

United States Government
Department of Energy
memorandum

DATE: June 6, 1996

REPLY TO
ATTN OF: IG-1

SUBJECT: INFORMATION: Report on "Audit of Department of Energy's Activities Designed to Recover the Taxpayers' Investment in the Clean Coal Technology Program"

TO: The Secretary

BACKGROUND:

In 1985, the Congress directed the Department of Energy to implement a Clean Coal Technology Program. The purpose of this Departmental initiative is to successfully demonstrate a new generation of advanced coal-based technologies. As a part of the program, the Department established a goal to recover an amount up to the taxpayers' investment in each successfully commercialized clean coal technology project. The objectives of the audit were to determine whether clean coal recoupment practices are achieving the Department's goal of recovering the taxpayers' investment in successfully commercialized projects and the impact of these practices on future Departmental recoupment efforts.

DISCUSSION:

As of December 31, 1995, the clean coal program included 42 projects with repayment agreements predicated on the successful commercialization of demonstrated technologies. The Department's cost share for these projects was approximately \$2.3 billion. A detailed analysis of six clean coal projects revealed that recoupment decisions made by the Department limited its ability to recover the taxpayers' investment. These decisions exempted foreign sales, excluded some domestic sales on certain projects, and lowered the repayment rate on some sales. As a result, the Department may not recoup an estimated \$133.7 million of the taxpayers' \$151 million investment in these six projects and may limit its opportunity to recover future investments in other energy technology programs. An analysis and justification of recoupment decisions would help ensure that the Department is balancing overall program goals of the clean coal program with their recoupment goal. Analysis and justification of recoupment decisions would also facilitate implementation of future Departmental technology transfer programs. These programs are required by the Energy Policy Act of 1992 to model their recoupment procedures after those of the Clean Coal Technology Program.

Formal financial policies and procedures also had not been

established to track, account for, and verify the accuracy of moneys due and collected from industry participants. Repayment policies and procedures would help ensure that the Department collects moneys from successfully commercialized clean coal projects.

The Deputy Assistant Secretary for Coal Technology, the Deputy Controller, and the Directors, Pittsburgh and Morgantown Energy Technology Centers, agreed with the report's recommendations. However, the Deputy Assistant Secretary cautioned that the greatest payback to the nation from the program will not be in the form of repayment of Federal cost-sharing, but rather from general contributions to a clean environment and economic prosperity (e.g., sales of equipment and jobs creation). Part II of this report provides details on the audit findings and recommendations, and Part III includes detailed management and auditor comments

(Signed)

John C. Layton
Inspector General

Attachment

cc: Deputy Secretary
Under Secretary

U.S. DEPARTMENT OF ENERGY
OFFICE OF INSPECTOR GENERAL

AUDIT OF DEPARTMENT OF ENERGY'S
ACTIVITIES DESIGNED TO RECOVER THE TAXPAYERS' INVESTMENT
IN THE CLEAN COAL TECHNOLOGY PROGRAM

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U.S. DEPARTMENT OF ENERGY
OFFICE OF INSPECTOR GENERAL
OFFICE OF AUDIT SERVICES

AUDIT OF DEPARTMENT OF ENERGY'S
ACTIVITIES DESIGNED TO RECOVER THE TAXPAYERS' INVESTMENT
IN THE CLEAN COAL TECHNOLOGY PROGRAM

Audit Report Number: DOE/IG-0391

SUMMARY

The Congress in 1985 directed the Department of Energy to implement a Clean Coal Technology Program. The purpose of the program is to successfully demonstrate a new generation of advanced coal-based technologies and stimulate the movement of the most promising into the domestic and international marketplace. As part of this program, a goal was established to recover an amount up to the taxpayers' investment in successfully commercialized projects.

