

December 1, 2009

NG-09-0860 10 CFR 50.75 10 CFR 50.54

U.S. Nuclear Regulatory Commission Attn: Document Control Desk Washington, D.C. 20555-0001

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

Response to Request for Additional Information to Support the Review of the Duane Arnold Energy Center Spent Fuel Management Program and Preliminary Decommissioning Cost Estimate

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Reference: Request from NRC to NextEra Energy Duane Arnold, dated November 9, 2009, "Request for Additional Information to Support the Review of the Duane Arnold Energy Center Spent Fuel Management Program and Preliminary Decommissioning Cost Estimate" (ADAMS Accession No. ML093140630)

By the reference above the Nuclear Regulatory Commission Staff (NRC) issued a Request for Additional Information (RAI) related to the Irradiated Fuel Management Program, and the Preliminary Decommissioning Cost Estimate provided by NextEra Energy Duane Arnold. NextEra Energy's responses to the Staff's RAI are provided in the Enclosures to this letter.

Should you have questions regarding NextEra Energy's responses to the Staff's RAI, please contact Licensing Manager, Steve Catron at (319) 851-7234.

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Christopher R. Costanzo V Vice President, Duane Arnold Energy Center NextEra Energy Duane Arnold, LLC

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NG-09-0860 December 1, 2009 Page 2 of 2

Enclosures (4)

cc: Administrator, Region III, USNRC Project Manager, DAEC, USNRC Resident Inspector, DAEC, USNRC

NG-09-0860 December 1, 2009 Page 1 of 8

## **ENCLOSURE 1**

## Response to Request for Additional Information to Support the Review of the Duane Arnold Energy Center Spent Fuel Management Program and Preliminary Decommissioning Cost Estimate

## Irradiated Fuel Management Program

## **RAI No. 1: Financial Assurance**

In order for a licensee to assume an earnings credit on its decommissioning funds over a DECON or SAFESTOR period that is greater than a 2 percent real rate of return, the licensee must be able to recover total decommissioning costs through rates set by itself or a regulatory authority, 10 CFR 50.75(e)(ii)(A). Such rates must be subject to adjustment upwards during the SAFESTOR period following the permanent shutdown of the plant if the actual rate of growth of the decommissioning funds does not meet or exceed the approved higher real earnings rate. Please provide a statement and supporting references or documents that demonstrate DAEC will be able to receive upward adjustments from ratepayers to its decommissioning funds, if necessary, following permanent shutdown. FPL stated that the Corn Belt Power Cooperative (CBPC) is a 10% owner and Central Iowa Cooperative (CIPCO) is a 20% owner and both have an exempt status under IRS ruling. CIPCO and CBPC both claim a higher rate of return although both CIPCO and CBPC rates are not authorized by any state or federal agency but are adjusted annually by their Board of Directors. DAEC needs to provide the documented basis, as identified above, to claim a higher real rate of return (RRR) greater than 2 percent as well as recognizing that the remaining 70 percent ownership would be subject to the 2 percent RRR.

## NextEra's Response to RAI No. 1

CIPCO is a public corporation incorporated under Chapter 499 Iowa Code (2009). CIPCO has the authority and is required to fix, establish, and collect adequate rates and other charges for electrical energy or services sold or furnished by it. CIPCO is accordingly authorized to establish its own rates and other charges through which it can recover its cost of service. CIPCO is governed by a 13 member Board of Directors that are elected by the CIPCO members. The Board of Directors is the rate making authority for CIPCO. CIPCO rates are not regulated by any state or federal authority. In a Board Resolution dated October 27, 2009, the CIPCO Board of Directors resolved that the rates and other charges for electrical energy services and the decommissioning fund be established assuming a real rate of return on the decommissioning fund of four percent. A copy of the CIPCO Board resolution is attached as Enclosure 2.

Corn Belt Power Cooperative is a public corporation incorporated under Chapter 499 lowa Code (2009). The Cooperative has the authority and is required to fix, establish, and collect adequate rates and other charges for electrical energy or services sold or furnished by it. Corn Belt is governed by an 11 member Board of Directors who are elected by its members. The Corn Belt Board of Directors is accordingly authorized to establish its own-rates and other charges through which it can recover its cost of service and is the rate making authority for the Cooperative. The Cooperative's rates are not regulated by any state or federal authority. In a Board Resolution dated October 30, 2009, the Corn Belt Board of Directors resolved that the rates and other charges for electrical energy services and the decommissioning fund be established assuming a real rate of return on the decommissioning fund of three percent. A copy of the Corn Belt Board Resolution is attached as Enclosure 3.

NextEra Energy recognizes that the remaining 70 percent ownership share would be subject to the two percent RRR.

## RAI No. 2: Duane Arnold Energy Center Annual Costs

The Staff requests that DAEC provide a break down of the estimated \$4.1 million annual cost and identify the supporting activities that support spent fuel management for DECON option identified for the period 2026-2052, and the \$5.3 million annual cost for a similar period for SAFESTOR.

