

**Plant name:** **Harris (Shearon) Nuclear Power Plant**

**Docket Number:** **50-400**

1 The minimum financial assurance (MFA) estimate pursuant to 10 CFR 50.75(b) & (c): \$447.1million  
 Did the licensee identify the amount of estimated radiological funds? (Y/N) Y

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

Licensee:	% Owned:	Category:	Amount in Trust Fund:
Progress Energy Carolinas, Inc.	83.83%	1	\$234,562,613
North Carolina Municipal Power Agency	16.17%	1	\$41,023,543
			Total Trust Fund Balance <b>\$275,586,156</b>

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)

Rate of Return on Earnings	Escalation Rate	Rate(s) of Other Factors	Real Rate of Return	PUC Verified (Y/N)	Allowed through Decom (Y/N)	RAI Needed (Y/N)	Post-RAI		
							PUC Verified (Y/N)	Allowed through Decom (Y/N)	Rates Determined (Y/N)
variable <sup>1</sup>	3.00%		variable <sup>1</sup>	Y	N	N	Y	N	Y

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

7 Any material changes to trust agreements? (Y/N) Y<sup>2</sup>

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)

<sup>1</sup> Rates provided are variable because the rates are not consistent throughout the funds of the licensee

<sup>2</sup> Effective 2/16/2010, Progress Energy Service Company, LLC engaged Watson Wyatt Investment Consulting, Inc., a Tower Watson company as its new investment advisor. Towers Watson Advises Progress Energy on its trust investments including its nuclear decommissioning trusts.

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**Termination of Operations:** Month: 10 Day: 24 Year: 2046

BWR/PWR	MWth	1986\$	ECI	Base Lx		Lx	Px	Latest Month Px	Base Px	Fx	Latest Month Fx	Base Fx		Ex		Bx
PWR	2900	\$100,520,000	112.8	1.98	0.65	2.23	1.676	191.4	114.2	3.049	250.0	82.0	0.13	2.253	0.22	12.28

**NRC Minimum:** \$446,929,043 **Site Specific:**

Licensee:	% Owned:	Category	Amount of NRC Minimum/Site Specific:	Amount in Trust Fund:
Progress Energy Carolinas, Inc.	83.83%	1	\$374,660,617	\$234,562,613
North Carolina Municipal Power Agency	16.17%	1	\$72,268,426	\$41,023,543
			Total Fund Balance:	\$275,586,156

**Step 1:  
Earnings Credit:**

Trust Fund Balance:	Real Rate of Return per year	Years Left in License	Total Earnings:	Does Licensee Pass:
\$275,586,156	2%	35.81	\$560,099,627	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

Total Annuity	Real Rate of Return per year	Years remaining after annuity	Total Step 2:
See Total Step 2	See Annuity Sheet	N/A	\$810,156,818

Total Step 1 + Step 2	Does Licensee Pass:
\$1,370,256,445	YES

**Step 3:  
Decom Period:**

Total Earnings:	Real Rate of Return per year	Decom Period:	Total Earnings for Decom:
\$1,370,256,445	2%	7	\$101,868,747

Total of Steps 1 thru 3:	Does Licensee Pass:	Shortfall:
\$1,472,125,193	YES	NO

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**Date of Operation:** Month: 12 Day: 31 Year: 2010  
**Termination of Operations:** 10 24 2046

If licensee is granted greater than 2% RRR

**Step 4:  
Earnings Credit:**

Type of Fund	Trust Fund Balance:	Real Rate of Return	Years Left in	Total Earnings:	Does Licensee Pass:
North Carolina Qualified Fund	\$142,471,204	3.00%	35.81	\$681,201,121	YES
All Others	\$133,114,952	2.00%			

**Step 5:  
Accumulation:**

Value of Annuity per year	Real Rate of Return per year	Number of Annual Payments:	Total Annuity:	
see annuity sheet	See Annuity Sheet	0	See Total Step 4	
Total Annuity	Real Rate of Return per year	Years remaining after annuity	Total Step 5	
See Total Step 4	See Annuity Sheet	N/A	\$832,926,074	
			Total Step 4 + Step 5	Does Licensee Pass:
			\$1,514,127,194	YES

**Step 6:  
Decom Period:**

Total Earnings:	Real Rate of Return per year	Decom Period:	Total Earnings for Decom:	
\$1,514,127,194	2.00%	7	\$112,564,506	
		Total of Steps 4 thru 6:	Does Licensee Pass:	Shortfall:
		\$1,626,691,701	YES	NO

