



March 31, 2022

NG-22-0041  
10 CFR 50.75(f)(1)  
10 CFR 50.82(a)(8)(v)

Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

Duane Arnold Energy Center  
Docket No. 50-331  
Renewed Facility Operating License No DPR-49

Duane Arnold Energy Center  
Independent Spent Fuel Storage Installation  
NRC Docket No. 72-030

Subject: Duane Arnold Energy Center, 2022 Annual Decommissioning and Spent Fuel Management Funding Status Report

References:

- 1) Letter, Curtland (NEDA) to U.S. NRC, "Certification of Permanent Cessation of Power Operations," NG-20-0074, dated August 27, 2020 (ML20240A067)
- 2) Letter, Curtland (NEDA) to U.S. NRC, "Certification of Permanent Removal of Fuel from the Reactor Vessel for Duane Arnold Energy Center," NG-20-0090, dated October 12, 2020 (ML20286A317)
- 3) Letter, Curtland (NEDA) to U.S. NRC, "Post Shutdown Decommissioning Activities Report," NG-20-0027, dated April 2, 2020 (ML20094F603)
- 4) Letter, Hansen (NEDA) to U.S. NRC, "Update to Spent Fuel Management Plan Pursuant to 10 CFR 50.54(bb)," NG-20-0078, dated January 13, 2021 (ML21014A455)
- 5) Letter, Wall (NRC) to D. Moul (NEDA), "Duane Arnold Energy Center – Request for Exemption from 10 CFR 50.82(a)(8)(i)(A) and Section 75(h)(1)(iv)," dated August 12, 2020 (ML20171A627, ML20171A626)

In accordance with 10 CFR 50.75(f)(1), 10 CFR 50.82(a)(8)(v), and 10 CFR 50.82(a)(8)(vii), NextEra Energy Duane Arnold, LLC (NEDA) submits the annual status of decommissioning funding, status of funding for managing irradiated fuel, and the financial assurance status report for the Duane Arnold Energy Center (DAEC).

In References 1 and 2, DAEC certified permanent cessation of power operation and permanent removal of fuel from the reactor vessel for DAEC. In Reference 3, DAEC submitted its Post-Shutdown Decommissioning Activities Report (PSDAR) containing a site-specific Decommissioning Cost Estimate (DCE) pursuant to 10 CFR 50.82(a)(4)(i) and 10 CFR 50.82(a)(8)(iii). In Reference 4, NEDA submitted a spent fuel management plan pursuant to 10 CFR 50.54(bb). In Reference 5, the NRC granted an exemption allowing NEDA to fund spent fuel management and site restoration costs from its Nuclear Decommissioning Trust.

Enclosure 1 provides the 2022 Annual Decommissioning and Spent Fuel Management Funding Status Report.

No commitments to the NRC are made in this letter.

If you should have any questions about the enclosed reports, please contact Michael Davis, Nuclear Licensing Manager, at (319) 851-7032.

Respectfully,



Paul Hansen  
Decommissioning Director, Duane Arnold Energy Center  
NextEra Energy Duane Arnold, LLC

Enclosure: As stated

cc: Regional Administrator, USNRC, Region III  
Project Manager, USNRC, Duane Arnold Energy Center  
Inspector, USNRC, Duane Arnold Energy Center  
A. Leek (State of Iowa)

**Enclosure 1**  
**Duane Arnold Energy Center**  
**2022 Annual Decommissioning and Spent Fuel Management Funding Status Report**

As required by 10 CFR 50.75(f)(1) and 10 CFR 50.82(a)(8), Duane Arnold Energy Center (DAEC) reports the following information:

**A. Current Decommissioning Cost Estimate**  
**(License Termination, Spent Fuel Management, and Site Restoration)**

As required by 10 CFR 50.82, DAEC completed a site-specific Decommissioning Cost Estimate (DCE), prepared by Energy Solutions LLC. The study was performed using the SAFSTOR decommissioning method. The DCE included expenses anticipated to be incurred for license termination activities (radiological remediation), interim spent fuel storage, and non-radiological site restoration activities. Based on the DCE (completed with 2018 data, revised January 2020), the total estimated cost to decommission DAEC is \$1,103,169,863 (for period of 2019 – 2080, escalated to 2021 dollars). Of that total cost estimate, the current site-specific cost estimate for license termination expenses of Duane Arnold Energy Center is \$782,060,162. The current estimate of spent fuel management costs is \$280,007,427. The current estimate for non-radiological site restoration is \$39,332,440. The current estimate of Independent Spent Fuel Storage Installation (ISFSI) demolition and decommissioning (D&D) costs is \$1,769,835.