The clean coal program is the first major initiative by the Department without a legislative requirement to recover the taxpayers' investment in demonstrated technologies. As of December 31, 1995, the clean coal program included 42 projects with repayment agreements predicated on the successful commercialization of demonstrated technologies. The Department's cost share for these projects is approximately \$2.3 billion while industry contributed about \$3.7 billion. Our audit objectives were to determine whether clean coal recoupment practices are achieving the Department's goal of recovering the taxpayers' investment in successfully commercialized projects, and the impact of these practices on future Departmental recoupment efforts.

A detailed analysis of six projects revealed that recoupment decisions made by the Department limited its ability to recover the taxpayers' investment in clean coal projects. The decisions that were incorporated into repayment agreements exempted foreign sales, excluded some domestic sales on certain projects, and lowered the repayment rate on some sales. As a result of these decisions, the Department may not recoup an estimated \$133.7 million of the taxpayers' \$151 million investment in six projects and may limit its opportunity to recover future investments in other energy technology programs. A review of the financial controls over the repayment process also disclosed that the Department had not established formal policies and procedures to handle repayments due from sponsors.

To strengthen the recoupment process, we recommend that the Department formally analyze and justify any recoupment

decision in future recoupment efforts that limits its ability to recover the taxpayers' investment in successfully commercialized technologies, and establish and implement financial policies and procedures to ensure that sponsor repayments are timely, accurate, and complete. Management in responding to the report concurred with the recommendations.

_____ (Signed) _____
Office of Inspector General

PART I

APPROACH AND OVERVIEW

INTRODUCTION

In 1985, the Congress directed the Department of Energy to implement a Clean Coal Technology (CCT) Program. The purpose of the program is to successfully demonstrate a new generation of advanced coal-based technologies and stimulate the movement of the most promising into the domestic and international marketplace. As a part of this program, the Department, with the support of the Office of Management and Budget, established a goal to recover up to the taxpayers' investment in each successfully commercialized clean coal project.

The program is the Department's first major initiative at recoupment without a legislative requirement. As of December 31, 1995, the Department's program included 42 projects for which the Department's cost share was approximately \$2.3 billion. In 1992, the Energy Policy Act required the Department to model repayment procedures for several of the Act's innovative technology transfer programs after those used in the clean coal program. Our objectives were to determine whether clean coal recoupment practices are achieving the Department's goal of recovering the taxpayers' investment in successfully commercialized projects and the impact of these practices on future Departmental recoupment efforts.

SCOPE AND METHODOLOGY

The audit included an examination of the clean coal recoupment practices for 16 of the 42 clean coal projects. The 16 projects, with an estimated cost of \$735 million, had completed or nearly completed the technology demonstration phase. The Department's cost share for these projects totaled \$314 million. A detailed analysis was conducted on six of these projects where recoupment decisions affected the ability of the Department to recover the taxpayers' investment. The estimated cost of these projects totaled \$339 million, and the Department's cost share was \$151

million. In addition to our review of the six projects, the audit included an examination of other energy program recoupment requirements and whether the Department analyzed the economic impact of its clean coal recoupment decisions. Audit work was conducted from May 1995 through January 1996 at Department Headquarters, the Pittsburgh and Morgantown Energy Technology Centers, and at selected CCT sponsor sites.

Discussions were held with Headquarters' clean coal officials and project managers at the Pittsburgh and Morgantown Energy Technology Centers to determine (1) the status and accomplishments of each CCT project, (2) what controls were established to account for and track project technology sales and repayments, and (3) what mechanism existed to ensure the accuracy and timeliness of repayments. These discussions were also used to obtain an understanding of the repayment agreements and to identify any changes in recoupment provisions. In addition, interviews were conducted with clean coal project sponsors to obtain their opinions regarding the commercial viability of demonstrated technologies. We also interviewed Ohio Coal Development Office officials to obtain their views, opinions, and philosophy relating to recoupment since they co-funded a number of the Department's clean coal projects and are attempting to recover their investment. Finally, the ability of the Department to meet the Energy Policy Act of 1992 recoupment requirements was evaluated using the Department's recoupment practices under the CCT Program.

