

109728



BY THE COMPTROLLER GENERAL

# Report To The Congress

OF THE UNITED STATES

*10/28/79*

## Issues Facing The Future Of Federal Coal Leasing

This report identifies and analyzes a broad range of issues affecting the development and implementation of a sound Federal coal management program--particularly the use of Western coal in meeting America's energy needs.

On June 4, 1979, the Secretary of the Interior announced a new Federal coal program, calling for a resumption of competitive leasing for the first time since a moratorium was imposed in 1971. Leasing is to take place beginning in January 1981. But--as the report points out--many questions remain unanswered, some of which GAO believes need to be resolved before further long-term leasing can take place. Others can be worked out during the early stages of the new leasing program.

GAO believes early consideration and resolution of these issues is needed for a coal program that responds to national needs expeditiously--and in the most effective way.



*005691/109728*



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WASHINGTON, D.C. 20548

B-169124

To the President of the Senate and the  
Speaker of the House of Representatives

This report brings to the attention of the Congress and the Administration issues affecting the development and implementation of a sound Federal coal management program and the use of Federal and non-Federal Western coal in meeting America's energy needs. Its basic purpose is to provide a framework for understanding the broad range of coal leasing issues by identifying and sorting out the more significant questions which face the future of coal on Federal lands.

Copies of this report are being sent to the Director, Office of Management and Budget; the Secretary of the Interior; the Secretary of Energy; and the Attorney General.

A handwritten signature in black ink, reading "Thomas B. Heath".

Comptroller General  
of the United States

D I G E S T

This report brings to the attention of the Congress and the Administration issues which have or may have significant adverse effects on the development and implementation of a sound Federal coal management program and the use of Federal and non-Federal Western coal in meeting America's energy needs. Its basic purpose is to provide a framework for understanding the broad range of coal leasing issues by identifying and sorting out the more significant questions which face the future of coal on Federal lands.

Federal coal leasing issues are important because Federal coal accounts for about 30 percent of total domestic coal reserves and 60 percent of Western coal reserves. In addition, Interior estimates that the Government controls about 20 percent of non-Federal Western coal because many Western coal regions are characterized by intermingled ownership patterns.

These issues are also important because Federal coal is now, and is expected to continue through this century to be, a significant energy supply source. For example, Interior has estimated that existing leases and pending preference right lease applications could have an annual production potential as high as 450 million tons by 1990, a figure equal to about 65 percent of Western coal production and 31 percent of national coal production by 1990, as forecast by the Department of Energy.)

But, GAO and many public and private sector parties are concerned about the effect existing and proposed regulations could have on the responsiveness of the new Federal coal

program in making available--in a socially and environmentally-acceptable manner--sufficient quantities of Federal coal to meet the Nation's energy needs.

FRAMEWORK FOR UNDER-  
STANDING COAL ISSUES

The following six overriding questions--progressing from basic public policy issues to "down to earth" management concerns provide the framework for understanding the broad range of coal leasing issues addressed by this report.

- How should Federal coal leasing goals and policies be balanced with inter-related and often conflicting national environmental, socio-economic, and economic objectives? (See Chapter 3.)
- How well are the two Departments--Energy and Interior--working together in establishing and implementing goals and regulations to "make it all happen"? (See Chapter 4.)
- What, realistically, is the production potential of coal already under lease --in view of the many legal, economic, environmental, and other factors affecting its development? (See Chapter 5.)
- How should Interior better tie together its determinations on the amount of unleased coal available to meet future needs with on-going land use planning and coal exploration programs? (See Chapter 6.)
- How should Interior proceed in identifying, evaluating, and selling specific lease tracts? (See Chapter 7.)
- How can Energy and Interior improve lease management to encourage the timely and orderly development of coal? (See Chapter 8.)

## Balancing Multiple Goals

In recent years, the Congress has enacted various laws governing the basic policy and regulatory framework affecting the leasing and development of Federal coal--e.g., the Federal Coal Leasing Amendments Act of 1976, Federal Land Policy and Management Act of 1976, Surface Mining Control and Reclamation Act of 1977, and the Department of Energy Organization Act. These and other public laws emphasize the multifaceted nature of coal resource management, taking into consideration three interrelated goals--domestic energy development, environmental protection, and socio-economic security--which, at times, may be in conflict but for which a reasoned balance through appropriate trade-offs is the ultimate objective.

A major GAO concern is that a reasonable balance between these goals may not be achieved. Uncertainties about the achievement of this balance is represented by the following issues:

- When coal leasing goals conflict with environmental, socio-economic, and economic goals, how should a trade-off analysis be performed?
- Who should pay the cost of achieving a balance among goals?
- Can a less regulated private sector achieve timely, orderly, and efficient coal development without jeopardizing environmental and social concerns?

As the new Federal coal leasing program is implemented, GAO believes the Administration and the Congress should identify and weigh alternative ways of dealing with these complex issues and their potential consequences on the public and private sectors. Otherwise, short-sighted decisions and actions could evolve, the consequences of which could be unforeseen adverse effects on certain groups--be they industry, environmental, consumer, or other--

and on the availability of Federal coal to meet energy demand.

Split Responsibility Between  
Energy and Interior

Interior has primary responsibility for leasing public coal lands. However, the Department of Energy Organization Act requires Energy to develop certain regulations related to the management of energy resources--also to establish energy production objectives. Because of the split responsibility, the law established a Leasing Liaison Committee to assist in inter-agency coordination.

GAO believes the following issues--stemming from split responsibilities--are ones both the Administration and the Congress ought to monitor closely:

- Will the split responsibility between agencies enhance or impede efforts to develop effective regulations? (Will the Leasing Liaison Committee function as an effective inter-agency coordinating mechanism?)
- Will leasing to meet Government-derived production goals restrict supplies and result in anticompetitive coal markets and supply shortfalls?
- Will production goals be formulated on the basis of flexible methodology and reliable data?

At the present time, there are major uncertainties about how reliable and useful Energy's production goals are, whether such goals will actually be used by Interior in shaping the rate and timing of new leasing, and the effect of all this on the state of competition in coal markets. GAO in a recent report 1/ expressed concern about

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1/"Federal Leasing Policy--Is the Split Responsibility Working?", EMD-79-60, June 4, 1979.

whether the Leasing Liaison Committee can function effectively when the departments are in conflict or when lease management and regulatory policies--e.g., concerning diligent development, competition, and bidding systems--need to be resolved at the department levels.

In recently announcing the new coal management program, the Secretary of the Interior also announced establishment of a new Interior/Energy working group, under the Leasing Liaison Committee, to coordinate Energy's coal production goals with Interior's regional leasing targets. GAO believes this and other top management cooperation are needed to assist in resolving potential conflicts in objectives between the two departments.

#### Coal Already Under Lease

Previous efforts by Interior to resume Federal coal leasing, including the previous leasing program--the Energy Minerals Activity Recommendation System--were widely criticized because the need to resume Federal leasing had not been demonstrated. The District Court in NRDC v. Hughes cited this deficiency as a major defect in the 1975 programmatic environmental impact statement.

GAO believes that a coal leasing program should be designed regardless of whether or not there is a need now for new leasing. In developing the program, Interior should consider all aspects of pre-lease and post-lease sale management functions and market conditions. If this is done, a reliable, efficient, effective, and flexible system should be in place if and when a resumption of coal leasing is necessary. Leasing decisions can then be made in a timely and efficient manner.

The following questions are relevant to the assessment of leased coal tonnage.

- To what extent is the development of existing leases restricted by environmental considerations?

--To what extent does an evaluation of production potential and capacity of existing leases depend on the formation of mining units that could be mined profitably?

--To what extent is the development of existing leases prevented by a lack of transportation networks?

Interior has not made an analysis of existing leases to determine those that have environmental problems, those that are not by themselves or in conjunction with other coal properties logical mining units, or those that are not near transportation facilities.

#### Availability of Unleased Coal

Interior is responsible for evaluating Federal lands to determine how much unleased Federal coal is available and suitable for meeting coal needs. Such evaluations must be tied in with land use planning and coal exploration programs. Three issues surface.

--Should regional coal production goals be considered along with other resource values in developing land use plans?

--Will the designation of areas unsuitable for coal mining be impeded by a lack of information?

--Will Federal coal exploration provide sufficient data for timely analysis of all potential leasing areas?

GAO found that in evaluating alternative land uses--a critical step in coming up with regional land use plans--Interior does not explicitly consider regional coal production goals or other resource needs, which could result in plans that do not adequately assess trade-offs between coal and other resource needs and values. GAO believes that such evaluation--considering demands and values



for all resources--needs to be employed as a regular part of Interior's evaluations of land use alternatives.

In addition, Interior plans to make recommendations on lands determined to be environmentally unsuitable for coal production early in land use planning if sufficient data is available or--if best available data is not sufficient--later in the leasing process when sufficient data is available. Either way, Interior plans to provide an opportunity for public comment on criteria applications. A major uncertainty is whether delays in land use planning and leasing will occur and, if so, whether an alternative planning and leasing mechanism could be developed to reduce delays and risks to acceptable levels.

Regarding coal exploration, GAO believes a long-range plan is needed to provide public and private sector energy, coal leasing, and land use decision-makers with better information for both leasing and land use decisions. Furthermore, a long-range plan could assist the Congress in considering alternative exploration incentives, strategies, and policies. A key issue is whether and, if so, how exploration objectives can be better accomplished through incentives to industry to identify and analyze coal deposits.

Identifying, Evaluating,  
and Selling Lease Tracts

(One of the most important responsibilities Interior has in implementing a new leasing program will be to select, evaluate, and then sell specific tracts which are responsive to the need for Federal coal.) GAO sees many potential obstacles in accomplishing this, including:

--Some means for and agreement on how to go about resolving probable conflicts in exchanging unsuitable leases for suitable ones.

- A question as to whether Interior can and should be authorized to lease certain tracts--such as bypass tracts--non-competitively to reduce administrative costs, save time, and provide more certainty of getting tracts into production.
- Possible high costs of gaining the consent of surface owners for access to certain tracts otherwise ideal for leasing.
- Dis-incentives for industry to enter lease sales and develop Federal coal after it is leased because of uncertainties involving maximum economic recovery and higher minimum royalty requirements.
- Problems in making fair market value determinations and in implementing alternative bidding procedures.
- Finding ways to streamline the process for gaining public participation and resolving differences with State and local governments.

#### Coal Lease Management

If Federal coal is to be developed in an orderly and efficient manner, the Government must formulate clear and reasonable lease management policies which encourage private sector investment and orderly and timely development. GAO zeroed-in particularly on permitting, diligent development, and logical mining unit requirements.

GAO believes the permitting process should be reviewed to determine how it can be redesigned and streamlined to shorten development lead times, cut administrative costs, and reduce paperwork and duplication between Federal and State requirements.

GAO also finds that diligent development requirements need to be re-examined in light of the effect they have on the timely and orderly production of coal and premature cancellation of leases. And, finally, the reasonableness of the 40-year depletion requirement and the manner in which logical mining units are defined are other matters viewed by GAO as needing review because of their potential effect on limiting the coal that can be produced by a given mine.

CURRENT PROGRAM STATUS AND  
ISSUES REQUIRING IMMEDIATE  
ATTENTION

On June 4, 1979, the Secretary of the Interior announced a new Federal coal management program, calling for a resumption of competitive leasing for the first time since a moratorium was imposed in 1971. Leasing is to take place beginning in January 1981. But--as the report points out--many questions relating to coal leasing remain unanswered, some of which GAO believes need to be resolved before any further long-term leasing can take place. Others can be worked out during the early stages of the new leasing program.

Some of these same questions and issues have been or are now being addressed by either the Department of the Interior or the Department of Energy. GAO noted considerable progress by the two Departments in developing a workable program--including changes made since a draft of this report was made available to them for comment. But further actions are needed, and it is hoped this final report will further contribute to their resolution.

GAO believes that--~~as a minimum~~--the following four important issues need to be dealt with before leasing can be resumed:

--An analysis needs to be made of the production potential of existing

leases--in view of the many economic, environmental, and other problems associated with their likely development. This is necessary to give a better fix on how much coal needs to be made available to satisfy demand under the emerging program.

--Interior, in initially developing its comprehensive land use plans, needs to consider coal production goals-- as well as demand estimates for other resources--to help make judgments on land use alternatives and foster an appropriate balancing of energy goals with environmental and socio-economic goals. This is particularly important because land use plans developed over the next several years will affect the level of resource usage on Federal lands--whether recreation, wildlife, timber, coal, or whatever--for the remainder of this century and beyond.

--Interior needs to evaluate the impact of the surface owner consent requirement--and decide how to implement it--since this will affect the economics and thus the ultimate leasability of proposed new tracts.

--Final regulations are needed specifying (1) how maximum economic recovery determinations will be made, and (2) what factors will be considered in establishing logical mining units.) These determinations are essential for potential developers in knowing how to respond to the nomination process for new leases as well as in considering the implications of the rules for existing leases.

Interior has recently issued its final programmatic environmental impact statement for a new leasing program, and final regulations are expected to be issued shortly. (GAO found that the final programmatic statement--while

*subject*

not effectively dealing with the issues discussed above--is thorough in defining the history and broad scope of the proposed program, in describing potential environmental impacts, and in providing good insights into many aspects of the proposed new leasing system.

In the interest of getting on with a new leasing program, GAO is not suggesting revisions to the statement itself--but believes instead that open issues need to be dealt with either through the final regulations or other analyses called for in this report. (Unless this is done, the emerging program could well become a major source of uncertainty and confusion to private and public sector energy and environmental planners.)

MATTERS FOR CONSIDERATION BY THE  
CONGRESS AND THE ADMINISTRATION

A program such as this that will impact on national welfare for decades to come should be subject to close scrutiny during the early development stages. This will increase its chances for success in the long-run and, hopefully, prevent delays such as those encountered during the last decade.

Oversight by the Congress, through the appropriate committees, is needed--with particular attention given to such matters as:

- Effectiveness of Federal policies to provide a proper balance between the Nation's interrelated coal production, environmental, social, and economic objectives.
- Workability of retaining the split responsibilities between Energy and Interior. (A case in point is the manner in which Energy's coal production goals will be used to develop Interior's leasing targets and schedules and the feasibility of this approach in light of differing agency perceptions and objectives. Actions by Interior and Energy on recommendations GAO made in a recent report, "Federal Leasing Policy--

Is The Split Responsibility Working?", issued June 4, 1979, should be closely monitored.)

- Effectiveness of the Leasing Liaison Committee--as well as the newly established working group on production goals and leasing targets--in ironing out differences between departmental objectives and regulatory policies.
- Interrelationships between Interior's coal leasing and land use planning and coal exploration programs.
- Feasibility of streamlining the permitting and public participation processes to avoid production delays and duplication of effort.
- Clarification or revision of certain statutory requirements which, in their present form, have potential for adverse impact on balancing multiple goals and achieving timely and orderly development. These requirements include maximum economic recovery, logical mining unit formation, diligent development, 40-year mine life, and minimum royalty.
- Feasibility of a general lease exchange authority.
- Feasibility of short-term non-competitive leasing (e.g., bypass or emergency leases).
- Implementation of the surface owner consent requirement.

Before new long-term leasing is resumed, GAO is recommending that the Secretary of the Interior:

- Analyze the production potential of existing leases by determining which leases are included in logical mining units and which ones will be eliminated by unsuitability criteria, inaccessibility to transportation facilities or

other factors--and submitting such analysis to the Department of Energy.

- Use regional production goals as well as demand estimates for non-coal resources, as a regular part of Interior's evaluation of land use alternatives.
- Evaluate the economic, energy, and environmental implications of Interior's implementation of the surface owner consent requirement--including its effect on the determination of fair-market value--and submit this study to the Congress.
- Publish explicit maximum economic recovery and logical mining unit regulations for comment and public hearings.

In addition to the above recommendations, which are highlighted because of their importance in connection with the resumption of long-term leasing, GAO further recommends that the Secretary of the Interior:

- Follow through in the development of an appropriate and workable mechanism for achieving a reasonable balance between interrelated energy, environmental, and socio-economic objectives.
- Prepare and submit to the Congress a long-range coal exploration plan.
- Determine whether the process for fulfilling public participation requirements can be redesigned to improve Government planning and decision-making.
- Determine how the permitting process can be streamlined.
- Work closely with the Secretary of Energy in making the Leasing Liaison Committee an effective inter-departmental coordinating and problem-solving body and in expeditiously staffing and making operational the Interior/Energy working group on coal production goals and leasing targets.

GAO recommends that the Secretary of Energy:

- Use Interior's evaluation of production potential on existing leases--which will be done as a result of our first recommendation to the Secretary of the Interior--in developing coal production goals.
- Publish methodology and procedures to be used in arriving at production goals, including an explanation of assumptions used in making the estimates, and make this available to the public.
- Work closely with the Secretary of the Interior in implementing a new Federal coal management program that achieves a balance between public policy goals of domestic energy development, environmental protection, and socio-economic security. Particular attention should be given to Energy's statutory responsibilities for issuing regulations pertaining to diligent development, competition, and alternative bidding systems.
- Work closely with the Secretary of the Interior in making the Leasing Liaison Committee an effective body and in expeditiously staffing and making operational the Interior/Energy working group on coal production goals and leasing targets.

AGENCY COMMENTS

The Department of Energy, in commenting on GAO's draft report (see Appendix IV), noted overall that the report was quite thorough and addressed the major issues relevant to the future management of Federal coal resources. By contrast, Interior's response (see Appendix V) was highly critical of our draft report.

Interior's basic impression is that GAO is calling for a reconsideration of much of the legislation related to coal leasing that the Congress has passed in recent years. They refer



to the Federal Coal Leasing Amendments Act, Federal Land Policy and Management Act, Surface Mining Control and Reclamation Act, and various other laws which establish national policy related to coal development. Whereas there are certain items related to these laws that should be reviewed, GAO is not--as suggested by Interior--calling for a sweeping review of such legislation and has no quarrel with such basic tenets as the need for comprehensive land use plans and an end to speculative holding of Federal coal.

GAO is concerned, however, with how the Administration will implement programs to support congressionally-established environmental, energy, and social policies. Interior's charges should not divert attention from the unresolved coal management issues which need to be scrutinized.

Interior also expressed concern that delaying implementation of the Federal coal program to study various issues would only cause further uncertainty about the Government's ability to manage its coal resources. GAO does not want to delay program implementation but believes some issues--discussed earlier--must be resolved before long-term leasing is resumed. For the most part, however, the issues identified in this report should be evaluated by the Congress, Interior, and Energy during the early stages of program implementation.

Overall, GAO believes early consideration and resolution of issues identified in this report will result in a coal management program that responds to national needs expeditiously--and in the most effective way.

A more detailed treatment of Interior and Energy's responses, and GAO's evaluation of them, is included in Chapter 9. In addition, because of the serious and extensive nature of Interior's comments, GAO's responses have been annotated--section by section of paragraph by paragraph--on the full text of Interior's letter (See Appendix VI).

It should be noted that subsequent to Interior's formal comments on this draft report, it published a final environmental impact statement and announced adoption of the new coal management program. These actions incorporated various changes, some of which addressed issues included in the earlier draft report. It has been GAO's intent to recognize these actions in this report.

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ABBREVIATIONS

EIS environmental impact statement

GAO General Accounting Office

## CHAPTER 1

### INTRODUCTION

This report brings to the attention of the Congress and the Administration issues which have or may have adverse impacts on the development of a sound Federal coal management program and the use of Federal and non-Federal Western coal in meeting the Nation's energy needs. The report's objective is to contribute to a better understanding of what these issues are and how they are interrelated. Where the analysis went far enough to make specific conclusions and recommendations now, either to the Congress or the Administration, we made them. Future work will follow up on the specific recommendations as well as deal with various other questions and issues which remain open.

Being the first in a series of GAO reports on Federal coal leasing, this report identifies and sorts out the more significant questions and issues facing the future of Federal coal. It establishes a framework for analyzing issues with regard for environmental, socio-economic, energy, and economic policies. The following six overriding questions--progressing logically from basic public policy issues to "down to earth" management concerns--provide the framework for the report:

- How should Federal coal leasing goals and policies be balanced with interrelated and often conflicting national environmental, socio-economic, and economic objectives? (See ch. 3.)
- How well are the two departments--Energy and Interior--working together in establishing and implementing goals and regulations to "make it all happen"? (See ch. 4.)
- What, realistically, is the production potential of coal already under lease--in view of the many legal, economic, environmental, and other factors affecting its development? (See ch. 5.)
- How should Interior better tie together its determinations on the amount of unleased coal available to meet future needs with on-going land use planning and coal exploration programs? (See ch. 6.)



--How should Interior proceed in identifying, evaluating, and selling specific lease tracts? (See ch. 7.)

--How can Energy and Interior improve lease management to encourage the timely and orderly development of coal? (See ch. 8.)

Since Federal coal leasing was halted in 1971, the Department of the Interior has committed a substantial amount of resources to its coal activities. Interior estimates that for the fiscal year 1971-79 period, total coal activity appropriations have exceeded \$183 million. Seventy-eight percent of this amount has been appropriated since fiscal year 1977.

The FY 1980 budget for coal leasing related activities is about \$62 million. These activities include coal exploration, reserve and resource appraisals, water monitoring, coal land classification, leasing operations and management, and environmental studies. This amount compares to a total FY 1980 coal activity budget of about \$307 million--primarily for environmental and reclamation research, mined area regulatory programs, mine health and safety research and development (R&D), as well as coal leasing. The FY 1980 coal activity budget for Energy is about \$690 million--primarily for R&D.

During the 1970's Interior has studied coal leasing issues and has attempted to design and implement a viable coal leasing program. The first attempt failed, as the programmatic environmental impact statement was successfully challenged in court. Interior has initiated its second attempt, but as this report demonstrates, there are serious issues which still confront the department's objective of implementing a sound program. This is not to say that Interior is ignoring these issues. Many of them are being studied by task forces established by Interior. These task forces are listed in Appendix VIII.

Over this same period we have focused our attention on problems and issues that are either directly or indirectly related to Federal coal leasing. Since 1972, we have issued a number of reports related to coal leasing. These reports are listed in Appendix I.

In a recent report to the Congress 1/ and in testimony before congressional committees, we stated that the United States, in the long run, must develop inexhaustible sources of energy for any sustained economic growth. Domestic oil and gas supplies are declining and international supplies have security and availability problems. Long lead times in overcoming technological and economic barriers associated with inexhaustibles must be factored into the transition to a renewable resource base. Reliance on greater coal production as well as energy conservation will be key elements in bridging the transition. Because coal will be an important near-term and intermediate-term energy supply, the analysis of coal leasing issues is important.

Federal coal accounts for approximately 60 percent of Western coal reserves and 30 percent of total domestic coal reserves. In addition, Interior estimates that the Government controls about 20 percent of non-Federal Western coal because many of the Western coal regions are characterized by intermingled ownership patterns.

Western coal production is increasing, and so is the share of total Western coal produced from Federal sources. Approximately 60 million tons of coal were mined in the West in 1972, accounting for about 10 percent of that year's nationwide production. Western Federal coal production in 1972 accounted for about 15 percent of that year's total Western production and about 2 percent of the nationwide production. In 1977 approximately 165 million tons were mined in the West, about 24 percent of nationwide production. Western Federal coal production in 1977 accounted for about 31 percent of that year's total Western production and about 8 percent of nationwide production.

The trend of increasing Western coal production is expected to continue according to Energy and Interior forecasts. Energy's April 1979 production forecast estimates that by 1990 approximately 689 million tons could be mined in the West, representing 47 percent of nationwide production. Interior estimates that with no new Federal leasing Federal coal production potential in 1990 could be approximately 450 million tons, representing about 65

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1/"Analysis of the Energy and Economic Effects of the Iranian Oil Shortfall," EMD-79-38, March 5, 1979.

percent of Energy's Western production forecast and 31 percent of the nationwide production forecast. 1/

#### SCOPE OF WORK

We identified issues by raising a series of guiding questions and relating the issues to these questions: How much Federal and non-Federal coal do we need? How much Federal coal do we have under existing lease relative to our needs? How much Federal coal should be leased if needs are not satisfied by existing leases? How much Federal coal could be made available after considering environmental impacts? How should the Federal coal be leased? How should the coal leases be managed? In addition, we reviewed issue papers which had been prepared by Interior. Then we compiled an issues document.

Next, we convened a panel of seven energy and environmental experts from across the Nation for a workshop in Washington, D.C. Each expert received an advance copy of the issues document. The workshop focused on issues pertaining to production goals and the role of the public and private sectors. The issues document was updated as a result of the workshop.

We then distributed the updated issues document to over 50 Federal and non-Federal parties across the Nation. Included were environmental, financial, legal, mining, private interest, research, State government, transportation, and university representatives. We also sent copies of the document to representatives of Energy and Interior. A list of the recipients is included in Appendix VII. We met individually with each party, after which the report was prepared. Prior to issuance, it was submitted to the Departments of Energy and Interior for comment.

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1/Percentage figures relate to Energy's medium production scenario.

## CHAPTER 2

### HISTORY OF COAL MANAGEMENT ACTIVITIES AND

#### DESCRIPTION OF INTERIOR'S PREFERRED

#### LEASING PROGRAM

#### EVENTS LEADING TO INTERIOR'S PROPOSALS FOR A FEDERAL COAL MANAGEMENT AND LEASING PROGRAM

Prior to 1970 Interior responded to requests for leasing on a case-by-case basis without regard to the total reserves under lease or the need for additional leasing and coal production, and without an assessment of the environmental impact of the expected coal production. From 1945 to 1970 leased acreage on public lands in six Western States--Colorado, New Mexico, North Dakota, Montana, Utah, and Wyoming--increased from about 80,000 acres to about 788,000 acres, according to a 1970 Bureau of Land Management study. During this same period, production from Federal leases decreased from 10 million tons of coal to 7.4 million tons. Coal was being produced from only about 10 percent of the acreage under lease.

Because of concern over low production levels and over the adequacy of environmental safeguards, the Secretary of the Interior stopped all coal leasing activity in 1971, including the issuance of prospecting permits.

#### Energy Minerals Activity Recommendation System

A new coal leasing policy was established in 1973. This policy required Interior to develop a new Federal coal leasing program and prepare a programmatic environmental impact statement. In addition, the moratorium on the issuance of prospecting permits was continued and the only leasing allowed was that which would maintain existing mines or provide reserves for production in the near future. These were designated short-term

leases. Between 1974 and 1978, ten short-term leases were issued. Seven of these leases were producing coal by the end of 1977. No long-term leases were issued during this period.

In May 1974, Interior issued a draft programmatic environmental impact statement and in September 1975 the final statement was issued. The leasing program was adopted in 1976 and was known as the Energy Minerals Activity Recommendation System. It included four basic program elements: (1) nominations, (2) land use planning, (3) environmental analysis, and (4) resource evaluation. This program required Interior to first obtain industry nominations of potential lease tracts and public identification of areas that should not be leased. Nominations could be accepted for any area, and based upon them, Interior would select areas for land use planning, environmental analysis, and resource evaluation.

Lawsuit: Natural Resources  
Defense Council vs. Hughes

The adequacy of the 1975 final programmatic environmental impact statement was challenged in Federal court by four parties--the Natural Resources Defense Council, Inc. (NRDC), Environmental Defense Fund, Inc., Northern Plains Resource Council, and Powder River Basin Resource Council. <sup>1/</sup> On September 27, 1977, the court ruled that Interior had violated the National Environmental Policy Act of 1969 "in their formulation, adoption and implementation of a new federal coal leasing program..." Interior was enjoined from

"taking any steps, whatsoever, directly or indirectly, to implement the new coal leasing program, including calling for nominations of tracts for federal coal leasing and issuing any leases, except when the proposed lease is required to maintain an existing

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<sup>1/</sup>Civil Action No. 75-1749; Natural Resources Defense Council, Inc., et al., v. Royston C. Hughes, et al.; United States District Court for the District of Columbia; memorandum opinion and order issued September 27, 1977; modified order issued June 14, 1978.

mining operation at the present levels of production or is necessary to provide reserves necessary to meet existing contracts and the extent of the proposed lease is not greater than is required to meet these two criteria for more than three years in the future."

The court indicated that the standard should be applied to both non-competitive preference right lease applications 1/ and competitive lease applications.

On June 14, 1978, the court approved a settlement of the case and issued a modified order which altered its initial standards for leasing prior to the issuance of a final new programmatic environmental impact statement. The revised standards allow additional leasing when:

--The proposed lease is required for the mining of coal that would otherwise not be mined, and perhaps never at all, because of economic or environmental costs, if it is not developed by an existing mine. Up to 5 years of reserves may be included in a lease under the provision. To qualify for a lease, mining operations must have been in existence on September 27, 1977.

--The proposed lease is required for the maintenance of production and employment in mines which were in operation on September 27, 1977. Up to 8 years of reserves may be included in a lease under this provision.

--The proposed lease is required for the exchange of a lease in an alluvial valley floor 2/, as

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1/A preference right lease application is an application for a lease which will be issued if the applicant has discovered commercial quantities of coal. The application can only be made for lands under prospecting permit issued before the Federal Coal Leasing Amendments Act of 1976.