**ANNUITY**

**Termination of Operations:**            10            24            2046

Year	Annuity:	Real Rate of Return:	Total Accumulation
2011	\$17,538,171	2%	\$35,645,600
2012	\$16,706,579	2%	\$33,289,632
2013	\$16,706,579	2%	\$32,636,894
2014	\$16,706,579	2%	\$31,996,955
2015	\$16,706,579	2%	\$31,369,563
2016	\$16,706,579	2%	\$30,754,474
2017	\$16,706,579	2%	\$30,151,445
2018	\$14,885,194	2%	\$26,337,523
2019	\$14,885,194	2%	\$25,821,101
2020	\$14,885,194	2%	\$25,314,805
2021	\$14,885,194	2%	\$24,818,436
2022	\$14,885,194	2%	\$24,331,800
2023	\$14,885,194	2%	\$23,854,706
2024	\$14,885,194	2%	\$23,386,967
2025	\$14,885,194	2%	\$22,928,399
2026	\$14,885,194	2%	\$22,478,822
2027	\$14,885,194	2%	\$22,038,061
2028	\$14,885,194	2%	\$21,605,942
2029	\$14,885,194	2%	\$21,182,296
2030	\$14,885,194	2%	\$20,766,957
2031	\$14,885,194	2%	\$20,359,762
2032	\$14,885,194	2%	\$19,960,551
2033	\$14,885,194	2%	\$19,569,168
2034	\$14,885,194	2%	\$19,185,458
2035	\$14,885,194	2%	\$18,809,273
2036	\$14,885,194	2%	\$18,440,464
2037	\$14,885,194	2%	\$18,078,886
2038	\$14,885,194	2%	\$17,724,398
2039	\$14,885,194	2%	\$17,376,861
2040	\$14,885,194	2%	\$17,036,138
2041	\$14,885,194	2%	\$16,702,096
2042	\$14,885,194	2%	\$16,374,604
2043	\$14,885,194	2%	\$16,053,533
2044	\$14,885,194	2%	\$15,738,758
2045	\$14,885,194	2%	\$15,430,155
2046	\$12,404,328	2%	\$12,606,335