**B. Funding Balance for License Termination**

Because DAEC is jointly owned among NextEra Energy Duane Arnold, LLC (NEDA), Central Iowa Power Cooperative (CIPCO), and Corn Belt Power Cooperative (Corn Belt), each Joint Owner (NEDA, CIPCO, and Corn Belt) maintains nuclear decommissioning trust(s) respective to their undivided interest ownership share.

The total balance available in NRC-jurisdictional nuclear decommissioning trusts (NDTs) for DAEC as of December 31, 2021 was \$671,505,944, broken out as follows

<b>Licensee</b>	<b>Trust Balance as of 12/31/21 (\$Thousands)</b>
Duane Arnold - NextEra	536,936
Duane Arnold - CIPCO	88,398
Duane Arnold - Corn Belt	46,171

**C. Funding Balance for Spent Fuel Management**

In accordance with the exemption granted by the NRC on August 12, 2020 (Reference 5), withdrawals from NEDA's NDT are used for decommissioning, spent fuel management and non-radiological site restoration purposes.

CIPCO and Corn Belt did not seek an exemption to allow use of their NDTs for spent fuel management activities. CIPCO and Corn Belt are not-for-profit electric

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cooperatives. CIPCO and Corn Belt maintain internal supplemental reserve funds, outside of their NDTs, the use of which are not legally restricted like an NDT, for asset retirement and other purposes. These funds are sufficient to pay for spent fuel management and may be supplemented by operational income, if necessary. The CIPCO and Corn Belt supplemental funds are not commingled with the NDTs used for license termination costs, and these funds are not included as funds for satisfying NRC minimum license termination obligations.

**D. Annual Decommissioning Collections**

There were no annual collections for 2021 and no collections anticipated.

**E. Rates Used to Escalate Decommissioning Costs and Fund Balances**

The estimates in the 2018 DCE have been inflated to 2021 dollars in the estimates provided in Attachments B – C. The Bureau of Labor Statistics (BLS) data provided the basis for the decommissioning cost estimate inflation rate forecast. Decommissioning costs are inflated using average observed data for Consumer Price Index, for All-Urban Consumers. DAEC used a factor of 1.8% to escalate 2018 dollars to 2019 dollars, 1.2% to escalate 2019 dollars to 2020 dollars, and 4.7% to escalate 2020 dollars to 2021 dollars.

Anticipated NEDA, CIPCO, and Corn Belt NDT and supplemental fund balances incorporate a 2% annual real rate of return, consistent with the requirements of 10 CFR 50.75.

**F. Current ISFSI Decommissioning Cost**

The current detailed site-specific ISFSI decommissioning cost estimate is \$ 1,769,835 (escalated to 2021 dollars). The table below summarizes data presented in Attachments C-1, C-2 and, C-3 and demonstrates that adequate funding will remain following the decommissioning of the site to cover future ISFSI D&D costs (10 CFR 72.30).

Licensee	Trust Balance as of 12/31/21 (2021\$ Thousands)	Projected Trust Fund Balance After Decommissioning (2021\$ Thousands)	ISFSI Decommissioning Cost Estimate (2021\$ Thousands)
Duane Arnold - NextEra	536,936	546,629	1,239
Duane Arnold - CIPCO	88,398	101,198	354
Duane Arnold - Corn Belt	46,171	56,520	177

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**G. Contracts to Fund Decommissioning**

None.

**H. Modification to Method of Providing Financial Assurance**

None.

**I. Material Changes to Trust Agreements**

None.

**J. Annual Report Conclusions**

Attachment A provides the amount spent on decommissioning, both cumulative and over the previous calendar year, the remaining balance of any decommissioning funds, an estimate of the costs to complete decommissioning work performed during the year, reflecting any difference between actual and estimated costs, in satisfaction of 10 CFR 50.82(a)(8)(v). Attachment A also provides the projected costs of managing spent fuel and the amount of funds accumulated to cover the cost of irradiated fuel, in satisfaction of 10 CFR 50.82(a)(8)(vii).

Attachment B provides the projected annual costs to decommission DAEC escalated to 2021 dollars.

Attachment C-1 compares the NEDA NDT balance, accounting for a 2% real rate of return, against the estimated costs for license termination, spent fuel management, and site restoration costs, demonstrating the NEDA NDT contains sufficient funds to cover license termination (50.82(a)(8)(v)) and spent fuel management (50.82(a)(8)(vii)) costs.