2/An alluvial valley floor consists of unconsolidated stream-laid deposits holding streams where water availability is sufficient for subirrigation or flood irrigation agricultural activities.

authorized by the Surface Mining Control and Reclamation Act.

--The proposed lease is required for the support of research and technology projects authorized by the Surface Mining Control and Reclamation Act.

--The proposed lease is one of seven specifically cited exceptions to the injunction.

Interior estimates that 35 leases involving a total of 275 to 300 million tons of coal to satisfy short-term production needs could be leased under the above criteria. Prior to the approval of a lease sale, however, except as to the seven cited lease applications, Interior is required by the court order to notify the plaintiffs and to provide them information on the qualifications of an applicant for a lease. As of April 1, 1978, 13 leases involving a total of 53 million tons have been offered for sale.

The court order authorizes Interior to process but not issue 20 preference right lease applications. Interior is required to give preference to applications for tracts in which 90 percent of the reserves can be mined by deep mining methods and the total amount of surface mining would affect no more than 50 acres, which would not require substantial additional transportation facilities or water storage or supply systems in a region, and would not involve substantial new industrial development in the region.

Lawsuits: Sierra Club vs. Kleppe and Natural Resources Defense Council vs. Berklund

In addition to NRDC v. Hughes, two other lawsuits have resulted in decisions that affect Federal coal management. The first, Kleppe v. Sierra Club, 427 U.S. 390 (1976), was appealed to the Supreme Court. The Court found that an environmental impact statement is not required until the time a Federal agency makes a recommendation or report on a proposal for Federal action. Although an individual project may proceed where covered by an adequate statement, the Court indicated that the National Environmental Policy Act may require a comprehensive statement where several related projects are pending at the same time.

In the second lawsuit, NRDC v. Berklund, 458 F. Supp. 925 (1978), the United States District Court for the District of Columbia held that the Secretary of the Interior does not have discretion to reject preference right lease applications where coal has been found in commercial quantities. If the issuance of a preference right lease would constitute a major Federal action significantly affecting the quality of the human environment, an environmental impact statement must first be prepared.

President Carter's  
environmental policy

The President stated his position on the management of Federal coal in his environmental message of May 23, 1977. He said:

"The newly enacted Coal Leasing Amendments and the Federal Land Policy and Management Act provide the Secretary of the Interior with the necessary authority to carry out environmentally sound, comprehensive planning for the public lands. His duty now is to implement an affirmative program for managing coal lands and associated resources in a manner that fully protects the public interest and respects the rights of private surface owners."

The President's memorandum of May 24, 1977, instructed the Secretary of the Interior to respond to reasonable production goals but to lease only those areas where mining is environmentally acceptable and compatible with other land uses. He also directed that existing leases and preference right lease applications be evaluated to determine whether they show prospects for timely development in an environmentally acceptable manner.

DESCRIPTION OF THE FEDERAL  
COAL MANAGEMENT AND LEASING PROGRAM

On December 15, 1978, Interior issued a new draft programmatic environmental impact statement (EIS) and on April 30, 1979, a final EIS was issued. The Secretary of the Interior established a Federal coal management and leasing program June 4, 1979. Interior has set a



goal of holding its first long-term lease sale since the 1971 leasing moratorium in January 1981.

According to Interior, 1.5 billion tons of Federal coal will be leased in 1981 and 1982 to meet energy production goals through 1987. Interior states that "in the long term up to 200 billion tons of Federal coal reserves would be made available for leasing and production." The regions and coal tentatively targeted for leasing in 1981 and 1982 are as follows:

<u>Region</u>	<u>Coal (million tons)</u>
Green River-Hams Fork	531
Uinta-Southwestern Utah	109
Powder River	<u>776</u>
Total tons	<u>1,416</u>

This level of leasing is projected by Interior to add about 76 million tons of annual production from 13 new mines.

Interior indicated that selection of final leasing targets would be made next Fall when the regional lease sale EISs would be started. The current leasing targets are considered tentative and will be subject to public comment prior to Interior's selection of final leasing targets.

Regarding the processing of preference right lease applications, the Secretary decided that these applications be processed in the cycle of on-going land use plans unless the applications would not be processed in 5 years; then processing would be done independently of the land use planning schedule.

Interior considered seven possible leasing alternatives in the programmatic EIS. The first alternative listed below is the one selected by Interior and is described in much more detail in the EIS than the other six. The seven alternatives are as follows:

- Merge Department of Energy production projections with inputs from States, local governments, industry, and interest groups to derive Interior regional production targets and then lease to meet the targets.
- No Federal leasing until at least 1985.

- Process and lease only preference right lease applications.
- Lease only bypass coal 1/ and coal needed to maintain existing operations.
- Lease to meet the coal industry's indication of need.
- Allow States to determine leasing levels.
- Lease to meet Department of Energy production goals.

Interior refers to the selected alternative as the Federal coal management program. It has several significant program elements:

- Land use planning.
- Tract delineation, ranking, and selection.
- Pre-lease sale and lease sale procedures.
- Public body and small business leasing.
- Preference right lease applications.
- Emergency leasing.

#### Land use planning

The initial step of the selected alternative is land use planning by the land management agencies such as the Bureau of Land Management and the Forest Service. Implementation of the agencies' planning systems would result in the delineation of areas acceptable for further consideration for coal leasing. The areas acceptable would be identified by screening out areas that:

- Have coal reserves of low development potential.

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1/Bypass coal is an isolated coal deposit that cannot, for the foreseeable future, be practically mined either separately or as part of any logical mining unit other than that of the applicant for an emergency lease.

- Are environmentally unsuitable for leasing.
- Are preferred for non-mining uses by the surface owner.
- Are considered to be more valuable for other uses in the resource trade-off analysis.

Industry, States, and other parties would be encouraged to participate in the land use planning process through hearings, meetings, written comments, and other ways to make their particular needs or desires known. An environmental impact statement would be prepared on the land use plan prior to its adoption.

Tract delineation, ranking, and selection

The second step of the selected alternative is tract delineation, ranking, and selection. This step follows completion of the land use plan, and the tracts to be delineated are contained in the areas acceptable for further consideration for leasing.

The delineation of preliminary tracts would be based on:

- Expressions of interest by industry, States, public bodies, small businesses, or others and existing or planned operations on adjoining lands.
- Technical coal data, including reserve tonnage, type of coal, sulfur content, seam thickness, and proportion of recoverable coal to reserves.
- Conservation considerations, including calculation of preliminary maximum economic recovery, land ownership patterns, and the formation of logical mining units.
- Surface ownership, including the results of surface owner consultation in the land use planning activity, and the existence of surface owner consents and their terms.

--Prior regional leasing targets and guidance from the regional coal teams.

Ranking would be on a coal region-wide basis and not separately within each land use planning area. Ranking criteria would relate to coal economics, ease of reclamation, proximity to existing transportation facilities, class of surface ownership (Federal or non-Federal), and socio-economic and environmental considerations. The selected tracts would be placed in a proposed regional lease sale schedule.

Regional coal teams would be established to facilitate coordination and consultation between Interior, state governors, other Federal land management agencies, and other Federal and State agencies with expertise of relevance to the tract ranking and selection process. A separate team would be established for each of the major multi-State coal regions, and would consist of a Bureau of Land Management field representative and a State government representative from each State within the region. An additional member would be appointed by the Bureau Director and would serve as the team leader.

Each regional coal team would consider and suggest policy for regional production goal and lease target setting, tract delineation, and site-specific analysis in the coal regions. It would guide and review tract ranking, and conduct the tract selection and sale scheduling procedures that develop the alternatives which are analyzed in the regional lease sale environmental impact statement. The Secretary of the Interior would have decision-making authority for the selection and scheduling of tracts for lease sale.

The development of the lease sale schedule would be based on the assessment of need for Federal coal, according to Interior's regional coal production targets. In establishing the targets, Interior would review and adjust that portion of the Department of Energy's national goal which applies to the Federal coal production regions. Final regional production targets would be established by Interior after the States had been consulted and the public and industry had been given an opportunity to submit comments on the preliminary targets.

The results of the ranking and selection process, the proposed lease sale schedule, and the ranking criteria would be published in a regional lease sale environmental impact statement. This would be followed by a public hearing and the submission of comments. Following release of the final environmental impact statement, Interior would formally consult with the affected State Governors or Federal surface management agencies. The surface management agencies would have to consent to the issuance of the lease before Interior could issue the lease. If a Governor objected to the lease proposal, Interior would reconsider the proposed lease sale but would not be required to withdraw the proposal and cancel the lease sale.

#### Pre-lease sale and lease sale procedures

The final step of the selected alternative is the lease sale. Several activities pertaining to pre-lease sale and lease sale procedures are mineral evaluation and determination of fair market value, acquisition of surface owner consent, and determination of lease sale and bidding methods.

#### Mineral evaluation and determination of fair market value

After the regional lease sale schedule is announced, the Geological Survey would determine the coal resource economic value. The public would be given an opportunity to comment on fair market value and maximum economic recovery. The basic method for evaluating fair market value would be the discounted cash flow analysis. This analysis involves calculating, in current year dollars, annual costs and revenues which would result from the development of the property. This evaluation would also include the consideration of coal quality and quantity, probable mining method, and logical mining unit. The estimate of costs would include surface owner consent acquisition costs.

include the consideration of coal quality and quantity, probable mining method, and logical mining unit. The estimate of costs would include surface owner consent acquisition costs.

Acquisition of surface  
owner consent

According to the Surface Mining Control and Reclamation Act, a coal lease for surface mining cannot be issued unless consent has been granted in those circumstances where the surface owner is of a special type. The surface owner is required to meet one of the following criteria for at least 3 years prior to granting of any consent to mine:

- Have his or her principal place of residence on the land.
- Personally conduct farming or ranching operations on the land.
- Receive directly a significant portion of his or her income, if any, from such farming and ranching operations.

The criteria for defining a surface owner are further discussed in Appendix III.

The Federal Coal Leasing Amendments Act requires that leases be sold on a competitive basis for fair market value. According to the draft programmatic EIS, Interior would monitor surface owner consent to ensure that the form and financial terms do not substantially affect fair market value or the competitive nature of the lease sale. Interior would, should these terms threaten the public interest, decline to proceed with the lease sale or to execute the lease.

In the selection of tracts for sale, Interior would give preference to tracts where the surface is federally owned and to tracts where surface owner consent has been received. Industry would be responsible for acquiring surface owner consent prior to execution of the lease. If no filing of consent is made before notice of sale, the tract would be removed from the sale schedule and, if necessary, another tract substituted for it.

The consent would be required to be transferrable to a third party. If any consent existing prior to the

Surface Mining Control and Reclamation Act is non-transferrable, the tract would not be offered for sale unless it is included in an intertract sale (discussed below).

Determination of sale  
and bidding methods

Interior prefers that the sale and bidding mechanisms be kept flexible, and that the choice of method be made on a case-by-case basis. Sale methods include individual tract and intertract. Under the individual tract method, bidders would compete against each other for a given tract. Under the intertract method, bidders would compete between tracts as well as over individual tracts. More tracts would be offered for sale than are intended to be awarded. Only those tracts with the highest bids which are needed to meet the cumulative lease sales target would be awarded.

Five optional bidding methods are presented in the draft and final programmatic EISSs. These are:

- Direct bonus bidding, in which immediate cash payment is offered for the lease.
- Royalty bidding, in which a fixed percentage of the value of the coal is offered for the lease.
- Sliding scale royalty bidding, in which the amount of the royalty paid is varied in proportion to the value of the coal produced.
- Profit sharing, in which the Government becomes a partner in the coal enterprise and receives a percentage of profits.
- Fixed rental, in which the bidder pays the Government a set amount each year regardless of production.

Public body and small  
business leasing

Interior would reserve and offer a number of coal lease tracts as special leasing opportunities to public bodies under the Federal Coal Leasing Amendments Act and to small businesses under the Small Business Act of 1953, as amended. The special opportunities would consist of holding special lease sales where public bodies would bid only against other public bodies and small businesses against other small businesses.

Preference right  
lease applications

Interior would examine all preference right lease applications for acceptability for mining using the unsuitability criteria. All applications would be processed through the land management agencies' planning systems. The applications, or portions thereof, for which applicants are entitled to leases, but which are found unsuitable, would be purchased, exchanged, or conditioned to protect environmental, socio-economic, or other values.

Emergency leasing

Interior states that emergency leasing would enable them to meet urgent needs for Federal coal which could not be dealt with in a timely manner through the normal long-term leasing process. The emergency leasing proposed by Interior would differ from the normal long-term leasing process only with respect to the method of tract identification and the breadth and scope required in the planning and environmental process. An emergency lease would have to meet one of these criteria:

- The applicant is an existing mining operation which had been producing coal for at least 2 years before the date of application; and the Federal coal is needed within 3 years to sustain an existing mining operation at the average annual level of production or new committed level of production on the date of application, as substantiated by a mining sequence plan and projected production levels.
- In an existing mining operation, the requested Federal coal would be bypassed if not mined. Further, some portion of the bypassed coal would be mined within 3 years as substantiated by a mining sequence plan and stated proposed production levels.
- The Federal coal would be mined within 3 years in the process of obtaining economic access for development of private or leased coal.



In addition, the applicant would have to show that the need for coal, except in certain cases of bypassed coal, had resulted from circumstances beyond the control of the applicant or that he could not have reasonably foreseen and planned for in time to enable Interior to respond through the normal long-term process.

No coal lease would be issued unless a comprehensive land use analysis has been conducted on and Interior's unsuitability criteria have been applied to the land to be included in the lease.

### CHAPTER 3

#### HOW SHOULD FEDERAL COAL LEASING GOALS AND POLICIES BE BALANCED WITH INTERRELATED AND OFTEN CONFLICTING NATIONAL ENVIRONMENTAL, SOCIO-ECONOMIC, AND ECONOMIC OBJECTIVES?

In recent years, the Congress has enacted various laws governing the basic policy and regulatory framework affecting the leasing and development of Federal coal. These laws, many of which are listed in Appendix II and selectively discussed in Appendix III, include the Federal Coal Leasing Amendments Act of 1976, Federal Land Policy and Management Act of 1976, Surface Mining Control and Reclamation Act of 1977, and the Department of Energy Organization Act. These laws emphasize the multifaceted nature of coal resource management, taking into consideration three interrelated goals--domestic energy development, environmental protection, and socio-economic security--which, at times, may be in conflict but for which a reasoned balance through appropriate trade-offs is the ultimate objective.

This chapter focuses on issues that revolve about these interrelated and sometimes conflicting goals. We are concerned that Interior may implement a coal leasing program that will not effectively achieve a balance between these goals, largely because of uncertainties represented by the following issues:

- When coal leasing goals conflict with environmental, socio-economic, and economic goals, how should Interior perform a trade-off analysis?
- Who should pay the cost of achieving a balance among goals?
- Can a less-regulated private sector achieve timely, orderly, and efficient coal development without jeopardizing environmental and social concerns?

We believe the Administration and the Congress should identify and weigh alternative ways of dealing with these complex issues and their potential consequences on the public and private sector. Otherwise, shortsighted

decisions and actions would evolve, the consequences of which could be unforeseen adverse effects on certain groups--be they industry, environmental, consumer, or others--and on the availability of Federal coal to meet energy demand.

Our concern over the balancing of goals also relates to the timely development of land use plans for all areas that could be considered for future coal leasing--essentially those including Known Recoverable Coal Resource Areas (discussed in Chapter 6). Interior states they will review existing land use plans to determine whether the plans are of sufficient quality to permit coal leasing decision-making prior to 1985. Criteria for this review will be included in coal management regulations. The Secretary of the Interior has ordered that no planning of lease sales be conducted on existing land use plans after 1984. New plans will then be required for all coal leasing decisions.

#### DOMESTIC ENERGY DEVELOPMENT

The National Energy Plan was first submitted to the Congress in April 1977 and revised in April 1979. It will be revised and resubmitted bi-annually thereafter. A major objective of the plan is to reduce the Nation's dependence on foreign oil and its vulnerability to supply interruptions.

Two main reasons for seeking energy independence are national security and economic stability. National security is jeopardized when America is forced to depend on unreliable foreign sources of oil. The uncertainty about the future of Iran and other Middle East countries illustrates the unstable nature of foreign oil prices and supplies. Economic considerations are emphasized by recent oil price increases by the Organization of Petroleum Exporting Countries. The price paid for foreign oil is presently contributing to domestic inflationary pressures, the Nation's balance of payments problem, and the low value of the dollar in relation to foreign currencies.

The achievement of energy independence from foreign sources of fuel supply is one objective that may have an effect on the pacing and timing of Federal coal development. If non-coal domestic or foreign energy fuels are unavailable or unacceptable, the demand for coal may experience a sharp rise.

The precise level of future Federal coal production is difficult to determine because of uncertainties which affect forecasts. The amount of oil and gas that is available can rapidly change with new discoveries and actions by foreign oil producers. Additional factors that will affect Federal coal production levels include, but are not limited to, Western, Mid-Western, and Eastern coal demand in relation to productive capacities in these regions; availability and capacity of transportation networks and the sensitivity of coal prices to transportation rates; and air quality standards and associated costs of pollution control equipment that are designed to limit powerplant pollutant emissions. The production potential from existing and any new Federal leases also depends on other environmental and socio-economic factors, discussed below, as well as Federal lease management policies and regulations, production from private, State, railroad, and Indian coal lands, and the economic viability of the coal tracts in question.

In addition, the 1978 National Energy Act, consisting of five laws, may affect the demand for Federal coal. These laws are:

- The Public Utility Regulatory Policies Act of 1978 (P.L. 95-617).
- The Energy Tax Act of 1978 (P.L. 95-618).
- The National Energy Conservation Policy Act (P.L. 95-619).
- The Powerplant and Industrial Fuel Use Act of 1978 (P.L. 95-620).
- The Natural Gas Policy Act of 1978 (P.L. 95-621).

The Utility Regulatory Act could affect coal use through a leveling of electrical demand, thereby reducing the number of generating plants needed to supply peaking power. The Tax Act could affect coal use by tax incentives which might encourage conversion to coal from oil and gas. The Conservation Act could indirectly affect coal use by potentially reducing electrical demand from utilities. The Fuel Use Act could result in an increased demand for coal, particularly for new utility generation facilities and new industrial boilers. The Gas Policy Act could encourage greater use of coal through higher natural gas prices.

The Department of Energy Organization Act requires Energy to establish coal production objectives. With the above forecasting qualifications in mind, it would be helpful in this discussion to briefly review the coal production projections prepared by Energy in April 1979. These projections are an update of June 1978 projections calculated at the request of Interior for use in developing the coal leasing programmatic EIS.

The Department of Energy prepared three Western coal production scenarios to provide a range of planning estimates for 1985 and 1990 coal production. According to Energy it is not expected that circumstances will combine to generate coal production requirements lower than that indicated by the "low" case, or higher than indicated by the "high" case. Accordingly, the low and high forecasts are selected to bound the range of reasonable expectations, with the mid-range scenario representing a "more likely" estimate.

Energy has forecast a production range for coal regions in six States--North Dakota, Montana, Wyoming, Colorado, Utah, and New Mexico. The range extends from a low of about 249 million tons to a high of about 291 million tons in 1985, and from about 465 million tons to about 654 million tons in 1990. The forecast did not indicate how much of the estimated production would consist of Federal coal. However, mining plans for Federal leases indicate that about 309 million tons are planned for production in 1985. In 1977 Western Federal coal production was about 52 million tons.

#### ENVIRONMENTAL PROTECTION

Western coal development will be affected by environmental policies at the national, State, and local levels. For example, new source performance standards, prevention of significant deterioration increments, and ambient air quality standards will influence the pace and magnitude of coal development.

The new source performance standards require that new coal-fired facilities be equipped with the "best available control technology" to reduce the emission of air pollutants. This may affect the current premium on use of low sulfur Western coal in favor of high sulfur Mid-Western and Eastern coal or low sulfur deep Eastern coal. This could occur if the higher electric generation costs resulting from the use of mandatory

scrubber technology make the total cost of mining, transporting, and burning Mid-Western or Eastern coal less than the total cost of mining, transporting, and burning Western coal.

The implications associated with this type of policy relate to national production goals, the options to fill a possible Western coal production shortfall, and the cost of the options. Some of the Western coal production which would have been destined for Mid-Western and Eastern markets may be replaced with deep-mined Eastern coal. The increased social costs of this option in terms of safety and public health may exceed the costs of other options, such as importation of foreign oil. On the other hand, higher prices and conservation efforts may eliminate the anticipated shortfall.

In a recent report 1/ we stated that:

"the benefits of constantly controlling sulfur dioxide are largely unknown, and most parts of the country are achieving the national ambient air quality standards. Because the cost--estimated to be in the billions of dollars---of constant emission controls is great and the benefits largely unknown, EPA (Environmental Protection Agency) should not require schedules calling for immediate compliance until it has done the research to determine whether they are necessary."

In response to this report the Environmental Protection Agency said that continuous emission controls are required by the Clean Air Act Amendments and that there are problems with non-continuous control technology --particularly the lack of adequate monitoring feedback controls. The Agency admits that the benefits of continuous control are not clearly defined, but they also state that, "the risk of allowing virtually unrestricted Sulfur Dioxide emissions are equally unclear." On May 25, 1979, the Agency announced the control standards for new coal burning electric powerplants. These standards are summarized beginning on page 3-16.

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1/"16 Air And Water Pollution Issues Facing The Nation," CED-78-148B, October 11, 1978, p. 41.

The effects of another environmental objective, the prevention of significant deterioration, may be important because most of the pristine areas such as National Parks and wilderness areas are in the Western States. One effect may be to limit the size and probably the number of energy conversion facilities such as coal-fired steam-electric powerplants that can be sited in certain localities. For example, in 1978 the Environmental Protection Agency denied a permit needed for construction of two additional units of a powerplant in Colstrip, Montana. The denial was made because the Agency's air quality model showed that the units would violate Federal air quality standards in a nearby pristine area, the Northern Cheyenne Indian Reservation. According to the Agency, the units can be built if adequate emission controls are achieved.

Air quality standards may also serve to significantly limit Western coal development because of fugitive dust emissions. For example, the Wyoming Department of Environmental Quality has told us that the maximum allowable emissions for an area near Gillette may be reached before the coal production levels now approved have been attained, and certainly before production commences at the levels covered by mine permit applications. Although the fugitive dust problem might be solved through appropriate environmental safeguards and research and development applications, a major concern is the cost of controlling fugitive dust and its effect on policy options to concentrate coal leasing and production.

Another environmental consideration is the National Environmental Policy Act of 1969. This act will continue to influence the rate, timing, and amount of leasing by the requirement for an environmental impact statement for any proposed major Federal action which would significantly affect the quality of the human environment.

In addition to the above environmental policies, a number of others will affect Western energy development. These include policies to promote coal mine safety, to protect water quality, maintain the natural character of wild and scenic streams, protect and preserve endangered species, control the disposal of toxic substances, protect drinking water supplies, and restore surface-mined lands. Statutes establishing these policies are listed in Appendix II. Furthermore, land use planning activities are designed to protect environmental impacts through the application of environmental unsuitability criteria. Issues pertaining to this criteria are discussed in this report.

## SOCIO-ECONOMIC SECURITY

Socio-economic concerns apply to Eastern and Mid-Western coal fields as well as Western coal regions. If expanded Western coal production replaces Eastern coal production, social impacts in Eastern and Mid-Western communities could occur. For example, these communities could face higher unemployment and under-utilization of existing resources and coal facilities.

Large-scale Western energy development could also cause serious social and economic disruptions in small Western communities if actions are not taken in advance of development to plan for and alleviate these disruptions. Western coal and other energy fuels--e.g., uranium, oil shale, oil, and gas--are generally located in sparsely populated places and in many cases the development of more than one energy source or non-energy mineral is common in the same area. This development has already resulted in one new town in Wyoming and has caused some existing communities to double, triple, and quadruple their populations in a few years.

Population growth in many energy development areas can be expected to continue. This, in turn, can cause changes in the social structure and life style of the communities as they grow and are impacted by energy development. More specifically, crime rates may increase to such a degree that existing law enforcement capabilities will have to be upgraded; higher demand for medical services may mean that more medical facilities and personnel will be needed; more school children may necessitate more classroom space and teachers; and so on.

Rapid growth may impose economic hardships on some communities. The need for basic public facilities and services often arises before adequate local revenue sources, including a tax base, are available. Increased revenue will follow a population increase; however, if adequate public services are to be maintained, construction of facilities must coincide with, or precede, population increases. Even if enough revenue is available, development often takes place quickly and time for planning for population increases is sometimes short. Furthermore, some observers question whether impacts can be effectively mitigated in advance of development if local community citizens do not perceive the nature and magnitude of the expected impact. They maintain that without a public education process and consensus among local citizens as to the nature of the problem, planning may be futile.



Preservation or enhancement of the quality of life and the alleviation of hardships in energy impacted communities is of growing local, State, and national concern. The States are demanding a larger role in planning Federal energy development because of the socio-economic problems. The fiscal responsibility of the States and localities places them not only in a strategic position but also gives them considerable responsibility for dealing with these problems. However, this responsibility is not theirs alone. It is shared with the Federal Government and industry.

The Federal Land Policy and Management Act of 1976 establishes a loan program and requires that a certain percentage of mineral revenues be returned to the States to relieve social or economic impacts by development of mineral leases. The Powerplant and Industrial Fuel Use Act of 1978 also provides for impact assistance through socio-economic planning grants and land acquisition and development grants. An impact assistance bill was debated in the last session of the Congress. The sponsor of this legislation indicates that it will be re-introduced in the 96th session.

WHEN COAL LEASING GOALS  
CONFLICT WITH ENVIRONMENTAL,  
SOCIO-ECONOMIC, AND ECONOMIC  
GOALS, HOW SHOULD A TRADE-OFF  
ANALYSIS BE PERFORMED?

In light of complex interrelationships among goals, a systems approach to analyzing coal leasing issues can enhance understanding and help assure the emergence of a logical and consistent leasing system. This approach emphasizes that issues should not be examined in isolation without considering their potential effect not only on the leasing system as a whole, but also on the total energy and economic system. Any approach to decision-making which fails to recognize complex and dynamic interrelations could result in the misallocation of resources. In general, policy decision-making should involve the following elements:

- Specification of the issue.
- Identification of alternatives to resolve the issue.

--Analysis of each alternative in terms of its relative advantages (benefits), disadvantages (costs and uncertainties), and key interrelationships with other issues.

--Selection of the best alternative.

An analysis of the dynamic interrelationships among goals and issues should explicitly recognize that there are uncertainties and risks associated with decision-making. Some of these uncertainties and risks pertain to (1) trade-offs among differing public policy goals, (2) certainty and stability in Government policies, and (3) private sector participation in public sector decision-making.

Conflicting public policy goals in the Federal resource management area may result in a complex decision-making process. Simultaneously maximizing the goals of timely and orderly energy development, environmental protection, and socio-economic security may not be feasible or possible. The adjustment of differences between goals can be a slow process because many different interests must be considered in light of local, State, and national priorities. In some instances a balance between multiple goals may be achieved quickly. In other instances the balance may be difficult to achieve.

Furthermore, certainty as to timely Government decision-making should promote timely and orderly resource development. For example, the lessee is required to commence production and achieve diligent development within 10 years of lease issuance. This includes submitting a mine plan within 3 years after lease issuance and obtaining a number of permits before mining can commence. As many as five Federal agencies are involved in this process. However, these agencies are not required to take action on these documents in a specified timeframe.

An increased role of public sector decision-making is required by recently enacted legislation. However, if the private sector were excluded from providing input to the decision-making process, uncertainties about the feasibility of achieving energy goals and meeting energy demand and the risk of incurring a production shortfall would be increased substantially. The risk of leasing too little (much), too late (soon), or at the wrong site without proper market information might be judged to be so serious a societal risk and uncertainty that greater private sector

participation early in the decision-making process would be warranted.

Interior's proposed coal management regulations make provision for public comments and testimony in establishing coal production goals and regional leasing targets, and for formal expressions of leasing interest after land use planning is completed. An issue is whether Interior will receive, in a timely manner, the type of information needed for planning and decision-making. Actual operational experience during the early stages of program implementation should enable Interior to determine this. The larger issue connected with information needs cited here and in other sections of this report is how quickly the process for planning and decision-making will operate to allow supply and demand forces to function efficiently--promoting competition and the timely production of coal at the minimum necessary cost.

These risks and uncertainties and other factors discussed in this report indicate that no direct link can be made between leasing, production, and development impacts. In light of all the uncertainties and potential cost impacts, the link cannot always be viewed rigidly or predictably at a high confidence level. For example, with the environmental statutes and regulations that have evolved in this decade and with changes in land use and coal leasing policy, a lease by itself no longer guarantees a right to mine. Nor should it, unless all actions necessary for mine plan approval were accomplished prior to lease issuance. If a billion tons is leased, it is not certain that a billion tons will be mined. Subsequent chapters discuss some of the particular aspects of the leasing environment that break the link between leasing, production, and development impact.

