# Plant name: Palo Verde Nuclear Generating Station, Unit 2

**Docket Number:** 

50-529

The minimum financial assurance (MFA) estimate pursuant to 10 CFR 50.75(b) & (c):

\$469,000,000

Did the licensee identify the amount of estimated radiological funds? (Y/N)

The total amount of dollars accumulated at the end of the appropriate year: (see below)

Licensee:	% Owned:	Category:	Amount in Trust Fund:
Arizona Public Service Company (APS)	29.10%	1	\$174,763,000
Salt River Project Agricultural Improvement and Power District (SRP)	17.49%	1	\$77,020,000
El Paso Electric Company (EPE)	15.80%	1	\$51,916,000
Southern California Edison Company (SCE)	15.80%	1	\$256,671,000
Public Service Company of New Mexico (PNM)	10.20%	1	\$53,766,000
Southern California Public Power Authority (SCPPA)	5.91%	1	\$52,638,000
Los Angeles Department of Water and Power (LADWP)	5.70%	1	\$38,261,000

Total Trust Fund Balance \$705,035,000

3 Schedule of the annual amounts remaining to be collected: (provided/none)

Provided

4 Assumptions used in determining rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections: (see below)

		_	_	_	_	_		Post-RAI	
Rate of		Rate(s) of	Real Rate	PUC	Allowed through Decem	RAI	PUC	Allowed	Rates
Return on	Escalation Rate	Other	of Return	Verified Allowed through Decom	Needed	Verified	through	Determined	
Earnings		Factors	of Ketuili	(Y/N)	(Y/N)	(Y/N)	(Y/N)	Decom (Y/N)	(Y/N)
Variable <sup>1</sup>	Variable <sup>1</sup>		Variable <sup>1</sup>	N		Y	Y	N	$N^2$

5 Any contracts upon which the licensee is relying? (Y/N)

N

6 Any modifications to a licensee's method of providing decommissioning funding assurance? (Y/N)

N

Any material changes to trust agreements? (Y/N)

N

If a change has occurred, the reviewer will document on this sheet that a change has occurred and identify the reviewer who will evaluate the change: (see below)

Signature: Michael Purdie and JoAnn Simpson Date: 8/10/2011

Signature: Aaron L. Szabo Date: 8/22/2011

<sup>&</sup>lt;sup>1</sup> Rates provided are considered variable because the rates are not consistent throughout the licensee(s) and/or years of operation.

<sup>&</sup>lt;sup>2</sup> For EPE, year-to-year rates cannot be determined from the submitted information since they are determined by the FERC, the Public Utility Commission of Texas and the New Mexico Public Regulation commission, which have issued various orders and rules related to decommissioning funding, investment criteria, and/or fund operations.

Palo Verde Nuclear Generating Station, Unit 2 Docket Number: Plant name: 50-529

> Day Month: Year: 12 31 2010

**Date of Operation: Termination of Operations: 24 2026** 

BWR/PWR	<u>MWth</u>	<u>1986\$</u>	ECI	Base Lx		<u>Lx</u>	Px	Latest Month Px	Base Px	Fx	Latest Month Fx	Base Fx		<u>Ex</u>		<u>Bx</u>
PWR	3990	\$105,000,000	112.5	2.06	0.65	2.32	1.676	191.4	114.2	3.049	250.0	82.0	0.13	2.253	0.22	12.28

**NRC Minimum: Site Specific:** \$472,584,981 \$578,116,000

	-		Amount of NRC Minimum/Site	
Licensee:	% Owned:	Category	Specific:	Amount in Trust Fund:
Arizona Public Service Company (APS)	29.10%	1	\$168,231,756	\$174,763,000
Salt River Project Agricultural Improvement and Power District (SRP)	17.49%	1	\$101,112,488	\$77,020,000
El Paso Electric Company (EPE)	15.80%	1	\$91,342,328	\$51,916,000
Southern California Edison Company (SCE)	15.80%	1	\$91,342,328	\$256,671,000
Public Service Company of New Mexico (PNM)	10.20%	1	\$58,967,832	\$53,766,000
Southern California Public Power Authority (SCPPA)	5.91%	1	\$34,166,656	\$52,638,000
Los Angeles Department of Water and Power (LADWP)	5.70%	1	\$0	\$38,261,000