Attachment C-2 compares the CIPCO NDT balance, escalated at a 2% real rate of return, against the estimated costs for license termination, demonstrating the CIPCO NDT contains sufficient funds to cover license termination costs (50.82(a)(8)(v)).

Attachment C-3 compares the Corn Belt NDT balance, escalated at a 2% real rate of return, against the estimated costs for license termination, demonstrating the Corn Belt NDT contains sufficient funds to cover license termination costs (50.82(a)(8)(v)).

Thus, considering the current NDT balances, anticipated growth in those balances over time, and anticipated future license termination costs, the Joint Owners' trust funds are expected to have adequate funds for completion of license termination activities. Similarly, considering the NEDA NDT balance and the CIPCO and Corn Belt supplemental funds and other sources, the Joint Owners are expected to have adequate funds for spent fuel management activities.

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**Duane Arnold Energy Center**  
**2022 Annual Decommissioning and Spent Fuel Management Funding Status Report**

Decommissioning Funding Status Report  
 Duane Arnold Energy Center  
 ATTACHMENT A  
 Summary Information as of December 31, 2021  
 10 CFR 50.82 (a) (8) (v)-(vii)

**Decommissioning Trust Fund Balances 50.75(f)(1) 50.82(a)**

Year	Joint Owner	Type of Trust	Fund Balance	Comments
2021	NEDA	Decommissioning Trust	\$ 536,936,348	
2021	CIPCO	Decommissioning Trust	\$ 88,398,165	
2021	Corn Belt	Decommissioning Trust	\$ 46,171,431	

**Other Financial Assurance Methods Being Relied Upon 50.75(f)(1)**

None

**Prior Years Decommissioning Expenditures 50.82(a)(8)(v)(A)**

Year	License Termination	Spent Fuel	Site Restoration	ISFSI D&D	Total	Comments
2019-2020	\$ 15,107,487	\$ 21,527,654	\$ 698,654	\$ -	\$ 37,333,796	
2021	\$ 21,889,481	\$ 46,152,805	\$ 237,862	\$ -	\$ 68,280,148	
<b>Total</b>	<b>\$ 36,996,968</b>	<b>\$ 67,680,459</b>	<b>\$ 936,516</b>	<b>\$ -</b>	<b>\$ 105,613,943</b>	

**Prior Year Expenditures Variance to Estimated Cost 50.82(a)(8)(v)(B)**

Year	License Termination	Spent Fuel	Site Restoration	ISFSI D&D	Total	Comments
2021 Estimated	\$ 47,197,200	\$ 20,617,678	\$ -	\$ -	\$ 67,814,878	
2021 Actual	\$ 21,889,481	\$ 46,152,805	\$ 237,862	\$ -	\$ 68,280,148	
<b>Variance</b>	<b>\$ 25,307,719</b>	<b>\$ (25,535,127)</b>	<b>\$ (237,862)</b>	<b>\$ -</b>	<b>\$ (465,270)</b>	See below for variance commentary

**Variance Commentary**

**License Termination:** Favorable (lower) expenses compared to DCE estimate driven by cost optimization and accelerated project timeline  
**Spent Fuel:** Unfavorable (higher) expenses compared to DCE estimate driven by starting final pool to pad spent fuel campaign earlier than expected in the DCE study  
**Site Restoration:** Unfavorable (higher) expenses compared to DCE estimate driven by storm recovery activities and cost schedule optimization

Accruals are reflected in total costs but not in reimbursements

**Cumulative Withdrawals from Decommissioning Trusts 50.82(a)(8)(v)(A)**

Year	Joint Owner	License Termination	Spent Fuel	Site Restoration	ISFSI D&D	Total	Comments
Through 12/31/2021	NEDA	\$ 20,465,895	\$ 37,010,322	\$ 620,965	\$ -	\$ 58,097,182	
Through 12/31/2021	CIPCO	\$ 7,236,704	\$ -	\$ -	\$ -	\$ 7,236,704	
Through 12/31/2021	Corn Belt	\$ 3,484,230	\$ -	\$ -	\$ -	\$ 3,484,230	
<b>Total Through 2020</b>		<b>\$ 31,186,829</b>	<b>\$ 37,010,322</b>	<b>\$ 620,965</b>	<b>\$ -</b>	<b>\$ 68,818,116</b>	

**Remaining Decommissioning Estimated Cost 50.82(a)(8)(v)(B) / (vii)(B)**

Year	License Termination	Spent Fuel	Site Restoration	ISFSI D&D	Total	Comments
2021 \$	\$ 691,393,682	\$ 255,550,852	\$ 39,332,033	\$ 1,770,057	\$ 988,046,623	Remaining decom costs from 2022 - 2080 escalated to 2021 \$