Repayment provisions and subsequent changes to repayment provisions were analyzed to determine their effect on the ability of the Department to successfully implement its clean coal recoupment goal. Our analysis employed three methodologies. First, we determined what portion of the Department's investment was at risk through the exemption of foreign sales. Second, the impact of excluding some domestic sales was determined by calculating the value of exempted domestic sales and applying the appropriate repayment rate. Third, the impact of lowering the repayment rate was determined by applying alternative repayment rates to domestic sales.

The audit was performed in accordance with generally accepted Government auditing standards for performance audits, which included tests of internal controls and compliance with laws and regulations to the extent necessary to satisfy the objectives of the audit. We placed only limited reliance on computer-generated data during this audit, and thus, did not test the reliability of that data. Because our review of internal controls was limited, it would not necessarily have disclosed all internal control and compliance deficiencies that may have existed.

An exit conference was held on May 22, 1996, with the representatives of the Office of Coal Technology.

BACKGROUND

The CCT Program is a Government and industry cost-shared partnership implemented by the Department to demonstrate a new generation of advanced coal-based technologies and move promising technologies into the marketplace. The emphasis to commercialize these technologies reflects the strategic importance of coal to the U.S. economy and the commitment to sound environmental policies. Clean coal technology has helped ensure that coal will continue to serve U.S. energy interests, enhance opportunities for economic growth and employment, and aid in meeting national and international commitments for a clean and healthy environment. The CCT Program also plays a major role in ensuring that the U.S. leads the world in developing, applying, and exporting sustainable, clean, and economically competitive energy technologies.

The program began in 1985 and was expanded in 1987 to meet the recommendations of the United States and Canadian Special Envoys on Acid Rain. The industry contribution of about \$3.7 billion was financed through sponsors as well as other corporate partners. Under the program, the Department may not finance more than 50 percent of the total costs of any single project and may only share in project cost growth up to 25 percent of the originally negotiated Government share.

The total cost of the 42 clean coal projects will approximate \$6 billion. The Department's share for the current or completed projects is about \$2.3 billion. These projects were selected through a series of rounds (Rounds I through V) of competitive solicitations over an 8-year period (1986-1993). As of December 31, 1995, 10 projects were completed, 9 had completed operational testing, 7 were in operation, 5 were under construction, and 11 were being designed. In addition to these 42 current or completed projects, 1 project was still in the pre-award phase at the time of our review.

The Government's funding commitments and Federal assistance terms are represented in cooperative agreements negotiated for each project. All of the 42 awarded projects contain repayment provisions agreed to by each of the project sponsors. These repayment agreements last 20 years and state that it is the intent of the Government to recoup up to the full amount of the taxpayers' contribution in each project once the technology has been commercialized. As of December 31, 1995, three sponsors repaid the Department \$377,000 of the \$33.4 million taxpayers' investment in their projects.

In 1992, the Energy Policy Act required the Department to model repayment procedures for several of the Act's innovative technology transfer programs after those used in the clean coal program. These included Renewable Energy, Clean Coal, and Environmental Technology Transfer Programs.

In addition, the Act specifically required the Department to re-examine its recoupment policies and establish procedures for its cost-share in other coal demonstration and commercial application projects.

OBSERVATIONS AND CONCLUSIONS

A detailed analysis of six clean coal projects indicated that the Department limited its ability to recover the taxpayers' financial investment through recoupment in successfully commercialized technologies. Decisions were made to (1) exempt foreign sales, (2) exclude some domestic sales, and (3) lower the repayment rate. These decisions were made without the benefit of any economic analysis to determine their impact on the Department's goal of recouping the taxpayers' investment. As a result, the Department may not recoup an estimated \$133.7 million on six projects and may limit its opportunity to recover future investments in other energy technology projects. In this regard, the Energy Policy Act of 1992 directs the Department to model future recoupment procedures (for environmental, renewable energy, and innovative clean coal technology transfer programs) after the Department's clean coal program. Because of the potential impact of clean coal recoupment practices on these future programs, the Department should formally analyze and justify any recoupment decision that limits its ability to recover the taxpayers' investment in successfully commercialized technologies.

