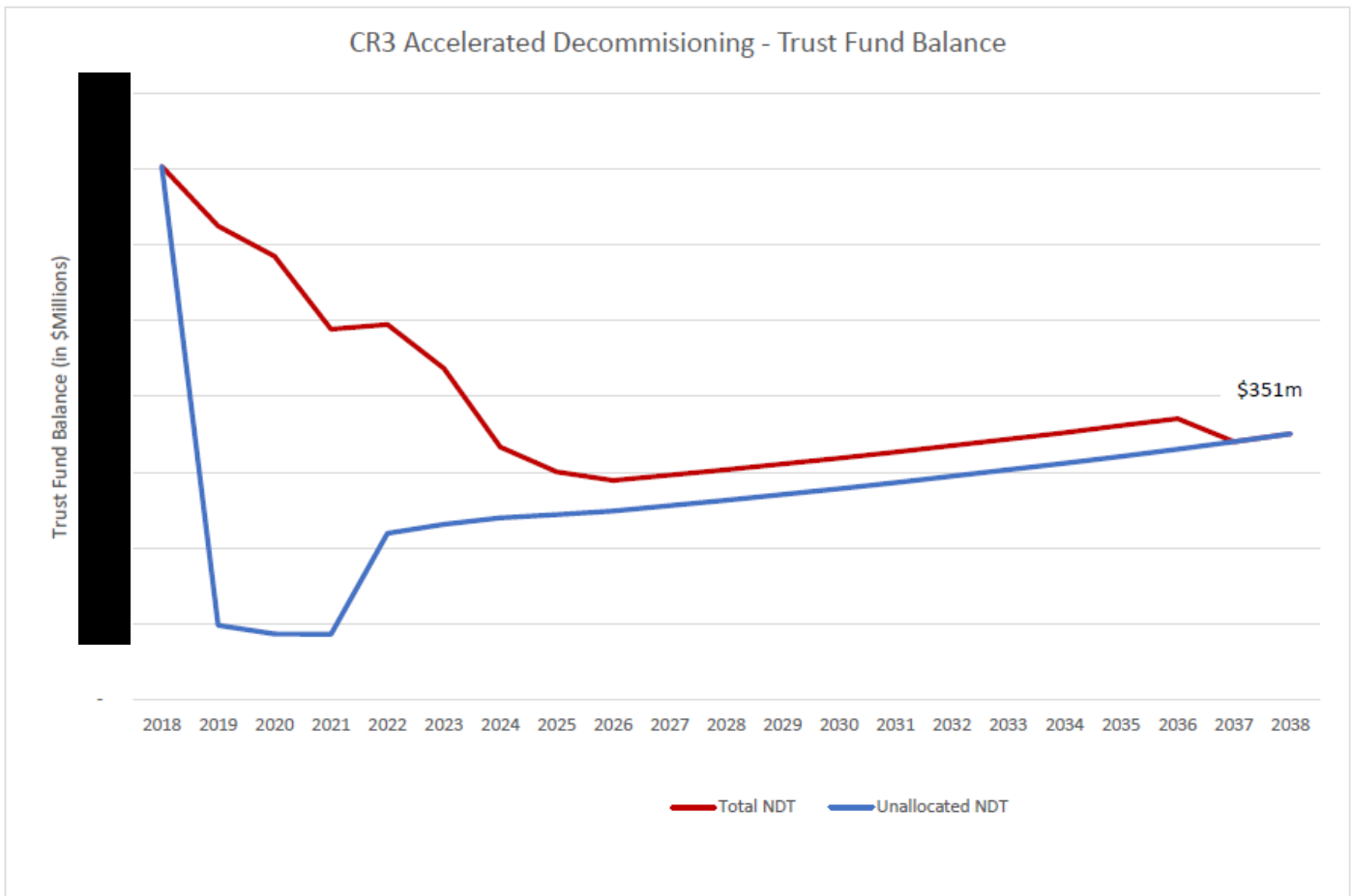
The ADP Team has participated in the decommissioning of many of the major nuclear decommissioning projects in the US and overseas. ADP is an already fully-formed alliance of NorthStar and Orano in an existing joint venture created specifically for the purpose of nuclear power plant decommissioning including the Vermont Yankee plant. The following figure provides an overview of the ADP Team Qualifications:

PROJECT NAME	Prime Contractor	Subcontractor	Contract Structure	Completion Date	Scope of Work									
					D&D Planning	Reactor Disassembly	Decontamination	Systems and Components Removal	Structural Demolition	Radiological Assessments, Work Coverage, Monitoring	Radiological Waste Packaging, Transportation, Disposal	Clean Waste T&D	Final Status Surveys	
Duke Energy – Gibson Station	✓		*LS/UR	2017			✓							
Duke Energy – HF Lee Power Gen. Station	✓		*LS/UR	2016			✓							
Duke Energy – WC Beckjord	✓		*LS/UR	2018			✓							
Duke Energy-Gibson Station SALF	✓		*LS/UR	2018			✓							
Duke Energy-Former Kinston, NC MGP Site	✓		*LS/UR	2015			✓							
Duke Energy-Sanford MGP Site	✓		*LS/UR	2013			✓							
Duke Energy-Ward Transformer	✓		*LS/UR	2011			✓							
Argonne National Laboratory, Chicago Pile 5		✓	T&M	2000					✓	✓				
Brunsbüttel (BWR)		✓	FFP	2022		✓								
Cadarache MOX Plant	✓	✓	Owner	2017	✓	✓	✓	✓	✓	✓	✓		✓	
Conn Yankee (PWR)		✓	T&M	2007	✓	✓								
Downreay Fast Reactor		✓	Task Order	2004	✓			✓						
GB1 Enrichment Plant	✓	✓	T&M	2023	✓		✓	✓	✓	✓	✓		✓	
Hanford 308, 309, 340		✓	FFP	2015	✓		✓	✓	✓	✓	✓		✓	
Hanford AY102	✓		T&M	2017	✓		✓	✓	✓	✓	✓		✓	
Iowa State University UTR-10 Reactor	✓		T&M	2000	✓	✓								✓
Krümmel (BWR)		✓	FFP	2022		✓								
La Hague UP2-400	✓	✓	Owner	On-going	✓	✓	✓	✓	✓	✓	✓		✓	
Los Alamos - Omega West reactor		✓	T&M	2015	✓		✓	✓	✓	✓	✓		✓	
Maine Yankee (PWR)		✓	FFP	2001	✓	✓					✓		✓	
Marcoule UP1	✓	✓	T&M	2030	✓		✓	✓	✓	✓	✓		✓	
Millstone-1 (BWR)		✓	FFP	2004	✓		✓	✓	✓	✓	✓		✓	
MZFR research reactor (Germany)	✓		Task Order	2003		✓								
NASA's Plum Brook Nuclear Facility		✓	T&M	2006	✓									
Neckarwestheim Unit 2 (PWR)		✓	FFP	2025		✓								
Oak Ridge Y-12 National Security Complex Building 9211 and 9769	✓		FFP	2010	✓				✓		✓			
Osiris research reactor (France)		✓	FFP	2012		✓				✓				
Phebus research reactor (France)		✓	FFP	2009		✓								
Phillipsburg Unit 2 (PWR)		✓	FFP	2025		✓								
Rancho Seco (PWR)		✓	FFP	2006		✓								
Rapsodie research reactor (France)		✓	FFP	2005		✓								
Savannah River Site Cooling Towers		✓	FFP	2010	✓								✓	
Sellafield - UK		✓	T&M	2021	✓									
SICN Fuel Plants	✓	✓	Owner	2011	✓		✓	✓	✓	✓	✓		✓	
Stade (PWR)		✓	Task Order	2009		✓								
UK Magnox Sites		✓		2013	✓									
University at Buffalo D&D	✓		FFP	2015	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
University of Arizona TRIGA	✓		FFP	2010	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
University of Illinois TRIGA	✓		FFP	2012	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
University of Washington D&D	✓		FFP	2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Vermont Yankee (BWR)		✓	FFP	2020	✓		✓	✓	✓	✓	✓	✓	✓	✓
Würgassen (BWR)		✓	Task Order	2010	✓		✓	✓	✓	✓	✓	✓	✓	✓
Yankee Rowe (PWR)		✓	Task Order	2007	✓	✓					✓		✓	✓

Figure 3-8: ADP Team Qualifications.

Appendix 3 – Financial Data







CR3 Accelerated D&D Overview

November 5, 2018



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Initial Decommissioning Decision and Actions

- Currently pursuing a SAFSTOR strategy
 - Place plant in dormant state and complete Decontamination & Dismantlement (D&D) by 2074
 - In 2013, Nuclear Decommissioning Trust (NDT) not viewed as adequate to immediately fund estimated D&D costs
- On track to reach dormancy by August 2019
 - All fuel in dry storage (ISFSI)
 - Spent fuel pool has been cleaned and will be empty by December 2018
 - All targeted operational systems will be decommissioned
 - Large components and low level waste shipped off site
 - License conditions have been modified to align with SAFSTOR conditions
- \$40M favorable variance from decommissioning cost estimate (achieving dry dormancy in 2019)

Actions to position plant for long term dormancy also support accelerated D&D strategy

Why Consider an Accelerated D&D Strategy?

Pros

- Mitigates risk of regulatory/environmental changes
 - Includes availability of waste depository sites
- Mitigates financial risks
 - Cost escalation rates relative to NDT rate of return
 - Significant devaluation of the trust fund
- Potential for any excess NDT funds returned to customers earlier

Cons

- Conditions may improve in the future
- Relies on Special Purpose Entity (SPE) to execute the project (financial assurance)

Accelerated strategy is consistent with recent industry decisions

Alternate D&D Transaction Models

- License Stewardship (LS)
 - All or some NRC license obligations are transferred to a 3rd party (SPE*)
 - Duke retains title to property and spent nuclear fuel
 - Nuclear Decommissioning Trust (NDT) remains under Duke control
 - Limited risk transfer from Duke to SPE
- Asset Acquisition (AA)
 - Plant assets sold to SPE, includes spent fuel
 - All license obligations transfer to the SPE
 - Duke retains ownership of real property and leases easement to SPE
 - NDT transfers to SPE but access to funds can be capped
 - Significant risk transfer from Duke to SPE
- General Contractor Model (GC)

* Special Purpose Entity

LS model currently in use

AA model – untested option \ not implemented yet

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Key Questions to Address about Accelerated D&D