**Decommissioning Criteria Upon Which the Estimate is Based 50.75(f)(1) 50.82(a)(8)(v)(B)**

SAFSTOR

**Any Modification to Method of Providing Financial Assurance 50.75(f)(1) 50.82(a)(8)(v)(C)**

No

**Any Material Changes to Trust Agreement Since Previous Report 50.75(f)(1) 50.82(a)(8)(v)(D)**

In accordance with the exemption granted by NRC on August 12, 2020, withdrawals from NEDA's nuclear decommissioning trust (NDT) for spent fuel management purposes; request for Exemption from 10 CFR 50.82(a)(8)(i)(A) and Section 75(h)(1)(iv)," dated August 12, 2020 (ML20171A627, ML20171A626)

**Need for Additional Financial Assurance 50.75(f)(1) 50.82(a)(8)(v) (vii)(C)**

See Attachment C

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**ATTACHMENT B**  
**Duane Arnold Energy Center**  
**Decommissioning Cost Estimate (100% Share)**  
**Estimates in 2021 Dollars (Thousands)**

Year	License Termination	Spent Fuel	Site Restoration	ISFSI D&D	Total 2021
2022	17,212	62,102	-	-	79,314
2023	5,514	54,941	-	-	60,455
2024	16,074	3,477	-	-	19,551
2025	6,048	3,489	-	-	9,537
2026	2,375	3,489	-	-	5,864
2027	1,972	3,489	-	-	5,461
2028	1,972	3,489	-	-	5,461
2029	1,972	3,489	-	-	5,461
2030	2,033	3,489	-	-	5,522
2031	1,910	3,489	-	-	5,399
2032	1,910	3,781	-	-	5,691
2033	1,910	3,785	-	-	5,695
2034	1,910	3,785	-	-	5,695
2035	1,910	3,785	-	-	5,695
2036	1,910	3,785	-	-	5,695
2037	1,910	3,785	-	-	5,695
2038	1,910	3,785	-	-	5,695
2039	1,910	3,785	-	-	5,695
2040	2,602	3,785	-	-	6,387
2041	1,910	3,785	-	-	5,695
2042	1,910	3,785	-	-	5,695
2043	1,910	3,785	-	-	5,695
2044	1,910	3,785	-	-	5,695
2045	1,910	3,785	-	-	5,695
2046	1,910	3,785	-	-	5,695
2047	1,910	3,785	-	-	5,695
2048	1,910	3,785	-	-	5,695
2049	1,910	3,785	-	-	5,695
2050	1,910	3,785	-	-	5,695
2051	1,910	3,785	-	-	5,695
2052	1,910	3,785	-	-	5,695
2053	1,910	3,785	-	-	5,695
2054	2,218	3,785	-	-	6,002
2055	2,295	3,785	-	-	6,079
2056	1,910	3,785	-	-	5,695
2057	1,910	3,785	-	-	5,695
2058	1,910	3,785	-	-	5,695
2059	2,330	3,140	-	-	5,470
2060	3,321	-	-	-	3,321
2061	2,842	-	-	-	2,842
2062	2,842	-	-	-	2,842
2063	2,842	-	-	-	2,842
2064	2,842	-	-	-	2,842
2065	2,842	-	-	-	2,842
2066	2,842	-	-	-	2,842
2067	2,842	-	-	-	2,842
2068	2,842	-	-	-	2,842
2069	2,842	-	-	-	2,842
2070	2,842	-	-	-	2,842
2071	2,842	-	-	-	2,842
2072	2,842	-	-	-	2,842
2073	16,662	-	-	-	16,662
2074	35,189	-	-	-	35,189
2075	84,387	-	-	199	84,586
2076	101,443	-	-	435	101,877
2077	127,729	27	-	327	128,084
2078	109,053	5,258	6,704	788	121,803
2079	61,928	-	30,014	21	91,963
2080	5,210	-	2,614	-	7,824
<b>Total</b>	<b>691,394</b>	<b>255,551</b>	<b>39,332</b>	<b>1,770</b>	<b>988,047</b>

# Enclosure 1

## Duane Arnold Energy Center

### 2022 Annual Decommissioning and Spent Fuel Management Funding Status Report

ATTACHMENT C-1  
 NextEra Energy Duane Arnold, LLC (70% Share)  
 License Termination (50.82(a)(8)(v))  
 Spent Fuel (50.82(a)(8)(vii))  
 Estimates in 2021 Dollars (Thousands) / Balance with 2% Real Rate of Return