Economic analysis is needed  
but should not exclude other  
decision tools

The Federal Government is mandated responsibility under the Mining and Minerals Policy Act of 1970 to foster and encourage private industry in the orderly economic development of domestic mineral reserves. The Department of Energy Organization Act requires Energy to identify strategies that should be followed to achieve energy production, utilization, and conservation objectives. Energy is also required to outline appropriate Federal Government policies that will maximize private

production and investment necessary in each of the significant energy supply sectors consistent with Federal, State, and local environmental laws, standards, and requirements.

A desirable objective would be to encourage rational decision-making by determining the economic effect of the programs established to accomplish energy, environmental, and socio-economic goals. An impartial assessment of program cost and benefit to the public and private sectors could be used by regulatory authorities in designing the most efficient and effective programs to accomplish the goals.

However, determining and quantifying all the costs and benefits might be extremely difficult, if not impossible, from strictly an economic perspective. For example, some non-energy uses of public energy lands, such as recreation or wilderness, may have a low market value in economic terms, although in non-economic terms their social value to the region and Nation may be high.

If social values are included in the analysis, the difficulty or impossibility of quantifying them could cause the decision-making authority to place a higher or lower benefit on them than on energy development. Furthermore, the benefits of energy development could be difficult to assess because the energy user beneficiaries may not be the same group that bears the social and environmental costs. This could occur when coal is converted to electricity at the mine site and then transported out of the region.

If social values are excluded from the analysis, the decision-making authority could place a higher benefit on energy development because of the difficulty in quantifying the non-economic values.

This illustrates the point that no individual analytical tool or mixture of tools can be relied on to provide a quantified objective decision in every case. Data bases have imperfections that cannot realistically be corrected. Consequently, trade-offs will be difficult to make because of these inadequacies, the conflicting nature of goals, and the lack of a public consensus. This is not to say that alternative uses of public lands and alternative locations in siting energy and non-energy activities cannot be identified through existing techniques. However, some non-quantifiable alternatives and trade-offs may have to be resolved through other decision-making mechanisms.

The trade-offs that will be made carry the risk that the failure to achieve, in a particular way, one or more goals may have unacceptable consequences to certain groups, be they industry, environmental, or others. Coal development may be in greater demand from some coal regions than from others. If minimum standards to alleviate the environmental and socio-economic impacts are established, accepted, and enforced, coal development could be given a higher priority than maintaining the environmental and socio-economic elements in their present position. This emphasizes that the trade-off decision should not be viewed as the elimination of one goal in favor of another. Instead, it should be viewed as the mechanism for achieving a mixture of or acceptable balance between goals and for avoiding judgments about two or more goals in "either-or" terms.

WHO SHOULD PAY THE COST OF  
ACHIEVING A BALANCE AMONG GOALS?

The desire to achieve a reasonable balance among these goals raises the issue as to how it should be paid for. Some observers maintain that all costs associated with coal development, including environmental and socio-economic, should be reflected in the price of coal. They argue that subsidized costs inappropriately understate the total cost of coal development and make the selection of coal, or any energy fuel for that matter, questionable on economic grounds.

Other observers maintain that the Government has a responsibility to subsidize certain energy development costs because the national interest dictates that these costs be financed publicly. They argue that if it weren't for these overriding social cost concerns at the Federal level, local and State governments would encourage energy development at a lower total cost to consumers, perhaps in order to capture additional State revenue. This raises the issues of social equity. For example, one such issue is whether costs would be shifted onto society in the form of unacceptable environmental and social degradation.

CAN A LESS REGULATED PRIVATE SECTOR  
ACHIEVE TIMELY, ORDERLY, AND EFFICIENT  
COAL DEVELOPMENT WITHOUT JEOPARDIZING  
ENVIRONMENTAL AND SOCIAL CONCERNS?

The coal industry operates in a regulated environment with regulations affecting both coal supply and coal

demand. On the supply side regulations affect coal operations in many ways. Included are environmental protection for surface mining reclamation, job safety and working conditions, exploration, and land use restrictions. On the demand side regulations affect coal use. Factors that can constrain demand include air quality protection and transportation modes and rates. From an economic perspective, regulations can increase supply costs, thus reducing coal expansion, or increase the cost of using coal, thus reducing coal demand, or some combination of these. However, regulations can also reduce long-term costs, spur innovation, and encourage greater coal utilization at socially acceptable levels.

Many individuals are concerned about actions the Government may take to prescribe when, where, and how coal resources should be developed and used. A major issue is whether a less-regulated private sector could achieve the timely, orderly, and efficient development of coal resources without jeopardizing environmental and social concerns. This issue involves the proper mix and type of Government regulatory controls and acceptable private sector initiatives to meet national energy, environmental, and social policy objectives. The issue centers not only on whether existing and proposed regulatory programs provide worthwhile social benefits, but also on whether the expenditures necessary to comply with the regulations are worth the benefits received, and whether less costly alternatives to direct regulatory control are available to achieve the social objectives. Conversely, in some areas regulations may be appropriate or may be desirable to create yardsticks against which private sector performance can be measured.

In a December 1978 report <sup>1/</sup>, the Congressional Research Service noted that regulatory requirements stemming from recent laws have added large costs to coal production and use, have created extensive delays, and have introduced great uncertainty as to what will be required and when approvals will be given. The Research Service believes that actions should be taken to improve productivity and to comply with regulatory requirements at minimum necessary cost. The magnitude of the cost impact associated

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<sup>1/</sup>"The Coal Industry: Problems and Prospects,"  
Congressional Research Service, December 1978.

with Federal regulations depends on the regulatory approach adopted. Many categories of regulatory control could be designed. Two broad categories are the direct approach and the incentives approach.

#### Direct regulatory approach

The direct regulatory approach can go two ways. One is called design standards, often referred to as the "cook-book" approach, that not only specifies the objective to be achieved but also prescribes in detail, and sometimes in complex terms, the steps that are required to achieve the objective. The other is performance standards which may prescribe an objective without specifying the exact means by which the objective is to be obtained. Emissions standards is one example of a performance standard.

Advocates of the direct approach contend that it provides a high level of administrative certainty as to the achievement of goals. They also believe that compliance can be more easily enforced than under the incentives approach in that violations can be more easily prevented. In general, performance standards allow more flexibility for compliance compared to the design standards.

Critics of this approach argue that less costly alternatives may be available that could achieve the same objective. Critics also argue that because the direct approach restricts choices and alternatives by channeling action in a specific way, it inhibits innovation, expansion of knowledge and research, and improvement upon the state-of-the-art.

#### Incentives regulatory approach

The incentives regulatory approach relies on economic mechanisms such as taxes or penalty charges to encourage behavior consistent with desired social objectives. For example, by using taxes or charges to reduce pollutant emissions into air or water, the regulatory agency could impose a cost on the polluter for the damages caused by the emissions. The charges would serve as an incentive for adopting measures to reduce emissions. A polluter could choose from a variety of pollution reduction measures such as cutting back production to a less polluting level, changing production techniques, installing pollution control devices, or some combination of these.

According to advocates of the incentives approach, a major advantage is the decentralization of decision-making.

They believe this approach encourages efficiency at a lower cost to society when compared to the direct regulatory approach.

Critics of this approach question its feasibility because of a lesser degree of assurance that regulatory objectives are being achieved. For example, a polluter might be willing to pay the higher taxes or penalty charges and continue polluting the air.

#### Need for regulatory review

As a measure to improve Government regulations, President Carter issued Executive Order 12044 on March 23, 1978. This order established the policy that regulations are to be as simple and clear as possible; achieve legislative goals effectively and efficiently; and not impose unnecessary burdens on the economy, individuals, public or private organizations, and State and local governments. Regulatory analysis is required to be performed for all regulations which will result in an annual effect on the economy of \$100 million or more, or in a major increase in costs or prices for individual industries, levels of government, or geographic regions. The President established the Regulatory Analysis Review Group to review regulations and consult with agencies.

A number of regulations could affect the demand for and supply of Western coal as well as Eastern and Mid-Western coal. Examples of regulations yet to be proposed that could do so include maximum economic recovery, diligent development, logical mining unit formation, and surface owner consent. Recently proposed regulations that could have an effect on the extent of future coal leasing and development of Western coal include those to control air quality and surface mining. The following discussion summarizes some recent studies of these proposed regulations to illustrate the possible effect of the regulations on coal development.

The Clean Air Act Amendments of 1977 changed the law for regulating new powerplants by requiring the use of technological systems to limit sulfur dioxide emissions. The main question is whether a boiler using low-sulfur coal should be required to achieve the same percentage reduction on sulfur dioxide emissions as boilers using higher sulfur coal. On September 18, 1978, the Environmental Protection Agency issued proposed standards to require a reduction of potential sulfur dioxide emissions



by 85 percent except for 3 days per month when no less than 75 percent would be allowed. Compliance with the proposed percentage reduction would be on a 24-hour daily basis and would be computed on the basis of overall sulfur dioxide removal through various methods such as scrubbers and pre-treatment coal cleaning systems as well as through emerging clean-up technological systems.

On December 8, 1978, the Environmental Protection Agency published supplemental information and analyses of additional alternatives to the proposed sulfur dioxide standards, including a number of changes in the assumptions which have an effect on the analyses. The alternatives analyzed include full control, partial control, and 95 percent control with a sulfur dioxide emission limitation. As indicated below, alternatives to the proposed regulations have been studied by the Regulatory Analysis Review Group and the Department of Energy, the implications of which are a part of the ongoing debate.

A January 15, 1979, Regulatory Analysis Review Group evaluation of the proposed standards questions the validity of the benefit estimates because population exposure or health effects have not been analyzed. The Review Group urges the Environmental Protection Agency to analyze exposure and health effects of emission levels of each proposed alternative before making a final decision on the form of the new source performance standard.

In a July 6, 1978, letter to the Environmental Protection Agency, the Department of Energy indicated that adoption of the proposed standard could result in significant conflict among environmental, economic, and energy objectives. Energy proposed two modifications to the standards. They suggested that compliance with the percentage reduction requirement be averaged on a monthly basis rather than a daily basis and that the percent reduction requirement be a non-uniform one (a sliding scale).

On May 25, 1979, the Environmental Protection Agency announced final Federal air pollution standards for new coal-burning electric power plants. 1/ Sulfur dioxide

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1/"New Standards For New Coal-Fired Power Plants," Statement by Douglas M. Costle, Administrator, U.S. Environmental Protection Agency, May 25, 1979. The standards apply to electric utility steam generating units capable of firing more than 250 million BTU/hour heat input of fossil-fuel, for which construction is commenced after September 18, 1978.

emissions to the atmosphere are limited to 1.20 pounds per million BTU (British Thermal Unit, a measure of heat value) heat input, and a 90 percent reduction in potential sulfur dioxide emissions is required at all times except when emissions are less than 0.60 pounds per million BTU heat input. When sulfur dioxide emissions are less than 0.60 pounds per million BTU heat input, a 70 percent reduction in potential emissions is required. According to the final standards, compliance is determined on a continuous basis by using continuous monitors to obtain a 30-day rolling average.

The second set of proposed regulations deal with surface mining. The Office of Surface Mining has proposed rules to regulate surface mining under the Surface Mining Control and Reclamation Act of 1977.

The Regulatory Analysis Review Group, in a November 27, 1978, study, concluded that the Office of Surface Mining's proposed air quality regulations would enforce standards of doubtful environmental benefit and cause many Western surface mines to have difficulty in complying with even the best available control technology. In addition, the Review Group is critical of the Office of Surface Mining because of uncertainty and lack of analysis about the effect of the alluvial valley floor regulations. The Review Group also concludes that much of the coal that is minable will be subject to reclamation costs at least 10 to 15 percent higher than those required by existing regulations. In regard to permitting requirements the Review Group states, "There are requirements for hydrologic studies, blasting plans and performance bonds which are discretionary and may add roughly \$29.44 million to the annual cost of coal without contributing significantly to the information required to protect the environment."

#### QUESTIONS FOR CONSIDERATION

##### Nature of goals:

1. What are the specific national policy goals that should be addressed by Federal coal management and leasing policy?
2. Is congressional action needed to resolve conflicting statutory goals or should the Administration be relied on to do this?

Trade-off analysis:

1. How should Interior balance multiple goals? What analytical tools should be used in making trade-off decisions? How should non-quantifiable factors be analyzed and weighted, particularly if a public consensus is lacking?
2. In those regions where energy development is encouraged by the Government, what level of Government funding to mitigate socio-economic impact is appropriate? Can funding be relied on to mitigate all impacts, or will local citizens need to be educated about problems before solutions can be found?

Who pays the cost:

1. Should all costs of energy development including environmental and socio-economic be included in the price of energy and directly passed on to the consumer, or should some of these costs be funded by Government appropriations and other public sources and indirectly passed on to the consumer or the public at large?

Regulatory control:

1. What type of regulatory control should be adopted for Federal coal leasing? How will regulatory control affect the balancing of goals? How will regulations affect coal market supply and demand conditions?
2. What are the benefits and costs of regulatory control? Do the benefits outweigh the costs? If the costs exceed the benefits, can the regulations be revised to improve program effectiveness?
3. What are the viable alternatives to direct regulatory control? What is the proper mix and type of regulatory control and private sector initiative? How does regulatory control affect private sector initiative to meet

energy, environmental, and social policy objectives? Can a less-regulated private sector achieve the timely, orderly, and efficient development of coal resources without jeopardizing environmental and social concerns?

4. What regulatory actions should be taken to foster increased productivity and decreased consumer costs?
5. What coal regulations should be reviewed by the Regulatory Analysis Review Group? Should the Group's conclusions and recommendations be considered binding?

## CHAPTER 4

### HOW WELL ARE THE TWO DEPARTMENTS--ENERGY AND INTERIOR--WORKING TOGETHER IN ESTABLISHING AND IMPLEMENTING GOALS AND REGULATIONS TO "MAKE IT ALL HAPPEN"?

Interior has primary responsibility for leasing public coal lands. However, the Department of Energy Organization Act requires Energy to develop certain regulations related to the management of energy resources. The act also requires Energy to establish energy production forecasts. Issues related to these requirements include:

- Will the split responsibility between agencies enhance or impede efforts to develop effective regulations? (Will the Leasing Liaison Committee function as an effective inter-agency coordinating mechanism?)
- Will leasing to meet Government-derived production goals restrict supplies resulting in anti-competitive coal markets and supply shortfalls?
- Will production goals and leasing targets be formulated on the basis of flexible methodology and reliable data?

#### WILL THE SPLIT RESPONSIBILITY BETWEEN AGENCIES ENHANCE OR IMPEDE EFFORTS TO DEVELOP EFFECTIVE REGULATIONS?

Prior to October 1, 1977, Interior had sole responsibility for leasing, regulatory, and management functions. However, with the enactment of the Energy Organization Act, Energy has assumed some of the regulatory functions. Energy is responsible for issuing regulations pertaining to fostering competition for leases, implementing alternative bidding systems, and establishing requirements for diligent development and production rates. Energy is required to consult with Interior during the preparation of regulations and to give Interior an opportunity to comment on the proposed regulations before they are published for public comment.

Interior retains sole responsibility for the issuance and supervision of leases and the enforcement of all leasing regulations, including but not limited to lease terms and conditions and production rates. However, Energy may disapprove of any term or condition which relates to any matter for which it has regulatory responsibility. If disapproved, the term or condition may not be included in the lease. The interrelationship of Interior's leasing system and Energy's leasing regulations is obviously very close.

The role of the  
Leasing Liaison Committee

The Energy Organization Act established a Leasing Liaison Committee to be composed of an equal number of members from Energy and Interior. A Committee charter, signed by the Secretaries in May 1978, requires that the Committee be composed of four representatives from each Department who are serving at the Presidential appointment level.

The charter allows the Committee to address policy issues and make recommendations to the respective Secretaries, but it does not allow the Committee to function as a policy-making body. The scope of activities includes leasing matters pertaining to Federal energy resources such as coal, offshore oil and gas, onshore oil and gas, uranium, geothermal, oil shale, and tar sands.

Specifically, the Committee's responsibilities are to (1) identify and solve problems related to Federal energy leasing responsibilities that arise between Energy and Interior, (2) provide timely information exchanges, (3) expedite consideration and resolution of inter-departmental energy leasing matters generally, (4) ensure cooperation and assistance in preparing annual reports and reports to the Congress, and (5) facilitate consultation on technical matters of concern to both departments.

The effectiveness of the inter-agency establishment of coal leasing policy, development of particular regulations, and resolution of differences are issues of concern to many Government and non-Government persons. Many observers believe that split responsibility under a properly functioning Leasing Liaison Committee could result in the orderly resolution of issues and potential conflicts. They maintain that this organizational arrangement could be an appropriate mechanism for reaching the most desirable and constructive

regulatory-related decisions because of the checks and balances element in it.

Other observers believe that split responsibility could result in conflicting policies and major uncertainties about the timely and orderly development of Federal coal resources. They maintain that Interior and Energy may have divergent views--in part because of the agencies' interpretation of their responsibilities and objectives--which could prolong issue-resolution and regulatory decision-making. Further, this could adversely affect certain elements of the coal leasing program. It could create confusion and uncertainty among not only Government energy and environmental planners in Washington, D.C., but also Government field personnel responsible for implementing the program and interacting with the private sector, and the various non-Federal groups--including environmentalists, local citizens, State officials, and the coal industry.

It remains to be seen how the Leasing Liaison Committee will resolve problems that are not solved at the departmental level. If the Leasing Liaison Committee becomes deadlocked over an issue, a mechanism has not been established which stipulates who should resolve the issue (e.g., the President or the Congress), when the conflict should be aired, and what procedures will be followed in resolving the issue.

#### Energy's regulatory role

At the present time there are major uncertainties about the effect of Interior policy and administrative functions regarding many issues, particularly maximum economic recovery, environmental unsuitability, tract selection and ranking, and surface owner consent, as well as production goals which are discussed below. These issues may substantially affect competitive interest in particular tracts, mine development lead times, and production rates.

As these uncertainties are removed by Interior, Energy, or both agencies through the Leasing Liaison Committee, special regulatory action by Energy may be required to foster competition, encourage timely production, and implement appropriate bidding systems. The manner in which Energy responds to these and other issues will affect the timely and orderly development of Federal coal reserves.

## The role of production goals

The Department of Energy Organization Act requires Energy to establish production objectives for coal and other energy fuels for periods of 5 and 10 years. The act also requires Energy to identify the strategies that should be followed to achieve production objectives, including levels of investment in supply and consumption sectors and the appropriate Federal policies and actions that will maximize private production and investment.

Although not specifically required by the act, the Departments have agreed to establish production goals for Federal energy resources. Production goals can serve several useful functions. Among these are:

- To promote the development of an integrated national energy policy by specifying production objectives for Federal and non-Federal energy resources which are necessary to carry out that policy.
- To serve as a vehicle for seeking a national consensus on energy production and conservation policies.
- To provide guidelines as to priority areas where Federal efforts should be committed.
- To communicate to the private sector national energy policy production objectives and the type of private development activity which the Government will encourage.

Energy and Interior signed an agreement in September 1978 spelling out the responsibilities of both agencies in the establishment and use of production goals for Federal energy resources including coal, offshore oil and gas, onshore oil and gas, uranium, geothermal, oil shale, and tar sands. Interior agreed to provide Energy with an evaluation of resource and production potential for Federal lands. Prior to the establishment of final national production goals, Energy agreed to submit the proposed goals to Interior for review.

According to the agreement Energy will establish production goals for federally owned resources based upon

- production estimates provided by Interior;



- production estimates developed by Energy for lands scheduled to be leased;
- increases or decreases in these estimates resulting from modifications to pertinent regulations or statutes, anticipated advances in technology, or use of enhanced recovery methods; and
- any additional increases or decreases in production which the Secretary of Energy may propose.

The coal production forecast periods are 5, 10, and 15 years. The agreement requires Interior to be "guided" by the final production goals in establishing or revising leasing programs and lease planning schedules. The term "guided" is not defined.

The agreement does not explicitly state that Interior's lease sale scheduling will be driven by Energy's production goals. In the final programmatic EIS Interior states that selection of production targets includes consideration of the full range of Federal land management responsibilities and applicable statutory requirements and policies of the States. Interior officials indicate that these factors--particularly those affecting environmental protection--may conflict with regional lease sale scheduling designed to meet Energy's production goals, and that Interior should make adjustments where necessary.

According to Interior's proposed coal management regulations, published in the Federal Register on March 19, 1979, Interior--in consultation with Energy, affected State Governors, and other concerned parties--will biennially adopt regional coal production goals established by Energy. Interior would establish preliminary and final regional leasing targets based on Energy's regional production targets, recommendations of Federal/State coal teams, and other relevant information from various sources--coal and utility industries, agricultural groups, community organizations, environmental groups, and other parties. If the final target suggests the need for Federal coal leasing, a proposed lease sale schedule would be prepared.

Interior's proposed regulations emphasize that Interior's target for a given region may not be the same as Energy's goal for that region. Energy officials have emphasized that, in the aggregate, Energy's goals and Interior's targets should be in agreement, but that Interior must respond to environmental and other concerns which may require

adjustments to the regional goals in formulating regional leasing targets. This agreement may be difficult to ascertain because Energy's production goals are expressed as a range. If Interior's leasing targets--in conjunction with estimates of production potential for existing leases and non-Federal coal--falls within the range, it might be difficult to determine if, in the aggregate, sufficient coal will be leased. An issue is the extent to which factors independent of Government-derived production goals will be used to verify the market demand for Federal coal.

As a mechanism to develop working procedures for implementing the process of coal production goals in conformity with the September 1978 agreement and subsequently, deriving Interior regional leasing targets, the Secretary of the Interior, on June 2, 1979, established an Interior/Energy working group under the Leasing Liaison Committee. The working group would serve in an advisory capacity only, and its recommendations would not be binding on Energy or Interior. According to Interior, the group would facilitate communications between the Departments in assuring that they carry out their responsibilities in an effective manner that would reduce the potential for misunderstanding.

The groups's basic role would be to:

- Facilitate the exchange of information on coal between Interior and Energy.
- Coordinate timing, scheduling and other technical aspects in the execution of the agreement between Interior and Energy concerning production goals and leasing targets.
- Resolve questions relating to interpretation and application of coal models used in production goal and leasing target setting.
- Generally provide a mechanism for interchange of technical ideas and views between Interior and Energy.

WILL LEASING TO MEET GOVERNMENT  
DERIVED PRODUCTION GOALS RESTRICT  
SUPPLIES RESULTING IN ANTI-COMPETI-  
TIVE COAL MARKETS AND SUPPLY SHORTFALLS?

In a previous report 1/ we stated that

"Under present circumstances and outlook, a viable state of competition exists in the coal industry and it is unlikely that the industry could be dominated by any firm or group of firms. Circumstances could change, however. The situation is dynamic in Western markets and requires the continued vigilance by the Federal Trade Commission, Department of Justice, and the Interior Department through its coal leasing program."

A limited leasing policy may affect competition in the Western coal market. A Department of Justice report 2/ states that Federal coal leasing has a great potential to protect the competitive environment of Western coal markets because the Government controls most of the Western coal. Justice believes that the coal leasing moratorium may be the most severe barrier to new entries into the Western coal market. A conclusion in the report is that "In the Southwest and Northern Plains it may already be starting to limit the ability of sellers to compete and could eventually foster anti-competitive effects, tantamount to a monopolistic restriction of supply."

Advocates of a greater level of leasing argue that a limited leasing program could restrict the availability of coal to be mined and create a single source of fuel supply for planned utility and industrial plants. They maintain that such a Government-created monopoly would have inflationary impacts, both locally and nationally, and may be contrary to antitrust objectives.

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1/"The State of Competition In The Coal Industry," EMD-78-22, December 30, 1977.

2/"Competition in The Coal Industry," Department of Justice, May 1978.

The issue of adequate competition in Western coal markets focuses on what constitutes a sufficient number of potential suppliers to offer a wide range of choices so prospective coal users--utility and industrial users--can choose the least cost available coal. The primary concern is the rate and timing of new leasing to achieve the desired level of competition, and as discussed below, to hedge against production shortfalls.

Some advocates of a limited leasing policy believe the limit can be made flexible to respond to periodic adjustments in production forecasts. They argue that a liberal leasing policy may retard Government (local, State, and Federal) efforts to plan for and mitigate environmental and socio-economic impacts. For example, the draft programmatic EIS states that land use and environmental impacts of Federal leasing would depend on which of the leases were developed, making Federal control of these impacts less secure.

Advocates of a greater level of leasing argue that while impact assessment and control are valuable functions, other important factors should also be considered in determining how much coal to lease. They maintain that tonnage leased may not equal tonnage produced because the leases are in areas where supply is subsequently limited by constraints such as coal quality, transportation rates, air quality protection standards, or other factors.

Critics of limited leasing argue that the realization of a probable shortfall is likely to come too late for effective mid-course correction. They maintain that such a shortfall could result in higher prices for electricity and further inflationary pressures as well as anti-competitive activities. Furthermore, critics believe that if the shortfall were serious enough, the Government would have to take action to allocate coal to areas severely disrupted by the shortfall or to impose mandatory conservation measures.

The issue of available supply to meet demand focuses on how much surplus Western production capacity should be available if and when needed as a result of supply shortfalls in other coal regions or in other energy supplies. Prior to the preparation of the draft programmatic EIS, Interior considered a variation of the proposed preferred

leasing alternative. <sup>1/</sup> In this variation, the basis for calculating the regional production target would be Energy's medium production goal plus 25 percent. The inflated goal was justified under this leasing alternative because it is difficult to predict actual future coal production that will result from any given level of leasing. The prediction is difficult because some leases may not be developed due to unforeseen environmental or marketing problems.

This variation is excluded from the preferred alternative in the final programmatic EIS. Interior's medium production estimate of Western coal production for 1990 for the preferred alternative indicates that approximately the same total Western production as Energy's medium forecast would be achieved, although the magnitude of regional production would differ. If Energy's medium production goal were adjusted by 25 percent and the resultant estimate used as a basis for calculating the regional production target, the estimate would be 827 million tons, or 165 million tons above the final programmatic EIS's production projection for the preferred alternative. The highest 1990 medium production estimate is 772 million tons to meet the industry needs alternative.

However, when the Secretary of the Interior announced adoption of a Federal coal management program June 4, 1979, he selected preliminary leasing targets for three regions as discussed on page 2-6. The preliminary target for the Powder River Region is based on Energy's medium production goal plus a 25 percent factor to increase the preliminary target over Energy's goal. Interior states that the additional 25 percent will allow greater flexibility and promote competition. The preliminary leasing targets for the other two regions are based on Energy's medium production goals with no adjustment.

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<sup>1/</sup>Office of Coal Leasing Planning and Coordination, Department of the Interior, "Secretarial Issue Paper: Formulation of Proposal for Coal Programmatic Environmental Impact Statement," June 23, 1978, "Summary of Paper on Need for Leasing/Leasing Systems Choice," p. 11.

WILL PRODUCTION GOALS AND LEASING TARGETS BE FORMULATED ON THE BASIS OF FLEXIBLE METHODOLOGY AND RELIABLE DATA?

The reliability and usefulness of Energy's production goals and Interior's leasing targets depend on several interrelated factors. Because goals and targets may be used for different purposes--setting departmental priorities, analyzing their impact on market structure and competition, scheduling lease sales, etc.--it is important that they be formulated on the basis of flexible forecasting methods that reflect realistic assumptions, supply and demand conditions, and take uncertainty into account.

Flexible forecasting

Forecasting techniques need to be flexible enough to meet various analytical and policy needs, including the potential uses of production goals and leasing targets and the extent to which site-specific and event-specific data will shape final leasing and production decisions. Forecast estimates can be calculated several ways. Estimates can be generated through the use of large, complex and integrative computer models, such as those utilized by Energy and Interior. These energy models seek to forecast energy demand and supply in detail, taking into account specific energy demand and supply sources by sector, type, and geography. In short, they are designed to provide a range of energy market conditions. Other decision tools--such as market surveys and total cost schedules of energy supply alternatives based on uniform cost accounting standards--could meet some policy needs at various decision-making points, particularly when Energy's assumptions and goals are subject to modification by Interior at different decision-making points.

Whether policymakers at the Federal level should be locked into a single forecasting model or a set of models to meet their continuing policy development needs is an issue. <sup>1/</sup> Local and regional political and market conditions may have

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<sup>1/</sup>Coopers & Lybrand, "Management Audit of Selected Areas of the Department of Energy," a report undertaken at the request of the Secretary of Energy, published March 2, 1979, pp. 35-37.

considerable influence in shaping Federal leasing decisions. Factors such as land use trade-offs, coal prices, and environmental standards and their enforcement may be more accurately reflected through information at the decentralized level compared to data generated by computer models at the Federal level. However, the extent to which computer models can be disaggregated and their assumptions stated explicitly could determine their usefulness to decisionmakers at various levels of responsibility.

