

DEPARTMENT OF ENERGY  
FY 2002 CONGRESSIONAL BUDGET REQUEST  
CLEAN COAL TECHNOLOGY

PROPOSED APPROPRIATION LANGUAGE

[(Deferral)]

[Of the funds made available under this heading for obligation in prior years, \$67,000,000 shall not be available until October 1, 2001:  
*Provided, That funds* Funds made available in previous appropriations Acts shall be available for any ongoing project regardless of the  
separate request for proposal under which the project was selected.

DEPARTMENT OF ENERGY  
FY 2002 CONGRESSIONAL BUDGET REQUEST

CLEAN COAL TECHNOLOGY

CLEAN COAL TECHNOLOGY (CCT)

I. **Mission Supporting Goals and Objectives:**

The CCT Program is a technology development effort jointly funded by government and industry, in which the most promising advanced coal-based technologies are being demonstrated at a scale large enough to generate the data needed for the marketplace to judge their commercial potential. The Program is consistent with and directly supportive of DOE's energy strategy and the implementing legislation in the Energy Policy Act of 1992 (Public Law 102-486). The Program began in 1985 with the objective of accelerating the pace at which advanced coal-based utilization technologies would enter commercial service. Underlying this objective was the recognition that the vast, and relatively inexpensive, U.S. coal reserves represent a critical energy resource which can provide a significant economic advantage to the Nation. However, these benefits can only be realized when coal can be used in ways which are environmentally responsible, and when advanced technology can achieve significantly higher efficiencies than existing commercial technology.

Although the CCT Program has been ongoing for a number of years, the importance of demonstrating technologies that improve the performance and extend the service of the Nation's reliable coal-based generating capacity is vital for supporting today's economy. The increased need for reliable power generation, and the development of additional innovative technologies over the past decade, have resulted in a new Clean Coal Power Initiative, described elsewhere in the budget, that builds on the success of the CCT Program.

The 38 active projects in the Program have a total cost of \$5,203,707,000, of which DOE has committed \$1,755,832,000. As of December 31, 2000, 25 projects had completed operation and reporting requirements, six projects were in operation or were completing reporting requirements, and seven projects were in design or construction. By law, the DOE cost share is restricted to no more than 50% of total project costs. However, the program has achieved significantly greater leverage of the Federal investment with an overall average non-DOE cost share of 66%.

The technologies being demonstrated in the Program are grouped into four primary market applications: (a) Advanced Electric Power

I. **Mission Supporting Goals and Objectives:** CLEAN COAL TECHNOLOGY (Cont'd)

Generation Systems, which offer the prospect of much higher efficiency coal-based powerplants to meet the energy demand requirements of the Nation; (b) Environmental Control Devices, which offer more attractive ways to reduce emissions from existing powerplants and industrial facilities both domestically and in international markets; (c) Coal Processing for Clean Fuels, which offer coal feedstock conversion to produce a stable fuel of high energy density that can be used to produce steam, electricity, or be used as a transportation fuel; and (d) Industrial Applications, which offer superior ways to competitively manufacture key commodities such as steel in an environmentally responsive manner.

For FY 2000, P.L. 106-113 deferred \$156,000,000 from available funds until FY 2001. In accordance with P.L. 105-277, \$10,000,000 of previously deferred funds were made available in FY 2000. In addition, \$38,000 were rescinded as part of a general reduction.

For FY 2001, P.L. 106-291 deferred \$67,000,000 from available funds until FY 2002. In accordance with P.L. 105-277 and 106-113, \$171,000,000 of previously deferred funds were made available in FY 2001. In addition, \$95,000,000 were transferred to Fossil Energy Research and Development for a Power Plant Improvement Initiative and \$20,000 were rescinded a part of a general reduction.

In accordance with P.L. 105-277 and 106-291, the Department proposes that \$82,000,000 of previously deferred funds be made available in FY 2002.

FY 2002 performance measures include:

- C Initiate construction of the Advanced Pressurized Circulating Fluidized Bed demonstration project.
- C Continue construction of the fixed-bed slagging gasification and fuel cell demonstration project.
- C Initiate operation of the Circulating Atmospheric Fluidized Bed demonstration project.

