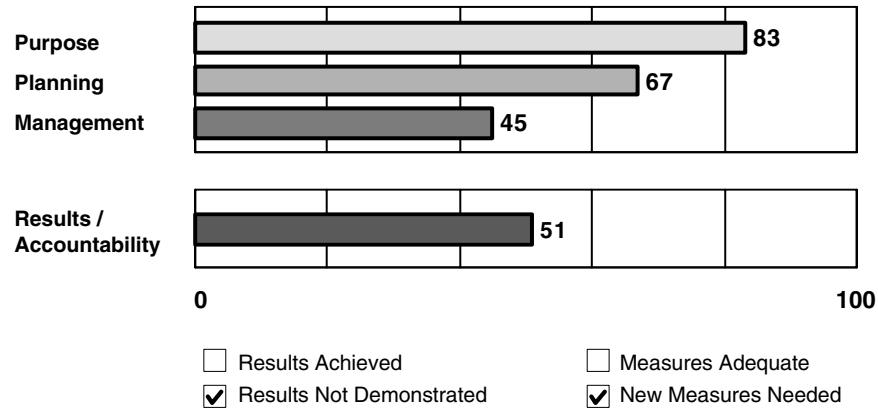


Program: Clean Coal Research Initiative

Agency: Department of Energy

Bureau: Fossil Energy



Key Performance Measures

Year Target Actual

| | | | |
|---|------|--------|---------|
| Long-term Measure: Capital cost (\$/kW) Integrated Gasification Combined Cycle (IGCC) is a new, cleaner and more efficient way to use coal to make electricity, and potentially other products. Unfortunately, construction costs of these plants are still too high, and DOE- funded research is trying to lower them. | 2002 | | \$1400 |
| | 2008 | \$1000 | |
| | | | |
| Long-term Measure: Change in cost of electricity (COE) from sequestration (%) To ensure that coal remains in the energy mix, it may be necessary to have a way to keep CO2 out of the environment (sequestered), but right now the available processes are very expensive, increasing the cost of electricity 30-70%. | 2002 | | + 30-70 |
| | 2010 | +10 | |
| | | | |
| Annual measure: Measures under development | | | |
| | | | |
| | | | |

Rating: Results Not Demonstrated

Program Type: Research and Development

Program Summary:

The Clean Coal Research Initiative encompasses all DOE coal-related research including Advanced Central Power Systems, Carbon Sequestration, Clean Coal Power Demonstrations, and Innovations for Existing Plants. It researches better ways to use coal more cleanly and efficiently.

Key findings, in conjunction with the R&D Investment Criteria, included:

1. These programs have a clear purpose and have demonstrated the ability to articulate potential public benefits;
2. Too high a proportion of funding has been directed at lower-priority activities (commercial-scale "demonstration", which should primarily be the responsibility of private-sector interests). This program had over 50% of its funding targeted toward construction of commercial-size "demonstration" power plants;
3. The program's management scores reflect the lack of efficiency or cost effectiveness measures, inability to adequately document procedures to ensure the quality of non-competitive awards, and lack of a system for tracking earned value (cost, schedule and performance) of projects;
4. The results scores reflect the fact the Department has not established adequate annual performance measures. The PART process, through its public accountability mechanisms, brought new thinking to the process of performance measurement, and improved the Program's metrics to include specific performance targets with expected dates of completion;; and
5. The Department has begun to add rigor to its benefits modelling process. While it still does not consistently use the methods recommended by the National Academy of Sciences, the Department is making progress.

As a result of the above, the Administration will:

1. Improve research effectiveness by reducing funding for demonstrations and placing greater emphasis in the Budget on funding research and development;
2. Consolidate the coal research accounts under one umbrella account to improve management;
3. Improve tracking of cost, schedule and performance of projects, and institute specific program execution efficiency measures; and
4. Continue to support improved benefits modeling and estimation efforts to increase accuracy and consistency between programs.

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

Program Funding Level (in millions of dollars)

| 2002 Actual | 2003 Estimate | 2004 Estimate |
|-------------|---------------|---------------|
| 338 | 316 | 321 |