Total Fund Balance: \$705,035,000

# Step 1: **Earnings Credit:**

_	Real Rate of Return	Years Left		_
Trust Fund Balance:	per year	in License	Total Earnings:	Does Licensee Pass:
\$705,035,000	2%	15.31	\$954,805,787	YES

# Step 2: Accumulation:

	Value of Annuity per year (amount/See Annuity Sheet)	Real Rate of Return per year	Number of Annual Payments:	Total Annuity:
	See Annuity Sheet	See Annuity Sheet		See Total Step 2
		In an an a		
		Real Rate of Return	Years remaining after	
L	Total Annuity	per year	annuity	Total Step 2:
	See Total Step 2	See Annuity Sheet	N/A	\$159,749,302

	Total Step 1 + Step 2	Does Licensee Pass:
ſ	\$1,114,555,090	VES

#### Step 3: **Decom Period:**

	Real Rate of Return	Decom	Total Earnings for
Total Earnings:	per year	Period:	Decom:
\$1.114.555.090	2%	7	\$82.859.184

Total of Steps 1 thru 3:	Does Licensee Pass:	Shortfall:
\$1.197.414.273	YES	NO

Signature: Michael Purdie and JoAnn Simpson

Date: 8/10/2011 Signature: Aaron L. Szabo Date: 8/22/2011

Plant name: Palo Verde Nuclear Generating Station, Unit 2 Docket Number: 50-529

Date of Operation:Month:DayYear:12312010Termination of Operations:4242026

If licensee is granted greater than 2% RRR

### Step 4: Earnings Credit:

		Real Rate	Years Left		
Owner	Trust Fund Balance:	of Return	in License	Total Earnings:	Does Licensee Pass:
APS	\$174,763,000	2.00%	15.31	\$987,890,389	YES
SRP	\$77,020,000	2.00%			
EPE	\$51,916,000	2.0375%			
SCE	\$256,671,000	2.00%			
PNM	\$53,766,000	4.50%			
SCPPA	\$52,638,000	2.00%			
LADWP	\$38,261,000	2.00%			

# Step 5: Accumulation:

		Real Rate of Return	Number of Annual		_
	Value of Annuity per year	per year	Payments:	Total Annuity:	
	See Annuity Sheet	See Annuity Sheet	0	See Total Step 4	
		_			
_		Real Rate of Return	Years remaining after	1	_
L	Total Annuity	Real Rate of Return per year	Years remaining after annuity	Total Step 5	J
ŀ	Total Annuity See Total Step 4		annuity	Total Step 5 \$167,140,190	-

Total Step 4 + Step 5	Does Licensee Pass:
\$1,155,030,580	YES

# Step 6: Decom Period:

_	Real Rate of Return	Decom	Total Earnings for
Total Earnings:	per year	Period:	Decom:
\$1,155,030,580	2.00%	7	\$85,868,246

Total of Steps 4 thru 6:	Does Licensee Pass:	Shortfall:
\$1,240,898,826	YES	NO

Signature: Michael Purdie and JoAnn Simpson Date: 8/10/2011

Signature: Aaron L. Szabo Date: 8/22/2011 **ANNUITY** 

APS			
Year	Annuity:	Real Rate of Return:	Total Accumulation
2011	\$1,193,213	2%	\$1,615,980
2012	\$1,193,213	2%	\$1,584,295
2013	\$1,193,213	2%	\$1,553,230
2014	\$1,193,213	2%	\$1,522,774
2015	\$1,193,213	2%	\$1,492,916
2016	\$1,193,213	2%	\$1,463,643
2017	\$1,193,213	2%	\$1,434,944
2018	\$1,193,213	2%	\$1,406,808
2019	\$1,193,213	2%	\$1,379,224
2020	\$1,193,213	2%	\$1,352,180
2021	\$1,193,213	2%	\$1,325,667
2022	\$1,193,213	2%	\$1,299,673
2023	\$1,193,213	2%	\$1,274,190
2024	\$1,193,213	2%	\$1,249,205
2025	\$1,193,213	2%	\$1,224,711
2026	\$1,193,213	2%	\$1,200,697
		Total:	\$22,380,138