- Can a transaction effectively transfer risk, and how much, to a counterparty?
- Does counterparty have necessary technical expertise?
- Do we have enough money in the NDT?
- Can a transaction with an SPE be structured to meet financial assurance expectations?
- What would be the impact on the NDT (includes tax treatment)?
- Who will manage fuel \ ISFSI?
- Do we have clear end state requirements?
- Can we get approvals, without burdensome conditions, in a timely fashion?
 - NRC
 - Florida Public Service Commission

A cross functional team is evaluating these questions

[REDACTED] were selected for due diligence and further negotiations

Criterion	[REDACTED]	[REDACTED]
Technical	[REDACTED]	[REDACTED]
Total Cost	[REDACTED]	[REDACTED]
Risk Transfer	[REDACTED]	[REDACTED]
Fuel Management	[REDACTED]	[REDACTED]
NDT Impacts – Control	[REDACTED]	[REDACTED]
NDT Impacts – Tax	[REDACTED]	[REDACTED]
NDT Return to Customer	[REDACTED]	[REDACTED]
SPE Financial Assurance	[REDACTED]	[REDACTED]
Regulatory Approval NRC	[REDACTED]	[REDACTED]
Regulatory Approval FPSC	[REDACTED]	[REDACTED]

Evaluation Score GOOD MED WEAK

Initial Bid Analysis Shows Support For Cost Feasibility

COST (in 000's)	[REDACTED]
Total Cost	
Total Funding Sources	
2018 NDT Reserve	
Future NDT Earnings Net of Cost Escalation	
2038 NDT Reserve	

* Includes \$14m risk associated with DOE recovery of Spent Fuel Management costs.
 That same risk would be transferred to [REDACTED] for the AA Model.

- Total Cost under SAFSTOR is estimated at \$919,387 (thousands of 2017 dollars)

Information subject to change after further due diligence and negotiation

Key Question for AA Model:

Can AA Transaction Be Structured To Provide Financial Assurance?

Financial

- SPE commits to fixed price for project with 15%+ contingency (\$65m+)
- Fuel management costs will be recovered from DOE
- Parent company guarantees
- Additional credit enhancement options
 - Letter of Credit
 - Escrow portion of milestone payments
 - Environmental accident insurance
- Excess funds in NDT
 - Over \$100M in 2018 (available to fund unforeseen conditions)
 - Not directly available to SPE
- NDT tax treatment under review

NDT Protections

- SPE access to funds capped at contract amount
- Withdrawals require completion certificate and potential 3rd party audit (subject to negotiation)

Contractual

- Duke expects to have a seat on the SPE board with veto rights on select decisions
 - Return to SAFSTOR and voluntary bankruptcy filing

Key Question for LS Model: Is There Enough Funding?

Financial Assurance

- Duke\Customers retain more project risk
 - Cost escalation
 - Regulatory/environmental changes to end-state requirements
 - Unforeseen site conditions
- Spent Fuel Management remains with Duke Energy
 - Cost to manage
 - Future DOE litigation
- Cost funding margin to NDT assets only 3% compared to 19% for AA bid
- Margin may improve when bid is refreshed after due diligence
- Greater control / oversight of NDT withdrawals by Duke

Regulatory Considerations and Communication Plan

- NRC approval requirements for license transfer
 - Demonstrate technical competence
 - Demonstrate financially sound / financial assurance
- FL Department of Environmental Protection
 - Defines required end state conditions
 - Verbally confirmed standards set by the NRC
- FL Public Service Commission Approval
 - Key factor is demonstrating benefit/protection to the customer
- Other FL stakeholders

Next Steps

- Complete Due Diligence
- Select preferred vendor
- Finalize Transaction Structure
- Finalize Contract Negotiations
- Continue discussions with key intervenors and prepare FPSC filing
- Finalize Recommendation
 - If recommendation is to proceed, target Q1 to sign contract
- NOC Presentation 12-Dec-18