II. A. **Funding Schedule:**

<u>Activity</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>\$Change</u>	<u>%Change</u>
Cooperative Agreements .....	\$-146,038	\$103,980	\$82,000	\$-21,980	21%
Program Direction .....	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0%</u>

<u>Activity</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>\$Change</u>	<u>%Change</u>
Total, Clean Coal Technology (CCT)	<u>\$-146,038</u>	<u>\$103,980</u>	<u>\$82,000</u>	<u>\$-21,980</u>	<u>21%</u>

II. B. **Laboratory and Facility Funding Schedule:** CLEAN COAL TECHNOLOGY (Cont'd)

	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>\$Change</u>	<u>%Change</u>
All Other .....	<u>\$-146,038</u>	<u>\$103,980</u>	<u>\$82,000</u>	<u>\$-21,980</u>	<u>21%</u>
Total, Clean Coal Technology (CCT) .....	<u>\$-146,038</u>	<u>\$103,980</u>	<u>\$82,000</u>	<u>\$-21,980</u>	<u>21%</u>

III. **Performance Summary:**

<u>Activity</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>
Cooperative Agreements	<p>Overall Program:</p> <p>For FY 2000, P.L. 106-113 deferred \$156,000,000 until FY 2001.</p>	<p>Overall Program:</p> <p>For FY 2001, P.L. 106-291 deferred \$67,000,000 until FY 2002. In addition, \$95,000,000 was transferred to Fossil Energy Research and Development.</p>	<p>Overall Program:</p> <p>Department's proposal For FY 2002 is \$82,000,000.</p>

III. **Performance Summary:** CLEAN COAL TECHNOLOGY (Cont'd)

<u>Activity</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>
	<p>At the end of FY 2000, 25 projects were complete with one additional project completing final reports. Five projects were in operation, three projects in construction, and four projects in design. At the end of FY 2000, two projects had outstanding obligation commitments.</p>	<p>At the end of FY 2001, 30 projects are expected to be completed with one additional project completing final reports. One project is expected to be in operation, three projects in construction, and three projects in design. At the end of FY 2001, one project is expected to have outstanding obligation commitments.</p>	<p>At the end of FY 2002, 31 projects are expected to be completed. Three projects are expected to be in operation, three projects in construction, and one project in design.</p>
<p>Cooperative Agreements (Cont'd)</p>	<p>Adv. Power Gen. Sys:  During FY 2000, McINTOSH 4A, McINTOSH 4B, and KY PIONEER continued design activities. The COAL DIESEL project continued construction activities and JEA initiated construction activities at their risk. TAMPA and SIERRA continued operation. AIDEA completed operation and significant progress towards completing final reports. WABASH submitted final reports.</p>	<p>Adv. Power Gen. Sys:  During FY 2001, McINTOSH 4A and McINTOSH 4B will continue design activities. KY PIONEER (\$74,220,000) is expected to join JEA and COAL DIESEL in the construction phase. TAMPA will complete operation. AIDEA will submit final reports.</p>	<p>Adv. Power Gen. Sys:  During FY 2002, McINTOSH 4B will continue design activities. McINTOSH 4A will initiate construction and KY PIONEER will continue construction activities. JEA and COAL DIESEL will initiate operation.</p>

III. **Performance Summary:** CLEAN COAL TECHNOLOGY (Cont'd)

<u>Activity</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>
	<p>Emission Control Systems:</p> <p>During FY 2000, SCS-WF continued operation. The NOXSO project ended. CHIYODA, MICRO REBURN, and PS-COL submitted final reports.</p>	<p>Emission Control Systems:</p> <p>During FY 2001, SCS-WF will complete operation and reporting requirements.</p>	<p>Emission Control Systems:</p> <p>No activity.</p>
<p>Cooperative Agreements (Cont'd)</p>	<p>Coal Proc. for Clean Fuels:</p> <p>During FY 2000, WESTERN and LPMEOH continued operation. The CUSTOM COALS project ended.</p>	<p>Coal Proc. for Clean Fuels:</p> <p>During FY 2001, LPMEOH will continue operation. WESTERN will complete operation and reporting requirements.</p>	<p>Coal Proc. for Clean Fuels:</p> <p>During FY 2002, LPMEOH will continue operation.</p>
	<p>Industrial Applications:</p> <p>During FY 2000, CPICOR continued design activities. THERMOCHEM initiated construction activities. BETHLEHEM STEEL submitted final reports.</p>	<p>Industrial Applications:</p> <p>During FY 2001, CPICOR will continue design activities.</p>	<p>Industrial Applications:</p> <p>During FY 2002, CPICOR (\$135,662,000) will initiate construction activities.</p>