Computer models can be useful tools, providing valuable assistance to energy policymakers. However, certain procedures and practices should be followed to insure that mathematical and statistical models make credible predictions. These include (1) a system for obtaining the views of both experts and the general public; (2) established rules for changing the model; and (3) procedures to document, verify, validate, and test the model. 1/

In commenting on a draft of this report, Department of Energy officials stated that Energy's production forecasts recognize problems associated with unreliable data and numerous unquantifiable factors. The officials also stated that Energy's production projections appear as ranges (low, medium, and high) which recognizes the problems of uncertainty. Additionally, the officials told us that Energy anticipates putting into place a continuous process of improvement in Federal coal production goal development methodology which would assure that the best state-of-the-art forecasting techniques are used. Further, the officials indicated that Interior has provided in its proposed coal management regulations a process for translating Energy's goals into leasing targets. This was briefly summarized earlier.

Interior's leasing targets would be used for several purposes--setting departmental priorities, aiding States in planning for future coal development impacts, and guiding Interior on the amount of coal to be offered through lease schedules. The proposed regulations state Interior's regional leasing targets would reflect the difference between desired levels of production in the regions and projected supplies. They also state that final leasing targets do

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1/"Activities of the Energy Information Administration," Report to the President and the Congress by the Professional Audit Review Team, May 7, 1979, p. 33.

Previous efforts to resume Federal coal leasing, including the adoption of the former leasing program, the Energy Minerals Activity Recommendation System, were widely criticized because the need to resume Federal leasing had not been demonstrated. The court in NRDC v. Hughes (see Chapter 2) cited this deficiency as a major defect in the 1975 coal leasing programmatic EIS.

INTERIOR'S ANALYSIS OF THE  
NEED FOR COAL LEASING

According to the final programmatic EIS, approximately 6 billion tons or 36 percent of the 17 billion tons of recoverable coal under lease will probably not be mined because of failure to achieve diligent development by 1986. The leases containing this coal are not included in mining plans. Additional tonnage for leases included in mining plans may also not be mined, but no estimate was made.

Interior discusses the following reasons why some existing leases may not be put into production. Some leases:

- Are small and would require additional Federal leasing or acquisition of other coal rights to form economically viable mining units.
- Are located far from transportation routes.
- Are in areas with environmental problems.
- Contain coal that is of poor quality and thus is not competitive with higher quality coal.
- Contain coal that is costly to mine and thus is not competitive with coal that is cheaper to mine.
- Will not be mined because demand is lacking and coal will only be produced if there is a market for it.

Interior discussed four benefits which they believe would be realized by a resumption of leasing. These are:

- The Nation would have greater assurance of being able to meet its national energy objectives.



## Reliable data

Supply and demand data used to formulate production goals must be reliable if the goals are to be useful. As mentioned above, with so much uncertainty about the future, a specific number may not be as reliable as a range. Supply data includes estimates of Federal and non-Federal recoverable coal reserves, projections of new mine openings and capacity additions to existing mines, State and local government policies, and supplies of non-coal fuels. Demand data includes indications of potential coal markets, need for existing operations, and demand for non-coal fuels.

### Supply data

The first type of supply data needed is a valid estimate of recoverable reserves. In the West, the Federal Government owns the majority of coal reserves, and therefore has a major responsibility for ensuring the availability, validity, and reliability of reserve estimates. The manner in which this responsibility is discharged is discussed in Chapter 6.

In addition, estimates of non-Federal coal will be needed to evaluate production potential and to determine the amount of Federal coal that should be leased to meet production goals. Some reserve estimates of non-Federal coal may be obtainable from States, Indian tribes, industry, and other owners.

Furthermore, some Western Federal coal, standing alone, cannot support mining operations. Before production potential is evaluated, these tracts should be consolidated into economic-sized mining units with nearby non-Federal coal. If the non-Federal coal has not been explored, the projection of Federal coal drill hole data onto the non-Federal land may not provide a sufficiently reliable reserve estimate for calculating mining unit reserves. In this case, the Federal Government might encourage the non-Federal owners to explore their lands. If the owners do not have this capability, it might be feasible for them to participate with the Federal Government in conducting the Federal drilling program so that an economic-sized mining unit could be delineated, thus enabling Interior to obtain more reliable estimates of production potential and encouraging the availability of a mining unit package at the time of lease issuance.

The second type of supply data needed is a projection of mine openings and capacity additions to existing mines. In many cases these future mine openings are announced far in advance of their scheduled opening and are, therefore, subject to uncertainty. The uncertainty is created not only by Federal and State regulations but also by market uncertainties and energy economics. If milestones to judge the progress of expansion plans were established, they could indicate either the need for additional regulatory action or regulatory modifications that would promote timely development.

The third type of supply data needed is State and Indian coal policies and plans that pertain to the development of their respective resources. Their policies and production plans, if available, could influence Federal coal leasing in terms of how much, when, and where leasing should occur.

The fourth type of supply data needed is an estimate of supplies of non-coal fuels. This is needed to indicate the production potential in other energy sectors and to assess the role of coal in the interfuel energy supply.

#### Demand data

The first type of demand data needed is a valid estimate or range of future market demand. Private sector and end-use plans can be used in developing production goals and leasing targets. The plans are subject to revision as energy investment incentives, regulatory changes, and altering compliance costs could modify private sector intentions upward or downward.

The second type of demand data needed is a forecast of additional coal requirements for existing mines. The requirements can be identified in part by using short-term leasing criteria because it is based on the need for additional unleased Federal coal to fulfill market contracts, maintain employment, or prevent bypassing small tracts of unleased Federal coal. Production goals and leasing targets could separately specify how much coal is needed to maintain existing mine operations, but is not yet under the control of industry. Goals and targets could also indicate the number of new mining operations that will be required to meet coal use projections. Factors such as market structure, maximum economic recovery, and logical

mining unit formation could also affect projections, too, but these are partly based on market conditions and regulatory policies.

The third type of demand data needed is a forecast of future demand for non-coal fuels. This is needed to help determine the magnitude of future coal demand.

#### QUESTIONS FOR CONSIDERATION

##### Effect of split responsibility:

1. Will the split responsibility between Energy and Interior enhance or impede efforts to establish coal leasing policy, develop effective regulations, and resolve agency differences? Will the split responsibility result in greater uncertainties over the timely and orderly development of coal resources than if a single agency were entirely responsible? Will split responsibility result in administrative delay and duplication?
2. If the functions should be performed by Energy and Interior, is the current management structure conducive to effective management? If not, how can it be modified to be made effective? If the functions should be performed by a single agency, which agency should assume the functions and how should it be organized? What other options exist for Federal resource management?
3. Will the Leasing Liaison Committee be able to resolve or foster the resolution of conflicts over coal policy and regulatory control in a timely and conclusive manner? If the Committee becomes deadlocked over an issue, how will the issue be resolved? Who will resolve it? When will it be surfaced? What procedures will be followed in resolving it?
4. Should Energy have the authority to exclude certain lease terms and conditions that Interior is proposing for a lease? Can the Leasing Liaison Committee resolve the conflict if both Departments are in disagreement? Should an impartial authority be established to make

final determinations when both agencies cannot resolve these conflicts?

Effect of leasing tonnage equivalent to production goals:

1. How will leasing to meet production goals affect competition? What constitutes a sufficient number of potential suppliers to offer a wide range of choices so prospective coal users can choose the least cost available coal?
2. Will leasing to meet production goals increase the risk of supply shortfalls? How much surplus Western production capacity should be available if and when needed as a result of shortfalls in other coal regions or in non-coal energy supplies?
3. Should Interior's lease scheduling strategy be driven by Energy's production goals? If so, in what manner should this be done in light of the differing perceptions and objectives of the two agencies? If not, what is the proper role of Energy's production goals, particularly in relation to what Interior does in lease scheduling? How will Interior be "guided" by Energy's production goals?
4. Should Interior formulate its own regional production targets? If so, for what purpose? How should they be estimated? How flexible should they be?
5. How will Energy's goals and Interior's targets differ? Will Interior develop a single production target or will the target be expressed as a range? Should Energy and Interior use the same production goals for Federal lands in developing the National Energy Plan and in managing the Federal coal leasing program? What role should the Leasing Liaison Committee have in resolving this issue?

Effect of forecasting and data:

1. Are production goals formulated on the basis of flexible methodology? Are existing forecasting methods adequate to meet public policy requirements and the needs of coal production

tion goal-setting and lease target-setting?  
To what extent should market forces be allowed to determine the rate and location of leasing as opposed to the rate and location set by Government forecasting?

2. Will the conditions and assumptions built into forecasting produce reliable and realistic results? How should future uncertainties be accounted for in developing production goals and leasing targets? What degree of accuracy should be expected in production goals and leasing targets?
3. Are production goals formulated on the basis of reliable data? Does available data allow realistic and reliable forecasts to be made? If not, what additional data is needed? How should their reliability and validity be verified? Does Interior have authority to explore non-Federal lands if requested by the mineral owner and if properly reimbursed?
4. What should Energy and Interior do to assure that the goal-setting process considers State and Indian coal leasing policies and production plans? What coordination between these groups is essential?

## CHAPTER 5

### WHAT, REALISTICALLY, IS THE PRODUCTION POTENTIAL OF COAL ALREADY UNDER LEASE--IN VIEW OF THE MANY LEGAL, ECONOMIC, ENVIRONMENTAL, AND OTHER FACTORS AFFECTING ITS DEVELOPMENT?

One of the key issues in the coal leasing debate has been and continues to be the relationship between coal tonnage under Federal lease and the future demand for Federal coal. Interior's estimates show that over 17 billion tons of recoverable coal are thought to be contained in the 534 outstanding leases. Over 92 percent of this tonnage is estimated for 468 leases in 6 Western States--Colorado, Montana, New Mexico, North Dakota, Utah, and Wyoming. As indicated in Chapter 4 of the report, forecasting demand for Federal coal depends on many interrelated factors and uncertainties, including market conditions, lead times, and production goals established by Interior and Energy.

Three fundamental points are central to this issue: (1) the portion of future coal production that will come from Federal lands, and the time frame covered by this portion; (2) the extent to which existing leases could supply quantities of coal to meet immediate demand; and (3) if the extent of this supply source is inadequate in relation to demand for Federal coal, whether the necessary lease schedules to prevent production shortfalls and anticompetitive conditions can be followed.

Coal tonnage under Federal lease represents only one Western coal supply source that could be made available to the market to meet current and future demand. Besides coal under existing lease, other coal supply sources include new long-term Federal leasing, a combination of existing leases with new short-term Federal leasing to form mining units that could be mined profitably, and non-Federal coal under the control of State government, Indian tribes, railroads, and private entities. In short, the issue really focuses on the extent to which existing leases by themselves or in combination with other coal properties, are capable of supplying coal to meet the demand for Western coal.

Three major questions are related to the assessment of leased coal tonnage.

--To what extent is the development of existing leases restricted by environmental considerations?

--To what extent does an evaluation of existing leases depend on the formation of mining units?.

--To what extent is the development of existing leases prevented by a lack of transportation networks?

We believe that a coal leasing program should be designed regardless of whether or not there is a need now for new leasing. In developing the program Interior should consider all aspects of pre-lease sale and post-lease sale management functions and market conditions. If this is done, a reliable, efficient, effective, and flexible system should be in place if and when a resumption of coal leasing is necessary. Leasing decisions can then be made in a timely and efficient manner.

Although this chapter addresses only three major questions that are related to the production potential of existing leases, certain other questions raised in other chapters also bear on the ultimate resolution of this issue. Briefly, these include:

--Interior's data requirements on production potential of lands under Federal lease as spelled out in the memorandum of understanding between Interior and Energy concerning use of production goals for energy resources on Federal lands;

--the extent to which maximum economic recovery estimates for existing leases are based on maximum economic recovery definition and guidelines that Interior adopted June 2, 1979;

--the extent to which unsuitable leases will be affected by lease exchange and related actions; and

--leases not currently contained in mining plans but which Interior recently indicated may have future production potential, such as leases acquired through assignments in the last five years.

Previous efforts to resume Federal coal leasing, including the adoption of the former leasing program, the Energy Minerals Activity Recommendation System, were widely criticized because the need to resume Federal leasing had not been demonstrated. The court in NRDC v. Hughes (see Chapter 2) cited this deficiency as a major defect in the 1975 coal leasing programmatic EIS.

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Interior discussed four benefits which they believe would be realized by a resumption of leasing. These are:

- The Nation would have greater assurance of being able to meet its national energy objectives.



- More desirable patterns of coal development would be promoted.
- Interior would benefit by legal and administrative advantages.
- Competition in the Western coal industry would be improved.

Leasing to meet national energy objectives

Interior states that a lease sale in 1980 is not likely to result in coal production until 1985 to 1990. They estimate that for a major Western surface coal mine it takes 4 to 7 years after lease issuance to design the mine plan, assemble equipment and construct the mine, and study and design modifications to comply with State and Federal laws.

Because non-producing leases will be subject to cancellation in 1986 as a result of the diligent development requirement, Interior states that increases in Federal coal production after 1986 will come from two sources: (1) new Federal leasing and/or (2) expansion of mines containing Federal coal which are already in operation by 1986. Interior admits that it is hard to know precisely what the expansion potential of those mines would be, or whether rapid expansion would introduce inefficiencies in their operation.

Interior's comparison of Energy's Western production goals with its own analysis of Western production potential indicates there may be no need for significant leasing to reach the 1990 low production projection. However, Interior believes extensive development of new sources would be required to achieve 1990 medium or high production levels. This is based on the following production estimates.

	<u>Interior estimate of production potential (note a)</u>	<u>Energy production projections (note b)</u>		
		<u>Low</u>	<u>Medium</u>	<u>High</u>
1985	422.2	299.8 (315.9)	391.1 (367.5)	438.7 (387.5)
1990	509.8	366.5 (563.1)	659.7 (689.3)	922.1 (753.9)

a/Includes planned production for mine plans including Federal leases, planned production from Indian lands, and planned production from wholly non-Federal leases. The 1990 figures include production potential for preference right lease applications.

b/The figures in brackets are based on the April 1979 Energy estimates. The unbracketed figures are based on the June 1978 Energy estimates used in the EIS.

Leasing to promote more  
desirable patterns of

Interior believes that new Federal leasing would improve intra-regional patterns of development. They state that new leases could displace development of some existing leases and preference right lease applications which may not be the most suitable in terms of land use and environmental considerations. This could occur because new leasing will be permitted only after comprehensive land use and environmental planning is conducted.

Leasing for legal and  
administrative purposes

Interior emphasizes that a resumption of Federal leasing is necessary, at least to the extent of issuing leases for qualifying preference right lease applications. In addition, Interior views lease exchange or lease purchase as possible alternatives to preventing development of existing leases and preference right lease applications in environmentally unsuitable areas. They maintain that the likely administrative and financial burdens to acquire leases in unsuitable areas could be reduced by new leasing and that Federal and State governments would benefit from the added bonuses and royalties from the sale and mining of new Federal leases.

Leasing to increase  
competition in the  
Western coal industry

Interior states that certain conditions must exist in order for private markets to function in the most socially beneficial manner, making the best coal available at the lowest price. They indicate that a critical requirement is that there should be a sufficient number of buyers and sellers for the market to be genuinely competitive so that no one or few buyers can influence prices in a monopolistic fashion. Interior believes that a decision not to lease Federal coal would tend to inhibit competition in the Western coal industry. The final programmatic EIS cites a 1978 Department of Justice report, discussed in Chapter 3, which supports a resumption of Federal leasing to increase competition.

What additional analysis should  
be made to determine the need  
for future leasing?

In commenting on this report, both Interior and Energy believe that mining plans should be relied upon in the evaluation of production potential for existing leases. As stated in Chapter 9, we believe that this strategy would not result in the type of information needed to answer the question, "Is there a need for new long-term coal leasing in the near future?"

The final programmatic EIS does not present an analysis of existing leases to show those that have environmental problems, that are not by themselves or in conjunction with other coal properties logical mining units, or that are not near transportation facilities. An analysis of these factors is necessary in assessing existing production potential and production capacity.

Physical production potential and capacity estimates could provide useful information to support leasing policy and decision-making. However, interpretation of the estimates will depend upon professional judgments regarding future uncertainties and the effect of regulations not under Interior control. For example, uncertainties in rail transportation rates, which are regulated by the Interstate Commerce Commission, could affect the economic viability of a specific lease tract.

The assessment of production potential and capacity is also dependent on the validity and reliability of reserve estimates. In a recent report 1/ we stated that Geological Survey's reserve estimates for existing leases are neither accurate nor reliable. Interior has stated it is undertaking a program to improve the accuracy of reserve information and to obtain reserve estimates from lessees using a standard reserve estimating methodology.

TO WHAT EXTENT IS THE DEVELOPMENT  
OF EXISTING LEASES RESTRICTED BY  
ENVIRONMENTAL CONSIDERATIONS?

There are many environmental considerations which should be carefully reviewed. These include but are not limited to the designation of air quality areas where industrial development would be limited or prohibited, the protection of potential or proposed wilderness areas, and regional and site-specific surface mining considerations.

These considerations emphasize the lack of a direct link between leasing and mining. This was discussed previously in Chapter 3. Environmental protection goals may consequently require that areas of unmined coal which could support an economic mining operation not be mined because of overriding environmental concerns.

Two environmental considerations, discussed below, illustrate the need for assessing the environmental suitability of existing leases. These are the designation of leases environmentally unsuitable for mining and the effect of fugitive dust standards on existing leases.

An analysis of the production potential and capacity for all existing leases and preference right lease applications is not possible because Interior has not determined which leases and applications are environmentally acceptable for mining. Interior maintains that specific lease development proposals must be reviewed to measure the possible contribution existing leases and applications could make to future energy needs. In the final programmatic EIS Interior states that unsuitability criteria would be applied to all new leases, including emergency

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1/"Inaccurate Estimates of Western Coal Reserves Should Be Corrected," EMD-78-32, July 11, 1978.

leases and preference right lease applications, while the unsuitability of existing leases would not be determined until the time mining plans were submitted or lease exchange requests were received.

According to the final programmatic EIS, 223 leases estimated to contain about 9 billion tons of recoverable reserves will be reviewed for unsuitability, because the lessees have submitted mine plans. On the other hand, there are 311 leases estimated to contain about 8 billion tons of recoverable reserves which will not be reviewed for unsuitability because the lessees have not submitted mining plans or applied for lease exchanges. However, some of these leases are in areas Interior is presently updating to take unsuitability criteria into account to support a possible mid-1980 lease sale.

The application of unsuitability criteria to existing leases will in all likelihood be time-consuming. This makes it all the more important for Interior to undertake a comprehensive study of all existing leases (1) to determine what additional information is needed, or if none is needed, to designate leases either as suitable or unsuitable for mining; (2) to inform the lessee as to the environmental status of his lease so that he can decide, in cases where more information is needed, whether to acquire the information or to relinquish the lease; and (3) to make a determination as to the production potential of the 17 billion tons under lease, in conjunction with the other analyses discussed in this chapter--a determination Interior has not adequately performed.

In addition to the surface mining unsuitability criteria other environmental analyses are needed to determine the production potential of existing leases. For example, as stated in Chapter 3, some existing leases which may or may not be included in mining plans might not be developed because of fugitive dust restrictions.

TO WHAT EXTENT DOES AN  
EVALUATION OF EXISTING  
LEASES DEPEND ON THE  
FORMATION OF MINING UNITS?

The assessment of production potential and capacity for existing leases will not be adequate if the economic viability of the lease tracts is unknown. One method for evaluating economic viability is to determine if a lease is included in a logical mining unit. This unit represents an area of coal that can be mined in an

efficient, economic, and orderly manner. Interior has not determined which leases are contained in such units.

In many instances there are diverse and intermingled mineral and surface ownership patterns in Federal coal lease areas. As a result of these patterns, some Federal lease tracts will be isolated unless they can be combined with private, State, railroad, Indian, and/or other Federal coal tracts to form logical mining units.

Many of the existing leases, alone, probably could not be technically classified as logical mining units. Interior estimates that over half the Federal coal leases standing alone would have insufficient reserves to supply high volume coal users such as electric utilities. Interior's reserve estimates for each of 530 leases indicates that 272 leases each contain less than 10 million tons of recoverable coal. Sixty-eight of the 272 leases each contain less than 1 million tons of recoverable coal.

In establishing logical mining units for existing and new leases, several technical issues need to be resolved. These include:

- Should the lease tracts be divided geographically and placed into different logical mining units?
- Should lease tracts not contiguous to other lands in a potential logical mining unit be made a part of the unit? If so, legislation may be necessary as the statutory requirement is that the tracts in a logical mining unit must be contiguous. This issue is further discussed in Chapter 8.
- Should separate coal seams in the same lease tract be designated as separate logical mining units to be mined by the same or different operators at the same or different points in time?
- How should maximum economic recovery determinations be made for logical mining units? Maximum economic recovery is further discussed in Chapter 7.

TO WHAT EXTENT IS THE DEVELOPMENT OF  
EXISTING LEASES PREVENTED BY A LACK OF  
TRANSPORTATION NETWORKS?

The availability of rail transportation, electric transmission lines, and other transportation modes should be considered in assessing the production potential and capacity of existing leases. Rail is a primary mode of transportation for Western coal, but many of the leases may not be served by railroad lines. For example, over 2 billion tons of leased recoverable reserves are in the Kaiparowits area of Southern Utah, but this area is not served by a viable transportation system. Unless this coal can be used to generate electricity at the mine sites, the coal cannot presently be transported once it is mined. One proposal for this area would require about 200 miles of track for a transportation corridor.

Other areas in the West are confronted with similar problems. For example, plans are being developed for a 45-mile rail spur along the Tongue River in the Northern Powder River Basin of Montana. Without this spur, proposed coal mines along the rail corridor may not be put into production.

Consequently, if a lease can be mined within environmental and economic considerations, estimates of production potential or capacity will not be meaningful unless a transportation network exists or transportation plans indicate that a network could be in place when needed. This analysis of production potential could provide some indication of the magnitude of investment that would be required to establish sufficient transportation capacity.

QUESTIONS FOR CONSIDERATION

Need for analysis:

1. How and when should Interior evaluate existing leases and preference right lease applications to assure an informed judgment as to the need for additional long-term leasing? Should Energy provide technical assistance to this effort?
2. How should production potential and production capacity be determined and used to assess the need for additional leasing?

Reserve estimates:

1. Will Interior's program to re-evaluate reserve estimates on existing leases provide valid and reliable estimates when needed?
2. How should reserve estimates be made for leases that have little or no exploration activity? If leases have low mining potential, should they be re-evaluated?

Environmental considerations:

1. Of the 17 billion tons of recoverable coal reserves under lease, how much is not minable because of environmental constraints?
2. In addition to unsuitability criteria and fugitive dust standards, what other environmental considerations should be taken into account?

Logical mining unit:

1. Of the 17 billion tons of recoverable coal under lease, how much is not minable because the leases are not included in logical mining units?
2. What factors should be considered by guidelines for resolving technical issues about logical mining units that pertain to geographical division of leases, contiguity of leases, separate coal seams, and maximum economic recovery?

Transportation networks:

1. To what extent could the lack of transportation facilities limit the contribution of existing leases to 1985 and post-1985 demand?
2. How many of the existing leases are not near or served by transportation facilities? What plans are being developed to provide transportation facilities?



## CHAPTER 6

### HOW SHOULD INTERIOR BETTER TIE TOGETHER ITS DETERMINATIONS ON THE AMOUNT OF UNLEASED COAL AVAILABLE TO MEET FUTURE NEEDS WITH ON-GOING LAND USE PLANNING AND COAL EXPLORATION PROGRAMS?

Interior is responsible for evaluating Federal lands to determine how much unleased Federal coal is available and suitable for meeting coal needs. The evaluation of available Federal coal depends on land use planning and the coal exploration program. Three issues are related to this activity.

- Should regional coal production goals or targets be considered along with other resource values in developing land use plans?
- Will the designation of areas unsuitable for coal mining be impeded by a lack of information?
- Will Federal coal exploration provide sufficient data for timely analysis of all potential leasing areas?

### SHOULD REGIONAL COAL PRODUCTION GOALS BE CONSIDERED ALONG WITH OTHER RESOURCE VALUES IN DEVELOPING LAND USE PLANS?

As emphasized in previous chapters, planning for future coal development is more involved than simply issuing leases. Interior must identify alternative land uses and make trade-off decisions among energy, other resources, and environmental objectives by evaluating planning areas to identify which portions have and which do not have potential to support coal development. One of the principles of land use planning is the allocation of scarce resources. This can be difficult when there are conflicts between resource uses.

Interior's preferred Federal coal management and leasing program described in the final programmatic EIS places great reliance on land use planning. Interior refers to its preferred program as a land use planning-oriented leasing system. Any leasing program would have to consider land use planning because of statutory requirements. The Federal Coal Leasing Amendments Act requires that a lease cannot be issued unless a comprehensive land use plan has been prepared and the lease sale is compatible with the plan. The Federal Land Policy and Management Act establishes the basic planning authority for the Bureau of Land Management.

The final programmatic EIS briefly discusses the planning system as proposed by the Bureau of Land Management on December 15, 1978, and which Interior says is similar to the system proposed by the Forest Service. According to the EIS, both proposals would require nine steps to be completed. For example, the steps include inventory data and information collection, formulation of alternative plans, and estimation of the effects of alternatives. The final EIS does not clearly explain how the proposed planning system will tie into Interior's preferred program alternative, nor does it clearly explain how the proposed system will be used to (1) determine values for coal and other resources, (2) identify land use alternatives and resource conflicts, and (3) perform trade-offs between coal and other resource values where resource conflicts exist. These are substantive issues and are important to a land-use oriented leasing system because they relate to decision-making mechanisms affecting coal production goals, unsuitability evaluations, tract selection and ranking, and expressions of tract interests from industry, environmental, and other groups. Left unexplained, it will be unclear as to how industry and others can effectively participate in land use planning and how land use planning and coal leasing are to be accomplished in light of Energy's coal production goals and the market demand for coal.

Many private and public sector energy, environmental, and socio-economic planners may be uncertain as to how trade-offs between coal and other resource values will be made. Some have expressed concerns to us about the possible unavailability of reliable coal and other resource-value data and the questionable capability of the Government to perform comprehensive land use and trade-off analyses under conditions of uncertainty.

The final EIS contains a detailed discussion of unsuitability criteria and emphasizes that "...most major conflicts between coal and other resources would be addressed during the application of the unsuitability criteria...", but it also recognizes that significant resource balancing decisions could remain. These multiple-use resource management decisions, according to the EIS, would be made to accommodate unique, site-specific resource values clearly superior to coal but which are not included in the unsuitability criteria. A prime recreation site or campground are cited as examples. The EIS states "The responsible official would balance these values against the value of possibly offering additional coal from the planning unit." A key issue is how these resource values will be determined.

According to the draft and final programmatic EISs, Interior does not plan to use coal production goals or targets in the land use planning process. Interior justifies this on the grounds that the exclusion of production goals or targets ensures that the planning system would first produce the best resource management decisions without the constraint of meeting pre-selected production targets.

If production goals are not to be used in the identification and evaluation of land use alternatives, Interior will not be able to evaluate all foreseeable land use alternatives. Use of coal production goals to analyze land use alternatives should not constrain a land use plan to the alternative that would satisfy the production goals. This would represent only one alternative.

Failure to evaluate this alternative along with other feasible alternatives could result in a plan that does not objectively assess coal needs relative to other resource values and a land use environmental impact statement that does not evaluate the cumulative effect associated with alternatives that will meet the needs. If all feasible alternatives were considered in terms of their relative benefits and costs, the land use decision would probably be more defensible because important consequences were considered. In addition, this should enable Interior's and Energy's coal supply analysts to have a better grasp on coal supply potential from Federal lands.

The use of coal production goals or targets could result in coal production as the selected land use, when

otherwise it might not. Other resources may not be as easily quantified because of a lack of market transactions, the difficulty in estimating reliable measures of consumers' willingness to pay, or other reasons.

However, the selection of coal as an acceptable land use will not automatically result in coal being leased and developed. Interior has established controls in the coal management program to prevent such a direct linkage. For example, leasing targets, tract selection, tract ranking, State consultation, and other environmental and socio-economic controls as well as coal economics and demand will play decisive roles in determinations of production levels in a given area.

Furthermore, in the final EIS, Interior maintains that resource use could be controlled through the use of threshold development rates or levels. According to Interior, these rates or levels would be used to control impacts which depend on an overall development level rather than on site-specific effects. For example, the final EIS states "...a threshold constraint would be established in the land use plan to specify the total level of habitat reduction within the acceptable areas identified in the plan." Interior maintains that threshold rates or levels can be applied during land use planning or in the activity planning process. The threshold concept is not clearly stated in the final EIS. The EIS is unclear as to how and when it would be applied, who would determine the threshold levels or rates, and how it would be related to coal production goals and targets.

BLM's proposed planning regulations state that the existing land use planning process needs a number of changes including:

- Better national policy communication to the local planner.
- Improved development, display, and assessment of alternatives.
- The assessment of the environmental and other effects of the proposed plans in a combined draft and final plan-environmental impact statement.

The development of the land use plan is to be based on a number of processes, including the formulation of alternative plans, a comparative assessment of the consequences of each alternative, and the selection of the preferred alternative. Various alternative plans, according to the proposed regulations, should be developed to encompass all reasonable ways to utilize the public land resource and resolve issues and differences of opinion. Plan alternatives may be developed which focus on different goals such as resource protection or resource production.