Appendix

Stakeholders

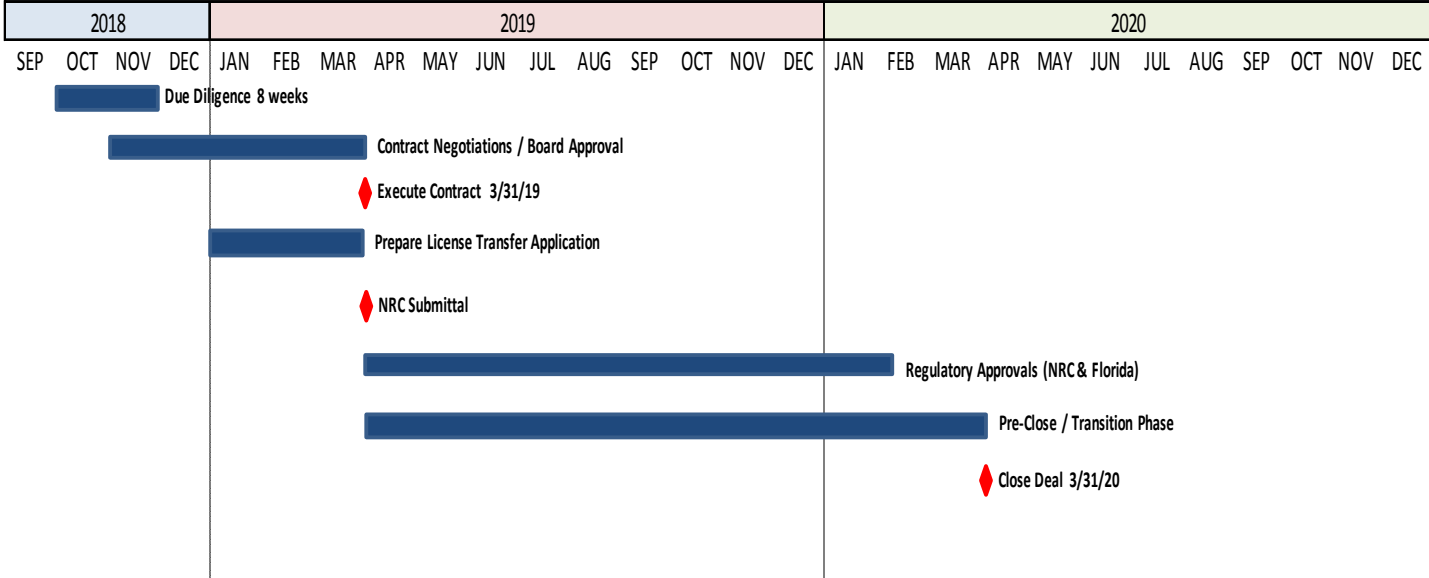
Stakeholders engaged in the process include:

- Supply Chain
- Engineering
- Legal – Internal / External
- Regulatory Affairs
- Rates & Regulatory Strategy – FL
- Risk Management
- Environmental/Health Physics
- Fossil Hydro
- Treasury
- Internal/External SMEs

Transaction Summary and Industry Trends

Nuclear Plant	Date	Utility	Model	Counterparty	Status	
					PSC	NRC
Pre 2017 Transactions						
Zion (2 units)	2011	Exelon	LS	EnergySolutions	Not required	Approved
La Crosse	2016	Dairyland Coop	LS	EnergySolutions	Not required	Approved
SONGS	2016	So Cal Edison	GC	ES/AECOM	N/A	N/A
Recent Transactions						
Vermont Yankee	2017	Entergy	AA	ADP	Under Review	Approved
Pilgrim	2018	Entergy	AA	Holtec	?	Not filed
Palisades	2018	Entergy	AA	Holtec	?	Not filed
Oyster Creek	2018	Exelon	AA	Holtec	?	LTA* Filed

Schedule Targets Contract Execution in Q1 of 2019 and Close in Q1 2020



December 12th meeting with the Nuclear Oversight Committee (NOC) of the Board

Evaluation Elements

- Independent Review Teams
- Technical – 20% Overall Weighting
 - Diverse Team of SMEs
- Commercial – 80% Overall Weighting
 - Financial – 70%
 - Legal / Supply Chain – 10%
- Qualitative Assessment
 - Un-monetized Risk / Opportunities

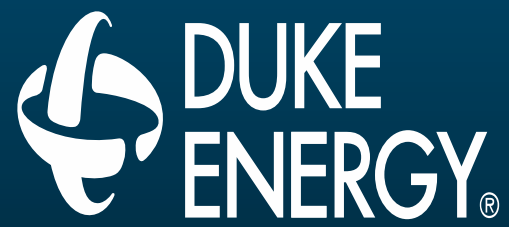
Spent Fuel Pool and Completed ISFSI

Before



After







CR3 Accelerated D&D Feasibility – Due Diligence Recommendation

September 2018



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Presentation Points

- Proposal Evaluation
- Feasibility Determination
- Due Diligence Recommendation
- Accelerated Schedule
- Next Steps
- Open Items

Proposal Evaluation

- 4 Proposals Received and Evaluated
- 2 Proposals Selected for Bidder Presentation

Bidder	Model	Proposal Discriminators	Selected

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Bidder Clarification Summary

Model	
Scope	
Terms	
Risk	
Due Diligence Period	
Unit 1 & 2 Option	
Contract Award	

Feasibility

Total Cost of Ownership Feasibility Analysis	
COST OF OWNERSHIP (in 000's)	
Bidder Offer (2018 \$)	
Owner Cost	
Duke Spent Fuel Management	
Bid Estimate Adjustments	
Total Cost of Ownership	
Funds Sources	
NDT Fund Beginning Balance (Net Taxes)	
Current DOE Claim 80% (Jan-14 thru Feb-18)	
Future DUKE DOE Claims - Spent Fuel Management - 90%	
Total Funding Sources	
Management Reserve (2018)	
NDT Earnings Net of Cost Escalation	
Management Reserve (2038)	

Note 1 - [Redacted]

Note 2 - [Redacted]

Estimate Variance / Overnight Cost

Decommissioning Cost Estimate Variance Analysis	
Cost Estimate (in 000's)	
D&D Cost Estimate excluding Spent Fuel Management	
Disposal Costs	
Vessel Segmentation / Large Component Removal Site Restoration / Other	
Total	