Prudent business practice also dictates that mechanisms be established to ensure that repayments due or made by clean coal and other future energy technology program sponsors are tracked, accounted for, and verified. Currently, the Department does not have a formal mechanism in place to achieve this objective. The audit found that the Department needs to establish formal financial policies and procedures over the repayment process. Also, the Pittsburgh and Morgantown Energy Technology Centers need to implement appropriate internal control mechanisms to ensure that sponsors' repayments are timely, accurate, and complete.

Part II of this report provides details on the findings and recommendations relating to the Department's activities designed to recover the taxpayers' investment in its clean coal technology program. Management concurred with the report's recommendations, but cautioned that the greatest payback to the nation will not be in the form of repayment of Federal cost-sharing. The payback will be from general contributions to a clean environment and economic prosperity (e.g., sales of equipment and jobs creation). Their comments are discussed in greater detail in Part III of the report and the Office of Coal Technology's comments are included verbatim in the Appendix to the report.

PART II

FINDINGS AND RECOMMENDATIONS

1. Recovering the Taxpayers' Energy Investment

FINDING

A goal of the Department is to recover up to the taxpayers' investment in successfully commercialized clean coal technologies. However, an analysis of six clean coal technology projects indicated that the Department limited its opportunity to recover the taxpayers' clean coal investment by (1) exempting foreign sales, (2) excluding some domestic sales on certain projects, and (3) lowering the repayment rate. The Department changed the recoupment provisions of its repayment agreements in an effort to respond to sponsors' complaints but did not analyze or justify the economic effect of each decision. As a result of these changes, the Department may not recoup an estimated \$133.7 million of the taxpayers' \$151 million investment in six clean coal technology projects and may limit its opportunity to recover future investments in other energy technology programs.

RECOMMENDATION

We recommend that the Deputy Assistant Secretary for Coal Technology, working with the Office of Environmental Management and the Office of Energy Efficiency and Renewable Energy, formally analyze and justify any recoupment decision in future recoupment efforts that limits the Department's ability to recover the taxpayers' investment in successfully commercialized technologies.

MANAGEMENT REACTION

Management concurred with the recommendation.

DETAILS OF FINDING

THE DEPARTMENT'S RECOUPMENT GOAL

The Department's policy is to recover "up to" the amount of the taxpayers' investment in each successfully commercialized clean coal project. This policy was included in all of the clean coal solicitations and in each repayment agreement. Most of the solicitations included language similar to the following:

"It is the policy of the DOE to recover an amount up to (i.e., not to exceed) the Government's actual contribution to the Project. Repayment will derive from those Projects which are successful and achieve commercial application... The Government's right to recover its contribution shall continue until either the Government has recouped its contribution or 20

years have elapsed from the effective date of the Repayment Agreement..."

CLEAN COAL RECOUPMENT PRACTICES

An analysis of six completed or nearly completed clean coal projects indicated that the Department limited its opportunity to recover the taxpayers' investment. Actions taken by the Department included:

- * exempting foreign sales,
- * excluding some domestic sales on certain projects, and
- * lowering the repayment rate.

These actions were implemented as a part of the clean coal solicitation process. Under the Round I solicitation, repayment was derived from revenue generated from plant operations beyond the demonstration phase and/or the commercial sale, lease, manufacture, licensing, or use of the technology. In Round II, repayment was limited to the potential revenues from the future commercialization of the demonstrated technology. For Round III, repayment was limited to U.S. sales only, while the repayment rate was adjusted from 2 to 0.5 percent of equipment sales. In addition, other sales were exempted from recoupment at the discretion of the Department's negotiating team. The recoupment provisions for Round IV and V were identical to those in Round III.

Provided below is a description of the changes that were made to clean coal repayment agreements.