The physical, biological, economic, and social effects of implementing each alternative are to be estimated and displayed, using the available data and technology. A key issue is that the assessment of alternatives will be incomplete if Interior does not consider production goals during land use planning. This issue is further discussed in Chapter 9 under our response to agency comments.

WILL THE DESIGNATION OF AREAS UNSUITABLE FOR COAL MINING BE IMPEDED BY A LACK OF INFORMATION?

The Surface Mining Control and Reclamation Act requires Interior to designate applicable lands as unsuitable for surface coal mining operations. In addition, Interior plans to designate unsuitable lands for deep mining operations where deep mining would produce hydrologic or surface effects to which an unsuitability criterion would apply. Surface effects include surface occupancy, subsidence, fire, and other environmental impacts of underground mining which are manifested on the surface.

According to Interior, the application of unsuitability criteria will enable to identify and isolate Federal coal areas with major environmental features that make them unsuitable for leasing. The designation of unsuitable lands is to normally occur during land use planning. Under the Federal coal management program, lands acceptable for further consideration for coal leasing would be designated after unsuitability and other criteria were applied.

Twenty-four unsuitability criteria have been identified and are presented in the final programmatic EIS and in proposed regulations. Many of the criteria are based on laws such as the Surface Mining Control and Reclamation Act and

the Federal Coal Leasing Amendments Act. Other criteria are based on Interior policy. Examples of the categories for which criterion have been developed are wilderness study areas, migratory birds, State fish and wildlife, wetlands, prime farm lands, endangered species, and alluvial valley floors.

Before the unsuitability criteria were selected for the preferred Federal coal management program, Interior established a task force to formulate, field test, and evaluate the criteria. Four Bureau of Land Management planning units which had completed land use plans were selected for the field test. These are the Decker-Birney Planning Unit in Montana, the Campbell Planning Unit and Converse Planning Unit in Wyoming, and the Wattis Planning unit in Utah. The test, done in 1978, indicated that about 98,000 acres or 39 percent of the total acreage would be excluded by application of the unsuitability criteria in the Decker-Birney Planning Unit; about 219,000 acres or 51 percent in the Campbell Planning Unit; about 28,000 acres or 26 percent in the Converse Planning Unit; and that the Wattis Planning Unit would not be affected because the entire area consists almost entirely of underground mineable coal.

The effect of all the criteria could not be analyzed due to a lack of information. The task force concluded that additional data would have to be obtained in most areas when unsuitability criteria are applied for hydrology, alluvial valley floors, threatened and endangered species, migratory birds, fisheries, and State unsuitable areas.

According to Interior, recommendations on lands determined to be environmentally unsuitable for coal production will be made early in land use planning if sufficient data is available or--if best available data is not sufficient--later in the leasing process when sufficient data is available. Either way, Interior plans to provide an opportunity for public comment on criteria applications. The 1978 field test indicates that some of the criteria cannot be evaluated because no data or very little data would be available. It states that the land use plan will (1) explain whether additional data would be likely to significantly affect the conclusions concerning unsuitability and (2) disclose when in tract selection, lease sale, or post-lease activities the necessary data would be generated. A key issue is how much data will be required for analysis. A major concern is whether delays in leasing will occur and, if so, whether an alternative leasing mechanism could be developed to reduce the delays.

In May 1979 written comments to Interior on its proposed coal management regulations, the Department of Energy expressed its concern about the large amount of acreage that cannot be considered for coal development until data pertaining to some of the unsuitability criteria is collected. Energy evaluated the effects of the unsuitability designations, as determined by Interior in its 1978 field test. Energy found that almost 70 percent of the reserves in areas it studied were categorized as "suitable pending intensive inventory," meaning that they cannot be used for coal development until adequate data is developed. About 45 percent of these affected reserves have a mining ratio of 4.5 to 1 or less, the lowest mining ratio level that Energy uses.

Further, Energy's evaluation indicates that six criteria--Federal endangered species, State endangered species, eagle areas, State fish and wildlife, wetlands, and alluvial valley floors--appear to have the greatest effect on coal reserves in the areas Energy studied. Energy stated that a seventh criterion--flood plains--had a major effect on coal reserves in one area.

Energy said it believes that the latter four of the above seven criteria are discretionary and have reasonable alternatives that would reduce the impact on coal reserves while maintaining the basic intent of the proposed criteria. Energy reports that for these four criteria in the areas it studied, about 3.4 billion tons of coal (about 27 percent of all reserves) are in the category of "unsuitable" or "suitable pending intensive study."

Following a review of the 1978 field test, Interior modified the criteria to be included in the preferred coal management program. In 1979, Interior field tested the modified criteria in 10 planning units in North Dakota, Montana, Wyoming, and Colorado. The areas reviewed included 551,760 acres and contained about 10 billion tons of coal.

Results of the 1979 field test and the Bureau of Land Management's recommendations have been documented in a May 1, 1979, Bureau report. According to the report, application of the criteria did not result in wholesale elimination of large acreages/tonnages--about 5 percent of the tested coal tonnage (about 512 million tons) were affected. However, the report states that some of the lands found to

be acceptable for future consideration for leasing will eventually require additional inventory and study before final informed management decisions can be made.

The report indicates that the determination of mining units is the largest question to be answered in determining which coal lands could be made available for leasing. That is, deletion of coal lands due to multiple-use trade-offs, unsuitability criteria, and surface owner consultation may result in coal land patterns which could prevent the formation of economical or logical mining units. According to the report, the effect of the resultant land patterns on mining units cannot be determined from the field test, but the field test suggests the problems may be substantial.

In two memoranda submitted to Interior's Office of Coal Leasing in March and April 1979, the Council of Economic Advisers expressed concern about the economic implications of some of the criteria. The Council noted that four criteria were likely to preclude mining in lowland areas resulting in the location of new mines in upland areas where mining costs are generally thought to be greater. The four criteria are riverine, coastal and special floodplains; Federal lands with national resource waters; prime farmlands; and alluvial valley floors. According to the Council, incremental mining costs resulting from the application of these criteria may increase the price of Western coal to a point sufficient to induce regional shifts in coal production, increased electric utility rates, and increased oil imports. The Council further stated that regional shifts in production could be accompanied by negative environmental impacts such as increased concentration of air pollutants associated with the use of Mid-Western and Appalachian coal. The Council recommended that Interior conduct an economic analysis of unsuitability criteria.

In response to the Council's recommendation, Interior performed an economic review of the unsuitability criteria. According to Interior in their May 1979 draft report of this review, application of unsuitability criteria may have the following results:

--Small (less than 30 percent) reserve withholdings will not immediately affect coal production in the West.



- Current withholdings will have a greater future impact through a shift in some forecasted coal production from surface minable reserves in the Powder River Basin to Western deep mining reserves and to reserves in Appalachia and the Mid-West.
- Western reserve withholdings of less than 50 percent may only affect national oil consumption slightly.
- At the national level the delivered price of coal may not show significant increases at low withholding levels.
- If withholding rates of less than 50 percent are forthcoming, electricity costs will not show significant increases.
- When the criteria are combined with the results of multiple-use planning decisions, the total reserves withheld may approach 50 percent in the extreme case with 30 percent or less more likely.

Interior states that its conclusions could understate the impact of the unsuitability criteria if there is a large withholding of Powder River Basin reserves with shifts to smaller mine sizes and/or less desirable reserves coupled with greater than anticipated increases in overall coal demand.

Interior's draft report does not discuss mining cost increases as a result of having to go from low cost coal to higher cost coal because of the unsuitability criteria. The report makes the implicit assumption that the coal lands unaffected by application of the unsuitability criteria are immediately available for production and unconstrained by Interior's coal management program. However, if the coal management program does constrain Western coal supply, the least cost coal unaffected by the unsuitability criteria may not be made available to insure that producers will be able to develop least-cost mines.

The Council on Wage and Price Stability in May 1979 comments to Interior on the proposed coal management regulations, stated that four of the proposed unsuitability

criteria--State fish and wildlife, wetlands, floodplains, and alluvial valley floors--have the greatest exclusionary effect on coal resources. According to the Council, these criteria appear to have their greatest impact on coal resources with low mining ratios, which generally have lower mining costs--perhaps on the order of 5 to 7 percent.

Further, in recognizing that future land use planning should be conducted in a manner that balances competing land uses, the Council is concerned that Interior does not appear to have an effective mechanism by which the value of coal and coal production can be considered in land use planning. The Council recommends that Interior develop and incorporate into its final regulations such a mechanism, and that Interior make the following modifications to the proposed unsuitability criteria: eliminate the State fish and wildlife, wetlands, and floodplains criteria, which are discretionary; and, the alluvial valley floor criterion should be modified.

On June 2, 1979, the Secretary of the Interior made the following program policy and procedure decisions regarding unsuitability criteria:

- Select the preferred alternative for 15 of the 24 unsuitability criteria.
- Modify 5 of the 24 preferred unsuitability criteria: Federal lands systems, rights-of-way and easements, scenic areas, Federal-listed endangered species, and State resident fish and wildlife.
- Delete 3 of the 24 preferred unsuitability criteria: prime farm land, reclamability, and State lands unsuitable.
- Defer the decision on the wetlands criteria until other options are considered.
- Study and reconsider two additional unsuitability criteria in cooperation with the Environmental Protection Agency: prevention of significant deterioration of airsheds and protection of sole source aquifers.

WILL FEDERAL COAL EXPLORATION PROVIDE  
SUFFICIENT DATA FOR TIMELY ANALYSIS  
OF ALL POTENTIAL LEASING AREAS?

The Federal Coal Leasing Amendments Act authorizes and directs Interior to conduct a comprehensive coal exploration program to accomplish two objectives. First, the program will enable Interior to obtain resource information to evaluate the extent, location, and potential for developing the known recoverable coal resources of Federal lands. Second, the program will enable Interior to obtain resource information to determine whether commercial quantities of coal are present and to estimate the amount of coal that is recoverable by deep and surface mining operations. According to the act, this information is to provide a basis for:

- Developing a comprehensive land use plan.
- Improving information on the value of resources and revenues which should be expected from leasing.
- Increasing competition among coal producers by providing data and information to all potential bidders equally and equitably.
- Providing the public with information on coal deposits and the value of public resources being offered for sale.

According to a Senate Energy and Natural Resources Committee report <sup>1/</sup> there is no requirement that all known Federal coal resources be evaluated before any can be leased. The Federal coal exploration program does not prevent Interior from issuing coal leases where information about the nature and extent of the coal is considered to be adequate.

Federal coal reserve data is needed not only to estimate the recoverability and economic value of coal for a given lease tract, but also to evaluate potential coal

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<sup>1/</sup>"Federal Coal Leasing Policies and Regulations," Senate Committee on Energy and Natural Resources Publication No. 95-77, by the Congressional Research Service, January 1978.

supply for unleased Federal lands. Interior submitted a plan to the Congress in 1977 outlining the Federal coal exploration program. The plan described the activities and regions to be explored during the first 5 years following enactment of the Federal Coal Leasing Amendments Act.

The exploration plan is composed of a regional coal assessment activity and a detailed coal evaluation activity. Numerous other Geological Survey activities such as topographic mapping and water studies support the coal exploration program.

The regional activity is general because it covers a broad geographic area and is concerned primarily with identifying the geographical extent of the coal fields. The coal fields are not evaluated in terms of economical and technological parameters. Regional exploration work does not provide information for identifying specific lease tracts. Approximately 85 different geographic areas covering about 100 million acres are currently scheduled for regional analysis; maps and associated data will be published from time to time as areas are completed. The Geological Survey estimates that all areas could be completed in 10 to 14 years if sufficient funds and staff were available.

Detailed evaluation activities are designed to provide an estimate of recoverable Federal coal reserves by surface and underground mining methods. Major evaluation activities include (1) the identification and evaluation of coal leasing areas referred to as Known Recoverable Coal Resource Areas and (2) the acquisition and interpretation of reserve data to be used in lease tract selection and evaluation. This assessment is based on a mapping program and the preparation of reserve estimates for potential coal leasing and development areas. In terms of development potentials, an analysis is conducted to designate areas as having high, medium or low potential for surface mining, underground mining, and in-situ coal gasification. As potential lease tracts are delineated, Survey conducts additional drilling, as necessary, to help determine and support maximum economic recovery and fair market value estimates.

The detailed mapping effort was initiated in 1977 and covered 12 coal leasing areas; an additional 10 acres were

added in 1978. The reserve assessment is completed for one area and Interior estimates that the remaining 11 of the initial 12 areas will be completed in late 1979. The 22 coal leasing areas together represent approximately 80 percent of the acreage of all presently designated coal leasing areas. The Geological Survey indicates that other areas will be completed as funding permits.

#### Long-range planning

Exploration data can be used to support land use planning decisions, production goal estimates, lease tract identification and evaluation, and lease management. Substantial quantities of useful data on a site-specific level can be obtained over the short-term. However, the development of a comprehensive resource data bank on potentially available and unleased Federal coal lands is a long-term activity.

Interior's exploration program plan forecasts activities over a 5-year period, which is the minimum planning requirement of the Federal Coal Leasing Amendments Act. A long-range plan, if developed, would provide a better focus on exploration schedules needed to meet objectives and would keep various Interior agencies and other interested Government and non-Government entities informed of exploration strategies and plans.

#### Exploration associated with advanced technology

Public and private sector exploration activities could provide data that would be useful in the analysis of coal lands suitable for advanced coal technology. Federal energy policy decisions affecting the development of synthetic coal fuels could be improved when certain characteristics, such as tract size and geological and geophysical composition, are known and related to potential development strategies and specifications of the energy technology. As these strategies and specifications are developed, exploration activities could be designed to develop a data base to support private and public sector plans as to where, what kind, and how much Federal coal could be leased to satisfy future energy requirements in a timely and efficient manner. The development of synthetic coal fuel exploration program objectives would be helpful to industry, State, and Federal energy planners by focusing attention on the importance of

exploration activities for selecting, and possibly reserving for future development, tracts suitable for siting synthetic coal fuel plants and mines.

Also, exploration activities could provide resource information on the location of future energy research and development complexes. Many factors, including geological, legal, and environmental, affect decisions as to type of mining technique and location of mining activity. An exploration program could be used to identify tracts suitable for conducting industry and Government experiments to demonstrate advanced technology, such as for synfuels and for increasing maximum recovery and resource conservation.

#### Private sector exploration

Before enactment of the Federal Coal Leasing Amendments Act, and the coal leasing moratorium, private sector prospecting or exploration work was permitted on Federal lands to determine the existence and workability of coal deposits. Interior had authority to issue prospecting permits which entitled the permittee to prospect for coal on the land included in the permit for a term of 2 years. A holder of a coal prospecting permit who showed that the land included in the permit contained coal in commercial quantities was entitled to a preference right lease.

The Federal Coal Leasing Amendments Act abolished prospecting permits and the issuance of preference right leases, with the exception of valid existing rights. Under the Amendments, no person can conduct coal exploration for commercial purposes for any unleased coal on Federal lands without an exploration license. An exploration license confers no right to a lease and the issuance of exploration licenses does not preclude Interior from issuing coal leases at such times and locations and to such persons as Interior deems appropriate.

The Amendments also require holders of exploration licenses to furnish Interior copies of all data obtained during exploration, including but not limited to, geological, geophysical, and core drilling analyses. Interior is required to maintain the confidentiality of all data obtained until after the areas involved have been leased or until such times as Interior determines that making the data available to the public would not damage the competitive position of the licensee, whichever comes first.

Finally, the Government financed exploration program specified in the Amendments authorizes and directs Interior to conduct seismic, geophysical, geochemical, or stratigraphic drilling, or to contract for or purchase the results of such exploration activities from commercial or other sources. This program does not limit any person from conducting similar exploration activities to the extent permitted by the exploration license regulations. All data, information, maps, interpretations, and surveys which are obtained directly by Interior or under a service contract are required to be made available to the public. Interior, however, is required to maintain the confidentiality of all proprietary data or information purchased from commercial sources not under contract with the Government until after the areas involved have been leased.

On March 19, 1979, proposed regulations were published in the Federal Register that would allow private parties singularly or jointly to explore Federally-owned coal deposits to obtain geological, environmental, and other data concerning coal deposits and the lands in which they occur.

The proposed regulations state that any person qualified to hold a lease could apply for an exploration license. An exploration license would not be valid for more than 2 years from its effective date and cleanup and reclamation must be completed during this 2-year period. According to the proposed regulations, exploration licenses would not be extended and exploration operations could not be conducted after the license had expired, although a new exploration license could be issued simultaneously with the termination of the existing license.

According to the proposed regulations, applicants for coal exploration licenses would be required to provide an opportunity for other parties to participate in exploration under the license on a pro rata cost sharing basis. Upon the filing of an application for exploration license an applicant would be required to have published a "Notice of Invitation" in a local newspaper for the area where exploration is to be conducted. This notice would be required to contain an invitation to the public to participate in the exploration under the license. Moreover, the proposed regulations state that an application to conduct exploration which could have been conducted as part of exploration under an existing or recent coal exploration license may be rejected.

Some observers believe existing and proposed Federal exploration regulations that require cost sharing and data sharing arrangements provide environmental protection benefits. This may result because any one participant to an exploration plan will not have to duplicate drilling, thus reducing the number of acres disturbed during exploration and reconnaissance activities. Also, since public resource is involved, all parties willing and able to pay their fair share of the exploration cost should also share all information, despite the reduced competitive advantage to those involved.

Critics of existing Federal coal exploration programs and related regulations argue that the system lacks proper incentives to encourage private industry to invest substantial resources in exploration projects on Federal coal lands. They say that regulations requiring public announcement of exploration plans and location, cost sharing with other parties interested in exploring the same area, and release of proprietary drill hole data to all cost sharing participants eliminates any competitive advantages created by the investment of substantial sums in exploration activities.

Moreover, critics assert that the Surface Mining Control and Reclamation Act and other environmental laws place costly requirements on future coal exploration and mine development plans. Requirements not only relate to acquisition of costly site-specific data, but also could add long lead times in monitoring water quantity and quality data at sites where no historical records exist due to a lack of previous mining experience.

Critics further argue that if industry is not given proper incentives to explore lands outside of current coal leasing areas, greater uncertainties could complicate future tract selection and ranking. They maintain that the Government may risk generating insufficient competitive interest from industry in tracts selected in previously unmined areas.

These and other observers believe that considering the amount of Federal coal lands yet to be explored, and the substantial financial resources involved to accomplish this effort within a reasonable time period, Interior will not have the necessary funds to undertake this effort. They emphasize this because of limited Federal budgetary



resources and the risk that future regulatory and market uncertainties could render some of this exploration effort useless. They believe there is a need for appropriate incentives to stimulate private sector investment in exploration at a level consistent with future leasing and production goals and land use planning objectives.

Investment requirements of the coal mining industry in the years ahead is expected to be large in comparison to the industry's past needs. Future coal projects--whether they be exploration or new mine openings--will have to compete in capital markets for investment funds with other energy and non-energy related projects.

In recent years equity financing has been a minor source of new capital for the coal industry, particularly for independent coal operators. Financial experts conservatively estimate that at least half of the coal industry's future capital needs will be provided from external sources. They cite costly regulatory burdens placed on the industry coupled with uncertain market demand as factors contributing to an uncertain outlook for industry profitability and internal financing, although external financing is not viewed as a constraining factor under conditions of improved coal demand.

Our discussions with commercial banking officials experienced in coal financing indicate that financial institutions generally will not share certain environmental and regulatory risks associated with exploration and mine plan development. According to a bank official, banks usually will not share exploration and start-up risks of mine plan preparation and design, water discharge data collection and analysis, environmental impact studies, and work force payrolls. In light of regulatory cost uncertainties and changing coal market conditions, banks are reluctant to lend money to cover these activities. Revenues to repay the loan usually do not begin to materialize, if at all, until mining operations begin, which can be several years after exploration and related work is scheduled for completion.

In addition to exploration expenditures, there are substantial front-end capital investments necessary to install the mine and ground support systems. Normally, a financial institution will not lend the full amount to finance these expenditures, and the amounts they do lend

usually have a payback schedule considerably less than the production schedule. One bank official whose bank is participating in financing a Western surface coal mine designed to produce ten million tons a year told us that between \$150 million and \$170 million in front-end capital is required before any production will be forthcoming. The official stated that such a project requires substantial exploration and reliable reserve estimates to justify a major investment outlay.

Considering the substantial front-end site-specific exploration and capital expenditures necessary to plan and develop large-scale Western coal mines, bank officials told us that independent coal operators, with the exception of major independents, are unlikely to internally finance large scale projects. Larger enterprises with internal financial resources either separately or through joint ventures involving independents or others may be the most likely to invest in large-scale and risky ventures or resort to equity markets. Bank officials feel that the Federal Government should provide proper incentives to encourage corporations to invest in Western coal exploration and mine development activities. They feel that this would enhance mining efficiency, foster timely development of Western coal reserves, stabilize coal market prices, and reduce costs to consumers in the long-term.

Some Government and non-Government energy officials have expressed concerns that existing Federal coal legislation and programs could discourage private sector investments in exploration projects on Federal coal lands, and increase the risk of future production shortfalls. They also expressed concerns about (1) a lack of Federal funds to accelerate Federal exploration programs, (2) the capability of the Government to perform the work effectively even if sufficient funds were made available, and (3) the risk that accelerated Government efforts could be misdirected because of uncertainties external to Interior control which could contribute to potential production shortfalls and increased coal prices. These analysts also believe the Government should identify and evaluate private sector-public sector alternatives to existing exploration and leasing strategies which could provide greater social benefits in a timely manner and at an acceptable cost to society.

Some observers argue that existing laws and policies limit Interior in implementing alternative exploration strategies to stimulate private sector investments in exploration, although they say that existing regulations could be modified to encourage such activity to a limited extent and still be within the existing legal and policy framework. Other observers say that the existing exploration programs are adequate, although they do recognize some need for greater private sector incentives. They indicate that investment incentives can take on many forms other than establishing a completely new exploration system. For example, investment tax credits and other tax policy measures could help reduce capital barriers and create an environment conducive to private sector investment and risk taking. Further, alternative bidding systems could be combined with various tract selection strategies to promote investment expenditures to finance exploration and mine development costs.

Experts have identified some alternatives, although they have not been evaluated in terms of their effect on competition, new entrants, and their relative benefits and costs compared to existing exploration programs. Examples of alternatives include:

- Competitive sale of exploration rights in unexplored areas and the right to a lease after a mine plan has been approved by the Government.
- Application of exploration expenditures as bidding right credits toward future lease sales.
- Deferrment of lease sale bonus bid payments until after a mine plan has been approved and production has begun.

#### QUESTIONS FOR CONSIDERATION

##### Production goals and land use:

1. How should Energy production goals and Interior production targets be used in developing the land use plan?

2. If production goals and targets are not used in analyzing alternative resource uses, how reliable and useful will the land use plan be? What coal resource demand data should then be used in developing the land use plan? How will Interior efficiently and timely determine whether a region could produce sufficient coal to meet the production target?
3. In identifying public land use alternatives, what data sources and disciplines should Interior utilize to measure and rank alternative resource values? How should Interior verify the reliability and validity of resource value measurements and ranking?
4. What is the precise meaning of threshold development levels or rates? How and when would the threshold concept be applied? Who would determine the threshold levels or rates? How should the threshold concept be related to production goals/targets?

Unsuitability criteria:

1. Does the Bureau of Land Management have the staffing and resources to implement the Federal coal management program? Under present staffing and funding levels, when will the Bureau be prepared to make long-term leasing decisions for all planning units.
2. When should a data base be available to make unsuitability determinations--during land use planning or prior to lease sale or prior to mining plan approval?
3. How will environmental resource information and data be analyzed to assure the environmental protection objectives will be achieved? Are decision-making criteria for prime farm lands, alluvial valley floors, etc. well enough established to permit reliable and consistent judgements as to environmental risks?
4. Once lands are determined to be unsuitable for surface coal mining, how will this designation

affect (1) the production potential of existing mines and mining plan modifications on Federal and non-Federal lands, (2) the long-range availability and production potential of undeveloped or unleased lands, and (3) private industry incentives to explore undeveloped coal lands thought to be suitable for future leasing and mining?

Coal exploration:

1. Will the Federal exploration program, as it is currently designed, enable Interior to obtain resource data when and where it is needed? Should Federal exploration efforts be increased to make possible the earlier completion of exploration activities or should the efforts be prioritized and undertaken over a longer period of time? Will exploration priorities, as stated in Interior's exploration program plan, be consistent with the Federal coal management and leasing program? What is the minimum exploration information needed for a coal leasing system to work properly?
2. Should the exploration program be used to identify potential lease tracts for synthetic fuel development (e.g., in-situ gasification) and for R&D activities?
3. Does the Government's role in coal exploration serve as a dis-incentive to industry exploration efforts? Should private industry be provided incentives to explore? What incentives could ensure and encourage the optimal level of industry exploration consistent with future leasing goals, recent leasing policy decisions, and energy market trends? What effect will this have on public knowledge of coal reserves and on Government efforts to encourage competition?
4. How should Interior evaluate prospective benefits and costs of the exploration program in comparison with alternative public and private sector exploration strategies?

## CHAPTER 7

### HOW SHOULD INTERIOR PROCEED IN IDENTIFYING, EVALUATING, AND SELLING SPECIFIC LEASE TRACTS?

One of the most important responsibilities Interior has in implementing a long-term leasing program will be to select and evaluate site-specific tracts which are responsive to the need for Federal coal. Major questions pertaining to this issue are:

- Will coal lease exchanges involving unsuitable preference right lease applications and leases be feasible?
- Should Interior have authority to issue short-term non-competitive leases?
- Will surface owner consent result in unreasonably high energy and environmental costs?
- How will the application of maximum economic recovery affect the leasing and production of coal?
- Could minimum royalty requirements discourage maximum economic recovery?
- Will fair market value estimates be reliable?
- What are the effects of various bidding systems on lease sales and the efficiency of production?
- Can the public participation process be made more effective?
- Can State government participation in the leasing process be made more effective?
- Will public body tract selection affect private entity tract selection?

WILL COAL LEASE EXCHANGES  
INVOLVING UNSUITABLE PREFERENCE  
RIGHT LEASE APPLICATIONS AND  
LEASES BE FEASIBLE?

Some preference right lease applications and outstanding leases may include lands that could not be mined after unsuitability criteria are applied. A lease exchange authority--to exchange environmentally suitable coal tracts for the unsuitable applications or leases--is one method for dealing with this problem that warrants further analysis.

Land exchanges for existing leases are currently authorized only for unsuitable leases located in alluvial valley floors under the Surface Mining Control and Reclamation Act and for certain leases identified in the 1978 amendments to the Mineral Leasing Act. Interior does not have exchange authority for unsuitable leases that fall outside these categories. Other exchanges are prevented because the Federal Coal Leasing Amendments Act requires that all coal leases be issued competitively. Before a decision is made on a general lease exchange authority, several issues need to be evaluated.

A major issue is whether lease exchanges will eliminate tracts that could be leased competitively. If a proposed exchange tract is insufficient, by itself, to serve as an economic mining unit but could be combined with other coal properties held by the exchange applicant to form such a unit, a lease exchange might be an appropriate mechanism for resolving the problem posed by the unminable outstanding lease. However, if the proposed exchange tract is of interest to more than one competitive lease bidder--e.g., if it is of sufficient size to be mined independently of other coal properties or in conjunction with other coal properties held by two or more potential bidders--it might be desirable to offer the tract for long-term competitive leasing to permit all interested parties to bid, thus promoting competition.

Another important issue is whether the administrative and technical costs associated with conducting a lease exchange program exceed the benefits to be gained. If a broad exchange authority were granted, many coal companies might want to exchange environmentally unsuitable preference right lease applications or existing leases for unleased

coal lands. According to Bureau of Land Management officials, this situation could result in an extreme but undetermined impact on other Bureau of Land Management, Geological Survey, and Forest Service programs and responsibilities.

Furthermore, before a decision is made regarding general lease exchange authority, other methods for disposing of an unsuitable application or lease should be evaluated. Alternatives include, but are not limited to, lease modifications, bidding right credits, and monetary compensation.

The lease modification option could be used in certain instances when only part of a lease is unsuitable for mining. The lease would be modified when the lessee relinquished the unsuitable part and obtained an equivalent amount of unleased coal land contiguous to the lease. The modification provision of the Federal Coal Leasing Amendments Act provides this authority. However, the acreage added by the modification cannot exceed 160 acres.

Another option is bidding right credits. A bidding right would consist of credit equal to an administratively determined fair market value of the unsuitable lease. The credit would be given in exchange for an unsuitable lease and applied against the bonus bid on a future competitive lease sale.

A further option would require monetary compensation upon relinquishment of the unsuitable lease. If this option is used a system must be established to determine fair and equitable compensation. This may be a costly option if the lessee has done exploration and development work.

SHOULD INTERIOR HAVE AUTHORITY  
TO ISSUE SHORT-TERM NON-COMPETITIVE  
LEASES?

Short-term lease tracts are non-competitive if they can only be mined by the lessee of adjacent coal land and the existing operator is the most logical and efficient producer of the coal. The front-end capital costs to outside bidders would be so high in these circumstances that other bidders would not have an incentive to purchase the lease and mine the coal.