Due Diligence Recommendation

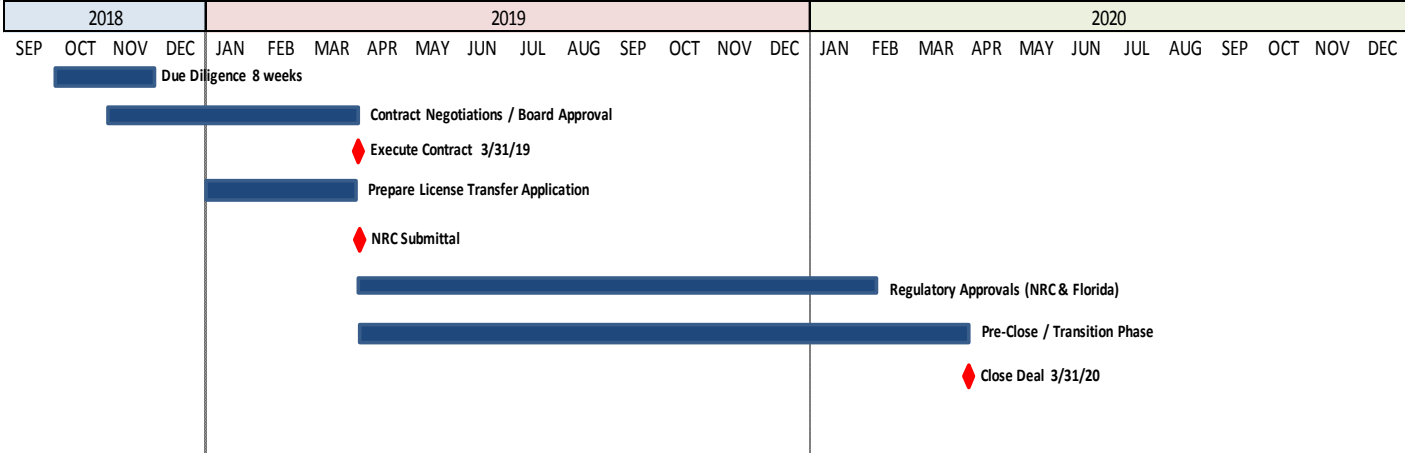
Recommendation:

Perform Due Diligence with both [REDACTED] and [REDACTED] to finalize risk/cost profile for 2 months.

If no significant changes to risk/cost profile, then:

- select [REDACTED] for final negotiations, and
- preserve [REDACTED] as back-up/contingency.

Accelerated Schedule

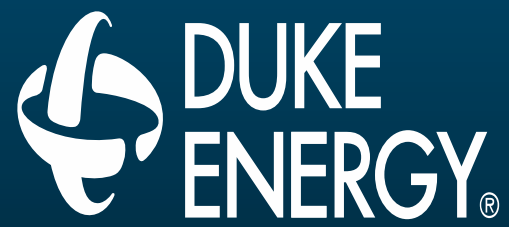


Next Steps

- Florida Department of Environmental Protection (FDEP) meeting to obtain Concurrence on end-state: 25 SEP 18
 - Excavate to 3 feet below grade
 - Release criteria of <25 millirem/year
 - Reuse of clean, rubblized concrete for fill
- Due Diligence / Contract negotiations 1 OCT 18
- SMC Presentation 5 NOV 18
- NOC Presentation 12 DEC 18

Open Items

- Trust Fund Tax Treatment
- End-state confirmation FDEP
- Credit enhancement mechanism
- Florida Public Service Commission (FPSC) consent
- Contingency funding requirements
- Regulatory approval contingency options
- Pre-closure and transition requirements



**Crystal River Unit 3 Accelerated Nuclear Decommissioning Project RFP
Compliance Checklist**

Attachment (worksheet)	Weight
1 - Supplier Profile	5
2 - Safety	5
3 - Lessons	5
4 - Risks	10
5 - DCE	40
6 - Milestones	5
7 - Annual Cash Flow	10
8 - Sub Contracting	5
9 - Waste Disposal	10
10 - Performance/Financial Assurance	5
Score	

		Safety on org chart	Safety Person	EMR 3 yr ave	Fatalities	TICR 3 yr ave	Avetta	EMR Rank*	TICR Rank	HU program	Overall Rank	
		Y	TBD									
			Y	Named								
			N									
		Y	Named									

* non-weighted

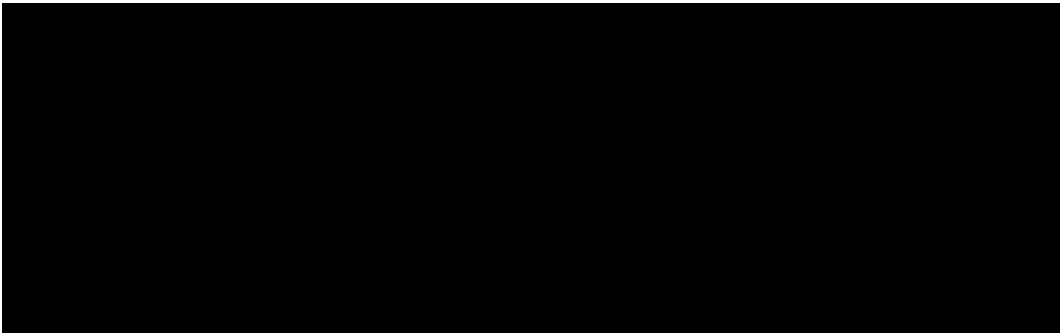
** discussed in different areas of proposal

