



Crystal River Accelerated Decommissioning

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Confidential

DEF RESP STAFF 2ND POD - 000241

Crystal River Accelerated Decommissioning

- Pursuing a SAFSTOR strategy
 - On track to reach dormancy by August 2019
 - All fuel in dry storage and spent fuel pool empty
 - License conditions have been modified to align with SAFSTOR conditions
 - \$40M favorable variance from decommissioning cost estimate (achieving dry dormancy in 2019)
 - Complete Decontamination & Decommissioning (D&D) by 2074
- Accelerated D&D
 - Mitigates risk of environmental/regulatory changes
 - Mitigates financial risks
 - Potential to return excess Nuclear Decommissioning Trust (NDT) funds to customers sooner
 - 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.
 - Transaction must demonstrate that it benefits the customers from a risk mitigation and financial perspective

Alternate D&D Transaction Models

	Asset Acquisition (AA)	License Stewardship (LS)
	Responsibility	
NRC license obligations	SPE	SPE
Title to plant assets and spent fuel (real property remains with DEF)	SPE	DEF
Spent fuel ownership / DOE litigation risk	SPE	DEF
Nuclear Decommissioning Trust (NDT) control	SPE *	DEF
Regulatory changes to end-state conditions risk **	SPE	DEF

SPE = Special Purpose Entity DEF = Duke Energy Florida

* Access to NDT Funds can be capped contractually

** End state condition: <25 millirem/yr, excavation to ≥3' below grade, use of rubblized concrete for backfill

LS model - currently in use **AA model** - untested \ not implemented yet **General Contractor** - not being considered



Two bidders were selected for due diligence and further negotiations

Vendor / Model	Technical	Total Cost	Risk Transfer	Spent Fuel Management	NDT Impacts	SPE Financial Assurance	NRC Approval	FPSC Approval

Evaluation Score GOOD ● MEDIUM ○ WEAK ○

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

- Initial bids support cost feasibility
- Information subject to change after further due diligence and negotiation
- There are concerns about FPSC approval of AA model

Path Forward

- Complete Due Diligence
- Finalize Transaction Structure
- Finalize Contract Negotiations
- Finalize Recommendation
- Target first quarter of 2019 to sign contract if recommendation is to proceed



Review and recommendation for Duke Energy Florida to enter into agreements to facilitate the accelerated decommissioning and dismantlement process for Crystal River 3

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Executive Vice President and Chief Operating Officer

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Catherine Stempien
State President - Florida

Executive Summary

- On track with SAFSTOR strategy for CR-3
 - Preparing to put the plant in long-term dormancy by August 2019
 - Required to complete decontamination and dismantlement (D&D) by 2073
- Accelerated D&D model provides important benefits to Florida customers
 - Mitigates risk of environmental events and regulatory changes
 - Mitigates financial risks
 - Provides potential to return excess trust funds to customers sooner than 60-year SAFSTOR model
- The proposed transaction is a viable option to accelerate D&D
 - Capable counterparty
 - Financially attractive
 - Effective risk transfer
 - Duke Energy maintains control of the Nuclear Decommissioning Trust Fund (NDT)

Transaction Structure and Risk Transfer

- Services agreement and sale of spent fuel
 - DEF retains ownership of property, plant and equipment
 - DEF remains Nuclear Regulatory Commission (NRC) licensed owner
 - DEF retains NDT ownership and control
 - DEF will contract with Accelerated Decommissioning Partners, LLC (ADP) for D&D services
 - ADP becomes NRC licensed operator
 - ADP will take title to spent fuel and assume DOE fuel contract
- ADP Consortium
 - NorthStar: A leader in demolition and nuclear waste disposal
 - Orano (previously Areva): Experienced nuclear industry contractor, including fuel management
- Risk Transfer
 - ADP accepts risks for
 - Project execution (escalation, overruns, unforeseen conditions)
 - Compliance with NRC regulations
 - Duke Energy retains risk for changes in end-state conditions