## NextEra's Response to RAI No. 2

In the case of Scenario 1 (DECON), the maintenance and operation of the ISFSI continues well past the completion of decommissioning and site restoration. The costs during 2026-2052 are in such a period, Energy*Solutions*' Dry Period (Pd) 4 – Dry Storage Only, so that the costs correspond to the total spent fuel management costs during that period. The Scenario 1 Annual Cash Flow Table, on page 1 of 6 in Appendix E, shows an annual cost of \$4.103M in the Spent Fuel category from 2026 to 2052 for Scenario 1 (DECON). Costs for Dry Pd 4 are also shown in the Appendix D Detailed Cost Tables, on page 13 of 82. A breakdown of cost components is listed on this page, with the total equal to \$113.846M. When annualized over the 27.74 year duration of this period, this equates to \$4.103M per year.

In the case of Scenario 2 (SAFSTOR), the maintenance and operation of the ISFSI occurs in combination with the SAFSTOR dormancy surveillance and maintenance of the power block structures. Therefore, the annual cost of \$5.3 M is a combined total of license termination (10 CFR 50.75(c)) and spent fuel management (10 CFR 50.54(bb)) costs. The Scenario 2 Annual Cash Flow Table, on page 2 of 6 in Appendix E, shows an annual cost of \$1.448M per year in the License Termination category and an annual cost of \$3.949M in the Spent Fuel category, which total to \$5.397M in combined costs. These costs also span the years from 2026 to 2052, and correspond to both Energy*Solutions*' SAFSTOR Pd 6 – Dormancy With Dry Storage (License Termination) and Dry Pd 3, Dry Storage During Dormancy (Spent Fuel).

The license termination costs of SAFSTOR Pd 6 are also shown in the Appendix D Detailed Cost Tables, on page 25 of 82. A breakdown of cost components is listed on this page, with the total equal to \$41.845M. When annualized over the 28.89 year duration of this period, this equates to \$1.448M per year. The concurrent spent fuel management costs of Dry Pd 3 are also shown in the Appendix D Detailed Cost Tables, on page 37 of 82. A breakdown of cost components is listed on this page, with the total equal to \$135.952M. When annualized over the 34.42 year duration of this period, this cost equates to \$3.949M per year.

As apparent from the Appendix D Detailed Cost Tables referenced above, staff costs represent a significant portion of costs incurred during any of these periods. Tables 6-2 and 6-6 in the report show the Scenario 1 (DECON) and Scenario 2 (SAFSTOR) Utility staff levels, respectively. Bases for property tax, NRC 171.15 fees, insurance, and supplies and services costs are given in Section 5.0 of the report, items 26 - 30. The basis for Utility staff salaries is given in Section 5.0, item 33.

## RAI No. 3: Section 3. Cost Considerations

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This submittal indicated that DAEC has an existing independent spent fuel storage installation (ISFSI) with sufficient capacity to accommodate the spent fuel in the reactor building pool at shutdown. What is storage capacity of the ISFSI? At the time of shutdown, how many modules will be stored on the ISFSI? How many additional multipurpose canisters will be loaded with fuel from the pool at the time of shutdown?

## NextEra's Response to RAI No. 3

The DAEC ISFSI is designed to be constructed in three phases with a combined total storage capacity of 80 NUHOMS-61BT dry storage canisters. Each NUHOMS 61BT has the capacity for 61 Boiling Water Reactor (BWR) spent fuel assemblies.

The reinforced concrete pad (basemat) is designed to be installed in three phases; Phase 1 is for 30 storage systems, Phase 2 is for an additional 30 storage systems, and Phase 3 is for a final 20 systems. The Phase 1 basemat was operational in 2003. The Phase 2 and 3 basemats are planned for future installation.

Appendix B of the report contains the spent fuel schedule for Scenario 1 (DECON) and 2 (SAFSTOR). Looking at the column "No Dry Modules," it can be seen that 20 modules will be stored in the ISFSI by shutdown (2014). 33 additional modules will be required after shutdown, during the years 2017 – 2019. This corresponds to 1,972 fuel assemblies transferred from the pool to dry storage during these years.

# RAI No. 4: Cost Estimate and Funding for Spent Fuel Management based on DECON Methodology

In the submittal, FPL estimated the cost for Spent Fuel Cooling and transfer of the fuel to dry storage is approximately \$129.7 million over approximately 5 years, and

identified several supporting activities. For each identified activity, provide a cost breakout associated with each activity.

## NextEra's Response to RAI No. 4:

Table 6-1 of the report, on page 36 of 58, includes Scenario 1 (DECON) Dry Pd 2 -Spent Fuel Cooling and Transfer to Dry Storage, with a duration of 4.99 years and a total cost of \$129.7M. The costs for Dry Pd 2 are also shown in the Appendix D Detailed Cost Tables, on page 11 of 82. A breakdown of cost components is listed on this page, each of which is further broken out into Labor, Equipment, Disposal, Other, and Contingency costs. A discussion of contingency costs and their assignment is included in the report on pages 16 and 17 of 58.