SRP				
Year	Annuity:	Real Rate of Return:	Total Accumulation	
2011	\$1,988,000	2%	\$2,692,368	
2012	\$2,105,000	2%	\$2,794,924	
2013	\$2,230,000	2%	\$2,902,837	
2014	\$2,362,000	2%	\$3,014,376	
2015	\$2,502,000	2%	\$3,130,435	
2016	\$2,650,000	2%	\$3,250,597	
2017	\$2,807,000	2%	\$3,375,666	
2018	\$2,973,000	2%	\$3,505,192	
2019	\$3,149,000	2%	\$3,639,900	
2020	\$3,335,000	2%	\$3,779,309	
2021	\$3,533,000	2%	\$3,925,184	
2022	\$3,742,000	2%	\$4,075,867	
2023	\$3,963,000	2%	\$4,231,946	
2024	\$4,198,000	2%	\$4,394,994	
2025	\$4,446,000	2%	\$4,563,365	

Total: \$53,276,961

Real Rate of
Return:
Total Accumulation:

EPE			
Year	Annuity:	Real Rate of Return:	Total Accumulation
2011	\$2,642,412	2%	\$3,578,645
2012	\$2,917,665	2%	\$3,869,743
2013	\$3,033,222	2%	\$3,944,125
2014	\$3,153,356	2%	\$4,019,938
2015	\$3,535,811	2%	\$4,419,114
2016	\$3,675,850	2%	\$4,504,056
2017	\$3,821,436	2%	\$4,590,631
2018	\$4,392,538	2%	\$5,173,223
2019	\$4,566,509	2%	\$5,272,661
2020	\$4,747,370	2%	\$5,374,009
2021	\$5,730,719	2%	\$6,359,958
2022	\$5,957,690	2%	\$6,482,207
2023	\$6,193,650	2%	\$6,606,805
2024	\$8,791,549	2%	\$9,194,117
2025	\$9,139,748	2%	\$9,370,843
		Total:	\$82,760,076

Year	Annuity:	Real Rate of Return:	Total Accumulation
2011	\$0	2%	\$0
2012	\$0	2%	\$0
2013	\$0	2%	\$0
2014	\$0	2%	\$0
2015	<b>\$</b> 0	2%	\$0
2016	<b>\$</b> 0	2%	\$0
2017	<b>\$</b> 0	2%	\$0
2018	<b>\$</b> 0	2%	\$0
2019	<b>\$</b> 0	2%	\$0
2020	<b>\$</b> 0	2%	\$0
2021	<b>\$</b> 0	2%	\$0
2022	<b>\$</b> 0	2%	\$0
2023	<b>\$</b> 0	2%	\$0
2024	<b>\$</b> 0	2%	\$0
2025	\$0	2%	\$0
		Total:	<b>\$0</b>

Year	Annuity:	Real Rate of Return:	Total Accumulation
2011	\$1,659,000	2%	\$2,246,800
2012	\$1,659,000	2%	\$2,202,746
2013	\$1,659,000	2%	\$2,159,554
2014	\$1,659,000	2%	\$2,117,210
2015	\$1,659,000	2%	\$2,075,696
2016	\$1,659,000	2%	\$2,034,996
2017	\$1,659,000	2%	\$1,995,094
2018	\$1,659,000	2%	\$1,955,975
2019	\$1,659,000	2%	\$1,917,623
2020	\$1,659,000	2%	\$1,880,022
2021	\$1,659,000	2%	\$1,843,159
2022	\$1,659,000	2%	\$1,807,019
2023	\$1,659,000	2%	\$1,771,587
2024	\$1,659,000	2%	\$1,736,850
2025	\$1,659,000	2%	\$1,702,794
		Total:	\$29,447,125