NEDA Ownership / Balance      70%      \$    536,936  
 Annual Fund Earnings            2.0%

Year	NextEra 70% Share of Costs Eligible from Decom Trust					A Beginning of Year Balance	B Withdrawals	C Annual NDT Earnings	= A + B + C End of Year NDT Balance
	License Termination	Spent Fuel	Site Restoration	ISFSI D&D	Total				
	2022 <sup>(1)</sup>	12,048	43,471	-	-				
2023	3,860	38,458	-	-	42,319	476,323	(42,319)	9,526	443,531
2024	11,252	2,434	-	-	13,686	443,531	(13,686)	8,871	438,716
2025	4,234	2,442	-	-	6,676	438,716	(6,676)	8,774	440,814
2026	1,662	2,442	-	-	4,105	440,814	(4,105)	8,816	445,526
2027	1,380	2,442	-	-	3,823	445,526	(3,823)	8,911	450,614
2028	1,380	2,442	-	-	3,823	450,614	(3,823)	9,012	455,803
2029	1,380	2,442	-	-	3,823	455,803	(3,823)	9,116	461,097
2030	1,423	2,442	-	-	3,866	461,097	(3,866)	9,222	466,453
2031	1,337	2,442	-	-	3,779	466,453	(3,779)	9,329	472,003
2032	1,337	2,647	-	-	3,984	472,003	(3,984)	9,440	477,459
2033	1,337	2,649	-	-	3,986	477,459	(3,986)	9,549	483,022
2034	1,337	2,649	-	-	3,986	483,022	(3,986)	9,660	488,696
2035	1,337	2,649	-	-	3,986	488,696	(3,986)	9,774	494,484
2036	1,337	2,649	-	-	3,986	494,484	(3,986)	9,890	500,387
2037	1,337	2,649	-	-	3,986	500,387	(3,986)	10,008	506,409
2038	1,337	2,649	-	-	3,986	506,409	(3,986)	10,128	512,551
2039	1,337	2,649	-	-	3,986	512,551	(3,986)	10,251	518,815
2040	1,822	2,649	-	-	4,471	518,815	(4,471)	10,376	524,721
2041	1,337	2,649	-	-	3,986	524,721	(3,986)	10,494	531,229
2042	1,337	2,649	-	-	3,986	531,229	(3,986)	10,625	537,867
2043	1,337	2,649	-	-	3,986	537,867	(3,986)	10,757	544,639
2044	1,337	2,649	-	-	3,986	544,639	(3,986)	10,893	551,545
2045	1,337	2,649	-	-	3,986	551,545	(3,986)	11,031	558,590
2046	1,337	2,649	-	-	3,986	558,590	(3,986)	11,172	565,775
2047	1,337	2,649	-	-	3,986	565,775	(3,986)	11,316	573,105
2048	1,337	2,649	-	-	3,986	573,105	(3,986)	11,462	580,581
2049	1,337	2,649	-	-	3,986	580,581	(3,986)	11,612	588,206
2050	1,337	2,649	-	-	3,986	588,206	(3,986)	11,764	595,984
2051	1,337	2,649	-	-	3,986	595,984	(3,986)	11,920	603,917
2052	1,337	2,649	-	-	3,986	603,917	(3,986)	12,078	612,009
2053	1,337	2,649	-	-	3,986	612,009	(3,986)	12,240	620,263
2054	1,552	2,649	-	-	4,202	620,263	(4,202)	12,405	628,467
2055	1,606	2,649	-	-	4,255	628,467	(4,255)	12,569	636,781
2056	1,337	2,649	-	-	3,986	636,781	(3,986)	12,736	645,530
2057	1,337	2,649	-	-	3,986	645,530	(3,986)	12,911	654,455
2058	1,337	2,649	-	-	3,986	654,455	(3,986)	13,089	663,557
2059	1,631	2,198	-	-	3,829	663,557	(3,829)	13,271	673,000
2060	2,325	-	-	-	2,325	673,000	(2,325)	13,460	684,135
2061	1,989	-	-	-	1,989	684,135	(1,989)	13,683	695,828
2062	1,989	-	-	-	1,989	695,828	(1,989)	13,917	707,755
2063	1,989	-	-	-	1,989	707,755	(1,989)	14,155	719,921
2064	1,989	-	-	-	1,989	719,921	(1,989)	14,398	732,330
2065	1,989	-	-	-	1,989	732,330	(1,989)	14,647	744,987
2066	1,989	-	-	-	1,989	744,987	(1,989)	14,900	757,897
2067	1,989	-	-	-	1,989	757,897	(1,989)	15,158	771,065
2068	1,989	-	-	-	1,989	771,065	(1,989)	15,421	784,497
2069	1,989	-	-	-	1,989	784,497	(1,989)	15,690	798,198
2070	1,989	-	-	-	1,989	798,198	(1,989)	15,964	812,172
2071	1,989	-	-	-	1,989	812,172	(1,989)	16,243	826,426
2072	1,989	-	-	-	1,989	826,426	(1,989)	16,529	840,965
2073	11,664	-	-	-	11,664	840,965	(11,664)	16,819	846,121
2074	24,632	-	-	-	24,632	846,121	(24,632)	16,922	838,411
2075	59,071	-	-	139	59,210	838,411	(59,210)	16,768	795,969
2076	71,010	-	-	304	71,314	795,969	(71,314)	15,919	740,574
2077	89,410	19	-	229	89,659	740,574	(89,659)	14,811	665,727
2078	76,337	3,681	4,693	552	85,262	665,727	(85,262)	13,315	593,779
2079	43,350	-	21,010	15	64,374	593,779	(64,374)	11,876	541,280
2080	3,647	-	1,830	-	5,477	541,280	(5,477)	10,826	546,629
<b>Total</b>	<b>483,976</b>	<b>178,886</b>	<b>27,532</b>	<b>1,239</b>	<b>691,633</b>				