Table 6-5 of the report, on page 42 of 58, includes Scenario 2 (SAFSTOR) Dry Pd 2 – Spent Fuel Cooling and Transfer to Dry Storage, with a duration of 4.99 years and a total cost of \$129.7M. The costs for Dry Pd 2 are also shown in the Appendix D Detailed Cost Tables, on page 36 of 82. A breakdown of cost components is listed on this page, each of which is further broken out into Labor, Equipment, Disposal, Other, and Contingency costs.

Costs for Purchase of Dry Storage Modules are related to both the costs per module and the number of modules required. The cost bases for dry storage canisters and Horizontal Storage Modules (HSMs) are given in Section 5.0 of the report, item 23. Appendix B contains the spent fuel schedule for Scenarios 1 and 2, which gives the number of dry storage modules purchased following shutdown (33) for either scenario.

Staff costs are related to both staffing levels and salaries. Table 6-2 in the report shows Scenario 1 (DECON) staff levels. Table 6-6 in the report shows Scenario 2 (SAFSTOR) staff levels. The basis for utility staff salaries is given in Section 5.0, item 33. Bases for property tax, NRC 171.15 fees, insurance, and supplies and services costs are given in Section 5.0 of the report, items 26 – 30.

## Preliminary Decommissioning Cost Estimate

## RAI No. 5: Section 1.0 Executive Summary

In the submittal, FPL identified 4 possible decommissioning scenarios for DAEC, and provided the total cost for each option, including spent fuel costs and greenfield costs. Later in the cost study, FPL identified its annual costs associated with each option. However, FPL did not provide an analysis using the decommissioning funds to demonstrate that adequate funds are available to address these options. FPL needs to provide the supporting analysis for each of the identified alternatives or, at a minimum, for the selected option based on the trust fund balance as of December 31, 2008.

NG-09-0860 December 1, 2009 Page 5 of 8

## NextEra's Response to RAI No. 5

As stated in NextEra Energy's November 5, 2009 "Response to Requests for Additional Information," concerning decommissioning funding assurance (Reference 1), NextEra Energy has chosen to rely upon its preliminary site-specific estimate of the cost to decommission the DAEC using the SAFSTOR method, which complies with 10 CFR 50.75. NextEra Energy has not made a final determination of the actual decommissioning approach for DAEC, but the SAFSTOR option has been selected for the purpose of demonstrating the adequacy of DAEC's decommissioning funding. NextEra Energy may choose a different decommissioning option in the future, recognizing that the chosen option must meet NRC requirements for decommissioning funding. Specifically, renewal of the DAEC operating license may lead NextEra Energy to change its planned decommissioning methods for funding assurance purposes. NextEra Energy filed a license renewal application for DAEC on September 30, 2008 (Reference 2).

Pursuant to 10 CFR 50.75(e)(1)(i), "A licensee that has prepaid funds based on a site specific estimate under § 50.75(b)(1) of this section may take credit for projected earnings on the prepaid decommissioning trust funds, using up to a 2 percent annual real rate of return from the time of future funds' collection through the projected decommissioning period, provided that the site-specific estimate is based on a period of safe storage that is specifically described in the estimate." Thus, a site-specific cost estimate may be used for demonstrating decommissioning funding assurance, provided that "the NRC-required cost estimate for decommissioning costs as defined in 10 CFR 50.2 is equal to or greater than the amount stated in the formulas in 10 CFR 50.75(c)(1) and (2)." (Section 1.1.1 in References 4 and 5.)

Scenario 2 of the DAEC preliminary decommissioning cost estimate considers the costs to decommission the facility assuming (1) no renewal of the facility operating license, and (2) the use of a SAFSTOR period. NextEra Energy's revised plan for demonstrating decommissioning funding assurance is based upon this scenario - a period of safe storage until 2068, at which time decommissioning activities will commence.

The decommissioning trust funds for DAEC have increased since December 31, 2008. As of September 30, 2009, the total decommissioning trust fund balance including the shares of all three joint owners is approximately \$232,709,000, compared to the December 31, 2008 balance of \$203,073,403. Table 1 of Enclosure 4 utilizes the September 30, 2009 DAEC decommissioning trust fund balance in lieu of the December 31, 2008 balance. Additional information about Table 1 of Enclosure 4 can be found in NextEra Energy's November 5, 2009 "Response to Requests for Additional Information," concerning decommissioning funding assurance (Reference 1). Because this particular RAI requests an analysis based on the balance as of December 31, 2008, NextEra Energy provides that additional analysis in Table 2 of Enclosure 4.

In each Table, the decommissioning trust fund ending balance is escalated each year by the 2% real rate of return allowed pursuant to 10 CFR 50.75(e)(1)(i) for NextEra's share, and by the 3% and 4% real rates of return authorized by Corn Belt's and CIPCO's rate-setting authorities, respectively, as allowed under 10 CFR 50.75(e)(i) and discussed in the answer to RAI No. 1. After the annual escalation, the estimated annual costs are subtracted from the annual total decommissioning fund balance and the planned contributions of CIPCO and Corn Belt are added. The tables include only license termination costs and do not include spent fuel management or non-radiological greenfield costs.