		<b>SCPPA</b>	
Year	Annuity:	Real Rate of Return:	Total Accumulation
2011	(\$1,298,912)	2%	(\$1,759,130)
2012	(\$1,298,912)	2%	(\$1,724,637)
2013	(\$1,298,912)	2%	(\$1,690,820)
2014	(\$1,298,912)	2%	(\$1,657,667)
2015	(\$1,298,912)	2%	(\$1,625,164)
2016	(\$1,298,912)	2%	(\$1,593,298)
2017	(\$1,298,912)	2%	(\$1,562,057)
2018	(\$1,298,912)	2%	(\$1,531,428)
2019	(\$1,298,912)	2%	(\$1,501,400)
2020	(\$1,298,912)	2%	(\$1,471,961)
2021	(\$1,298,912)	2%	(\$1,443,099)
2022	(\$1,298,912)	2%	(\$1,414,803)
2023	(\$1,298,912)	2%	(\$1,387,062)
2024	(\$1,298,912)	2%	(\$1,359,864)
2025	(\$1,298,912)	2%	(\$1,333,200)
		Total:	(\$23,055,590)

		<b>LADWP</b>	
Year	Annuity:	Real Rate of Return:	Total Accumulation
2011	(\$374,230)	2%	(\$506,823)
2012	(\$374,230)	2%	(\$496,886)
2013	(\$374,230)	2%	(\$487,143)
2014	(\$374,230)	2%	(\$477,591)
2015	(\$374,230)	2%	(\$468,227)
2016	(\$374,230)	2%	(\$459,046)
2017	(\$374,230)	2%	(\$450,045)
2018	(\$374,230)	2%	(\$441,220)
2019	(\$374,230)	2%	(\$432,569)
2020	(\$374,230)	2%	(\$424,087)
2021	(\$374,230)	2%	(\$415,772)
		Total:	(\$5,059,408)

TOTAL: \$159,749,302

If licensee is granted greater than 2% RRR

Year	Annuity:	Real Rate of Return:	Total Accumulation:
2011	\$1,193,213	2.00%	\$1,615,980
2012	\$1,193,213	2.00%	\$1,584,295
2013	\$1,193,213	2.00%	\$1,553,230
2014	\$1,193,213	2.00%	\$1,522,774
2015	\$1,193,213	2.00%	\$1,492,916
2016	\$1,193,213	2.00%	\$1,463,643
2017	\$1,193,213	2.00%	\$1,434,944
2018	\$1,193,213	2.00%	\$1,406,808
2019	\$1,193,213	2.00%	\$1,379,224
2020	\$1,193,213	2.00%	\$1,352,180
2021	\$1,193,213	2.00%	\$1,325,667
2022	\$1,193,213	2.00%	\$1,299,673
2023	\$1,193,213	2.00%	\$1,274,190
2024	\$1,193,213	2.00%	\$1,249,205
2025	\$1,193,213	2.00%	\$1,224,711
2026	\$1,193,213	2.00%	\$1,200,697
		Total:	\$22,380,138

		Total:	\$53,276,961
2025	\$4,446,000	2%	\$4,563,365
2024	\$4,198,000	2%	\$4,394,994
2023	\$3,963,000	2%	\$4,231,946
2022	\$3,742,000	2%	\$4,075,867
2021	\$3,533,000	2%	\$3,925,184
2020	\$3,335,000	2%	\$3,779,309
2019	\$3,149,000	2%	\$3,639,900
2018	\$2,973,000	2%	\$3,505,192
2017	\$2,807,000	2%	\$3,375,666
2016	\$2,650,000	2%	\$3,250,597
2015	\$2,502,000	2%	\$3,130,435
2014	\$2,362,000	2%	\$3,014,376
2013	\$2,230,000	2%	\$2,902,837
2012	\$2,105,000	2%	\$2,794,924
2011	\$1,988,000	2%	\$2,692,368

Year	Annuity:	Real Rate of Return:	Total Accumulation:
2011	\$2,642,412	2.0375%	\$3,598,849
2012	\$2,917,665	2.0375%	\$3,894,383
2013	\$3,033,222	2.0375%	\$3,967,781
2014	\$3,153,356	2.0375%	\$4,042,562
2015	\$3,535,811	2.0375%	\$4,442,351
2016	\$3,675,850	2.0375%	\$4,526,076
2017	\$3,821,436	2.0375%	\$4,611,379
2018	\$4,392,538	2.0375%	\$5,194,694
2019	\$4,566,509	2.0375%	\$5,292,598
2020	\$4,747,370	2.0375%	\$5,392,348
2021	\$5,730,719	2.0375%	\$6,379,316
2022	\$5,957,690	2.0375%	\$6,499,547
2023	\$6,193,650	2.0375%	\$6,622,043
2024	\$8,791,549	2.0375%	\$9,211,937
2025	\$9,139,748	2.0375%	\$9,385,555
		Total:	\$83,061,418