Foreign Sales Exempted

The Department limited its opportunity to recover an estimated \$120.3 million in four clean coal projects through the exemption of foreign sales. A clean coal official believed that the rising price of fuels competing with coal, the expectations of more stringent air pollution controls, and forecasts of the increasing need for new electric generation capacity would push demonstrated clean coal technologies into the domestic marketplace. However, a 1994 National Coal Council report, sponsored by the Department, concluded that an expansion of the foreign market was favorable. This was supported by a project sponsor that forecast domestic and foreign sales for its technology. The sponsor's forecast for foreign sales was approximately 1 1/2 times larger than its forecast for domestic sales. Another reason why Departmental officials excluded foreign sales from the recoupment process was that they believed that a mechanism could not be established to verify sales outside of the United States. However, further discussions with officials indicated that the Department had not established a mechanism to verify either foreign or domestic sales. The absence of a verification process is discussed further in Finding 2 of this report.

Some Domestic Sales Excluded

The Department also exempted some domestic sales from its repayment agreements. As a consequence, an opportunity was missed to recover an estimated \$12.7 million on two projects. The exclusions exempted \$2.5 billion in sales on one project that could have resulted in a repayment of \$12.5 million, and \$200 million in sales made on the other project during the demonstration period that could have resulted in repayment of \$200,000.

A clean coal official on the first project stated that sales were not included as a part of the repayment agreement because the Department was not initially involved in the project, and its technology was developed without any Department funding. However, the Department invested over \$17 million to demonstrate this technology, and this demonstration was instrumental in the successful testing and commercialization of the technology.

On the second project, the Department contributed \$63.9 million but did not include a repayment provision for sales made during the demonstration period. A clean coal official stated that these sales were excluded from the repayment agreement because the Department did not believe that sales of the technology would occur prior to completion of the demonstration phase. However, the project demonstration phase lasted 3 years, and some successful test results were available prior to the end of the demonstration period. As a result, the market recognized the benefits associated with the technology, and an order for the technology was placed.

Repayment Rate Lowered

The Department also decreased the repayment rate on sales of demonstrated technologies. The repayment rate for sales decreased from 2 percent of gross revenues in Round II to 0.5 percent of gross revenues for Rounds III through V. As a result of these actions, the Department lost an opportunity to recoup an estimated \$700,000 on one project.

The Ohio Coal Development Office (OCDO), a state agency, and the Electric Power Research Institute (EPRI), a utility association, participated in the aforementioned project with the Department. Each party negotiated repayment agreements with the sponsor based on the successful commercialization of the technology. Based on forecasted sales of the technology, the Department can expect to recover 4.7 percent of the taxpayers' original investment, while OCDO and EPRI can expect to recoup 41.3 percent and 9.5 percent of their respective investments. According to a clean coal official, the Department's repayment rate was decreased (from 2 to 0.5 percent of gross revenues) to bring it more in line with current business practices. Headquarters' officials could not provide documentation supporting the 0.5 percent rate as being the current business rate used on projects of this type. An industry clean coal project official indicated that the repayment rate of 0.5 percent was too low and

stated that it should have been between 1 and 5 percent depending on the technology's commercial potential.

COMMERCIAL VIABILITY VERSUS RECOUPMENT

Changes to recoupment provisions were made through the solicitation process and were made in part to address the concerns of clean coal project sponsors. However, an economic analysis was not performed to determine the effect of the changes on the Department's goal to recover the taxpayers' investment in clean coal technologies. The concerns of Department officials were ensuring that the clean coal technologies were commercialized, improving the timeliness of formalizing the cooperative agreements, and responding to other industry concerns about the recoupment provisions to ensure the industry's participation in the clean coal program.