As can be seen from the information provided in Table 1 and 2, the required funding for a SAFSTOR decommissioning, approximately \$579 million, is greater than the current (September 30, 2009) NRC formula amount per 10 CFR 50.75(b) and (c) of \$507,291,842. It is also greater than the December 31, 2008 NRC formula amount of \$503,764,690, which was stated in NextEra Energy's March 27, 2009 Decommissioning Funding Status Report (Reference 3). Therefore, the site-specific SAFSTOR analysis complies with the NRC's position outlined in Section 1.1.1 of Reference 4 that a site-specific cost estimate may only be used if it is equal to or greater than the NRC formula amount.

As explained in Reference 1, this SAFSTOR analysis demonstrates that when the September 30, 2009 decommissioning trust fund balance is escalated at the allowable rates and compared against the annual figures for the SAFSTOR period studied in the DAEC preliminary decommissioning cost estimate, a significant surplus would remain at the end of the decommissioning project. Accordingly, NextEra Energy concludes that no further action is required at this time to demonstrate adequate funding assurance for decommissioning DAEC.

However, as shown in Table 2 of Enclosure 4, when using the fund balance as of December 31, 2008, NextEra Energy's 70% share would project to be under-funded during the last two years of decommissioning by approximately \$24 million. Several points are important to consider with respect to that projected under-funding. First, while NextEra Energy's share would be projected to be under-funded, the total fund including the shares of all three joint owners would be fully funded. This is demonstrated by the total surplus at the end of the decommissioning period in Table 2. Second, NextEra maintains a \$93 million parent guaranty (which was in place on December 31, 2008) to provide additional decommissioning funding assurance of its decommissioning obligations. Finally, as discussed above, gains in the fund during 2009 have eliminated the under-funding that would be projected for NextEra Energy's share based upon its year-end 2008 balance.

As stated in Reference 1, while the \$93 million parent guaranty is no longer necessary to provide partial decommissioning funding assurance, NextEra Energy will maintain the parent guaranty in place until after it receives NRC approval of the revised decommissioning funding plan.

## RAI No. 6: Section 2.1 Study Objective

The submittal focuses on DECON as the preferred option for decommissioning, and Section 2.1 provided detailed discussions on the preferred DECON option as well as 3 other options. The Irradiated Fuel Management Program submittal uses the DECON option as the mechanism for addressing the radiological and spent fuel management costs. FPL needs to confirm which option is the preferred decommissioning option.

## NextEra's Response to RAI No. 6

NextEra has not made a final determination of the actual decommissioning approach for DAEC, but the SAFSTOR option has been selected for the purpose of demonstrating the adequacy of DAEC's decommissioning funding.

## RAI No. 7: Section 3.4 Site Specific Considerations

The submittal did not address why the site specific cost estimate was lower than the minimum amount established by 10 CFR 50.75(a)(1) and since it was lower, the analysis must be based on the higher amount. Since the site specific cost estimate is lower than the formula amount, FPL needs to address, in detail, why the site specific cost is less than the formula amount.

## NextEra's Response to RAI No. 7

As can be seen from the information provided in Tables 1 and 2 of Enclosure 4, the required funding for a SAFSTOR decommissioning, approximately \$579 million, is greater than the current (September 30, 2009) NRC formula amount per 10 CFR 50.75(b) and (c) of \$507,291,842. It is also greater than the December 31, 2008 NRC formula amount of \$503,764,690, which was stated in NextEra Energy's March 27, 2009 Decommissioning Funding Status Report (Reference 3). Therefore, the site-specific SAFSTOR analysis complies with the NRC's position outlined in Section 1.1.1 of Reference 4 that a site-specific cost estimate may only be used if it is equal to or greater than the NRC formula amount.

## **References**

- 1. Letter from M. Nazar to NRC, "Response to Requests for Additional Information," dated November 5, 2009. (ML093130065)
- Letter from R. Anderson to NRC, "Duane Arnold Energy Center Application for Renewed Operating License TSCR-109," dated September 30, 2008. (ML082980480)
- 3. Letter from R. Hughes to NRC, "Decommissioning Funding Status Reports," dated March 27, 2009. (ML090900306)

- 4. Regulatory Guide 1.159 Revision 1, "Assuring the Availability of Funds for Decommissioning Nuclear Reactors," dated October 2003.
- 5. Draft Regulatory Guide-1229, "Assuring the Availability of Funds for Decommissioning Nuclear Reactors," dated June 2009.