Year	Annuity:	Real Rate of Return:	Total Accumulation:
2011	<b>\$</b> 0	2%	\$0
2012	<b>\$</b> 0	2%	\$0
2013	<b>\$0</b>	2%	\$0
2014	<b>\$0</b>	2%	\$0
2015	<b>\$</b> 0	2%	\$0
2016	<b>\$</b> 0	2%	\$0
2017	<b>\$0</b>	2%	\$0
2018	<b>\$</b> 0	2%	\$0
2019	<b>\$</b> 0	2%	\$0
2020	<b>\$</b> 0	2%	\$0
2021	<b>\$</b> 0	2%	\$0
2022	<b>\$</b> 0	2%	\$0
2023	<b>\$</b> 0	2%	\$0
2024	<b>\$</b> 0	2%	\$0
2025	\$0	2%	\$0
		Total:	<b>\$0</b>

SCE

Year	Annuity:	Real Rate of Return:	Total Accumulation:
2011	\$1,659,000	4.5%	\$3,255,568
2012	\$1,659,000	4.5%	\$3,115,376
2013	\$1,659,000	4.5%	\$2,981,221
2014	\$1,659,000	4.5%	\$2,852,843
2015	\$1,659,000	4.5%	\$2,729,994
2016	\$1,659,000	4.5%	\$2,612,434
2017	\$1,659,000	4.5%	\$2,499,937
2018	\$1,659,000	4.5%	\$2,392,284
2019	\$1,659,000	4.5%	\$2,289,267
2020	\$1,659,000	4.5%	\$2,190,686
2021	\$1,659,000	4.5%	\$2,096,350
2022	\$1,659,000	4.5%	\$2,006,077
2023	\$1,659,000	4.5%	\$1,919,691
2024	\$1,659,000	4.5%	\$1,837,025
2025	\$1,659,000	4.5%	\$1,757,918
		Total:	\$36,536,671

**PNM** 

Year	Annuity:	Real Rate of Return:	Total Accumulation
2011	(\$1,298,912)	2%	(\$1,759,130)
2012	(\$1,298,912)	2%	(\$1,724,637)
2013	(\$1,298,912)	2%	(\$1,690,820)
2014	(\$1,298,912)	2%	(\$1,657,667)
2015	(\$1,298,912)	2%	(\$1,625,164)
2016	(\$1,298,912)	2%	(\$1,593,298)
2017	(\$1,298,912)	2%	(\$1,562,057)
2018	(\$1,298,912)	2%	(\$1,531,428)
2019	(\$1,298,912)	2%	(\$1,501,400)
2020	(\$1,298,912)	2%	(\$1,471,961)
2021	(\$1,298,912)	2%	(\$1,443,099)
2022	(\$1,298,912)	2%	(\$1,414,803)
2023	(\$1,298,912)	2%	(\$1,387,062)
2024	(\$1,298,912)	2%	(\$1,359,864)
2025	(\$1,298,912)	2%	(\$1,333,200)
		Total:	(\$23,055,590)

LADWP						
Year	Annuity:	Real Rate of Return:	Total Accumulation:			
2011	(\$374,230)	2%	(\$506,823)			
2012	(\$374,230)	2%	(\$496,886)			
2013	(\$374,230)	2%	(\$487,143)			
2014	(\$374,230)	2%	(\$477,591)			
2015	(\$374,230)	2%	(\$468,227)			
2016	(\$374,230)	2%	(\$459,046)			
2017	(\$374,230)	2%	(\$450,045)			
2018	(\$374,230)	2%	(\$441,220)			
2019	(\$374,230)	2%	(\$432,569)			
2020	(\$374,230)	2%	(\$424,087)			
2021	(\$374,230)	2%	(\$415,772)			
		Total:	(\$5,059,408)			

TOTAL: \$167,140,190