3.0 Technical Approach and Statement of Qualifications

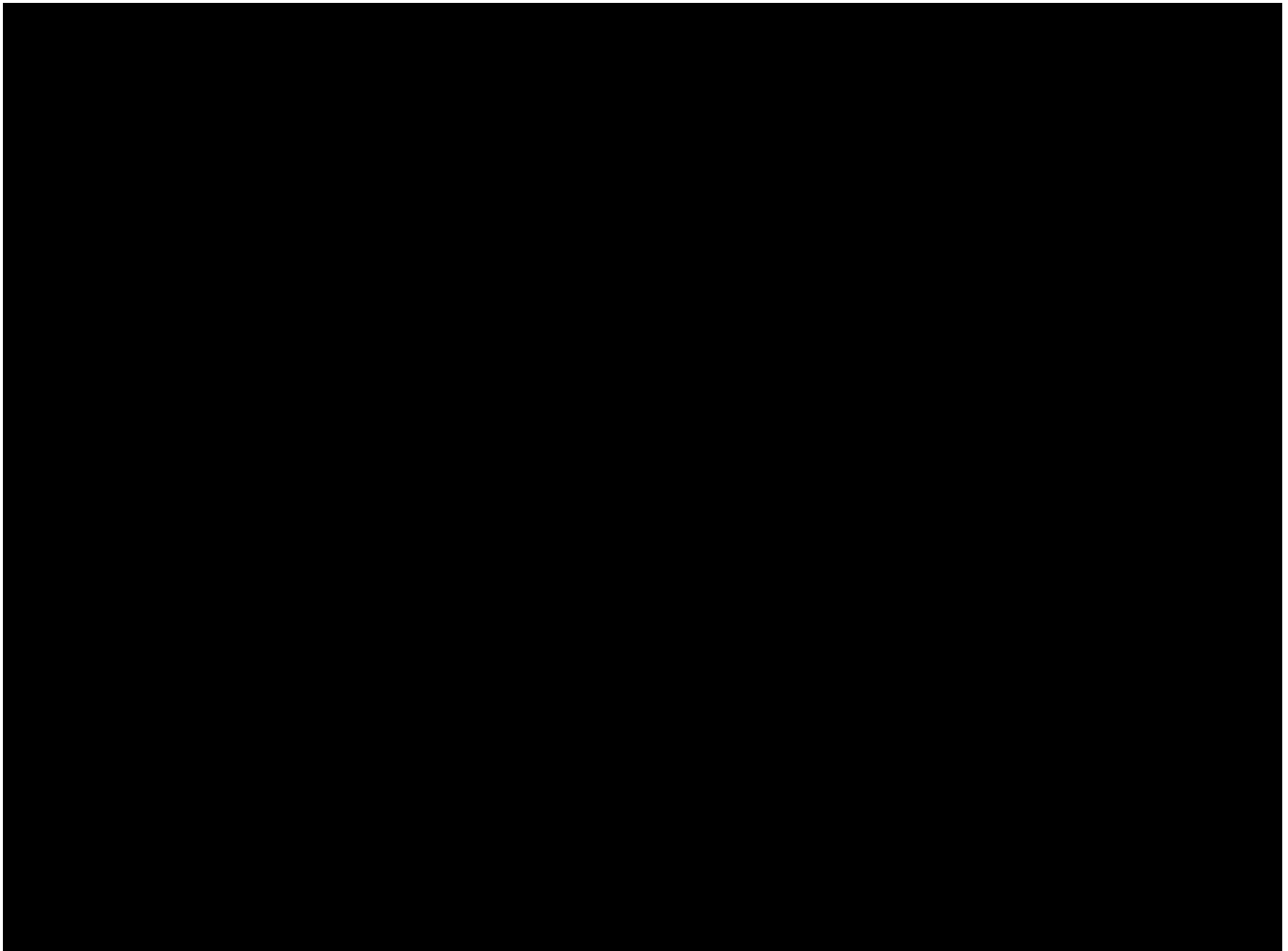
The following sections are organized to respond directly to the RFP requirements. The sidebar to the right provides a general roadmap of how we meet the requirements of the RFP.

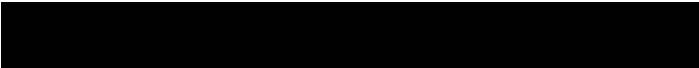
3.1 Proposed Approach

ADP offers a proven and powerful business model to eliminate the utility's risks of nuclear power plant decommissioning and spent fuel ownership for retired nuclear power facilities. A deal Transaction with ADP means Duke can focus on its traditional business and transfer all NRC License Termination risk and Spent Fuel Ownership responsibility to an "expert team" that will enhance Duke's safety, financial, regulatory and rate-payer reputation. [REDACTED]