## **ENCLOSURE 2**

**CIPCO Board Resolution** 

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### CERTIFICATE

I, Dale Walkup, do hereby certify:

That I am the duly elected, qualified and acting Secretary-Treasurer of CENTRAL IOWA POWER COOPERATIVE (hereinafter called the "Cooperative") and the keeper of its records; that at a regular meeting of the Board of Directors of the Cooperative with a quorum of directors present in person held October 27, 2009, the following resolution was unanimously adopted:

WHEREAS the Board of Directors of CIPCO is required to fix, establish, and collect adequate rates and other charges for electrical energy or services sold or furnished by it, and

WHEREAS for the purpose of establishing rates and charges necessary to recover its cost of service, including the DAEC decommissioning fund, the Board of Directors of CIPCO has assumed a Real Rate of Return on the decommissioning fund of four per cent, and

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF CIPCO that the rates and other charges for electrical energy services and the decommissioning fund be established assuming a Real Rate of Return on the decommissioning fund of four percent.

That said resolution has not been amended, altered, rescinded or modified and is presently in full force and effect.

IN WITNESS WHEREOF, I have executed this certificate and attached a corporate seal of the Cooperative this 27 day of October 2009.

-Treasurer

## **ENCLOSURE 3**

## Corn Belt Board Resolution

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## CORN BELT POWER COOPERATIVE Humboldt, Iowa

## CERTIFICATE

I, Scott Stecher, do hereby certify that I am the duly appointed, elected, qualified and acting Secretary of Corn Belt Power Cooperative and that the following is a true and correct extract of minutes duly adopted by the Board of Directors of Corn Belt Power Cooperative at its meeting held October 30, 2009

WHEREAS, the Board of Directors is required to fix, establish, and collect adequate rates and other charges for electrical energy or services sold or furnished by it; and

WHEREAS, for the purpose of establishing rates and charges necessary to recover its cost of service, including the cost of decommissioning the Duane Arnold Energy Center (DAEC), the Board of Directors has assumed a Real Rate of Return on the DAEC decommissioning trust fund of three percent;

IT IS, THEREFORE, RESOLVED that the rates and other charges for electrical energy services and the DAEC decommissioning trust fund be, and they are hereby, established assuming a Real Rate of Return on the DAEC decommissioning trust fund of three percent.

and that the action taken and/or resolutions adopted as above set out have never been rescinded, altered, amended, modified, or repealed, and are of the date hereof in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and attached the seal of the Cooperative this 30th day of 0ctober , A.D., 2009

(Seal)

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Secretary

## **ENCLOSURE 4**

Tables 1 and 2

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# TABLE 1 Duane Arnold Energy Center Decommissioning Funding Plan Scenario 2: 2014 Shutdown, SAFSTOR Alternative (Thousands of Dollars)

Basis Year 2008 Fund Balance as of 9/30/09: (T	bousands of Dollars)
Next Era	184,620 70% ownership
CIPCO	31,985 20% ownership
Corn Belt	<u>16,104</u> 10% ownership
Total Trust Fund Balance	232,709
Annual Escalation	0%
Annual Earnings - Next Era	2%
Annual Earnings - CIPCO	4%
Annual Earnings - Corn Belt	3%

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Year	50.75 Cost		Next Era Decommissioning Trust Fund Balance escalated at 2% minus 70%	CIPCO Decommissioning Trust Fund Balance escalated at 4% minus 20% of expenses +	Corn Belt Decommissioning Trust Fund Balance escalated at 3% minus 10% of expenses +	Total Decommisioning Trust Fund minus	CIPCO Decommissioning Trust Fund	Corn Belt Decommissioning Trust Fund
2009	50.75 COSt	0%	of expenses	Contributions	Contributions	expenses	Contributions	Contributions
2009			184,620	32,485	16,604	233,709	500	500
2010		-	188,312		17,602	240,699	1,000	50
2011	7,908	7,908	192,079		18,880	248,135	1,000	75
2012	9,100	9,100	190,385		19,656	248,122	1,000	1,00
2013	42,672	42,672	187,822 161,708	38,784 32,801	20,585	247,192	1,000	1,25
2014	42,072	42,672	163,690		18,436	212,946	1,000	1,50
2015	1,789	1,789	165,712	33,756	18,810	216,256		
2010	1,789	1,789	165,712	34,748	19,195	219,655		
2017	1,789	1,789	167,774	36,854	19,592 20,001	223,146		
2010	13,308	13,308	163,959	35,666	19,270	226,732		
2020 -	3,794	3,794	164,582	36,334	19,270	218,895 220,385		
2020	3,794	3,794	165,218	37,029	19,469			
2021	3,794	3,794	165,867	37,029	19,874	221,920		
2023	3,794	3,794	166,528	38.502	20,102	225,502		
2024	3,794	3,794	167,203	39,283	20,102	225,132		
2025	2,036	2,036	169,122	40,448	20,323	230,301		
2026	1,448	1,448	171,491	41,776	21,209	230,301		
2027	1,448	1,448	173,907	43,157	21,203	234,473		
2028	1,448	1,448	176,371	44,594	22,206	243,172		
2029	1,448	1.448	178,885	46.088	22,200	243,172		
2030	1,448	1,448	181,449	47,642	23,265	252,356		
2031	1,448	1,448	184,065	49.258	23,818	257,141		
2032	1,448	1,448	186,732	50,939	23,310	262,059		
2033	1,448	1,448	189,453	52.687	24,975	267,115		
2034	1,448	1,448	192,229	54,505	25,579	272,313		
2035	1,448	1,448	195,060	56,395	26,202	277,657		