Some observers believe that bidding for these tracts could delay the leasing of coal needed to maintain existing operations and could cause coal to be bypassed. Delays have occurred in the past where more than one sale for the same tract was required before Interior received an acceptable bid. The concern with these tracts is that they are not of substantial size, but exceed the 160 acre maximum for lease modification authorized by the Federal Coal Leasing Amendments Act. Furthermore, in some cases these tracts may not be developed unless leased within a short period because of an impending bypass.

In these situations Interior might be authorized to conduct a negotiated sales agreement. However, if this were determined to be a viable alternative, legislation would probably be needed because the Federal Coal Leasing Amendments Act requires a competitive leasing system.

WILL SURFACE OWNER CONSENT  
RESULT IN UNREASONABLY HIGH  
ENERGY AND ENVIRONMENTAL COSTS?

The Surface Mining Control and Reclamation Act states that Interior cannot lease any Federal coal for surface mining until the surface owner's written consent to allow such mining has been obtained. The law defines surface owner for the purpose of this provision. Basically, a surface owner is one who is a farmer or rancher and has owned the surface for 3 years prior to giving consent. This is discussed in Appendix III. This provision does not apply to underground mining or to Indian lands.

Indications are that substantial areas may be affected, although the extent to which future tract selection and leasing actions will require surface owner consent is not known. According to Interior, approximately 35 percent of the leasable Federal coal areas are underlain by Federal coal and 62 percent by both Federal and non-Federal coal. Many of these areas have intermingled surface ownership patterns. This could render adjacent Federal or private coal with non-private surface ownership minable only if the Federal coal overlain by privately held surface can be developed.

In the final EIS, Interior states that

"...of the 9.7 million acres of Federal lands classified as containing technically recoverable coal in the six principal western coal states, 6 million acres are overlain by private surface. ...Of course, the amount of private surface owned by surface owners as defined by Section 714 will be much less than the full 6 million acres, but it is still expected to be significant."

Before enactment of the Surface Mining Control and Reclamation Act and under 43 U.S.C. 299, an entity or individual who obtained a Federal coal lease could re-enter and occupy so much of the surface that was required for all purposes reasonably incident to coal mining if he had done any of the following: (1) secured the written consent of the homestead patentee (surface owner), (2) paid for damages to crops or other tangible improvements, or (3) executed a good and sufficient bond to secure the payment for damages.

The final programmatic EIS discusses Interior's preferred option for obtaining surface owner consent. Consent would be obtained by industry and filed with the Bureau of Land Management prior to the lease sale announcement. A consent obtained by one party would be transferable to another party. If no consent were filed, the tract would be removed from the sale schedule.

Interior has also approved an option whereby a pre-set consent compensation cost would be used to estimate fair market value. The limit would be based on surface estate costs and operation losses, regardless of the actual price paid or the price which a surface owner could otherwise demand for consent. Interior is concerned that high consent costs could reduce the fair market value estimate--and the minimum bonus bid--if a limit is not established. Interior argues that if the cost were sufficiently large and unlimited, it "would not provide the fair return which the Congress intended to flow to the public from the development of the coal." The final programmatic EIS states that if consent costs adversely affect fair market value return to the Government, Interior could refuse to lease. Interior states that if the lessee paid the surface owner more than the pre-set level, the excess cost would be made up by an adjustment in other costs, prices, or the return on investment that is used in calculating his bid.

Some observers maintain that Interior's policy implementing the surface owner consent requirement introduces additional uncertainties into the coal leasing system. They argue that the pre-set consent compensation policy causes Interior to make judgments about certain market transactions and whether they should be allowed to occur. Market forces could assign a higher worth to the surface estate and surface disruption damages than what is administratively viewed as an acceptable value from Interior's perspective.

Observers believe that Government intervention in these situations could be excessive and prevent logical mining unit formation and orderly development in areas where coal development is otherwise socially and environmentally acceptable. In certain situations, they argue that this might force development in other areas where the nature of the terrain, water systems, etc., will cause greater detrimental environmental effects. They conclude that substantial costs and inefficiencies could result which could outweigh perceived benefits of the consent requirement.

Other observers argue that because the Government mandated the surface owner consent policy, it has a responsibility to ensure that excessive surface access costs do not distort fair market value estimates. They maintain that surface consent cost should reflect surface estate value only and not the value of the Federal coal underlying the surface. In short, they state that the surface owner should not obtain windfall profits because of the presence of a public resource.

The timing and cost of obtaining surface owner consent may also adversely affect future tract selection and evaluation, particularly in terms of meeting production goals. The achievement of Western coal production goals could be delayed if consent were not received for the selected tracts. Furthermore, because surface minable coal is a significant coal supply element, this may require that the number of tracts to be selected and evaluated be larger than the number to be leased. Production goals could be more seriously affected if there were widespread non-consent to surface mine development.

In addition, tract selection and evaluation might be more costly to industry and Government if accomplished

prior to obtaining surface owner consent. This could occur if consent is not eventually given for some of the tracts. Consequently, more tracts would be selected and evaluated to lease and meet production goals. On the other hand, surface owners are not required to grant or refuse their consent before tract selection and evaluation, and they may want to keep their options open from an economic or other perspective.

Interior's fair market value task force, in its April 1979 draft report, discusses surface owner consent. According to the report, the matter of surface owner consent and whether it will cause problems in appraising Federal coal under private surface depends on what policy Interior adopts regarding the cost of surface owner consent. The report indicates that if a policy is adopted which would allow the open market to establish the value of surface rights, there should be no significant problems in appraising the fair market value of Federal coal under private surface.

However, the draft report states that if a policy is adopted which artificially limits or establishes what can be considered as the cost of surface owner consent, there will be substantial problems in appraising fair market value of Federal coal under private surface. The report mentions three problems.

The first problem would be a question as to whether a fair market value estimate--particularly one based on surface costs which would be vastly different from prices actually being paid in the market--would constitute fair market value. Secondly, the appraisals would be much more involved, require additional steps, and be more subject to question and criticism. Thirdly, estimates of coal value may exceed the fair market value of non-Federal coal being purchased in open market situations. If competition from privately owned coal or other forces would prevent the lessees from passing higher actual costs on to the consumer, the result would be to make some Federal coal unmarketable.

On June 2, 1979, the Secretary of the Interior approved four decisions on split-estate leasing and surface owner consent. These are:

1. Attempt to lease all coal regardless of surface ownerships with passive compensation safeguards through fair market value computation.

2. Industry would have the responsibility in the coal management program of acquiring surface owner consent. Consents would have to be filed with the Bureau of Land Management prior to the sale announcement. The consents would be required to be transferable. If no filing of consent is made on a tract prior to the sale announcement, the tract would be removed from the sale schedule (and, if necessary, another tract substituted for it). Should such determination be made, the successful bidder on that tract in the sale would be given a period of time after the sale to obtain consent.
3. A surface owner consent agreement would be considered transferable only if it provides that: (1) the payment for the consent is to be made by the successful bidder after the lease sale in which the lease for the tract to which the consent applies is sold, or (2) after the lease sale, the successful bidder is permitted to reimburse the company which first obtained the consent for the purchase price of the consent.
4. If after publication of a land use plan, a qualified surface owner on land acceptable for further consideration for coal leasing submits a statement that he has not previously given consent, the Federal coal underlying that surface would not be considered further in the ongoing activity planning process or any such processes conducted in the future, during the life of the land use plan, or, until the ownership of the surface estate changes.

HOW WILL THE APPLICATION OF MAXIMUM  
ECONOMIC RECOVERY AFFECT THE LEASING  
AND PRODUCTION OF COAL?

Maximum economic recovery is a concept introduced by the Federal Coal Leasing Amendments Act. The act requires

that maximum economic recovery be applied in three instances. These are:

--To determine the mining method, methods, or sequence of methods which achieve maximum economic recovery of the coal prior to lease issuance.

--To evaluate whether a mining plan can be approved.

--To identify leases that can be consolidated into a logical mining unit.

In the final EIS and prior to the establishment of a Federal coal management program, Interior stated that maximum economic recovery applies to all seams which are collectively profitable, taking into consideration social and environmental costs. In commenting on a draft of this report, the Department of Energy stated that it has raised concern about maximum economic recovery designation and Interior's proposed policy concerning this issue (see Appendix IV). Energy officials stated that Energy is working with Interior on a task force to modify the maximum economic recovery determination.

On June 2, 1979, the Secretary of the Interior reconsidered the earlier maximum economic recovery decision. The Secretary chose a new operational definition for maximum economic recovery. The new definition of maximum economic recovery is that after safety factors are taken into account, all portions of the coal deposit within a Federal lease should be mined that have a private incremental cost of recovery (including reclamation costs and opportunity costs) less than or equal to the market value of the coal. In short, lease on the basis of marginal cost equals marginal revenue. According to the Secretarial Issue Document the procedural guidelines for maximum economic recovery are as follows:

"The prelease determination of seams to be mined would be specified in the lease sale notice but not in the lease. This would provide potential bidders with an indication of Interior's judgment as to MER (maximum economic recovery) on the data then available without making this preliminary determination formal by inserting it as a lease term. The prelease MER determination would be subject to revision at the time of mine plan approval if more detailed market and geological information would become available showing that

the configuration of seams, actual mining costs or revenues were significantly different than those used previously to make the preliminary MER determination."

In a draft of this report, we expressed our concern about Interior's proposed definition of maximum economic recovery. Much of this discussion has been deleted in light of the Secretary's decision. However, we have left in tact the thrust of the discussion, because the detailed procedures for determining maximum economic recovery are yet to be developed and our concern about the effect of this issue on Interior and the coal industry is still alive.

The amount of coal that can be economically recovered is directly related to many factors. These include the: (1) complexity of the geological conditions in which the coal deposit exists and the imprecise knowledge regarding these conditions until development exploration and mining commence, (2) state-of-the-art in mining technology and the technology available for use by a given lessee, (3) coal industry economic climate in general and the competitive level of coal prices and mining costs in relation to a particular mining operation, and (4) the effect of transportation rates on the demand for coal.

Because these factors or knowledge about them change over time, it is necessary to consider the precision that can be achieved in the calculation of maximum economic recovery at different points in time. This is necessary to determine the best method or methods for calculation of maximum economic recovery at the different milestone points required by statute or by Interior policy. The precision of any calculation may be affected by unforeseen geologic complexities encountered during production that could decrease the reserves originally estimated to be minable and increase the cost of mining. Likewise, improved technology and economic conditions could increase the reserves originally estimated to be minable and decrease the cost of mining.

Economists and coal industry officials have been concerned that Interior's EIS position is a departure from the principles of marginal cost and marginal revenue. These principles hold that business will produce an extra unit of output so long as the additional cost of producing the unit is less than or equal to the additional revenues generated by the production. They maintained that Government

regulations requiring coal recovery beyond the level at which marginal cost equals marginal revenue could increase the total cost of coal to society. This increase could outweigh the benefits of resource conservation and reduced acreage disturbance, which the use of maximum economic recovery is supposed to achieve.

Since the final EIS was issued, Interior, as indicated above, reevaluated its definition of maximum economic recovery. In a May 18, 1979, report, Interior's Geological Survey investigated the issue of whether the proposed maximum economic recovery rule--as published in the Federal Register March 19, 1979--is economically efficient. According to the Survey, economic efficiency would occur when extra administration and mining costs for complying with the rule are offset by extra benefits. Survey's analysis indicated that the proposed maximum economic recovery rule could be a relatively costly way of reducing external environmental and socio-economic costs. It concluded that Interior's proposed rule is likely not to be an economically efficient policy.

Specifically, the Survey's report stated that Interior's proposed rule has extra administrative costs--to the Government and mining companies--estimated at \$1.5 million per year. Further, the report stated that--assuming 356 million tons of Federal coal are stripped in 1985--application of Interior's proposed rule would result in about a 9 percent reduction in acreage being disturbed.

The Survey report also indicated that under Interior's proposed rule, additional costs of mining deeper seams do not appear to be justified by benefits. To justify the mining of deeper seams under Interior's proposed definition, the report stated that unreasonable values would probably have to be assigned to environmental and socio-economic impacts.

The Survey report indicated that under current practice, Survey's Area Mining Supervisors determine what mining method best yields maximum economic recovery. Before mining plan approval, the mining supervisor evaluates the proposed plan, taking maximum economic recovery into account, and specifies modifications where necessary. According to Survey's report, some modification in the plan for the seams to be mined could be determined at the mine plan approval stage as more detailed information is available at that stage.



COULD MINIMUM ROYALTY REQUIREMENTS  
DISCOURAGE MAXIMUM ECONOMIC RECOVERY?

An important issue related to maximum economic recovery is the effect on the cost of mining of the statutory minimum royalty of 12-1/2 percent of the value for surface-mined coal. Under the Federal Coal Leasing Amendments Act new leases would be subject to the minimum royalty, and as existing leases are re-adjusted they, too, would be subject to the minimum royalty.

In discussing a draft of this report with Department of Energy officials, the officials pointed out that the minimum royalty requirement could complicate the implementation of alternative bidding systems. For example, they indicated that a profit sharing system could be affected adversely because of the market distortions associated with the minimum royalty requirement.

It is widely recognized that increased royalties from future coal production can provide social benefits to the Nation and local communities impacted by coal development. On the other hand, the social costs of a minimum royalty requirement should be considered, as should alternatives capable of minimizing any adverse effects and providing the social benefits that higher royalties would afford.

A major concern is the inflationary effect of higher royalties. For example, if Federal coal produced in fiscal year 1977 had been assessed a royalty of 12-1/2 percent of the value for surface-mined coal and 8 percent for deep-mined coal, the royalty revenues would have been approximately \$47 million, about a 380 percent increase over the royalties actually received. Some observers say that higher royalties could not only increase the real price of coal, but also cause current or prospective coal users to consider switching to non-coal fuel sources whose real prices are more favorable.

Another concern is the effect higher royalties could have on production and re-investment schedules. Experts say that coal operations are subject to site-specific cost conditions which are not uniformly distributed across all producers competing in the same market area. Coal demand conditions may not support higher coal prices to offset the increased royalty costs. To protect their competitive posture, some coal operators may have to absorb the higher

costs in the form of reduced profits until market conditions improve.

If the effect on profits were substantial, lower long-term profitability may impair coal operators' ability to generate sufficient funds to finance reinvestment schedules necessary to meet contract requirements and reclamation standards. A higher uniform royalty may cause some marginal producers to shut down. Consequently, coal production could decline and absolute royalties could be lower compared to what they would have been if lower royalties had encouraged increased production. In short, in certain situations maximum economic recovery may not be achieved and some coal may be wasted as a result.

Observers further indicate that the effect of higher royalty rates should not be viewed in isolation from other cost factors which together impose higher total costs. These other factors include transportation costs, air quality costs, and reclamation regulatory costs. Experts say that an analysis could determine the incremental cost impact of higher royalties given other cost factor changes. In this way, changes in public policy, such as the use of different royalty rates and their impact, could be better understood.

A key issue is what circumstances would justify recommending a royalty rate lower than the statutory minimum and to what degree higher royalties should be sacrificed because of other costs.

#### WILL FAIR MARKET VALUE ESTIMATES BE RELIABLE?

Interior determines the minimum acceptable bid for a lease sale by calculating an estimate of the lease tract's fair market value. Under present organizational arrangements, the Geological Survey makes the initial estimate of the tract's economic value. Survey submits this estimate to the Bureau of Land Management which adds other considerations, such as socio-economic factors, to arrive at the final estimate of the tract's fair market value.

If proper and reliable data were available at time of tract evaluation, the Survey might use a comparable sales approach to determine the mineral value of a tract. Under

this approach, an estimate of value is made by comparing recent land transactions in the area. Tracts are then rated for comparability on the basis of location, time of transaction, access to transportation facilities, highest and best use considerations, and other physical and economic similarities and differences. If comparable sales data are unavailable, the Survey uses an income approach with discounted cash flow analysis. This approach involves the calculation of annual revenues and costs resulting from development of the coal resource. The resulting cash flow is discounted over time to compute the net present value of the coal resource.

The following discussion summarizes some of the cost, price, and risk factors involved in calculating mineral value and how they can be treated in estimating ranges of fair market value.

#### Discount rate

Federal regulations do not require the use of discounted cash flow analytical techniques or any other techniques to evaluate lease tracts. However, Interior prefers discounted cash flow when comparable sales data are unavailable. In addition, the regulations do not specify what factors should be considered in selecting an appropriate discount rate to calculate present value revenue and cost.

Since regulations do not provide guidance on discount rates, discretionary authority will influence the choice of the discount rate and, consequently, the desired effect on the fair market value estimate. Without clear guidelines for selecting an appropriate discount rate, the rate could be used as a policy variable to influence tract evaluation results. For example, the choice of an unreasonably low discount rate would produce an excessively high fair market value estimate, reducing the opportunity for a successful lease sale. As a result, less Federal coal would probably be leased than if a higher discount rate were chosen. On the other hand, if the discount rate were high, the fair market value would be low, increasing the opportunity for a successful lease sale.

According to the Geological Survey, the discount rate reflects the cost of money and can be determined by reviewing the prime discount rate of banks and the Federal

Reserve interest rates. For projects developed by the private sector, however, economists maintain that the discount rate used in economic evaluation calculations is not the cost of borrowed money, but that it is the rate of return of other investment opportunities of similar risk. This is referred to as the opportunity cost of capital. Interior should determine whether the discount rate could be based on the opportunity cost of capital. If this is possible, the minimum acceptable bid may be a more reliable estimate of fair market value. This could reduce potential delays in leasing Federal coal.

### Coal price

The estimated selling price of the coal is a key element in projecting revenue from a tract when estimating fair market value. It is the basis for projecting cash flow over the life of the mine, although the price will fluctuate over this time period, particularly in a competitive market where the producers have little control over market prices.

Projected coal price variations depend upon assumptions that pertain to the strength of the coal market and the timing of expected variations. Large price variations occurring in the future will have less effect on the discounted cash flow than large variations occurring in earlier years. This results because long-range future values are discounted over a longer period of time than values closer to the present.

Different techniques are available to incorporate price variations over the life of the mine into the tract evaluation process. One way, for example, is to use a Monte Carlo computer procedure. This procedure incorporates price fluctuations into the evaluation process by using probability distributions that reflect market uncertainty and risk. Another technique to determine coal price variations is to project current coal contract prices by estimating future inflation and determining the effect of inflation on contract price and adjustments.

The technique that should be selected depends on uncertainty and risk associated with factors that affect the real coal price over the life of the mine. Some of the factors are environmental restrictions, utility

conversions to coal, coal demand for synthetic fuel, wage settlements, mining costs, transportation rates, the price of other fuels, and severance taxes. Once the appropriate factors have been identified, the degree to which they can be expected to affect coal prices should be determined. Interior should evaluate the feasibility of making such determinations.

The estimate of coal price variations affects the estimate of fair market value and the determination of the minimum acceptable bid. For example, if fair market value is based on an expected rise in coal prices through the life of the mine but bidders expect a smaller rise, the lease sale bids may be less than the minimum acceptable bid. Consequently, the Government might have to hold more lease sales than would otherwise be necessary to meet Energy production goals, providing some adjustments were made so that successful sales would be possible. On the other hand, if the Government underestimates future coal prices compared to bidder's estimates, fair market value estimates may be too low resulting in successful lease sales that may not provide for a fair return to the Government.

#### Royalty rate

The Federal Coal Leasing Amendments Act requires that the royalty rate be based on the value of the coal. According to the act, agency regulations are to specify the point in the selling process at which the value will be identified for calculating royalties. For example, regulations can require that the royalty be based on either the price of the coal at the mine mouth or on the price after preparation and treatment. Mine mouth prices are lower than preparation prices.

Federal coal royalties affect the market price of coal and the determination of fair market value. If royalties are determined at the preparation and treatment stage, higher royalties may lead to higher market prices. On the other hand, if royalties are determined before preparation, as they are presently, market prices would probably be lower.

Consequently, the point in the mining and preparation process at which royalties are determined could significantly affect the mining and use of coal. This is particularly true for coal that could be used as a feedstock for

synthetic fuel plants. This type of coal use may require costly preparation activities before shipment. Since the relative price of coal can affect the economic feasibility of future synthetic fuel development, royalty calculation methods and rates may directly bear on future coal policy. Minimum royalty rates were previously discussed in this chapter.

#### Transportation costs

The availability of adequate transportation is important to tract selection and evaluation because it may affect the coal price and access costs. This applies to existing leases as well as future leases. The actual selling price at the mine is determined by negotiations between the lessee and his customer. The customer is also interested in the delivered price of coal--fob mine mouth plus transportation costs.

An issue relates to the lack of transportation facilities at the time a tract is selected and evaluated for lease sale, and the effect of this on fair market value if tracts are selected for a specific end-use. If transportation is unavailable, judgments are required as to the potential end-use destination and the party who will pay the initial capital cost of any transportation facility.

Unless market and institutional uncertainties diminish, it would be difficult to decide who will pay for a railroad spur, right-of-way, loading facility, etc., at the time a tract is selected and evaluated. If this were known, transportation investment costs could be properly and equitably allocated to the appropriate entity. Uncertainty may cause the calculation of a fair market value that is either too high or too low, depending on the assumptions about transportation and the party who would pay for the initial investment. These uncertainties could adversely affect the rate of leasing and production schedules.

#### Department of Energy concerns

In May 1979 written comments to Interior on the proposed coal management regulations, Energy stated that the proposed rules contain no procedure for the determination of fair market value. According to Energy,

fair market value calculations, in their present form, are established using hypothetical mining methods, production costs, and selling prices. Regarding public and industry comments on Interior's fair market value estimates before lease sales, Energy states that these comments may be difficult to evaluate since the industry and the public will have no better knowledge of the tract than Interior.

Energy suggests that Interior's final regulations include guidelines for adjusting Interior's fair market value estimates to reflect public and industry comments. Energy further states that Interior's regulations should discuss how socio-economic costs will be incorporated in the process of adjusting resource value estimates to fair market value estimates.

WHAT ARE THE EFFECTS OF VARIOUS  
BIDDING SYSTEMS ON LEASE SALES  
AND THE EFFICIENCY OF PRODUCTION?

The Department of Energy Organization Act authorizes Energy to implement alternative bidding systems. Energy's choice of bidding systems may affect the intensity of bidding competition, the number of prospective bidders, and effective resource management.

The draft and final programmatic EISs state that optional bidding systems include:

- Direct bonus bidding, in which an immediate cash payment is offered for the lease.
- Fixed royalty bidding, in which a fixed percentage of the value of coal is offered for the lease.
- Sliding scale royalty bidding, in which the amount of the royalty paid is varied in proportion to the value of the coal produced.
- Profit sharing, in which the Government receives a percentage of the profits.
- Fixed rental, in which the bidder offers to pay the Government a set amount each year regardless of production.

Energy officials have told us that choice of bidding systems could vary depending on the tract selection method used by Interior. The bidding system used may depend on tract size and associated risks in developing a mine designed for large volume coal users, as opposed to tracts for short-term or low volume use. Further, small tracts may have different risk factors and would probably attract a different group of potential developers than large tracts. Small developers may prefer small tracts while large developers prefer larger tracts. Energy says that this is to be expected as efficiency objectives may require large tracts to accommodate modern mining technological designs in achieving economies of large scale production.

Before Energy makes any policy decisions affecting the use and timing of specific alternative bidding systems, Energy and Interior should evaluate options and prospective impacts. The evaluation should focus on advantages, disadvantages, and probable outcomes associated with each system under various degrees of risk and uncertainty. Three bidding systems are briefly described below to illustrate the potential of alternative systems.

#### Fixed royalty bidding

Fixed royalty bidding systems reduce the large front-end money problem associated with cash bonus bidding. This makes capital available for exploration work and mine plan preparation. Under this type of bidding, prospective lessees bid the share of future production they would be willing to pay the Government. In most cases, a minimum fixed bonus would be set to eliminate nuisance bidders. Independent operators with less capital could probably compete better under this system than under a cash bonus system, particularly when environmental and regulatory uncertainties could postpone or preclude orderly development schedules.

On the other hand, fixed royalty may encourage operators to abandon marginal coal deposits or prematurely terminate mining operations before all recoverable coal reserves are mined. This could occur because a fixed, high royalty rate may offset long-term profitability of mining marginal seams, depending on coal market conditions. The extent of this happening would depend on a combination of factors. Included are royalty rate level and possible royalty adjustments, cost variations over time in relation to market



price variations, cost pass-through provisions of coal supply contracts, and the reliability of Government and industry projections of these trends.

#### Sliding scale royalty bidding

Sliding scale royalty bidding systems attempt to eliminate the primary defect of fixed-royalty bidding--reduced recovery of marginal seams--by making royalty payments commensurate with production estimates. Royalties would tend to decrease in response to depletion of recoverable reserves and rising mining costs. Sliding-scale systems make these royalty adjustments automatic--according to a prescribed formula--rather than subject to protracted negotiations between Government and lessee.

#### Profit sharing bidding

Profit sharing bidding systems, like the royalty bidding systems, eliminate the front-end cash bonus. Under this type of bidding system, prospective lessees bid a percentage of the profit base that would be paid to the Government. Government, in turn, shares with industry some risks of cyclical and long-term revenue and cost fluctuations.

Because mining operations usually proceed in phases, it may be several years after lease sale before production and revenues reach their peak levels, with Government receiving less during the early phases than it could under other systems. Also, as the mine nears depletion and experiences increased production costs, since deeper and higher cost seams may be mined last, Government's share may decline to encourage greater resource conservation and maximum economic recovery.

A disadvantage of profit sharing may be incurred if the system results in high Government and industry administrative costs. This is possible if mine operating costs and revenues need verification before calculating the profit share.

Some experts say that under a proper profit-sharing formula Government participation would be closely tied to project viability, orderly development, and effective resource management. A high rental fee could be imposed on the lessee to minimize nuisance bidders. Some of the

experts suggest this fee could be deductible from the Government's profit share in years in which there is production. They believe royalty payments could be specified at a fixed and low rate to assure a source of revenue to the Government, while not unduly inhibiting production from marginal deposits.

Some experts are concerned whether the Government can respond in a timely manner if and when profit share adjustments are warranted. They fear adverse affects on resource management objectives. Adjustments may be warranted because of uncertainties--at the time of the profit sharing agreement--over future coal prices, production costs, and regulations affecting prices and costs, and the availability of data to support forecast results.

CAN THE PUBLIC PARTICIPATION  
PROCESS BE MADE MORE EFFECTIVE?

Public participation is an important element in the management of public lands. Several laws including the Federal Coal Leasing Amendments Act, Federal Land Policy and Management Act, and Surface Mining Control and Reclamation Act as well as proposed regulations have provision for public hearings and other forms of public participation. These include, but are not limited to:

- Public hearings on land use plan recommendations before the final land use plan decision.
- Public hearings after receipt of a petition to designate or terminate a designation of an area that is environmentally unsuitable for mining.
- Industry and public expressions of interest in possible tracts prior to the delineation of tract boundaries.
- Public comments solicited at the beginning of the regional tract selection and sale scheduling process.
- Public comments and hearings on the regional sale environmental impact statement.

--Public comments on fair market value prior to the determination of fair market value.

--Public hearings prior to lease sale.

--Public hearings prior to the consolidation of leases in a logical mining unit, if requested by any person whose interest is or may be adversely affected.

Two key issues pertain to public participation. First, will Interior's method of obtaining public participation be the most effective? Second, will Interior obtain industry expressions of interest in lease tracts at the most appropriate time?

Will Interior's method of  
obtaining public participation  
be the most effective?

The effect of public participation on Interior will be largely in terms of preparing for public hearings and reviewing comments received at the hearings. Hearings are of relative short duration and specified periods are established for the public commenting period. But, the time to prepare for the hearings may be lengthy. Extensive preparation may be necessary if Interior is to have successful and meaningful hearings. The design of the public participation process should be to facilitate opportunities for meaningful public involvement.

Some observers believe that too much opportunity for public participation has been created and this will delay the timely leasing of Federal coal. Other observers indicate that the problem is not too much public participation but the way in which Interior will implement the process. They maintain that in the past some public hearings have been of questionable value because of poor preparation on the part of the Government. They also believe that if public involvement is not solicited, further delays through legal proceedings may occur.

Will Interior obtain industry  
expressions of interest in  
lease tracts at the most  
appropriate time?

The proposed land use planning regulations state that the planning process relies heavily on public involvement

early and throughout the planning process to help identify issues and concerns which should be addressed. The regulations also emphasize that public involvement is critical to the development and assessment of alternative plans.

An advantage of public involvement cited in the regulations is that public assistance in identifying issues will add to the efficiency of the planning process by helping the land use planner concentrate data collection and alternative formulation and assessment on those issues that are of particular concern. This could be helpful for identifying areas where additional data is needed to apply unsuitability criteria.

The final programmatic EIS states that expressions of interest in possible lease tracts would not be solicited until land use planning is completed. However, the EIS states that comments and interests could be submitted during the planning process in the form of information on existing operations and on the location of resources. During the setting of regional production goals and leasing targets, the EIS states that industry could supply information on the overall demand for coal and the production potential from previously leased Federal reserves and non-Federal reserves for meeting that demand.