3.1.1 Project Timeline (RFP 5.1)





CRYSTAL RIVER UNIT 3 DECOMMISSIONING

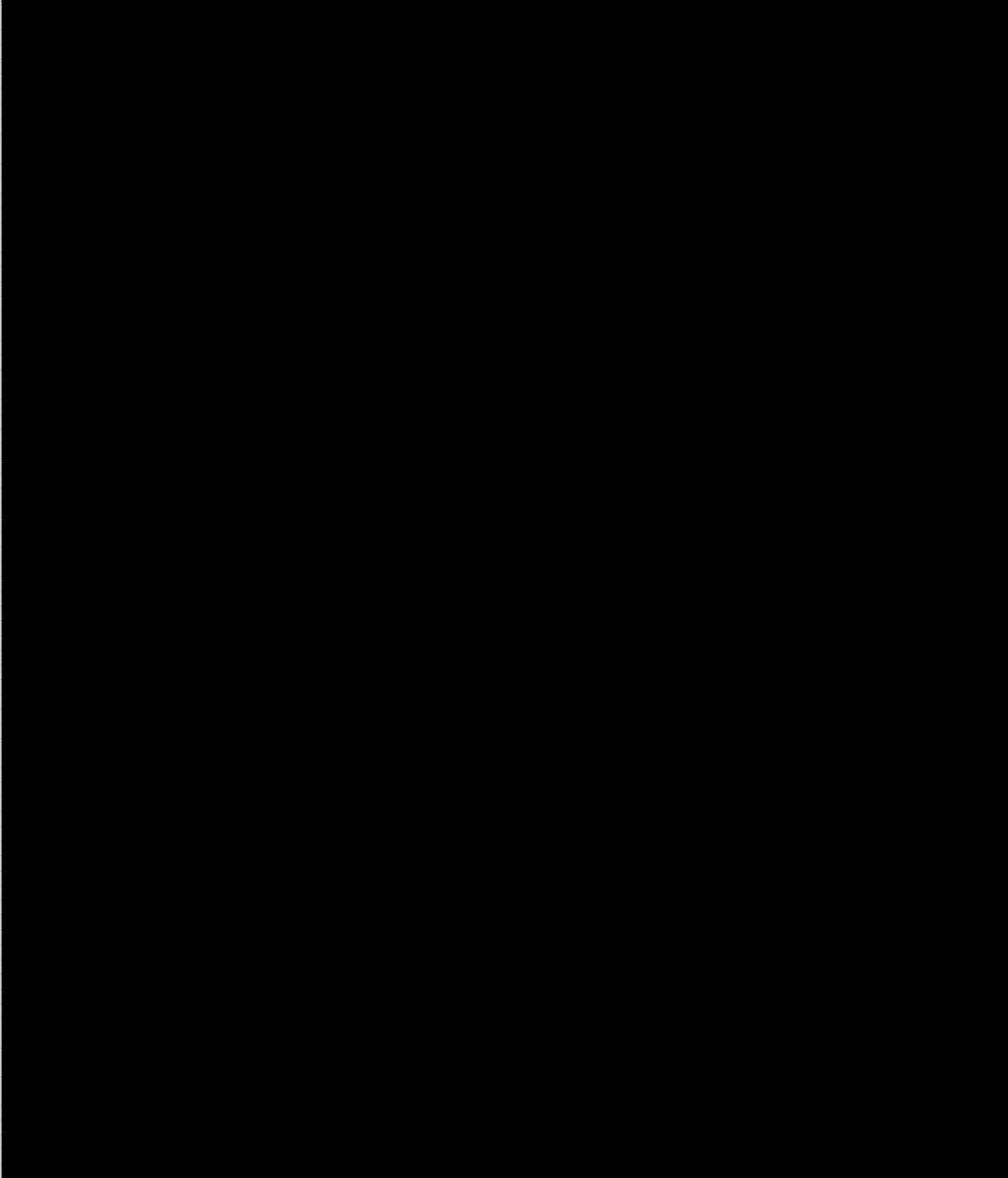


Figure 3-1: Summary Level Schedule. (Note: While ADP has used the RFP DOE spent fuel pickup date of 2037, ADP's exclusive CIS option provides an alternative early ISFSI retirement and full NRC License Termination date of 2030.)

3.1.2 Methods and Tools

ADP methods and tools are implemented within an integrated JV structure under common ownership and governance of its Members, NorthStar and Orano, performing in the same manner as currently being done at Vermont Yankee. Within the Member companies, our affiliate WCS, and team member Burns & McDonald, ADP brings under one roof all the key skills, experience, equipment, and assets required to perform all aspects of the project as described in this proposal.

All scopes of work are subcontracted to the Member companies, NorthStar and Orano, under a detailed and clear division of responsibility. Under the governance of the ADP Members, program management is delegated to be performed on site by NorthStar, including responsibility for overall project and facility management in compliance with all rules, regulations, processes and procedures of the licensed CR3 LLC. (Figure 3-2)

For individual work scopes, Orano has responsibility for three distinct scopes of RV/RVI segmentation, large component removal, and spent fuel ISFSI management.

NorthStar is responsible for all other SSC demolition and site remediation.

Descriptions of the common program elements under which the licensed CR3 LLC will function and be decommissioned are described in Section 3.3. Methods for the major scopes are provided in Section 3.2.

As further described in Section 3.2.2, Orano has the most advanced specialty tools and equipment for segmentation in the industry, developed and improved through our experience in the US and Germany. These tools are fully owned by Orano for dedicated use on the CR3 project.

All demolition and site remediation equipment, as described in Section 3.2.6, is fully owned by NorthStar, whose large fleet provides the ultimate flexibility at low cost to deliver and remove from site at ADP's determination.