#### TABLE 1

#### Duane Arnold Energy Center Decommissioning Funding Plan Scenario 2: 2014 Shutdown, SAFSTOR Alternative (Thousands of Dollars)

Basis Year 2008 Fund Balance as of 9/30/09: (T	housands of Dollars)
Next Era	184,620 70% ownership
CIPCO	31,985 20% ownership
Corn Belt	16,104 10% ownership
Total Trust Fund Balance	232,709
Annual Escalation	0%
Annual Earnings - Next Era	2%
Annual Earnings - CIPCO	4%
Annual Earnings - Corn Belt	3%

A	В	с	D	E	F	G	<u>н</u>	. <u> </u>
		Total Cost	Next Era Decommissioning Trust Fund	CIPCO Decommissioning Trust Fund Balance escalated	Corn Belt Decommissioning Trust Fund Balance escalated at 3%	Total	CIPCO	Corn Belt
	31-	1	Balance escalated	at 4% minus 20%	minus 10% of	Decommisioning	Decommissioning	Decommissioning
Year	50.75 Cost	Escalated at	at 2% minus 70% of expenses	of expenses + Contributions	expenses + Contributions	Trust Fund minus expenses	Trust Fund Contributions	Trust Fund Contributions
2036	1,448	1,448	197.947	58.362	26.843	283,152	Contributions	Contributions
2030	1,448	1,448	200,893		27,503	288,803		
2038	1,448	1,448	200,093	62,533	28,184	294,614		
2039	1,448	1,448	206,961	64,745	28,884	300,591		
2040	1,448	1,448	210,087	67,045	29,606	306,738		
2041	1.448	1,448	213,275		30,349	313,062		
2042	1,448	1,448	216,527	71,925	31.115	319,567		
2043	1,448	1,448	219,844		31,904	326,260		
2044	1,448	1,448	223,227	77,203	32,716	333,147		
2045	1,448	1,448	226,678	80,002	33,553	340,233		
2046	1,448	1,448	230,198	82,912	34,415	347,525		
2047	1,448	1,448	233,788	85,939	35,302	355,030		
2048	1,448	1,448	237,451	89,087	36,216	362,754		
2049	1,448	1,448	241,186		37,158	370,705		
2050	1,448	1,448	244,996		38,128	378,890		
2051	1,448	1,448	248,882	/	39,127	387,317		
2052	1,448	1,448	252,847	102,990	40,156	395,993		
2053	1,448	1,448	256,890		41,216	404,926		
2054	2,184	2,184	260,499		42,234	413,389		
2055	2,303	2,303	264,097	114,621	43,271	421,989		
2056	2,303	2,303	267,767	118,746	44,339	430,851		
2057	2,303	2,303	271,510		45,439	439,983		
2058	2,303	2,303	275,328		46,571	449,395		
2059	2,303	2,303	) 279,222		47,738	459,096		
2060	2,303	2,303	283,195		48,940	469,095		
2061	2,303	2,303	287,247	141,978	50,178	479,402		
2062	2,303	2,303	291,379	147,196	51,453	490,028		

#### TABLE 1 Duane Arnold Energy Center Decommissioning Funding Plan Scenario 2: 2014 Shutdown, SAFSTOR Alternative (Thousands of Dollars)

Basis Year	2008				
Fund Balance	as of 9/30/09: (TI	housands of	Dollars)		
Next Era		184,620	70% ownership		
CIPCO		31,985	20% ownership		
Corn Belt		16,104	10% ownership		
Total Trust Fu	ind Balance	232,709			
Annual Escala	ation	0%			
Annual Earnir	ngs - Next Era	2%			
Annual Earnir	ngs - CIPCO	4%			
Annual Earnin	ngs - Corn Belt	3%			
A	В	сс	D	<u> </u>	F
				CIPCO	Corn Belt

		Total Cost Escalated at		CIPCO Decommissioning Trust Fund Balance escalated at 4% minus 20% of expenses +	Corn Belt Decommissioning Trust Fund Balance escalated at 3% minus 10% of expenses +	Total Decommisioning Trust Fund minus		CIPCO Decommissioning Trust Fund	Corn Belt Decommissioning Trust Fund
Year	50.75 Cost	0%	of expenses	Contributions	Contributions	expenses		Contributions	Contributions
2063	2,303	2,303	295,595	152,623	52,766	500,984	_		
2064	2,303	2,303	299,895	158,268	54,119	512,281			
2065	2,303	2,303	304,280		55,512	523,930			
2066	9,354	9,354	303,818	168,832	56,242	528,893			
2067	14,366	14,366	299,838	172,712	56,493	529,044			
2068	63,862	63,862	261,132	166,849	51,802	479,782			
2069	79,225	79,225	210,897	157,678	45,433	414,008			
2070	96,091	96,091	147,851	144,766	37,187	329,805			
2071	80,953	80,953	94,141	134,366	30,207	258,715			
2072	47,681	47,681	62,647	130,205	26,345	219,198			
2073	18,654	18,654	50,842	131,682	25,270	207,795			
Total	579,397	579,397							