Management officials believed that their recoupment decisions would assist in making the technologies more competitive, lessen delays in the cooperative agreement negotiation process, and maintain industry's interest in the program. However, the General Accounting Office, in a 1991 report, "Improvements Needed in DOE's Clean Coal Technology Program," recommended that the Department analyze the effect that recoupment provisions have had on industry participation in the clean coal program and the likelihood of recovering the Federal investment. As of January 31, 1996, the Department had not taken any action to satisfy the General Accounting Office's concern.

IMPACT ON THE RECOVERY OF THE TAXPAYERS' INVESTMENT

Departmental actions, made without the benefit of an economic analysis, limited the Department's ability to recoup the taxpayers' investment in successfully commercialized clean coal projects. Although the potential may exist that the Department could recover the taxpayers' investment from domestic sales, project managers and project sponsors indicated that the domestic market for clean coal technologies is currently very limited, and unless market conditions change, recoupment from future domestic sales will be negligible. As illustrated in Table 1, the Department limited its opportunity to recover an estimated \$133.7 million of the taxpayers' \$151 million investment in six clean coal technology projects.

Table 1

Potential Dollar Impact of DOE Recoupment Decisions

Decision (in millions)	Potential Dollar Impact
Exempted Foreign Sales	\$120.3
Excluded Some Domestic Sales	12.7
Lowered Repayment Rates	.7

Total

\$133.7

In addition to the six projects examined as a part of this audit, the decision to exempt foreign sales from recoupment has much broader impact when looking at the entire clean coal program. For instance, the foreign sales exemption extends to an additional 19 clean coal projects that will be completed in the future. The Department invested over \$1.4 billion in these 19 projects. The exemption will greatly hinder the Department's goal of recovering the taxpayers' investment in these projects when one considers that 75 percent of the expected worldwide growth in coal use is expected to occur outside the United States. For example, the Department in 1993 reported that the potential clean coal technology market for new facilities and retrofit installations outside the United States for the 1993-2010 period was between \$571 billion and \$870 billion. Repayments from successful commercialization of the 19 projects outside the U.S. could potentially have resulted in the recovery of the taxpayers' investment in these technologies.

In addition, the Energy Policy Act of 1992 requires the recoupment of the taxpayers' investment in other cost shared demonstration and commercial application projects. This Act stipulates that these other projects should model their recoupment procedures, to the extent appropriate, after the Clean Coal Technology Program. Under the Act, \$1.8 billion has been authorized for three technology transfer programs: Environmental, Renewable Energy, and Clean Coal. As of February 1996, funding for these programs had not been appropriated. However, if funding is provided, potential repayments could be significant, and the Department needs to take steps to ensure that any actions that reduce the opportunity to recoup the taxpayers' investment in these programs are justified.

2. Repayment Policies and Procedures

FINDING

Prudent business practice dictates that controls be established to ensure that moneys for which the Government is entitled to are tracked, accounted for, and verified. However, the Morgantown and Pittsburgh Energy Technology Centers had not instituted any mechanism to monitor clean coal project repayments, and the Department had not established any formal recoupment policies and procedures. The Centers were waiting until projects were completed and repayments were made by project sponsors to establish such mechanisms, and the Department did not anticipate a need for such policies and procedures. Without appropriate policies and procedures, the Department's ability to collect moneys due the Federal Government from successfully commercialized clean coal projects may be impaired.

RECOMMENDATIONS

We recommend that the Office of Chief Financial Officer establish financial policies and procedures over Departmental recoupment activities. We also recommend that the Managers of the Energy Technology Centers implement, as quickly as possible, mechanisms to ensure that sponsor repayments are timely, accurate, and complete.

MANAGEMENT REACTION

Management concurred with the finding and recommendations.

DETAILS OF FINDING

ENSURING TIMELY, ACCURATE, AND COMPLETE REPAYMENTS

The clean coal program's recoupment goal is to recover up to the amount of the taxpayers' investment in each clean coal project. In this regard, prudent business practice dictates that the Department have financial policies and procedures in place to ensure that repayments made by clean coal technology sponsors are tracked, accounted for, and verified.