The final programmatic EIS states that a key question has been to decide the proper role for industry nominations in a land use planning-oriented leasing system. Interior criticized the Energy Minerals Activity Recommendation System because land use planning followed industry nominations. They believe the preferred leasing alternative would give the Government greater control over social and economic costs by deferring industry input until after land use planning and by the Government controlling the location and rate of leasing.

Some observers, particularly from industry, question the feasibility of delaying industry input until land use planning is completed. They maintain that industry expressions of interest submitted prior to land use planning at Interior's specific request would enable Interior to identify key areas of interest for coal development and provide an informed basis for establishing land use planning priorities. They argue that this would not

decrease the Government's control over the location and rate of leasing.

Other observers maintain that expressions of interest are appropriately received after land use planning. They question the efficiency of obtaining expressions of interest before the designation of areas as unsuitable for mining. They believe Government has a responsibility to evaluate all lands, irrespective of industry's expressions of interest.

CAN STATE GOVERNMENT PARTICIPATION  
IN THE LEASING PROCESS BE MADE  
MORE EFFECTIVE?

The final programmatic EIS states that the preferred leasing alternative emphasizes the role of State governments. According to the EIS, the States should participate in the Federal coal management and leasing program in the following ways:

- The States could sign cooperative agreements with Interior to enable them to participate directly in the land use planning process.
- The States could nominate unsuitability criteria to be added to the list of Federal unsuitability criteria.
- Expressions of interest in potential coal tracts could be submitted by the States.
- The States could be members of the regional coal teams and participate directly in tract ranking, selection, and scheduling.
- Tract ranking and selection will be done in close consultation with the Governors.
- Before establishing final regional production targets, the States would be consulted.
- Before establishing a regional coal sales schedule, the Governor would be consulted and given an opportunity to submit comments. The Governor would also be informally consulted before any final decision to offer a tract for sale.

The final programmatic EIS emphasizes that Interior would seek States' comments on the inter-regional and cumulative regional social and economic impacts of coal development in the regional production target setting process. States' comments on the intra-regional and site-specific social and economic impacts would be obtained in the tract ranking and selection process.

Interior and the States worked closely during the analysis of coal leasing issues that led to the preparation of the final programmatic EIS. We have discussed issues with a number of State officials who have been working with Interior. Interior has been receptive to constructive criticism from the States, and while differences in viewpoint will always exist, the States have been provided a greater role in the leasing program than under the previous leasing program. The purpose of this section is not to cast doubt on this relationship, but to present issues which we believe should be carefully analyzed.

Some observers, including officials in several Western States, question how Interior will resolve issues surrounding the interstate character of coal leasing and development. These include effects of coal development on air quality, water quality and availability, and population shifts and housing. This is of particular concern when the coal fields are near State boundaries.

States are also concerned about the adverse effects on cities and towns of increased coal train traffic. A coal train, which may be as long as 100 rail cars, divides many small communities while passing through unless underpasses or overpasses are in place to allow the free flow of traffic. Many communities are concerned about the effects of this disruption on the availability of needed public services, such as police and fire protection and medical services.

Some States are keenly interested in the setting of production targets by Interior and the possibility that Interior may emphasize low development in some States even though the State(s) may encourage high development. The concerned States believe this may occur, for example, when trade-offs are made between high cost/low production rate underground mine development and low cost/high production rate surface mine development. Several States

believe that Energy should formally obtain production projections from them, so that Energy's production goals will be established at least with the knowledge of the States' perspective on future production potential.

The States have told us that they and Interior should work closely together in establishing logical mining units before lease sale. They emphasize the importance of this where State coal lands are intermingled with Federal coal lands. They argue that if Interior does not do this, the ability of the States to plan and control the social and economic consequences of coal development will be decreased.

WILL PUBLIC BODY/SMALL BUSINESS  
TRACT SELECTION AFFECT PRI-  
VATE ENTITY TRACT SELECTION?

The Federal Coal Leasing Amendments Act requires that a reasonable number of leasing tracts be reserved for public bodies, including Federal agencies, rural electric cooperatives, and nonprofit corporations controlled by these entities. The act stipulates that the reserved tracts must be leased at fair market value. In addition, in response to the Small Business Act of 1973, as amended, Interior would reserve and offer coal lease tracts as special leasing opportunities.

Interior's draft programmatic EIS states that the Leasing Amendments Act gives Interior discretion to determine the number of tracts to be offered at special public body lease sales and the frequency of such sales. Interior further states that public body leasing could play a substantial role in any new Federal coal program, noting that public bodies currently provide slightly over 10 percent of the Nation's electrical generating capacity.

Under Interior's preferred alternative, the Secretary would designate certain coal lease tracts for special opportunity lease sales for public bodies. The designation would take place after the ranking and selection process and only if a public body had requested during the planning or expression of interest process that it desired a special opportunity lease sale be held.

It is not presently clear how many tracts Interior would make available for public body lease sales. Some observers are concerned that too few tracts could be selected and ranked to meet the needs of private entities as well as public bodies. They maintain that the consequences of this could be public bodies' selection of the most competitive tracts while private entities are left to choose from tracts in less desirable areas where mining costs could be higher. Key issues pertain to what constitutes a reasonable number of coal lease tracts to be designated as special leasing opportunities and what criteria is to be used to select these tracts geographically.

On June 2, 1979, the Secretary of the Interior made a decision to treat "public body" leasing as a major component of the system and encourage "public body" participation, but not to modify fair market value requirements or provide other financial incentives. Regarding a small business set-aside program, the Secretary decided that the department should carry through on actions to establish such a program and encourage minority participation in that program.

#### QUESTIONS FOR CONSIDERATION

##### Lease exchange:

1. Will coal lease exchanges involving unsuitable preference right lease applications and leases be feasible? Will lease exchanges eliminate tracts that could be leased competitively? Do the administrative and technical costs associated with conducting a lease exchange program exceed the benefits?
2. What guidelines should govern lease exchanges and the location and timing of exchange? Should the exchange applicant be required to perform drilling necessary to support tract evaluation? How should Interior calculate fair market value prior to making an exchange?
3. What alternatives to lease exchange should be considered? What are the costs and benefits of each alternative and how do these compare?



Non-competitive leases:

1. Should Interior be authorized to issue certain non-competitive lease tracts by negotiated sale procedures? Would this promote orderly and timely development without jeopardizing fair market value and competition objectives?

Surface owner consent:

1. Under Interior's preferred option for obtaining surface owner consent, will more tracts be selected and evaluated than will be leased because the uncertainty about surface owner consent is not resolved during the tract selection phase? What other alternatives exist for obtaining surface owner consent? Which alternative(s) promote the timely and orderly development of Federal coal and the receipt of fair market value?
2. How will the cost to industry of obtaining surface owner consent be factored into the determination of fair market value? Should Interior establish criteria to determine what a reasonable cost is for determining fair market value? Should Interior establish the "selling price" of the surface consent to prevent windfall profits? Will the cost of the consent significantly affect the selling price of the coal?

Maximum economic recovery:

1. How should Interior define maximum economic recovery? Should Interior use the same definition of maximum economic recovery at the preliminary tract delineation stage and mine plan approval stage? At what point should a precise determination be made? Should Interior develop different methods for calculating maximum economic recovery which are based on the quality of resource and economic information? How would environmental and social costs be used in determining maximum economic recovery?

2. What are the advantages and disadvantages of Interior's definition and method for determining maximum economic recovery, when the method is defined? Should a benefit-cost analysis be performed to evaluate the feasibility of the proposed definition and calculation method? How will a given definition and calculation method increase the cost of mining and what effect will this have on the price of coal?
3. Should maximum economic recovery determinations be periodically reviewed to update the reserve estimates for changing conditions related to factors such as engineering, technology, economics, environmental regulations, and enhanced knowledge of mining conditions? How will a change in the reserve estimate affect production requirements, mining costs, and risk and uncertainty, particularly after a mining plan has been approved, mining equipment acquired, and coal sold to a customer?
4. Should the determination of maximum economic recovery be left to industry subject to Government review and approval? If so, what detailed price and cost factors and other information will be required by the Government and what assurance will the Government have that the information obtained is valid?

Minimum royalty:

1. Will the statutory minimum royalty of 12-1/2 percent of the value of surface-mined coal distort the market through discouraging the mining of certain lease tracts? What are the costs and benefits of statutorily and administratively imposed minimum royalty requirements?
2. Will maximum economic recovery be encouraged in some instances through lower royalty requirements? What is the incremental cost impact of higher royalties given other cost factor changes?

Fair market value estimates:

1. How should Interior adjust the cost of money rate to calculate the appropriate discount rate for evaluating lease tracts? What risk and uncertainty factors should Interior consider in adjusting the cost of money to approximate the proper discount rate? Should the discount rate be based on the opportunity cost of capital? How should Interior determine the opportunity cost of capital?
2. How should Interior estimate selling price over the life of a proposed mining operation? Under what conditions should Monte Carlo or other methods be used? What factors affect the real coal price over the life of the mine? How can Interior estimate the degree these factors will affect the real coal price?
3. How should Interior calculate royalties for electric power steam market coal and for synthetic feedstock?
4. What is the proper way to integrate transportation availability and cost factors into fair market value estimates?
5. To what degree of detail should Interior base its fair market value estimates? What is a practical degree of detail?

Alternative bidding systems:

1. Other than deferred cash bonus payment, what alternative bidding systems should be evaluated by Energy and Interior to assure timely and efficient development of Federal coal and the receipt of fair market value? What are the advantages and disadvantages of the alternatives? What are the prospective costs and benefits of each option compared to the system now in use?
2. What criteria should be developed to evaluate each system's effect on the intensity of bidding

competition, the number of prospective bidders, and effective resource management?

Public participation:

1. Can the public participation process be made more meaningful? What methods in addition to public hearings would be conducive for public participation and obtaining public comments early to avoid unnecessary delays?
2. Can the public participation process be made more effective? Are certain hearings repetitious? Can joint hearings be conducted where more than one agency is required to hold them?
3. What is the most efficient and effective way for Interior to identify where industry has an interest in mining and where land use planning should first be done? Should Interior obtain expressions of interest in potential lease tracts prior to land use planning? Will expressions at this time help Interior set planning priorities and provide for timely acquisition of data needed to evaluate the area for unsuitability criteria as well as other land use planning requirements? Will expressions at this time be inefficient because of uncertainties over factors such as unsuitability criteria?
4. Would expressions of interest before and after land use planning have different effects on Interior's control of social, environmental, and economic impacts and on the rate and timing of leasing? If so, how? Would regional production targets and public and State input to the lease ranking and selection process limit the effect? Or, should all coal areas be evaluated before any leasing decisions are made?

State government participation:

1. What is the proper role of State government participation in the Federal coal leasing

process? How should States be involved in the setting of leasing and production targets and tract selection and ranking?

2. Are existing decision-making mechanisms adequate to enable Interior to resolve issues surrounding the interstate character of Federal coal leasing and development? What are the alternatives and their relative social benefits and costs? Can alternatives be implemented equitably and reasonably?
3. Should the Government take action to ease the disruption in Western and other communities caused by unit coal train traffic? Can the railroad industry ease some of these problems by joining with States in planning short-run and long-run transportation needs?
4. How will Interior and the States work together in establishing logical mining units prior to lease sale? Should Federal leases be issued if adjacent State lease tracts, which could be part of the mining unit, were not leased because of Interior's failure to participate with the States in forming mining units?

Public body tract selection:

1. How will public body tract selection affect private entity tract selection?
2. What constitutes a reasonable number of tracts to be reserved for public bodies? What criteria should be used to select public body tracts?

CHAPTER 8  
HOW CAN ENERGY AND INTERIOR  
IMPROVE LEASE MANAGEMENT TO ENCOURAGE  
THE TIMELY AND ORDERLY DEVELOPMENT OF COAL?

Sound lease management is an important element of the Federal coal management program. If Federal coal is to be developed in an orderly and efficient manner, with regard for environmental protection, the Government must have clear and reasonable lease management policies which encourage private sector investment and orderly and timely development. Some of these policies are initiated by Interior while others are developed by Energy.

In addition to the development of management policies, any lease management system should have well developed feedback mechanisms which can be used to judge the effectiveness of lease management policies in achieving orderly development and satisfying the demand for Western Federal coal. For example, an analysis of existing leases, as discussed in Chapter 5, will provide the baseline data from which informed judgments can be made about the impact that different production requirements and logical mining unit criteria could have on coal supply and production potential.

Two issues are related to coal lease management.

- Can lease management be improved by streamlining the permitting process and revising diligent development criteria?
- Can lease management be improved by revising logical mining unit requirements?

Following the discussion of these issues, we have added an information section which summarizes the lease assignment provisions of the new Federal coal management program recently announced by the Secretary of the Interior.

CAN LEASE MANAGEMENT BE IMPROVED  
BY STREAMLINING THE PERMITTING  
PROCESS AND REVISING DILIGENT  
DEVELOPMENT CRITERIA?

The mine development period includes many activities which occur during the diligent development 1/ time frame and culminate in the mining of the coal deposit. These activities consist of many pre-mining functions including:

- Acquisition of reserves to form a logical mining unit.
- Exploration work necessary to design a mining plan.
- Preparation of a mining plan and environmental analysis or impact statement.
- Submission and approval of the mining plan and permit applications necessary for operating the mine.
- Acquisition of mining equipment and capital financing.
- Construction of the mine and transportation facilities.
- Acquisition of a market for the coal.

Interior estimates that for a Western surface coal mine, it normally takes 4 to 7 years to begin mining from time of lease issuance. Interior also states that in some cases it could take up to 10 years. Coal industry officials told us that 8 to 10 years length is a more realistic estimate of the development period.

The length of this development period and the Government's and industry's ability to effectively respond to coal demand are directly related. The longer

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1/Diligent development means the production of coal to meet a minimum specified level of production within a given time frame.

the forecasting period, the less reliable are the production goals. Consequently, if development lead times were long, the risk of production shortfalls would be greater because of numerous assumptions about the nature of coal demand 10 years hence. As the planning horizon becomes shorter, coal demand forecasts become more reliable because they are subject to less uncertainty. Consequently, if development lead times are short and regulatory policies clear and stable, the risk of production shortfalls diminishes.

#### Permitting process

The length of the development period is determined by many activities, as previously mentioned. One of these activities, the permitting process, involves interaction between the lessee and a number of Federal, State, and county government agencies. For one Western surface mine, the lessee told us that over 50 permit applications had to be filed with eight Federal and four State agencies. These permits include:

- State water well and rights appropriation permits.
- State special use permit--such as a reservoir.
- State mining permit.
- State industrial siting permit.
- Federal Forest Service special land use permit.
- Office of Surface Mining permit, a permit not included in the above analysis.

The lessee said that 2-1/2 years may be required to obtain all permits. This will vary depending on such factors as the attitude of the regulatory authority and new laws and regulations which may complicate and extend the time for obtaining permits.

An important issue concerning the permitting process is whether a redesign or streamlining of that process can shorten the development period. An analysis of the types of permits, the optimum time and sequence of filing, and the period required for review and approval



Similarly in your April 1976 report, you called for--

- o Tighter control of national energy strategy:

"Under the (EMARS) process, the level of lease offerings would be determined from bidding results in competitive lease sales. Lease sales, if environmentally acceptable, would be offered as long as bids were sufficiently high.

"However, reliance on this process places Interior in the position of reacting rather than providing the leadership needed to develop sound national energy strategy."

*(GAO response: This report, which identifies many issues related to legislation enacted since 1976, is not inconsistent with our 1976 report as Interior is suggesting. This legislation--including the Federal Coal Leasing Amendments Act of 1976, Federal Land Policy and Management Act, and the Surface Mining Control and Reclamation Act--provides many environmental safeguards which are now part of the legal and policy framework governing coal leasing. This framework is quite different from the framework that existed before 1976. In this regard, a comprehensive analysis of coal leasing issues must interrelate these environmental safeguards with the energy and leasing objectives that are also now part of the policy framework. We are concerned that Interior may implement a new leasing program that is not well thought out in terms of the interrelationships between environmental protection safeguards, fair market value determinations, competitive lease sales, and national energy objectives.)*

- o Exclusively competitive sales and exploration without direct government incentive:

"The Congress should enact legislation that would . . . provide for (1) the award of leases only on a competitive basis and (2) issuance of prospecting permits under which persons could explore for coal for commercial purposes but have no exclusive rights to leases."

uncertainties affecting the kind of information and costs that go into the preparation of a mine plan, particularly when the coal is uncommitted and the necessary permits have not been obtained and approved. Under these conditions, the requirement might cause lessees to hastily prepare a mine plan of little or no use to the Government or a prospective coal customer. These and other observers are concerned whether such a regulation would be based on the intent to obtain useful information or whether it would represent an administrative expediency to terminate nonproducing leases which have become an embarrassment to the Federal Government.

Another alternative for defining diligent development would be in terms of economic incentives. For example, a sliding scale rental could be designed to require automatic periodic adjustments to the rental as long as a lease were not producing coal. Some observers believe this measure would assure a reasonable return to the public and leave to the lessees' discretion the choice between submitting a mine plan for approval or forfeiting the lease. Depending on market conditions, a lessee could decide to cancel the lease if projected cumulative rental payments and lease development costs outweighed projected benefits (long-term profitability) from developing the lease. Other economic incentives include minimum investment requirements, minimum royalties, and tax adjustments. These and other alternatives might provide a mechanism for making lease management activities more related to market conditions than the present system of arbitrary production periods.

Many public and private sector officials are concerned about potential resource misallocation that arbitrary diligent development requirements could cause in general and the misallocation of scarce Western metallurgical coal reserves in particular. They argue that Western metallurgical coal, a critical resource input into the production of coke which is used to convert Western iron ore into raw steel, 1/ may be depleted too

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1/Slightly more than 6 percent of domestic raw steel is currently produced in seven Western States--California, Arizona, Colorado, Utah, Washington, Oregon, and Hawaii --and substantial deposits of metallurgical coal have been estimated by the Bureau of Mines to occur in Colorado and Utah.

quickly or used inefficiently because of the early development pressures of diligent development requirements and the failure of the regulations to take market demand into account.

These officials and other experts knowledgeable of domestic and international steel industry developments emphasize that the demand for metallurgical coal is driven by steel economics and world steel market conditions, and not diligent development standards. They assert that arbitrary diligent development standards adversely affect the efficiency and competitiveness of America's steel industry because of the following factors: (1) metallurgical coal is usually a blend of various quality coals; (2) the quality coals needed do not always occur in a concentrated area, meaning that mining and exploration may have to occur over a large area at different depths; and (3) mining rates and development investment schedules are directly related to world steel prices and production costs, meaning that mining intensities vary at different rates at specific seams depending upon mining and reclamation costs.

CAN LEASE MANAGEMENT BE IMPROVED  
BY REVISING LOGICAL  
MINING UNIT REQUIREMENTS?

Two requirements that need to be carefully analyzed are the 40-year depletion requirement and the contiguity requirement. Both requirements are contained in the Federal Coal Leasing Amendments Act and both may result in adverse social and economic consequences.

Further, these concerns affect mine design, choice of mining technology, and investment schedules. Until they are resolved, the definition and calculation of maximum economic recovery--another requirement of the Federal Coal Leasing Amendments Act discussed in Chapter 7--will be unclear and difficult to implement.

Depletion requirement

The depletion requirement states that the mining plan for each logical mining unit must require the unit to be mined out in not more than 40 years. Diligent development regulations require that the period begin

with the approval of a mining plan. Consequently, the years following plan approval, during which no production is possible because of mine development activity, count against the 40 year requirement.

Based on the current maximum leadtime of 10 years for diligent development and the 3-year requirement for submitting a mining plan in the Federal Coal Leasing Amendments Act, it might take 7 years after mine plan approval before a logical mining unit started producing. This could reduce the mine life to 33 years, if the 40-year depletion period begins at the time of mining plan approval. Such a mine life could be less than the production life of a large-scale Western coal mine and could be counter to resource conservation interests. This, in addition to the fact that long-term coal contracts with utilities are negotiated for periods up to 40 years, indicates the need for a review of the reasonableness of the 40-year depletion requirement and of the period for which the requirement pertains.

Another adverse effect of the 40-year mine out requirement could be the limitation of mine reserves to a level that could not support the economic development of a coal deposit. The nature of the coal deposit and projected socio-economic impacts from development may justify a longer mine life in the interest of resource conservation and economic stability. For example, proper socio-economic planning may call for a gradual phasing in and out of major mining operations in some Western coal regions as opposed to the concentration of several mining operations over a 40-year period. Such a concentration may be technically infeasible within a 40-year period since surface mining and underground mining operations are subject to different depletion schedules--because of economic and engineering conditions--which may exceed 40 years. In addition, communities interested in stabilizing their population and avoiding an abrupt cessation of economic activity at the end of a 40-year period may elect to encourage major mining operations whose productive mine lives are made compatible with local and regional development plans.

Finally, steel industry experts indicate that coking and steel producing facilities, which utilize metallurgical coals, are designed to last longer than 40 years. They say it is not economically feasible to construct a modern

coking plant based on the life of a mine which supplies the coal input, particularly when fluctuations in world demand for steel may cause lower than usual utilization rates for both the plant and mines. This would make it uneconomical to deplete the mine on a strict 40-year schedule, not to mention resource misallocation potential.

#### Contiguity requirement

The contiguity requirement states that all lands within a logical mining unit must be contiguous. However, some Federal coal leases included in mining plans cannot be included in the logical mining unit because they are not contiguous and may be forfeited because a logical mining progression would dictate mining the lease after the diligent development period.

For example, some lessees have leases that are needed to fulfill coal supply agreements, but which are not planned for mining before the diligent development period ends, and are not contiguous to the other properties in the mining unit. Current regulations may cause actions not in the public interest. The lessee may make unnecessary capital investments to mine the leases out of sequence with the mining plan. This could raise the cost of mining unnecessarily. On the other hand, the costs may be so great that the leases would be relinquished even though the lessee has made an investment and intends to mine the coal. This action could also inhibit resource conservation.

#### LEASE ASSIGNMENT DECISIONS PERTAINING TO THE NEW FEDERAL COAL MANAGEMENT PROGRAM

Regarding the management of existing leases, on June 2, 1979, the Secretary of the Interior made four decisions affecting the transfer or "assignment" of existing leases. According to the Secretarial Issue Document, a lessee may assign his entire interest in a lease, a portion of the lease, an undivided interest in a lease, or a royalty share of the lease. Interior states that since demand for Western coal is now growing and since entry into the Western coal markets through new Federal coal leasing has been restricted, the current lease assignment market appears to involve the transfer of leases to concerns that are in a better position to achieve production than the original leases.

Further, Interior states that in view of the diligent development requirements, the leases which are now being assigned to coal companies are likely to become producing leases. Interior also states the lease assignment market is likely to effect total production, and the degree of competition in particular regions.

Interior's lease assignment decisions focus on four areas: disclosure of financial information, the 50 percent limitation on overriding royalties, anti-competitive effects of lease assignments, and compliance with diligence requirements.

Specifically, Interior's four lease assignment decisions are as follows:

1. Require, by notice, all lessees who received their leases through assignments in the last 5 years to disclose the financial terms of the assignment within 90 days after notification; and propose to adopt a regulation which bars approval of new assignments unless the terms of the assignments are disclosed.
2. Convene a group to analyze the information received on assignments to determine whether the current requirement of a 50 percent limitation on overriding royalties should be changed.
3. Issue a regulation that (1) requires all assignments be sent to the Department of Justice for review and, (2) prohibits approval of an assignment except when it meets the same standards for lack of anticompetitive effect as the Department has for competitive leases.

4. Give nonproducing leases on which assignments have been filed for approval the highest priority for implementation of the selected diligence and enforcement option; and request the Department of Energy to propose a regulation that requires all assignees to submit a definite plan for meeting diligence as a condition for approval of the assignment.

#### QUESTIONS FOR CONSIDERATION

##### Development period:

1. Can the mine development period be shortened by reducing the time required to obtain mining and other permits? How can the permitting process be streamlined?
2. Should diligent development regulations be modified to include milestones related to development activity? How feasible are milestones related to specific development activities versus milestones related to economic incentives? Should metallurgical coal be treated differently in terms of diligent development standards?
3. Should standards be developed which would give the Government greater flexibility in applying and enforcing diligent development requirements? How can the establishment of diligent development requirements be made flexible so that changes in the market place can be taken into account?
4. How should Energy and Interior evaluate the maximum time allowed to achieve diligent development? Should the present time frame be modified?
5. Should different diligent development standards be applied to leases issued before and after August 4, 1976, (enactment date of the Federal Coal Leasing Amendments Act) as they presently are under Interior regulations? If so, what should be the basis for differing standards and how should they differ?

Logical mining unit:

1. How should Energy and Interior evaluate the maximum time allowed to exhaust a logical mining unit reserve? What factors should they consider for reducing or increasing the maximum time allowed to deplete a logical mining unit reserve?
2. Should the statutory definition of logical mining unit be refined to allow for inclusion in a logical mining unit of non-contiguous tracts or parcels? What is the technical meaning of contiguous?



## CHAPTER 9

### CONCLUSIONS, RECOMMENDATIONS AND AGENCY COMMENTS

This report brings to the attention of the Congress and the Administration issues which have or may have significant adverse effects on the development and implementation of a sound Federal coal management program and the use of Federal and non-Federal Western coal in meeting America's energy needs. Its basic purpose is to provide a framework for understanding the broad range of coal leasing issues by identifying and sorting out the more significant questions which face the future of coal on Federal lands.

Federal coal leasing issues are important because Federal coal accounts for about 30 percent of total domestic coal reserves and 60 percent of Western coal reserves. In addition, Interior estimates that the Government controls about 20 percent of non-Federal Western coal because many Western coal regions are characterized by intermingled ownership patterns.

These issues are also important because Federal coal is now, and is expected to continue through this century to be, a significant energy supply source. For example, Interior has estimated that existing leases and pending preference right lease applications could have an annual production potential as high as 450 million tons by 1990, a figure equal to about 65 percent of Western coal production and 31 percent of national coal production by 1990, as forecasted by the Department of Energy.

But, we and many public and private sector parties are concerned about the effect existing and proposed regulations could have on the responsiveness of the new Federal coal program in making available--in a socially and environmentally-acceptable manner--sufficient quantities of Federal coal to meet the Nation's energy needs.

#### FRAMEWORK FOR UNDER- STANDING COAL ISSUES

The following six overriding questions--progressing from basic public policy issues to "down to earth" management concerns provide the framework for understanding the broad range of coal leasing issues addressed by this report.

- How should Federal coal leasing goals and policies be balanced with inter-related and often conflicting national environmental, socio-economic, and economic objectives? (See Chapter 3.)
- How well are the two Departments--Energy and Interior--working together in establishing and implementing goals and regulations to "make it all happen"? (See Chapter 4.)
- What, realistically, is the production potential of coal already under lease--in view of the many legal, economic, environmental, and other factors affecting its development? (See Chapter 5.)
- How should Interior better tie together its determinations on the amount of unleased coal available to meet future needs with on-going land use planning and coal exploration programs? (See Chapter 6.)
- How should Interior proceed in identifying, evaluating, and selling specific lease tracts? (See Chapter 7.)
- How can Energy and Interior improve lease management to encourage the timely and orderly development of coal? (See Chapter 8.)

### Balancing Multiple Goals

In recent years, the Congress has enacted various laws governing the basic policy and regulatory framework affecting the leasing and development of Federal coal--e.g., the Federal Coal Leasing Amendments Act of 1976, Federal Land Policy and Management Act of 1976, Surface Mining Control and Reclamation Act of 1977, and the Department of Energy Organization Act. These and other public laws emphasize the multifaceted nature of coal resource management, taking into consideration three interrelated goals--domestic energy development, environmental protection, and socioeconomic security--which, at times, may be in conflict but for which a reasoned balance through appropriate tradeoffs is the ultimate objective.

A major concern we have is that a reasonable balance between these goals may not be achieved. Uncertainties about the achievement of this balance is represented by the following issues:

- When coal leasing goals conflict with environmental, socio-economic, and economic goals, how should a trade-off analysis be performed?
- Who should pay the cost of achieving a balance among goals?
- Can a less-regulated private sector achieve timely, orderly, and efficient coal development without jeopardizing environmental and social concerns?

As the new Federal coal leasing program is implemented, we believe the Administration and the Congress should identify and weigh alternative ways of dealing with these complex issues and their potential consequences on the public and private sectors. Otherwise, short-sighted decisions and actions could evolve, the consequences of which could be unforeseen adverse effects on certain groups--be they industry, environmental, consumer, or other--and on the availability of Federal coal to meet energy demand.

#### Split Responsibility Between Energy and Interior

Interior has primary responsibility for leasing public coal lands. However, the Department of Energy Organization Act requires Energy to develop certain regulations related to the management of energy resources--also to establish energy production objectives. Because of the split responsibility, the law established a Leasing Liaison Committee to assist in inter-agency coordination.

We believe the following issues--stemming from split responsibilities--are ones the Administration and the Congress ought to monitor closely:

- Will the split responsibility between agencies enhance or impede efforts to develop effective regulations? (Will the Leasing Liaison Committee function as an effective inter-agency coordinating mechanism?)