<sup>1</sup> 2021 NDT withdrawal includes \$15,833 of expenses that were not reimbursed during prior periods

# Enclosure 1

## Duane Arnold Energy Center

### 2022 Annual Decommissioning and Spent Fuel Management Funding Status Report

ATTACHMENT C-2  
CIPCO (20% Share)  
License Termination (50.82(a)(8)(v))  
Estimates in 2021 Dollars (Thousands) / Balance with 2% Real Rate of Return

CIPCO Ownership / Balance      20%      \$      88,398  
Annual Fund Earnings                      2.0%

Year	CIPCO 20% Share of Costs Eligible from Decom Trust						
	License Termination	ISFSI D&D	Total	A	B	C	= A + B + C
				Beginning of Year Balance	Withdrawals	Annual NDT Earnings	End of Year NDT Balance
2022 <sup>(2)</sup>	3,442	-	3,442	88,398	(3,605)	1,768	86,561
2023	1,103	-	1,103	86,561	(1,103)	1,731	87,189
2024	3,215	-	3,215	87,189	(3,215)	1,744	85,718
2025	1,210	-	1,210	85,718	(1,210)	1,714	86,223
2026	475	-	475	86,223	(475)	1,724	87,473
2027	394	-	394	87,473	(394)	1,749	88,828
2028	394	-	394	88,828	(394)	1,777	90,210
2029	394	-	394	90,210	(394)	1,804	91,620
2030	407	-	407	91,620	(407)	1,832	93,045
2031	382	-	382	93,045	(382)	1,861	94,524
2032	382	-	382	94,524	(382)	1,890	96,033
2033	382	-	382	96,033	(382)	1,921	97,572
2034	382	-	382	97,572	(382)	1,951	99,141
2035	382	-	382	99,141	(382)	1,983	100,742
2036	382	-	382	100,742	(382)	2,015	102,375
2037	382	-	382	102,375	(382)	2,047	104,040
2038	382	-	382	104,040	(382)	2,081	105,739
2039	382	-	382	105,739	(382)	2,115	107,472
2040	520	-	520	107,472	(520)	2,149	109,101
2041	382	-	382	109,101	(382)	2,182	110,901
2042	382	-	382	110,901	(382)	2,218	112,737
2043	382	-	382	112,737	(382)	2,255	114,610
2044	382	-	382	114,610	(382)	2,292	116,520
2045	382	-	382	116,520	(382)	2,330	118,468
2046	382	-	382	118,468	(382)	2,369	120,456
2047	382	-	382	120,456	(382)	2,409	122,483
2048	382	-	382	122,483	(382)	2,450	124,550
2049	382	-	382	124,550	(382)	2,491	126,659
2050	382	-	382	126,659	(382)	2,533	128,811
2051	382	-	382	128,811	(382)	2,576	131,005
2052	382	-	382	131,005	(382)	2,620	133,243
2053	382	-	382	133,243	(382)	2,665	135,526
2054	444	-	444	135,526	(444)	2,711	137,793
2055	459	-	459	137,793	(459)	2,756	140,090
2056	382	-	382	140,090	(382)	2,802	142,509
2057	382	-	382	142,509	(382)	2,850	144,978
2058	382	-	382	144,978	(382)	2,900	147,495
2059	466	-	466	147,495	(466)	2,950	149,979
2060	664	-	664	149,979	(664)	3,000	152,314
2061	568	-	568	152,314	(568)	3,046	154,792
2062	568	-	568	154,792	(568)	3,096	157,320
2063	568	-	568	157,320	(568)	3,146	159,898
2064	568	-	568	159,898	(568)	3,198	162,527
2065	568	-	568	162,527	(568)	3,251	165,209
2066	568	-	568	165,209	(568)	3,304	167,945
2067	568	-	568	167,945	(568)	3,359	170,736
2068	568	-	568	170,736	(568)	3,415	173,582
2069	568	-	568	173,582	(568)	3,472	176,485
2070	568	-	568	176,485	(568)	3,530	179,446
2071	568	-	568	179,446	(568)	3,589	182,467
2072	568	-	568	182,467	(568)	3,649	185,548
2073	3,332	-	3,332	185,548	(3,332)	3,711	185,926
2074	7,038	-	7,038	185,926	(7,038)	3,719	182,607
2075	16,877	40	16,917	182,607	(16,917)	3,652	169,342
2076	20,289	87	20,375	169,342	(20,375)	3,387	152,353
2077	25,546	65	25,611	152,353	(25,611)	3,047	129,789
2078	21,811	158	21,969	129,789	(21,969)	2,596	110,417
2079	12,386	4	12,390	110,417	(12,390)	2,208	100,235
2080	1,042	-	1,042	100,235	(1,042)	2,005	101,198
<b>Total</b>	<b>138,279</b>	<b>354</b>	<b>138,633</b>				