III. **Performance Summary:** CLEAN COAL TECHNOLOGY (Cont'd)

Activity	FY 2000	FY 2001	FY 2002
	Funding Activities:	Funding Activities:	Funding Activities:
	Continued operation of US/China Center for Energy and Environment.	Continue operation of US/China Center for Energy and Environment.	Continue operation of US/China Center for Energy and Environment.
	Obligations for FY 2000 were \$-33,371,000.	Obligations planned for FY 2001 total \$74,220,000.	Project obligations scheduled for FY 2002 total \$135,662,000.
	\$-146,038	\$103,980	\$82,000
Program Direction	Continued to monitor progress on the active projects, including initiation of independent performance assessments on the projects that completed the operating phase during FY 2000.	Continue to monitor progress on the active projects, including development of independent performance assessments on the projects scheduled to complete the operating phase during FY 2001.	Continue to monitor progress on the active projects, including development of independent performance assessments on the projects scheduled to complete the operating phase during FY 2002.
	Continued to review project status at key decision points to ensure projects are fully satisfying the criteria to proceed to the next major phase of activity.	Continue to review project status at key decision points to ensure projects are fully satisfying the criteria to proceed to the next major phase of activity.	Continue to review project status at key decision points to ensure projects are fully satisfying the criteria to proceed to the next major phase of activity.
	Continued to monitor and evaluate the status of program funding.	Continue to monitor and evaluate the status of program funding.	Continue to monitor and evaluate the status of program funding.

III. **Performance Summary:** CLEAN COAL TECHNOLOGY (Cont'd)

<u>Activity</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>
Program Direction (Cont'd)	<p>Maintained a detailed information base on all project activity and status data, updated monthly, and provided key program inputs to the planning, budgeting, and management activities of the Department.</p>	<p>Maintain a detailed information base on all project activity and status data, update monthly, and provide key program inputs to the planning, budgeting, and management activities of the Department.</p>	<p>Maintain a detailed information base on all project activity and status data, update monthly, and provide key program inputs to the planning, budgeting, and management activities of the Department.</p>
	<p>Continued to compile, evaluate and model project performance and cost data, and publish results. Continued expansion of a CCT Database Compendium.</p>	<p>Continue to compile, evaluate and model project performance and cost data, and publish results. Continue expansion of a CCT Database Compendium.</p>	<p>Continue to compile, evaluate and model project performance and cost data, and publish results. Continue expansion of a CCT Database Compendium.</p>
	<p>Continued technology transfer and outreach activities as the availability of technical and economic performance data increased.</p> <p>Continued technology assessments for SOx and NOx control, advanced power generating systems, coal fuels technology, and industrial applications.</p>	<p>Continue technology transfer and outreach activities as the availability of technical and economic performance data increases.</p> <p>Continue technology assessments for SOx and NOx control, advanced power generating systems, coal fuels technology, and industrial applications.</p>	<p>Continue technology transfer and outreach activities as the availability of technical and economic performance data increases.</p> <p>Continue technology assessments for SOx and NOx control, advanced power generating systems, coal fuels technology, and industrial applications.</p>

III. **Performance Summary**: CLEAN COAL TECHNOLOGY (Cont'd)

<u>Activity</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>
Program Direction (Cont'd)	<p>Subject to direction from the Administration and Congress, continued activities to implement Section 1332 of the Energy Policy Act.</p> <p>Continued feasibility studies and project development activities for a China IGCC project.</p> <p>Continued NEPA compliance activities.</p> <p>Provided funding for Working Capital Fund.</p>	<p>Subject to direction from the Administration and Congress, continue activities to implement Section 1332 of the Energy Policy Act.</p> <p>No activity.</p> <p>Continue NEPA compliance activities.</p> <p>Provide funding for Working Capital Fund.</p>	<p>Subject to direction from the Administration and Congress, continue activities to implement Section 1332 of the Energy Policy Act.</p> <p>No activity.</p> <p>Continue NEPA compliance activities.</p> <p>Provide funding for Working Capital Fund.</p>
Program Direction (Cont'd)	<p>Funding Activity:</p> <p>Obligated approximately \$15,000,000 to finance activities at HQ and NETL (66 FTEs).</p>	<p>Funding Activity:</p> <p>Obligate approximately \$14,000,000 to finance activities at HQ and NETL (66 FTEs).</p>	<p>Funding Activity:</p> <p>Obligate approximately \$13,460,000 to finance activities at HQ and NETL (66 FTEs).</p>
Clean Coal Technology, Total	\$-146,038	\$103,980	\$82,000