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#### Calculations:

Column C = (B)\*(1+.00)^(current year - 2008) or Column C = Column B

Column D = (Column D (Previous year's fund balance)\* (1+.02)) - (Column C\* 0.70) (70% of current year's decommissioning expenditures)

Column E = (Column E (Previous year's fund balance)\* (1+.04)) - (Column C\* 0.20) (20% of current year's decommissioning expenditures) + Column H (current year's contributions) Column F = (Column F (Previous year's fund balance)\* (1+.03)) - (Column C\* 0.10) (10% of current year's decommissioning expenditures) + Column I (current year's contributions) Column G = Column D + Column E + Column F

#### Table 2 Duane Arnold Energy Center Decommissioning Funding Plan Scenario 2: 2014 Shutdown, SAFSTOR Alternative (Thousands of Dollars)

Basis Year 2008 Fund Balance as of 12/31/08: (	Thousands of Dollars)
Next Era	163,576 70% ownership
CIPCO	26,112 20% ownership
Corn Belt	13,386 10% ownership
Total Trust Fund Balance	203,074
Annual Escalation	0%
Annual Earnings - Next Era	2%
Annual Earnings - CIPCO	4%
Annual Earnings - Corn Belt	3%

_	Α	B	с	D	E	F	G	<u>н</u>	
	Year	50.75 Cost	Total Cost Escalated at		CIPCO Decommissioning Trust Fund Balance escalated at 4% minus 20% of expenses + Contributions	Corn Belt Decommissioning Trust Fund Balance escalated at 3% minus 10% of expenses + Contributions	Total Decommisioning Trust Fund minus expenses	CIPCO Decommissioning Trust Fund Contributions	Corn Belt Decommissioning Trust Fund Contributions
	2009		0,0	163,576	26,612	13,886	204,074	500	500
	2010			166,848		14,803	210,327	1,000	500
	2010		-	170,184		15,997	217,005	1,000	750
- H-	2012	7,908	7,908	168.053	/	16,686	216,213	1,000	1,000
-	2013	9,100	9,100	165,044		17,526	214,484	1,000	1,250
	2014	42.672	42,672	138,474		15.285	179,415	1.000	1,500
	2015	1,789	1.789	139,991	26,324	15,565	181.880		
	2016	1,789	1,789	141,539		15,853	184,411		
	2017	1,789	1,789	143,117	27,743	16,149	187,009		
	2018	1,789	1,789	144,727	28,495	16,455	189,677		
	2019	13,308	13,308	138,306	26,973	15,618	180,897		
	2020	3,794	3,794	138,417	27,293	15,707	181,416		
	2021	3,794	3,794	138,529	27,626	15,799	181,954		
	2022	3,794	3,794	138,644	27,972	15,893	182,509		
	2023	3,794	3,794	138,761		15,991	183,084		
	2024	3,794	3,794	138,880		16,091	183,678		
	2025	2,036	2,036	140,233		16,370	186,050		
	2026	1,448	1,448	142,024	30,336	16,716	189,076		
	2027	1,448	1,448	143,851	31,260	17,073	192,184		
L	2028	1,448	1,448	145,714		17,440	195,375		
L	2029	1,448	1,448	147,615		17,819	198,653		
	2030	1,448	1,448	149,554	34,259	18,209	202,021		
	2031	1,448	1,448	151,531	35,340	18,610	205,481		
	2032	1,448	1,448	153,548	36,464	19,024	209,035		
	2033	1,448	1,448	155,605	////////	19,449	212,687		
	2034	1,448	1,448	157,704		19,888	216,440		
	2035	1,448	1,448	159,844	40,113	20,340	220,297		

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#### Table 2 Duane Arnold Energy Center Decommissioning Funding Plan Scenario 2: 2014 Shutdown, SAFSTOR Alternative (Thousands of Dollars)

Basis Year 2008 Fund Balance as of 12/31/08: (	Thousands of Dollars)
Next Era	163,576 70% ownership
CIPCO	26,112 20% ownership
Corn Belt	13,386 10% ownership
Total Trust Fund Balance	203,074
Annual Escalation	0%
Annual Earnings - Next Era	2%
Annual Earnings - CIPCO	4%
Annual Earnings - Corn Belt	3%