Financial and Contractual Protections

Financial Protections

- ADP commits to fixed-price contract
 - \$540 million subject to final negotiations
 - DE Florida requesting approval for up to [REDACTED] in funding authorization
 - Disbursements for each scope of work limited to the amount defined in the contract
- Financial assurance
 - Parent company guarantees from NorthStar and Orano
 - \$50 million credit support
 - \$20 million initial cash deposit in new trust (NDT is beneficiary)
 - Retain 6% from milestone payments until reach \$50 million total
- Reserve funds in NDT can only be used at DE Florida's direction

Contractual protections

- Duke Energy will appoint a director to serve on the ADP board
- Returning plant to SAFSTOR is an option subject to Duke approval
- DE Florida has “Step in” rights if ADP defaults

Financial Summary

(As of March 26, 2019)

	<i>\$ millions</i>
NDT Value	\$654
Estimated NDT Earnings up to closing	\$31
Duke Operating Costs up to closing	<u>(\$44)</u>
Unallocated NDT Funds at Closing	\$91
Pending Potential DOE Recovery realized in 2022	\$90
Estimated NDT Earnings through 2022	\$9
Duke Operating Costs through 2022	<u>(\$4)</u>
2022 NDT Balance	\$186
Estimated NDT Earnings 2023-2038	\$120
Duke Operating Costs 2023-2038	<u>(\$29)</u>
2038 NDT Balance (Project Complete)	\$277

Note: Fund balances & earnings are net of taxes

- Treasury is pursuing a “zero cost collar” hedge to preserve funds needed to close

Required Regulatory Approvals – Conditions of Closing

- NRC Approval: Expected within 12 months
 - ADP must demonstrate financial assurance and technical capability
 - NRC approved Vermont Yankee license transfer to NorthStar in October 2018
 - NRC drop-in meeting completed on 4/19/19
 - 4 plants in active demolition, 4 plants in SAFSTOR, 10 plants have announced future shutdowns (by 2024), 7 ISFSI only sites
- Private Letter Ruling from the IRS
 - Ensure the transaction will not disqualify the NDT
- Florida Public Service Commission Approval: Expected within 6 to 9 months
 - Transaction demonstrates benefits to customers
 - Mitigates environmental and financial risks relative to SAFSTOR
 - Transfers project execution risks
 - Maintains control of NDT
 - Potentially returns unused funds to customers sooner than 60-year SAFSTOR model
 - Will file petition supported by written testimony
 - Preliminary discussions held with key stakeholders including FL intervenors to socialize the transaction

Three-Phase Stakeholder Engagement Plan

- Phase I: Publicly announce contract agreement with ADP (May 2019)
 - Approved key messages and FAQs will feed all internal and external communications
 - Communications for external audiences
 - Confidential discussions with regulatory, IRS, investor relations and treasury stakeholders before public announcement
 - 8K and national news release announcing agreement, including quotes from Duke Energy and ADP
 - Additional notifications to other stakeholders after public announcement
 - Corporate/regional social media posts and Web content on www.duke-energy.com/CR3
 - Bill insert(s), email communications, marketing fliers and/or When Neighbors Ask documents, as needed
 - Communications for internal audiences
 - All Hands meetings, email communications and Portal content
- Phase II: Introduce ADP to community (June 2019 – March 2020)
 - Presentations at city council and county commission meetings; open house, breakfast or lunch events; plant tours; one-on-one or small group meetings; digital or hard-copy communications to stakeholder groups, etc.
- Phase III: Receive regulatory approvals – deal closure
 - National news release announcing completion of transaction

Recommendation

Summary

- Change from a SAFSTOR to a DECON decommissioning strategy for the DE Florida Crystal River 3 plant subject to meeting the conditions of closing including:
 - Approval by the NRC
 - Approval by the Florida Public Service Commission
 - Favorable Private Letter Ruling from the IRS
- Execute proposed transaction with ADP with authorized funding not to exceed [REDACTED]