Earned Value Management System

ADP's Project Management associated with the programs baseline(s), cost and schedule, consists of utilizing an earned value type system of project controls. This system requires establishment of a Work Breakdown System (WBS) at the activity level that is incorporated into the baseline schedule and cost / revenue loaded. This method allows for the "earned value" (EV) of each activity to be determined as part of the schedule updates weekly. The benefit of the ADP earned value system is that any deviations from the baseline schedule can be identified and corrected before the activity has a significant overrun.

Based on Earned Value, Financial controls are established by setting target costs by WBS activity and statusing those activities monthly to determine the earned value of each activity. The ADP Project Management program provides a monthly Job Cost Report that is reviewed by the ADP Management Team to determine if any specific activity is exceeding the Budgeted Cost of Work Performed as compared to the Actual Cost of Work Completed (or Earned Value) and changes or corrective actions are required.

3.1.3 Project Team, Governance

ADP's approach to Project Management and Oversight recognizes two very different considerations for staffing: 1) the staffing needed to maintain the NRC license requirements and 2) staffing necessary to efficiently decommission the facility. The

staff required for NRC license compliance is currently in place at each site; ADP will maintain the available site key employees after ownership transfer to ADP. The decommissioning organization was developed utilizing ADP's extensive experience in performing similar work at other commercial and government facilities.

Our NRC license staffing approach for each decommissioning period is as follows:

CR3 Planning Period — Although the Fuel Transfer has been completed, SFP cleanout and Decommissioning Planning is ongoing. Optional - Units 1&2 D&D is possible.

Decommissioning Period(s) — ADP's approach is to maintain the current key site regulatory required staffing (if available) and as the license is reduced move the staffing to the ISFSI to ensure that the license commitments for staffing are maintained without disruption. Certified fuel handlers and maintenance personnel may be utilized to perform decontamination tasks and support the large component removal tasks if they are available. This allows ADP to control the staff costs and provide for a reasonable utilization of personnel. As the facilities are decommissioned and disposed of, we will process staff exemption requests to combine job responsibilities, allowing the staff to be adjusted to support the dry fuel storage operations since the remainder of the plant will have been removed by that time. ADP's plan is to make positions with less than full-time efforts to be part time by sharing key employees with our other facilities being decommissioned or plants already decommissioned and only supporting the ISFSIs.

ISFSI Operations Period — ADP's approach during the ISFSI Operations period is to maintain the regulatory required key employees listed in the decommissioning period, utilizing shared employees for less than full-time efforts and dedicated subcontractors for any maintenance items that arise. ADP will coordinate the fuel transfer to DOE transport and will augment the site staffing for the fuel transfer campaigns with Orano TN crews who are trained for spent fuel containers movements such as the pool to pad campaign that was performed in 2017-2018 at CR3.

The second staffing consideration is staffing the decommissioning efforts. ADP and our team have extensive experience in performing similar decommissioning and site closure work. Our experienced core management team, will utilize the existing Sites Work Management Process to establish the controls necessary to maintain compliant decommissioning operations, allowing work to proceed very much like it currently does for subcontractors at the CR3 facilities. ADP's approach is to continue the planned facility safe shutdown modifications, systems draining and plant controls to continue with the decommissioning team to work with the current site maintenance personnel to allow minor characterization and decontamination to be performed as resources are available. ADP has no intention of disrupting any planned activities at closing.

Period 1: Project Mobilization, Planning, Site Reactivation

ADP's goal during this phase of the project is the safe, compliant and efficient transition of ownership from Duke to ADP, as well as the planning of the project's critical path activities Reactor Pressure Vessel/Reactor Vessel Internals (RPV/RVI) removal scheduled for the first two years of the project and hazardous materials removal and radiological, universal wastes, lead and asbestos abatement. In order to advance the planning efforts, additional characterization may be initiated to close any gaps in the Historical Site Assessment (HSA) data. Initial waste profiling will also be conducted as characterization data is reviewed to coordinate with our transportation and disposal team.

Period 2: Decommissioning Work Activities

ADP will initiate decommissioning activities once the NRC License and Ownership are transferred in accordance with our project schedule and associated firm fixed price payment plan. The ADP team will be focused on the safe, compliant, and efficient completion of critical path tasks scheduled. Our project team will provide monthly reports to the executive committee and stakeholders, as needed, to document project performance and provide the earned value status to support the trust fund management. ADP's program management personnel will walk the project monthly and during critical operations to provide a corporate-level project sponsor and assign independent oversight to verify the safe completion of critical tasks.

The ADP project team will maintain staffing levels to support the current tasks and adjust those levels as needed as tasks are completed and new tasks started. The project team will safely drive the schedule to maintain an efficient operation coordinating non-critical path tasks to fill in schedule gaps and take advantage of concurrent activities that provide for early completion opportunities.

Period 3: License Termination and Site Restoration

ADP's approach to decommissioning allows for site restoration and license termination to be performed during the decommissioning phase of the project, as resources (labor and equipment) are made available. During this phase of the project ADP will have performed the vast majority of the physical decommissioning and site remediation, allowing the staffing to be ramped back to a smaller staff focused on the administrative portion of the partial license termination and the safe, compliant and efficient operation of the ISFSI.