**Total:    \$810,156,818**

**ANNUITY**

**Termination of Operations:** 10 24 2046

If licensee is granted greater than 2% RRR

Year	Annuity:	Real Rate of Return:	Total Accumulation	Year	Annuity:	Real Rate of Return:	Total Accumulation	Year	Annuity:	Real Rate of Return:	Total Accumulation
<b>North Carolina Qualified</b>				<b>North Carolina NonQualified</b>				<b>South Carolina and Wholesale</b>			
2011	\$8,433,298	3.00%	\$24,309,293	2011	\$4,370,492	2.00%	\$8,882,842	2011	\$2,902,789	2.00%	\$5,899,797
2012	\$8,433,298	3.00%	\$23,601,255	2012	\$4,370,492	2.00%	\$8,708,669	2012	\$2,902,789	2.00%	\$5,784,115
2013	\$8,433,298	3.00%	\$22,913,840	2013	\$4,370,492	2.00%	\$8,537,911	2013	\$2,902,789	2.00%	\$5,670,701
2014	\$8,433,298	3.00%	\$22,246,446	2014	\$4,370,492	2.00%	\$8,370,501	2014	\$2,902,789	2.00%	\$5,559,511
2015	\$8,433,298	3.00%	\$21,598,492	2015	\$4,370,492	2.00%	\$8,206,373	2015	\$2,902,789	2.00%	\$5,450,501
2016	\$8,433,298	3.00%	\$20,969,409	2016	\$4,370,492	2.00%	\$8,045,464	2016	\$2,902,789	2.00%	\$5,343,628
2017	\$8,433,298	3.00%	\$20,358,650	2017	\$4,370,492	2.00%	\$7,887,710	2017	\$2,902,789	2.00%	\$5,238,851
2018	\$8,433,298	3.00%	\$19,765,679	2018	\$3,063,777	2.00%	\$5,420,977	2018	\$2,388,119	2.00%	\$4,225,483
2019	\$8,433,298	3.00%	\$19,189,980	2019	\$3,063,777	2.00%	\$5,314,684	2019	\$2,388,119	2.00%	\$4,142,631
2020	\$8,433,298	3.00%	\$18,631,049	2020	\$3,063,777	2.00%	\$5,210,474	2020	\$2,388,119	2.00%	\$4,061,403
2021	\$8,433,298	3.00%	\$18,088,397	2021	\$3,063,777	2.00%	\$5,108,308	2021	\$2,388,119	2.00%	\$3,981,767
2022	\$8,433,298	3.00%	\$17,561,550	2022	\$3,063,777	2.00%	\$5,008,145	2022	\$2,388,119	2.00%	\$3,903,693
2023	\$8,433,298	3.00%	\$17,050,049	2023	\$3,063,777	2.00%	\$4,909,946	2023	\$2,388,119	2.00%	\$3,827,150
2024	\$8,433,298	3.00%	\$16,553,445	2024	\$3,063,777	2.00%	\$4,813,673	2024	\$2,388,119	2.00%	\$3,752,108
2025	\$8,433,298	3.00%	\$16,071,306	2025	\$3,063,777	2.00%	\$4,719,287	2025	\$2,388,119	2.00%	\$3,678,538
2026	\$8,433,298	3.00%	\$15,603,210	2026	\$3,063,777	2.00%	\$4,626,752	2026	\$2,388,119	2.00%	\$3,606,409
2027		3.00%	\$0	2027	\$11,497,075	2.00%	\$17,021,830	2027	\$2,388,119	2.00%	\$3,535,695
2028		3.00%	\$0	2028	\$11,497,075	2.00%	\$16,688,069	2028	\$2,388,119	2.00%	\$3,466,368
2029		3.00%	\$0	2029	\$11,497,075	2.00%	\$16,360,852	2029	\$2,388,119	2.00%	\$3,398,400
2030		3.00%	\$0	2030	\$11,497,075	2.00%	\$16,040,051	2030	\$2,388,119	2.00%	\$3,331,765
2031		3.00%	\$0	2031	\$11,497,075	2.00%	\$15,725,540	2031	\$2,388,119	2.00%	\$3,266,436
2032		3.00%	\$0	2032	\$11,497,075	2.00%	\$15,417,196	2032	\$2,388,119	2.00%	\$3,202,388
2033		3.00%	\$0	2033	\$11,497,075	2.00%	\$15,114,898	2033	\$2,388,119	2.00%	\$3,139,596
2034		3.00%	\$0	2034	\$11,497,075	2.00%	\$14,818,527	2034	\$2,388,119	2.00%	\$3,078,036
2035		3.00%	\$0	2035	\$11,497,075	2.00%	\$14,527,968	2035	\$2,388,119	2.00%	\$3,017,682
2036		3.00%	\$0	2036	\$11,497,075	2.00%	\$14,243,106	2036	\$2,388,119	2.00%	\$2,958,512
2037		3.00%	\$0	2037	\$11,497,075	2.00%	\$13,963,829	2037	\$2,388,119	2.00%	\$2,900,502
2038		3.00%	\$0	2038	\$11,497,075	2.00%	\$13,690,029	2038	\$2,388,119	2.00%	\$2,843,629
2039		3.00%	\$0	2039	\$11,497,075	2.00%	\$13,421,597	2039	\$2,388,119	2.00%	\$2,787,872
2040		3.00%	\$0	2040	\$11,497,075	2.00%	\$13,158,428	2040	\$2,388,119	2.00%	\$2,733,208
2041		3.00%	\$0	2041	\$11,497,075	2.00%	\$12,900,420	2041	\$2,388,119	2.00%	\$2,679,615
2042		3.00%	\$0	2042	\$11,497,075	2.00%	\$12,647,470	2042	\$2,388,119	2.00%	\$2,627,074
2043		3.00%	\$0	2043	\$11,497,075	2.00%	\$12,399,481	2043	\$2,388,119	2.00%	\$2,575,563
2044		3.00%	\$0	2044	\$11,497,075	2.00%	\$12,156,354	2044	\$2,388,119	2.00%	\$2,525,061
2045		3.00%	\$0	2045	\$11,497,075	2.00%	\$11,917,994	2045	\$2,388,119	2.00%	\$2,475,550
2046		3.00%	\$0	2046	\$9,580,896	2.00%	\$9,736,923	2046	\$1,990,099	2.00%	\$2,022,508
<b>Total:</b>			<b>\$314,512,050</b>	<b>Total:</b>			<b>\$385,722,276</b>	<b>Total:</b>			<b>\$132,691,748</b>
				<b>Total:</b>			<b>\$832,926,074</b>				