

Current Decommissioning Issues
ABZ, Inc.
6/17/2011

1. Funding Target

a. Rule amount

(1) Items not currently considered in rule

(a) Contaminated Concrete (tritium and carbon 14) – generally not a dose issue but an issue with EPA requirements

(b) Contaminated Soil

(c) Fuel storage impact on schedule (current rule assumes virtually no fuel storage after shutdown)

(d) Post 9/11 security requirements

(e) Current staffing models

(f) Taxes

(g) Insurance

(h) Operation with failed fuel (leading to alpha contamination)

(2) End-state

(a) NRC limit nominally 25 mrem/year to average member of critical group AND ALARA – NRC states that ALARA should meet more restrictive EPA limits – can add a significant cost to comply with more restrictive EPA limits

(3) Non-radioactive restoration

(a) Contamination, such as PCB, Asbestos, and lead, can substantially affect the radiological decommissioning schedule

(4) Waste disposal costs

(a) Life of plant agreements

(i) Short term, canceled by either party at any time

(ii) Recent licensee testimony is that life of plant agreements are in general agreement with waste escalation rates of 7 to 7.5 percent per year

(b) Licensing of current disposal facilities

(i) Not licensed to time of decommissioning

(c) Future volume of waste disposal

(i) Significant volumes, may exceed disposer's ability to handle at the same cost as today

(d) Availability of future sites

(i) No current facility for some classes of waste

2. Funding Mechanism

a. Cost Escalation

(1) Historical escalation data exists

(a) NUREG 1307 - NUREG 1307 escalation from 2002 to 2010 was 3.6% to 5.4% (NE Region, vendor and direct, PWR), and 4.8% to 5.4% (NE Region, vendor and direct, BWR)

(b) Site-specific cost estimates

(c) CPI from 2002 to 2008 was 2.3%, and 2.4% from 2002 to 2010

b. Fund Earnings

- (1) Don't currently consider unrealized gains
- (2) Historical data exists for after-tax earnings
 - (a) Using NISA data, after tax gain from 2002 to 2008 was 2.28%
 - (b) Using NISA data, after tax gain from 2002 to 2010 was 4.34%
 - (c) Using Duff & Phelps data, after tax gain from 2005 to 2009 was 1.4%
 - (d) Can also use funding assurance letters to measure after-tax earnings

c. Real growth of funds

- (1) Real growth (measured against NUREG 1307 escalation) ranged from -1.06% to 0.76% for PWR, and -1.07% to -0.45% for BWR from 2002 to 2010 (direct and vendor options)

d. Guarantees

- (1) No mechanism to ensure funding shortfalls are eliminated

NDT Growth Calculations (2002-2010)

NDT growth (after tax, not considering unrealized gains)				NISA					NISA					Duff & Phelps	
				Eff Ann Rate	4.34%				Eff Ann Rate	2.28%				Eff Ann Rate	1.42%
				EOY Bal	Collections				EOY Bal	Collections				EOY Bal	Collections
\$ 24.00	2002 NDT balance from NISA, billions			2002	\$ 24.00				2002	\$ 24.00				2005	\$ 32.06
\$ 4.84	Collections from 2003-2010, billions														
\$ 32.00	2008 NDT balance from NISA, billions		2003	\$ 25.98	\$ 0.90				2003	\$ 25.47	\$ 0.90			2006	\$ 33.09
\$ 39.90	2010 NDT balance from NISA, billions		2004	\$ 27.95	\$ 0.81				2004	\$ 26.87	\$ 0.81			2007	\$ 34.01
			2005	\$ 29.95	\$ 0.75				2005	\$ 28.25	\$ 0.75			2008	\$ 34.96
4.34% annual return since 2002				2006	\$ 31.98	\$ 0.70			2006	\$ 29.61	\$ 0.70			2009	\$ 35.87
			2007	\$ 33.94	\$ 0.55				2007	\$ 30.85	\$ 0.55				\$ 35.868
2.27%	CPI 2002-2008		2008	\$ 35.87	\$ 0.44				2008	\$ 32.00	\$ 0.44				
2.43%	CPI 2002-2010		2009	\$ 37.85	\$ 0.41										
			2010	\$ 39.90	\$ 0.39										
NUREG 1307 Escalation															
5.40%	PWR direct 2002-2010														
3.57%	PWR vendor 2002-2010														
5.40%	BWR direct 2002-2010														
4.79%	BWR vendor 2002-2010														
Real rate of return (excluding unrealized gains)															
PWR	-1.06%	0.76% (range, low to high)													
BWR	-1.07%	-0.45% (range, low to high)													