<sup>2</sup> 2022 NDT withdrawal includes \$163 of expenses that were not reimbursed during prior periods

**Enclosure 1**  
**Duane Arnold Energy Center**  
**2022 Annual Decommissioning and Spent Fuel Management Funding Status Report**

ATTACHMENT C-3  
 Corn Belt (10% Share)  
 License Termination (50.82(a)(8)(v))  
 Estimates in 2021 Dollars (Thousands) / Balance with 2% Real Rate of Return

CB Ownership / Balance                      10%                      \$                      46,171  
 Annual Fund Earnings                      2.0%

Year	Corn Belt 10% Share of Costs Eligible from Decom Trust						
	License Termination	ISFSI D&D	Total	A	B	C	= A + B + C
				Beginning of Year Balance	Withdrawals	Annual NDT Earnings	End of Year NDT Balance
2022 <sup>(3)</sup>	1,721	-	1,721	46,171	(1,937)	923	45,158
2023	551	-	551	45,158	(551)	903	45,510
2024	1,607	-	1,607	45,510	(1,607)	910	44,813
2025	605	-	605	44,813	(605)	896	45,104
2026	237	-	237	45,104	(237)	902	45,769
2027	197	-	197	45,769	(197)	915	46,487
2028	197	-	197	46,487	(197)	930	47,220
2029	197	-	197	47,220	(197)	944	47,967
2030	203	-	203	47,967	(203)	959	48,723
2031	191	-	191	48,723	(191)	974	49,506
2032	191	-	191	49,506	(191)	990	50,305
2033	191	-	191	50,305	(191)	1,006	51,120
2034	191	-	191	51,120	(191)	1,022	51,952
2035	191	-	191	51,952	(191)	1,039	52,800
2036	191	-	191	52,800	(191)	1,056	53,665
2037	191	-	191	53,665	(191)	1,073	54,547
2038	191	-	191	54,547	(191)	1,091	55,447
2039	191	-	191	55,447	(191)	1,109	56,365
2040	260	-	260	56,365	(260)	1,127	57,232
2041	191	-	191	57,232	(191)	1,145	58,186
2042	191	-	191	58,186	(191)	1,164	59,159
2043	191	-	191	59,159	(191)	1,183	60,151
2044	191	-	191	60,151	(191)	1,203	61,163
2045	191	-	191	61,163	(191)	1,223	62,195
2046	191	-	191	62,195	(191)	1,244	63,248
2047	191	-	191	63,248	(191)	1,265	64,322
2048	191	-	191	64,322	(191)	1,286	65,417
2049	191	-	191	65,417	(191)	1,308	66,535
2050	191	-	191	66,535	(191)	1,331	67,674
2051	191	-	191	67,674	(191)	1,353	68,837
2052	191	-	191	68,837	(191)	1,377	70,023
2053	191	-	191	70,023	(191)	1,400	71,232
2054	222	-	222	71,232	(222)	1,425	72,435
2055	229	-	229	72,435	(229)	1,449	73,654
2056	191	-	191	73,654	(191)	1,473	74,936
2057	191	-	191	74,936	(191)	1,499	76,244
2058	191	-	191	76,244	(191)	1,525	77,578
2059	233	-	233	77,578	(233)	1,552	78,896
2060	332	-	332	78,896	(332)	1,578	80,142
2061	284	-	284	80,142	(284)	1,603	81,461
2062	284	-	284	81,461	(284)	1,629	82,806
2063	284	-	284	82,806	(284)	1,656	84,178
2064	284	-	284	84,178	(284)	1,684	85,577
2065	284	-	284	85,577	(284)	1,712	87,004
2066	284	-	284	87,004	(284)	1,740	88,460
2067	284	-	284	88,460	(284)	1,769	89,945
2068	284	-	284	89,945	(284)	1,799	91,460
2069	284	-	284	91,460	(284)	1,829	93,005
2070	284	-	284	93,005	(284)	1,860	94,581
2071	284	-	284	94,581	(284)	1,892	96,188
2072	284	-	284	96,188	(284)	1,924	97,828
2073	1,666	-	1,666	97,828	(1,666)	1,957	98,118
2074	3,519	-	3,519	98,118	(3,519)	1,962	96,562
2075	8,439	20	8,459	96,562	(8,459)	1,931	90,034
2076	10,144	43	10,188	90,034	(10,188)	1,801	81,647
2077	12,773	33	12,806	81,647	(12,806)	1,633	70,474
2078	10,905	79	10,984	70,474	(10,984)	1,409	60,900
2079	6,193	2	6,195	60,900	(6,195)	1,218	55,923
2080	521	-	521	55,923	(521)	1,118	56,520
<b>Total</b>	<b>69,139</b>	<b>177</b>	<b>69,316</b>				