Specific guidance on the internal controls to be established are found in Departmental directives. Department Order 1000.3C states that internal controls should comprise the plans of the organization, methods, and procedures adopted by management to provide reasonable assurance that program objectives are achieved effectively and efficiently and that revenues applicable to the Department's operations are properly recorded and accounted for. The Department's Accounting Handbook further states that procedures to account for cash from its receipt to final disposition must include safeguards necessary to ensure proper control including the receiving, safeguarding, recording, and depositing of cash on a timely basis and for keeping the required records and accounts.

MECHANISMS TO MONITOR CLEAN COAL REPAYMENTS

At the time of our review, the Department had not established a financial policy for recoupment, and the Morgantown and Pittsburgh Energy Technology Centers had not established mechanisms to track, account for, and verify clean coal repayments. A policy and an implementing mechanism are needed to ensure that sales activity and repayment reporting are monitored, repayments are accounted for, and the accuracy and completeness of sales reports and repayments are verified. A review of Departmental accounting policy manuals and orders indicated that a financial policy for the recoupment of the taxpayers' investment in clean coal projects did not exist. A discussion with a Headquarters' official confirmed that a Departmental recoupment policy had not been established.

Tracking Sales Activity and Repayment Reporting

A requirement for sponsor sales activity and repayment reporting was included in all repayment agreements after the Round I solicitation. The project sponsor is required to submit an annual sales activity and repayment report subsequent to the completion of project operations. These reports are to detail any sales of project technology for which the Department would be entitled to repayment.

The Energy Technology Centers, however, had not established a mechanism to track when sales activity and repayment reports were due. Both Centers relied on project sponsors for timely submission of these reports. A review of six projects' records indicated that one annual sales activity and repayment report had never been submitted to the Department. The review also revealed that three reports due on two projects had been submitted any where from 2 to 11 months late. According to the responsible clean coal officials, they did not realize that the reports either were late or had not been received.

Accounting for Repayments

The Department should also implement appropriate accounting procedures over the collection and disposition of repayments. According to the administrative provisions of Public Law 103-138. (Department of Interior and Related Agencies Appropriations Act, 1994), revenues and other moneys received by or for the account of the Department (or otherwise generated by the sale of products in connection with projects of the Department appropriated under this Act) may be retained by the Secretary of Energy. These revenues are available until expended and should be used only for plant construction, operation costs, and payments to cost sharing entities as provided in appropriate cost sharing contracts or agreements. The Office of Inspector General found that the Energy Technology Centers used similar methods when accounting for their repayments. Both Centers correctly transmitted and credited repayments to the Department of Treasury's clean coal appropriation account where the repayments offset the clean coal appropriation. In responding to the draft report, the Office of Chief Financial Officer indicated that additional financial guidance pertinent to the recoupment process was warranted, and that they will develop appropriate financial policies and procedures over Department recoupment efforts for inclusion in the Departmental Accounting Handbook.

Verifying Accuracy and Timeliness of Repayments

The Energy Technology Centers also had not established a control mechanism to verify the accuracy and timeliness of sponsor repayments. Six repayments were received as of December 1995. However, one payment was late by 2 months. The clean coal official responsible for receiving the

repayment stated that he was not aware when the sponsor should have started repaying the Department's investment. The Department needs to develop a mechanism to ensure this and other repayments are timely, accurate, and complete. The Energy Technology Centers should also establish procedures to verify the accuracy of the repayments reported by the sponsors.

REPAYMENT MECHANISM NOT ESTABLISHED

Controls over repayments were discussed with a Headquarters' official. He stated that Departmental financial policy and procedures were not established because recoupment applied only to a single Departmental program, the Clean Coal Technology Program. He also explained that the Department generally does not establish a Departmentwide financial policy for a requirement that is applicable to a single program and left implementation up to the Energy Technology Centers. The Headquarters' official, however, acknowledged that the Energy Policy Act of 1992 requirement to include recoupment in several Departmental programs should have prompted the development of Departmentwide financial policies and procedures.