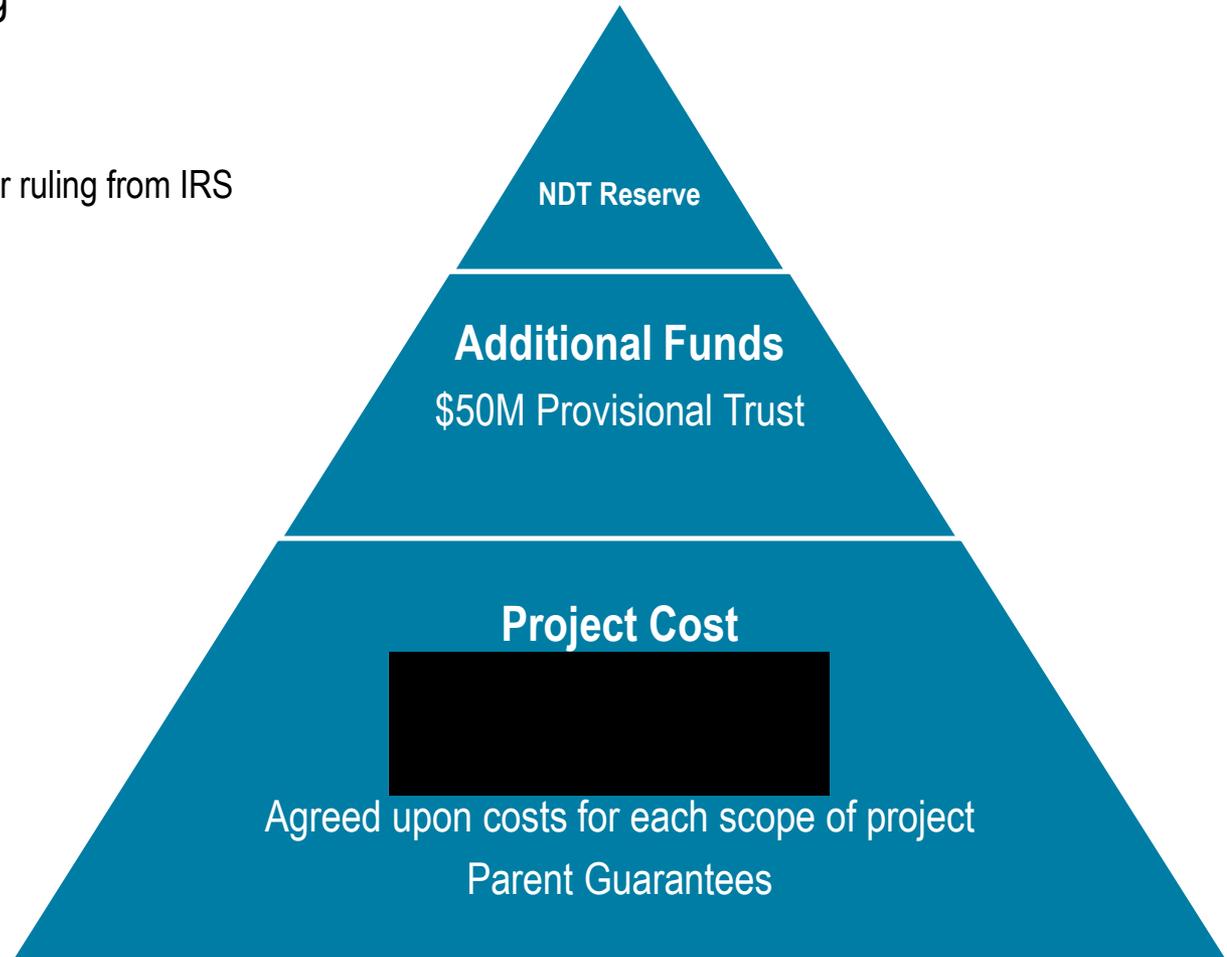
Duke Energy Florida requests that the FRMC approve and recommend for approval to the Board to:

- Enter into a decommissioning services agreement and certain ancillary documents (collectively, the “Decommissioning Services Agreement”)
- Delegate authority to the President and Chief Executive Officer to approve the final terms and conditions, materially consistent with the terms presented herein

Appendix

Financial Assurance

- Conditions of closing
 - NRC approval
 - FPSC approval
 - Favorable private letter ruling from IRS



Trust Fund Balance