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Α	В	сс	D	<u> </u>	F	G	Н	<u> </u>
		Escalated at	Next Era Decommissioning Trust Fund Balance escalated at 2% minus 70%	CIPCO Decommissioning Trust Fund Balance escalated at 4% minus 20% of expenses +	Corn Belt Decommissioning Trust Fund Balance escalated at 3% minus 10% of expenses +	Total Decommisioning Trust Fund minus	CIPCO Decommissioning Trust Fund	Corn Belt Decommissioning Trust Fund
Year	50.75 Cost	÷. 0%	of expenses	Contributions	Contributions	expenses	Contributions	Contributions
2036	1,448	1,448	162,028	41,428	20,805	224,261		
2037	1,448	1,448	164,255	42,795	21,285	228,334		
2038	1,448	1,448	166,526	44,217	21,779	232,522		
2039	1,448	1,448	168,843	45,696	22,287	236,826		
2040	1,448	1,448	171,206	47,235	22,811	241,252		
2041	1,448	1,448	173,617	48,834	23,350	245,802		
2042	1,448	1,448	176,076	50,498	23,906	250,480		
2043	1,448	1,448	178,583	52,229	24,478	255,290		
2044	1,448	1,448	181,142	54,028	25,068	260,238		
2045	1,448	1,448	183,751	55,900	25,675	265,326		
2046	1,448	1,448	186,412	57,846	26,301	270,559		
2047	1,448	1,448	189,127	59,870	26,945	275,942		
2048	1,448	1,448	191,896		27,609	281,480		
2049	1,448	1,448	194,720		28,292	287,177		
2050	1,448	1,448	197,601	66,442	28,996	293,039		
2051	1,448	1,448	200,539	68,810		299,070		
2052	1,448	1,448	203,536	71,273		305,277		
2053	1,448	1,448	206,594	73,834	31,237	311,665		
2054	2,184	2,184	209,197	76,351	31,956	317,503		
2055	2,303	2,303	211,769	78,944	32,684	323,397		
2056	2,303	2,303	214,392	81,641	33,434	329,467		
2057	2,303	2,303	217,068	84,446	34,207	335,721		
2058	2,303	2,303	219,797	87,363	35,003	342,163		
2059	2,303	2,303	222,581	90,397	35,823	348,801		
2060	2,303	2,303	225,420	93,553	36,667	355,640		
2061	2,303	2,303	228,316	96,834	37,537	362,688		
2062	2,303	2,303	231,271	100,247	38,433	369,950		

#### Table 2 Duane Arnold Energy Center Decommissioning Funding Plan Scenario 2: 2014 Shutdown, SAFSTOR Alternative (Thousands of Dollars)

Basis Year	2008							
Fund Balanc	e as of 12/31/08: (							
Next Era		163,576	70% ownership					
CIPCO		26,112	20% ownership					
Corn Belt		13,386	10% ownership					
Total Trust F	und Balance	203,074	-					
Annual Esca	lation	0%						
Annual Earni	ings - Next Era	2%						
Annual Earni	ings - CIPCO	4%						
Annual Earni	ings - Corn Belt	3%						
	в	с	D	Е	F	G	н	
<u>A</u>	P			<u> </u>	· · · · · · · · · · · · · · · · · · ·	<u> </u>		<u> </u>
				CIPCO	Corn Belt			
ł			Next Era	Decommissioning	Decommissioning			
1			Decommissioning	, J	Trust Fund Balance			
			Trust Fund	Balance escalated	escalated at 3%	Total	CIPCO	Corn Belt
		Total Cost	Balance escalated		minus 10% of	Decommisioning	Decommissioning	Decommissioning
	~	Escalated at		of expenses +	expenses +	Trust Fund minus	Trust Fund	Trust Fund
Year	50.75 Cost	× 0%	of expenses	Contributions	Contributions	· · ·	Contributions	Contributions
2063	2,303	2,303	234,284		39,355	expenses 377,436	Continuations	Contributions
2064	2,303	2,303	237,358		40.306	385,151		
2065	2,303	2,303	240,493		41,285	393,104		
2065	9.354	9,354	238,755		41,588	394.251		
2000	14,366	14,366	233,474	· · · · · · · · · · · · · · · · · · ·	41,399	390,464		
2068	63,862	63,862	193,440		36,255	337,137		
2069	79,225	79,225	141,851		29,420	267,166		
2003	96,091	96,091	77,424		20,693	178,631		
2070	80,953	80,953	22,306		13,219	103,068		
2072	47,681	47,681	(10,625)		8,847	58,931		
2073	18,654	18,654	(23,895)		7,247	42,758		
	10,004		(20,000)		1,271			

## Total Calculations:

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Column D:= (Column D (Previous year's fund balance)\* (1+.02)) - (Column C\* 0.70) (70% of current year's decommissioning expenditures)

Column E = (Column E (Previous year's fund balance)\* (1+.04)) - (Column C\* 0.20) (20% of current year's decommissioning expenditures) + Column H (current year's contributions) Column F = (Column F (Previous year's fund balance)\* (1+.03)) - (Column C\* 0.10) (10% of current year's decommissioning expenditures) + Column I (current year's contributions)

Column G = Column D + Column E + Column F

579,397

579,397