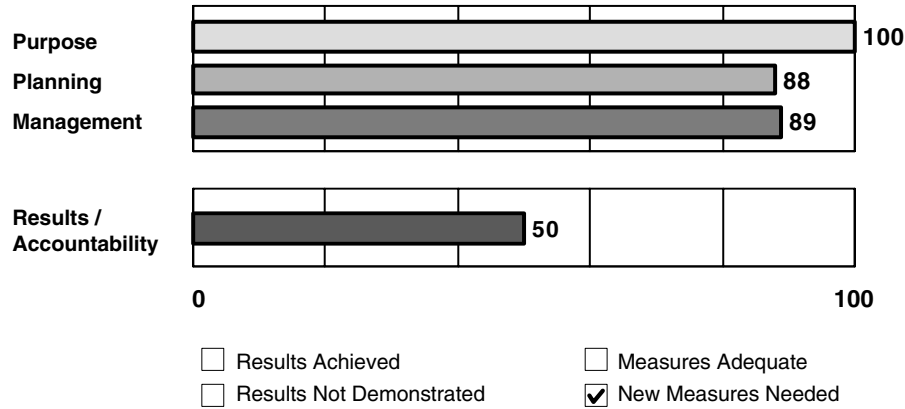


**Program:** *Advanced Fuel Cycle Initiative*

**Agency:** *Department of Energy*

**Bureau:** *Nuclear Energy*



**Key Performance Measures**

**Year Target Actual**

Key Performance Measures	Year	Target	Actual
Long-term Measures: Capability of reducing long-term radiotoxicity of high level nuclear waste	2030	-99%	
	2015	-75%	
Capability of reducing metric tonnes of high level waste produced by commercial nuclear reactors			
Annual Measure: Measures under development			

**Rating:** *Moderately Effective*

**Program Type:** *Research and Development*

**Program Summary:**

The goal of the Advanced Fuel Cycle Initiative (AFCI) is to develop new ways to treat the nuclear waste generated by the operation of commercial nuclear power plants. If DOE's efforts are successful, the new treatment methods could greatly reduce both the quantity and radioactive hazards of nuclear waste. As a result, the cost of disposing of the waste in a remote underground repository could be significantly reduced as well.

1. The assessment indicates that the program purpose is very clear and commonly held by parties committed to an expanded role for nuclear power in the United States and abroad to address long-term energy security, environmental, and economic concerns.
2. Because the program is just beginning, independent evaluations have not yet been conducted; however, the program has been designed with extensive international government, industry, and academic collaboration.
3. Long-term and near-term program goals have yet to be clearly defined in measurable terms.
4. The program budget cannot readily demonstrate potential impacts of funding changes on performance.

In response to these fundings, the Administration will:

1. Provide increased funding in the 2004 Budget for research on advanced technologies for reducing the quantity and toxicity of spent nuclear fuel.
2. Revise long-term and annual measures and prepare a detailed program plan that defines long-term and near-term goals in measurable terms relative to a current baseline.
3. Relate program funding to its goals, plans, and performance measures.
4. Establish plans for periodic independent evaluations to assess program progress and recommend program improvements.

(For more information on this program, please see the Department of Energy chapter in the Budget volume.)

**Program Funding Level (in millions of dollars)**

<u>2002 Actual</u>	<u>2003 Estimate</u>	<u>2004 Estimate</u>
77	18	63