Officials at the Energy Technology Centers explained that when clean coal program officials selected the first projects in 1986, they realized that it would be several years before any of the projects reached the commercialization stage and recoupment became a reality. These program officials decided to wait until projects were completed and repayments began before implementing a mechanism to track, account for, and verify repayments.

In the fall of 1995, the Energy Technology Centers established a joint process improvement team to develop procedures for handling, tracking, accounting for, and verifying repayments received from clean coal technology projects. According to Morgantown and Pittsburgh officials, the process improvement team was established to respond to this audit's inquiries. These inquiries centered on what mechanisms the Energy Technology Centers had established to track, account for, and verify potential moneys owed by clean coal technology sponsors.

The process improvement team's first meeting was in November 1995, and their final report was issued in April 1996. The report recommends that (1) data from annual sales activity and repayment reports be recorded in the Reports Receipts Tracking database, (2) repayments be processed as an appropriation reimbursement to the Clean Coal Technology Program, and (3) personnel responsible for oversight and auditing ensure that these processes occur.

ASSURANCE THAT REPAYMENTS ARE TIMELY AND ACCURATE

Without appropriate policies and procedures to properly track, account for, and verify repayments, the Department's

ability to collect moneys due the Federal Government from successfully commercialized clean coal projects may be impaired. The need for these policies and procedures is also underscored by the recoupment requirements of other future Departmental programs. The Energy Policy Act has authorized \$1.8 billion for Innovative Coal, Environmental, and the Renewable Energy Technology Transfer Programs. These programs also require the repayment of the taxpayers' investment in successfully commercialized technologies. The lack of policies and procedures reduces the assurance that the Department will recover the taxpayers' investment in successfully commercialized projects.

In addition, the Energy Technology Centers need to ensure implementation of the recommendations of their process improvement team. Implementation should assist the Energy Technology Centers on accurately recouping the taxpayers' investment in the Clean Coal Technology Program. As of December 1995, with over \$377,000 in repayments already received and significant sums potentially due the Department, it is crucial that a system be in place to ensure accurate and complete accounting for all repayments.

PART III

MANAGEMENT AND AUDITOR COMMENTS

The Deputy Assistant Secretary for Coal Technology, the Deputy Controller, and the Directors, Pittsburgh and Morgantown Energy Technology Centers, concurred with the report's three recommendations. However, the Deputy Assistant Secretary cautioned that the greatest payback to the nation from the program will not be in the form of repayment of Federal cost-sharing, but rather from general contributions to a clean environment and economic prosperity (e.g., sales of equipment and jobs creation). His comments in their entirety are included in the Appendix. Management comments and related auditor comments by recommendation follow.

Recommendation 1. Formally analyze and justify any recoupment decision in future recoupment efforts that limits the Department's ability to recover the taxpayers' investment in successfully commercialized technologies.

Management Comments. Management concurred with Recommendation 1. They agreed that the recommendation was worthy of support and implementation. Management added that the recommendation will be accommodated by applying a formal process to record the analysis and justification process used in recoupment decisions.

Auditor Comments. Management's intended effort to document and record the analysis and justification of their recoupment decisions is considered responsive to our recommendation.

Recommendation 2. Establish formal financial policies and procedures over Departmental recoupment activities.

Management Comments. Management concurred with this recommendation and stated that they planned to establish financial policies and procedures by January 31, 1997.

Auditor Comments. Management plans to develop financial policies and procedures over Departmental recoupment activities for inclusion in the DOE Accounting Handbook is considered responsive to our recommendation.

Recommendation 3. Implement as quickly as possible mechanisms to ensure that sponsor repayments are timely, accurate, and complete.

Management Comments. Management concurred with this recommendation and supports both Energy Technology Centers' effort to effectively carry out their responsibilities pertaining to repayment.

Auditor Comments. Management's intention to support both Energy Technology Centers' effort to track, account for, and verify repayments is considered responsive to our recommendation.