<sup>3</sup> 2022 NDT withdrawal includes \$215 of expenses that were not reimbursed during prior periods

**Enclosure 1**  
**Duane Arnold Energy Center**  
**2022 Annual Decommissioning and Spent Fuel Management Funding Status Report**

ATTACHMENT D  
Duane Arnold Energy Center  
2021 Decommissioning Cost Actual Expenses (100% Share)  
(dollars in thousands)

Decommissioning Expense	2021 Actual
<b>LT1 Safstor Planning Total</b>	<b>9</b>
<b>LT2 Transition Following Shutdown Total</b>	<b>14,991</b>
Utility Staff - Payroll/Labor	7,864
Payroll - Other (Benefits, Severance, Retention, Workers Comp, etc.)	1,759
Reactor Disassembly/LPRM Tool & Service	2,670
Materials and Supplies	404
Energy	371
Licenses, Permits & Fees	347
Other	1,575
<b>LT3 SAFSTOR Preparation Delay During Spent Fuel Pool Operations</b>	<b>6,766</b>
Utility Staff - Payroll/Labor	4,291
Payroll - Other (Benefits, Severance, Retention, Workers Comp, etc.)	517
Energy	463
Licenses, Permits & Fees	217
Other	1,278
<b>LT4 Completion of SAFSTOR Preparations</b>	<b>123</b>
Materials and Supplies	118
Other	5
<b>License Termination Total</b>	<b>21,889</b>
<b>Spent Fuel Planning (SF1) Total</b>	<b>39</b>
Contractors & Professional Services	36
Other	3
<b>Spent Fuel Cooling During Zirc Fire Window (SF2)</b>	<b>10,833</b>
Spent Fuel Pool Operations Staff	4,018
Site Security	4,005
Payroll - Other (Benefits, Severance, Retention, Workers Comp, etc.)	829
Licenses, Permits & Fees	398
Nuclear Property and Liability Insurance	272
Materials, Services, & Supplies	195
Other	1,115
<b>Spent Fuel Transfer to Dry Storage (SF3)</b>	<b>35,281</b>
Contractors & Professional Services	26,967
Site Security	3,382
Payroll - Other (Benefits, Severance, Retention, Workers Comp, etc.)	2,652
Nuclear Property and Liability Insurance	393
Energy	273
Licenses, Permits & Fees	257
Materials & Supplies	121
Other	1,236
<b>Spent Fuel Total</b>	<b>46,153</b>
<b>GF1 Clean Building Demolition During Decommissioning</b>	<b>238</b>
Contractors & Professional Services	229
Other	9
<b>Greenfield Total</b>	<b>238</b>
<b>Total Decommissioning Expense</b>	<b>68,280</b>