--Will leasing to meet Government-derived production goals restrict supplies and result in anti-competitive coal markets and supply shortfalls?

--Will production goals be formulated on the basis of flexible methodology and reliable data?

At the present time, there are major uncertainties about how reliable and useful Energy's production goals are, whether such goals will actually be used by Interior in shaping the rate and timing of new leasing, and the effect of all this on the state of competition in coal markets. In a recent report 1/ we expressed concern about whether the Leasing Liaison Committee can function effectively when the departments are in conflict or when lease management and regulatory policies--e.g., concerning diligent development, competition, and bidding systems--need to be resolved at the department levels.

In recently announcing the new coal management program, the Secretary of the Interior also announced establishment of a new Interior/Energy working group, under the Leasing Liaison Committee, to coordinate Energy's coal production goals with Interior's regional leasing targets. We believe this and other top management cooperation are needed to assist in resolving potential conflicts in objectives between the two departments.

#### Coal Already Under Lease

Previous efforts by Interior to resume Federal coal leasing, including the previous leasing program--the Energy Minerals Activity Recommendation System--were widely criticized because the need to resume Federal leasing had not been demonstrated. The District Court in NRDC v. Hughes cited this deficiency as a major defect in the 1975 programmatic environmental impact statement.

We believe that a coal leasing program should be designed regardless of whether or not there is a need now for new leasing. In developing the program, Interior should

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1/"Federal Leasing Policy--Is the Split Responsibility Working?" (EMD-79-60, June 4, 1979)

consider all aspects of pre-lease and post-lease sale management functions and market conditions. If this is done, a reliable, efficient, effective, and flexible system should be in place if and when a resumption of coal leasing is necessary. Leasing decisions can then be made in a timely and efficient manner.

The following questions are relevant to the assessment of leased coal tonnage.

--To what extent is the development of existing leases restricted by environmental considerations?

--To what extent does an evaluation of production potential and capacity of existing leases depend on the formation of mining units that could be mined profitably?

--To what extent is the development of existing leases prevented by a lack of transportation networks?

Interior has not made an analysis of existing leases to determine those that have environmental problems, those that are not by themselves or in conjunction with other coal properties logical mining units, or those that are not near transportation facilities.

#### Availability of Unleased Coal

Interior is responsible for evaluating Federal lands to determine how much unleased Federal coal is available and suitable for meeting coal needs. Such evaluations must be tied in with land use planning and coal exploration programs. Three issues surface.

--Should regional coal production goals be considered along with other resource values in developing land use plans?

--Will designation of areas unsuitable for coal mining be impeded by a lack of information?

--Will Federal coal exploration provide sufficient data for timely analysis of all potential leasing areas?

We found that in evaluating alternative land uses --a critical step in coming up with regional land use plans--Interior does not explicitly consider regional coal production goals or other resource needs, which could result in plans that do not adequately assess trade-offs between coal and other resource needs and values. We believe that such evaluation--considering demands and values for all resources--needs to be employed as a regular part of Interior's evaluations of land use alternatives.

In addition, Interior plans to make recommendations on lands determined to be environmentally suitable for coal production early in land use planning if sufficient data is available or--if best available data is not sufficient--later in the leasing process when sufficient data is available. Either way, Interior plans to provide an opportunity for public comment on criteria applications. A major uncertainty is whether delays in land use planning and leasing will occur and, if so, whether an alternative planning and leasing mechanism could be developed to reduce delays and risks to acceptable levels.

Regarding coal exploration, we believe a long-range plan is needed to provide public and private sector energy, coal leasing, and land use decision-makers with better information for both leasing and land use decisions. Furthermore, a long-range plan could assist the Congress in considering alternative exploration incentives, strategies, and policies. A key issue is whether and, if so, how exploration objectives can be better accomplished through incentives to industry to identify and analyze coal deposits.

#### Identifying, Evaluating, and Selling Lease Tracts

One of the most important responsibilities Interior has in implementing a new leasing program will be to select, evaluate, and then sell specific tracts which are responsive to the need for Federal coal. We see many potential obstacles in accomplishing this, including:

- Some means for and agreement on how to go about resolving probable conflicts in exchanging unsuitable leases for suitable ones.

- A question as to whether Interior can and should be authorized to lease certain tracts--such as bypass tracts--non-competitively to reduce administrative costs, save time, and provide more certainty of getting tracts into production.
- Possible high costs of gaining the consent of surface owners for access to certain tracts otherwise ideal for leasing.
- Dis-incentives for industry to enter lease sales and develop Federal coal after it is leased because of uncertainties involving maximum economic recovery and higher minimum royalty requirements.
- Problems in making fair market value determinations and in implementing alternative bidding procedures.
- Finding ways to streamline the process for gaining public participation and resolving differences with State and local governments.

#### Coal Lease Management

If Federal coal is to be developed in an orderly and efficient manner, the Government must formulate clear and reasonable lease management policies which encourage private sector investment and orderly and timely development. We zeroed in particularly on permitting, diligent development, and logical mining unit requirements.

We believe the permitting process should be reviewed to determine how it can be redesigned and streamlined to shorten development lead times, cut administrative costs, and reduce paperwork and duplication between Federal and State requirements.

We also find that diligent development requirements need to be re-examined in light of the effect they have on the timely and orderly production of coal and premature

concellation of leases. And, finally, the reasonable-  
ness of the 40-year depletion requirement and the man-  
ner in which logical mining units are defined are other  
matters viewed by us as needing review because of their  
potential effect on limiting the coal that can be pro-  
duced by a given mine.

CURRENT PROGRAM STATUS AND  
ISSUES REQUIRING IMMEDIATE  
ATTENTION

On June 4, 1979, the Secretary of the Interior  
announced a new Federal coal management program, calling  
for a resumption of competitive leasing for the first  
time since a moratorium was imposed in 1971. Leasing is  
to take place beginning in January 1981. But--as the re-  
port points out--many questions relating to coal leasing  
remain unanswered, some of which we believe need to be  
resolved before any further long-term leasing can take  
place. Others can be worked out during the early stages  
of the new leasing program.

Some of the same questions and issues have been or  
are being addressed by either the Department of the Inte-  
rior or the Department of Energy. We note considerable  
progress by the two departments in developing a workable  
program--including changes made since a draft of this  
report was made available to them for comment. But fur-  
ther actions are needed, and it is hoped this final re-  
port will further contribute to their resolution.

We believe that--as a minimum--the following four  
important issues need to be dealt with before leasing can  
be resumed:

--An analysis needs to be made of the  
production potential of existing  
leases--in view of the many economic,  
environmental, and other problems  
associated with their likely develop-  
ment. This is necessary to give a  
better fix on how much coal needs to  
be made available to satisfy demand  
under the emerging program.



--Interior, in initially developing its comprehensive land use plans, needs to consider coal production goals-- as well as demand estimates for other resources--to help make judgments on land use alternatives and foster an appropriate balancing of energy goals with environmental and socio-economic goals. This is particularly important because land use plans developed over the next several years will affect the level of resource usage on Federal lands--whether recreation, wildlife, timber, coal, or whatever--for the remainder of this century and beyond.

--Interior needs to evaluate the impact of the surface owner consent requirement--and decide how to implement it--since this will affect the economics and thus the ultimate leasability of proposed new tracts.

--Final regulations are needed specifying (1) how maximum economic recovery determinations will be made, and (2) what factors will be considered in establishing logical mining units. These determinations are essential for potential developers in knowing how to respond to the nomination process for new leases as well as in considering the implications of the rules for existing leases.

Interior has recently issued its final programmatic environmental impact statement for a new leasing program, and final regulations are expected to be issued shortly. We found that the final programmatic statement --while not effectively dealing with the issues discussed above--is thorough in defining the history and broad scope of the proposed program, in describing potential environmental impacts, and in providing good insights into many aspects of the proposed new leasing system.

In the interest of getting on with a new leasing program, we are not suggesting revisions to the statement

self--but believe instead that open issues need to be dealt with either through the final regulations or other analyses called for in this report. Unless this is done, the emerging program could well become a major source of uncertainty and confusion to private and public sector energy and environmental planners.

MATTERS FOR CONSIDERATION BY THE  
CONGRESS AND THE ADMINISTRATION

A program such as this that will impact on national welfare for decades to come should be subject to close scrutiny during the early development stages. This will increase its chances for success in the long-run and, hopefully, prevent delays such as those encountered during the last decade.

Oversight by the Congress, through the appropriate committees, is needed--with particular attention given to such matters as:

- Effectiveness of Federal policies to provide a proper balance between the Nation's interrelated coal production, environmental, social, and economic objectives.
- Workability of retaining the split responsibilities between Energy and Interior. (A case in point is the manner in which Energy's coal production goals will be used to develop Interior's leasing schedule and the feasibility of this approach in light of differing agency perceptions and objectives. Actions by Interior and Energy on recommendations we made in a recent report, "Federal Leasing Policy--Is The Split Responsibility Working?", issued June 4, 1979, should be closely monitored.)
- Effectiveness of the Leasing Liaison Committee --as well as the newly established working group on production goals and leasing targets--in ironing out differences between departmental objectives and regulatory policies.
- Interrelationships between Interior's coal leasing and land use planning and coal exploration programs.

- Feasibility of streamlining the permitting and public participation processes to avoid production delays and duplication of effort.
- Clarification or revision of certain statutory requirements which, in their present form, have potential for adverse impact on balancing multiple goals and achieving timely and orderly development. These requirements include maximum economic recovery, logical mining unit formation, diligent development, 40-year mine life, and minimum royalty.
- Feasibility of a general lease exchange authority.
- Feasibility of short-term non-competitive leasing (e.g., bypass or emergency leases).
- Implementation of the surface owner consent requirement.

Before new long-term leasing is resumed, we recommend that the Secretary of the Interior:

- Analyze the production potential of existing leases by determining which leases are included in logical mining units and which ones will be eliminated by unsuitability criteria, inaccessibility to transportation facilities or other factors--and submit such analysis to the Department of Energy.
- Use regional coal production goals as well as demand estimates for non-coal resources, as a regular part of Interior's evaluation of land use alternatives.
- Evaluate the economic, energy, and environmental implications of Interior's implementation of the surface owner consent requirement--including its effect on the determination of fair market value--and submit this study to the Congress.
- Publish explicit maximum economic recovery and logical mining unit regulations for comment and public hearings.

In addition to the above recommendations, which are highlighted because of their importance in connection with the resumption of long-term leasing, we further recommend that the Secretary of the Interior:

- Follow through in the development of an appropriate and workable mechanism for achieving a reasonable balance between interrelated energy, environmental, and socio-economic objectives.
- Prepare and submit to the Congress a long-range coal exploration plan.
- Determine whether the process for fulfilling public participation requirements can be redesigned to improve Government planning and decisionmaking.
- Determine how the permitting process can be streamlined.
- Work closely with the Secretary of Energy in making the Leasing Liaison Committee an effective interdepartmental coordinating and problem-solving body and in expeditiously staffing and making operational the Interior/Energy working group on coal production goals and leasing targets.

We recommend that the Secretary of Energy:

- Use Interior's evaluation of production potential on existing leases--which will be done as a result of our first recommendation to the Secretary of the Interior--in developing coal production goals.
- Publish methodology and procedures to be used in arriving at production goals, including an explanation of assumptions used in making the estimates, and make this available to the public.
- Work closely with the Secretary of the Interior in implementing a new Federal coal management program that achieves a balance between public policy goals of domestic energy development, environmental protection, and socio-economic

security. Particular attention should be given to Energy's statutory responsibilities for issuing regulations pertaining to diligent development, competition, and alternative bidding systems.

--Work closely with the Secretary of the Interior in making the Leasing Liaison Committee an effective interdepartmental coordinating and problem-solving body and in expeditiously staffing and making operational the Interior/Energy working group on coal production goals and leasing targets.

#### AGENCY COMMENTS

The Department of Energy, in commenting on our draft report (see Appendix IV), noted overall that the report was quite thorough and addressed the major issues relevant to the future management of Federal coal resources. By contrast, Interior's response (see Appendix V) was highly critical of our draft report.

Interior's basic impression is that we are calling for a reconsideration of much of the legislation related to coal leasing that the Congress has passed in recent years. They refer to the Federal Coal Leasing Amendments Act of 1976, Federal Land Policy and Management Act of 1976, Surface Mining Control and Reclamation Act of 1977, and other laws which establish national policy related to coal development. Whereas there are certain aspects of these laws that should be reviewed, we are not calling for a sweeping review of such legislation and have no quarrel with such basic tenets as the need for comprehensive land use plans and an end to speculative holding of Federal coal, as suggested by Interior.

We are concerned, however, with how the Administration will implement programs to support congressionally-established environmental, energy, and social policies. Interior's charges should not divert attention from the unresolved coal management issues which need to be scrutinized.

Interior also expressed concern that delaying implementation of the Federal coal management program to study various issues would only cause further uncertainty about the Government's ability to manage its coal resources. We believe some issues must be resolved before long-term

leasing is resumed--e.g., questions about the need for more leasing and guidelines determining maximum economic recovery and logical mining units. For the most part, however, the issues identified in this report should be evaluated by the Congress, Interior, and Energy during the early stages of program development and implementation.

In addition, Interior has suggested that, rather than being based on detailed analysis like most GAO reports, this report is largely based on the speculations of anonymous "experts" and "observers"--none of whom come from their department--with a bias toward industry interests. We agree the report is somewhat unique in that it takes a broad and preliminary look at a very complex subject. It does so deliberately, and we have tried to point out clearly that many of the questions and issues raised--while not necessarily new--are still very relevant to a new Federal coal program and require answers. Our purpose is to establish a framework for early analysis and debate --including by the Congress if necessary--to help make possible a successful coal leasing program.

As to the charge of industry bias, the issues were identified through an extensive process of discussion and analysis, which included probing the concerns of a carefully selected cross-section of thinking from many quarters both inside and outside the Government. This included heavy input from the Bureau of Land Management and Geological Survey as well as other Government people--and, overall, we feel represents a good balance and mix of viewpoints from those involved in or affected by the program.

Several recommendations do not require a response because Interior concurs. Our recommendation regarding public participation has been clarified. Interior indicates they have performed a comprehensive evaluation of the surface owner consent requirement--and we are asking that this be submitted to the Congress. Interior infers that they have already submitted a long-range coal exploration plan to the Congress by way of the FY '78 report on the Federal Coal Management Program. We found, however, that this report does not contain the details of a long-range plan, and we continue to believe such a plan is needed and should be submitted to the Congress.

The following discussion highlights agency comments and our response to the remaining recommendations.

Production potential of  
existing leases and the  
need for new leasing

We recommend that Interior determine production potential of existing leases. The issue focuses on the extent to which existing leases by themselves or in combination with other coal properties are capable of supplying coal to meet the demand for Western coal.

Interior states that they have analyzed production potential on an overall basis by evaluating mine plans and by the judgments of Geological Survey officials about the development potential of leases not included in the mining plans. They indicate that an analysis of each lease is unjustified on cost-effective grounds and that the submission of mining plans is the most cost-effective way to determine production potential.

Energy also believes that lessees should be required to indicate their proposed development plans through mining plan submissions rather than the Government attempting to predict which leases will be developed or relinquished. Energy states that no mining plans have been filed for more than 6 billion tons of the 17 billion tons of Federal coal currently under lease. They indicate that, given the 1986 deadline for development, if mining plans are not filed soon it is unlikely many outstanding leases will meet diligent development requirements.

We believe that mining plan submission will not resolve some important questions regarding production potential of existing leases. Even if a mining plan were submitted in good faith, the long-term production potential may be unclear because of the need for logical mining unit formation and the application of unsuitability standards. Therefore, the question as to the number of leases and the portion of the 17 billion tons under lease that are not in logical mining units or that cannot be mined because of environmental unsuitability will still remain open.

Action should be taken by Interior to work with the lessees in determining and formulating logical mining units. This is a complex subject and we believe Interior should resolve the problems of determining

how logical mining units should be formulated rather than simply requiring each lease, individually, to be a logical mining unit.

Interior should also initiate action to determine unsuitability on all existing leases, not just those included in land use planning units that are being updated. Unsuitability determinations are time consuming and may require considerable data. Interior's decision to wait until a mining plan or lease exchange request is submitted fosters continued uncertainty about the production potential of existing leases and the need for additional leasing.

The question about existing leases should not be allowed to linger on and go unanswered. It strikes at the heart of any long-term leasing program. A coal management and leasing program, such as Interior's preferred program, which requires extensive Government planning, analysis, decision-making, and action, should provide for resolution of these issues at the front-end to avoid delays in needed leasing and to insure that coal supplies will not be restricted by Government inaction, thereby limiting competition in the marketplace.

Production goals used  
during land use planning

Interior rejects our recommendation that coal production goals should be used during the initial steps of land use planning. Energy also questions whether this is necessary. Both agencies are concerned that the use of production goals in this initial step of land use planning will diminish the value of recreation, wildlife, environment, scenic, or other values when compared to coal.

We also recognize that this could occur. Other resources may not be as easily quantified because of a lack of market transactions, the difficulty in estimating reliable measures of consumers' willingness to pay, or other reasons. Nevertheless, the application of resource demand to all resources would encourage comprehensive land use decisions that are based not only on supply, environmental, socio-economic, and other legal or policy criteria, but also on demand factors.



We also believe the use of coal production goals along with other resource values in regional land use planning does not automatically mean that coal values will outweigh the values and uses of other resources that compete with coal. Given the present and future values of competing resources, coal's best use may be to remain in the ground at some sites. Demand or protection of non-coal resources may have little value to society if they are not consumed or preserved at a particular site. The alternative of relocating some activities may not be feasible because of some unique characteristics or demand factors, while coal--our most abundant energy resource--may in some cases be produced just as well at alternative sites.

In general, this depends on the comparison of costs and benefits of coal development versus non-development at certain sites in a region--taking environmental and other resource values into account--relative to similar comparisons at alternative sites over the region. It further depends on the size of the areas over which comparisons are made and specific coal quality features at specific sites relative to the occurrence of the other resources over the region.

Furthermore, the selection of coal as an acceptable land use will not automatically result in coal being leased and developed. Interior has established controls in the coal management program to prevent this from happening. For example, leasing targets, tract ranking, State consultation, and other environmental and socioeconomic controls--in addition to coal economics and demand--will play decisive roles in determinations of production levels in a given area.

One of the guiding principles of land use planning is the consideration of present and potential uses of the public lands. In formulating land use plans, Federal land managers are expected to consider the potential for public lands to achieve contemplated goals and objectives. Bureau of Land Management field officials indicate that estimates of demand for resources such as coal, timber, wildlife, recreation, etc., are important factors that should be considered during land use planning.

The proposed land use planning regulations issued by the Bureau of Land Management on December 15, 1978,

require each District Manager to prepare planning criteria to guide development of the land use plan. Among other things, the criteria is to apply to an analysis of all reasonable resource management alternatives and the capability and suitability of the public land resources to meet social, economic, and environmental needs. These needs are defined during the planning process through the State Director's guidance, public participation, and coordination with other Federal, State, and local government and Indian tribes. One resource management alternative will be selected to serve as the proposed land use plan.

If estimates of demand for a resource are not evaluated and used in resolving resource and land use conflicts--whether the resource be coal, timber, grasslands, wildlife, recreation, etc.--the selection of a land use alternative that could lead to the use of one or more resources, may not be based on an evaluation of the relative needs for the resource(s). Interior indicates that coal information will not be ignored during land use planning. They state that "Industry will be expected to argue forcefully for its interest and to submit detailed data in support of its arguments." It is uncertain to what extent this type of information will be considered during land use planning, although industry input regarding mine plans, reclamation and mitigation strategies, and regional impacts of proposed mines could provide useful data to State and Federal land use planners. However, in cases where industry does not have detailed data to support its arguments but where coal development potential exists, it may not be feasible to rely on industry to supply information far in advance of development.

We believe that multiple-use trade-off analysis--using a range of coal production goals as established by Energy or modified by Interior--needs to be employed as a regular part of Interior's evaluation of land use alternatives. Interior's decision not to take regional coal production goals into account during land use planning could result in land use plans that do not objectively assess coal resource needs relative to other resource needs.

Coal demand in relation to its availability, associated socio-economic and environmental regulations and costs, and other factors will influence when and where development takes place. Land use plans which may not be revised for 15 years will affect land use and resource decisions for the remainder of this century. The plans should comprehensively account

for all land use factors, including flexible estimates of resource demand.

Finally, by rejecting our recommendation regarding the use of production goals in land use planning, Interior states that "...production goals should not enter the coal leasing process until regional activity planning." However, the Bureau of Land Management's proposed coal management regulations require that prior to assessing Federal lands for unsuitability criteria, a detailed statement must be prepared which specifies (a) the potential coal resources, (b) the demand for coal resources, and (c) the impact of such designation on the environment, the economy, and the supply of coal.

Consequently, estimates of coal demand will be used explicitly during land use planning. Furthermore, Bureau officials, including the Director, state that demand for resources has been implicitly a part of land use planning. In other words, demand has been used even though Interior, in its response to our report, is opposed to it.

Because of the serious and extensive nature of Interior's comments, we annotated our responses--section by section or paragraph by paragraph--on the full text of Interior's letter. (See Appendix VI.)

It should be noted that subsequent to Interior's formal comments on this draft report, it published a final environmental impact statement and announced adoption of the new coal management program. These actions incorporated various changes, some of which addressed issues included in the earlier draft report. It has been our intent to recognize these actions in this report.

GAO REPORTS RELATEDTO COAL LEASING

	<u>Date</u>
Improvements Needed In Administration Of Federal Coal Leasing Program (B-169124)	March 29, 1972
Administration Of Regulations For Surface Exploration, Mining, And Reclamation Of Public And Indian Coal Lands (B-148623)	August 10, 1972
Further Action Needed On Recom- mendations For Improving The Administration Of Federal Coal Leasing Program (RED-75-346)	April 28, 1975
Information On Federal Coal Leases (RED-76-26A)	October 15, 1975
Role Of Federal Resources In Meeting National Energy Goals Needs To Be Determined And The Leasing Process Improved (RED-76-79)	April 1, 1976
Department Of The Interior's Approval Process For Coal Mining Plans (EMD-76-6)	July 20, 1976
National Energy Policy: An Agenda For Analysis (EMD-77-16)	January 12, 1977
Energy Policy Decisionmaking, Organization, And National Energy Goals (EMD-77-31)	March 24, 1977
Rocky Mountain Energy Resource Development: Status, Potential, And Socioeconomic Issues (EMD-77-23)	July 13, 1977
U.S. Coal Development--Promises, Uncertainties (EMD-77-43)	September 22, 1977

APPENDIX I

APPENDIX I

Date

The State Of Competition In  
The Coal Industry  
(EMD-78-22)

December 30, 1977

Problems Associated With Coal  
Reserve Estimates (EMD-78-23)

January 11, 1978

Inaccurate Estimates Of Western  
Coal Reserves Should Be  
Corrected (EMD-78-32)

July 11, 1978

Federal Leasing Policy--Is  
the Split Responsibility  
Working? (EMD-79-60)

June 4, 1979

STATUTES TO BE CONSIDERED  
IN A FEDERAL COAL LEASING PROGRAM

Anadromous Fish Conservation Act, 16 U.S.C. 757a-757f.

Antiquities Act of 1906, 16 U.S.C. 431.

Archaeological and Historic Preservation Act, as amended, 16 U.S.C. 469, et seq.

Bald Eagle Protection Act, 16 U.S.C. 668-668 d.

Clean Air Act Amendments of 1977, classified to 42 U.S.C. 7401, et seq.

Clean Water Act of 1977, classified to 33 U.S.C. 1251, et seq.

Coastal Zone Management Act of 1972, as amended, 16 U.S.C. 1451, et seq.

Department of Energy Organization Act, classified to 42 U.S.C. 7101, et seq.

Endangered Species Act of 1973, 16 U.S.C. 1531, et seq.

Federal Coal Leasing Amendments Act of 1976, 30 U.S.C. 181, et seq.

Federal Coal Mine Health and Safety Act of 1969, as amended, 30 U.S.C. 801, et seq.

Federal Land Policy and Management Act of 1976, 43 U.S.C. 1701, et seq.

Federal Water Pollution Control Act, 33 U.S.C. 1251, et seq.

Fish and Wildlife Coordination Act, 16 U.S.C. 661, et seq.

National Historic Preservation Act of 1966, 16 U.S.C. 470, et seq.

Historic Sites, Buildings, and Antiquities Act, as amended, 16 U.S.C. 461-467.

Migratory Bird Treaty Act, 16 U.S.C. 703-711.

Mining and Minerals Policy Act of 1970, 30 U.S.C. 21a.

Mineral Leasing Act of 1920, as amended, 30 U.S.C. 181, et seq.

Mineral Leasing Act Amendments of 1978, classified to 30 U.S.C. 193, 201, 203.

Mineral Leasing Act for Acquired Lands, 30 U.S.C. 351-359.

Multiple-Use Sustained-Yield Act of 1960, 16 U.S.C. 528, et seq.

Multiple Mineral Development Act, 30 U.S.C. 521-531.

National Environmental Policy Act of 1969, 42 U.S.C. 4321 et seq.

National Forest Management Act of 1976, 16 U.S.C. 472a.

National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470, et seq.

Noise Control Act of 1972, 42 U.S.C. 4901, et seq.

Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901, et seq.

Safe Drinking Water Act of 1977, classified to 42 U.S.C. 300f.

Soil and Water Resources Conservation Act of 1977, classified to 16 U.S.C. 2001, et seq.

Surface Mining Control and Reclamation Act of 1977, classified to 30 U.S.C. 1201, et seq.

Wild and Scenic Rivers Act, as amended, 16 U.S.C.  
1271, et seq.

Wild Free-Roaming Horses and Burros Act, 16 U.S.C.  
1331-1340.

Wilderness Act, 16 U.S.C. 1131, et seq.



REVIEW OF SELECTED  
LEGISLATION AFFECTING  
FEDERAL COAL DEVELOPMENT

Five laws establish Federal coal leasing policy and significantly affect private and public sector prospective decisions on choice of mining method as well as where, when, and how much Federal coal leasing and development should take place. These laws are:

- Federal Coal Leasing Amendments Act of 1976 (30 U.S.C. 181, et seq.)
- Mineral Leasing Act Amendments of 1978 (classified to 30 U.S.C., 193, 201, 203)
- Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.)
- Surface Mining Control and Reclamation Act of 1977 (classified to 30 U.S.C. 1201, et seq.) and
- Department of Energy Organization Act (classified to 42 U.S.C. 7101, et seq.)

Although these laws define the basic legal and regulatory framework within which Federal coal leasing decisions take place, there are other laws and associated regulations that also affect leasing decisions. 1/ These include a host of environmental protection laws (archeological, land, water, and air quality) which can, in effect, restrict leasing and development of specific Federal coal tracts. The Clean Air Act Amendments of 1977 (classified to 42 U.S.C. 7401, et seq.) is highlighted below.

Federal Coal Leasing  
Amendments Act of 1976

The Federal Coal Leasing Amendments Act of 1976 substantially amends the Mineral Leasing Act of 1920 (30

1/A list of the statutes is contained in Appendix II.

U.S.C. 181 et seq.) The 1920 act was the first statute which authorized the leasing of public coal lands. The following discussion presents the key provisions of the 1976 Amendments.

The Federal coal which can be leased is limited to areas that are known to contain minable coal deposits. Interior designates these areas as Known Recoverable Coal Resource Areas. The department is required to conduct a comprehensive exploration program designed to obtain sufficient data and information to define the geographical extent of the coal fields, determine the presence of commercial quantities of coal, and estimate the amount of coal which is recoverable by deep and surface mining operations. A series of detailed geological and geophysical maps and reports concerning all coal lands to be offered for leasing must be prepared, published, and kept current. This information is to be used to develop a comprehensive land use plan, improve information regarding the value of public resources, and increase competition among coal producers in the bidding process.

In addition to exploration by the Federal Government, private parties may engage in exploration if they obtain an exploration license. This license confers no right to a lease if commercial deposits of coal are discovered. Copies of all data must be submitted to Interior. The confidentiality of the data will be maintained until a lease is issued or until the Secretary of the Interior determines that public disclosure would not damage the competitive position of the licensee, whichever comes first.

A lease sale cannot be held unless the coal lands are included in a comprehensive land use plan, and the sale is compatible with the plan. If requested, Interior will hold public hearings on proposed land use plans prior to their adoption. In addition to land use planning, Interior must consider the effects of mining on impacted communities or areas. The effects include, but are not limited to, impacts on the environment, agricultural and other economic activities, and public services. Public hearings about these impacts are to be held before lease sale. Any lease proposal which permits surface coal mining within the boundaries of a National Forest must be submitted to the Governor of the State in which the coal deposits are located. If

the Governor objects to lease issuance, the Secretary of the Interior must reconsider issuance of the lease.

All leases must be issued by competitive bidding procedures. Prospecting permits for exploration of lands where the existence of a coal deposit is unknown cannot be issued. The 1920 Act authorized the issuance of prospecting permits and preference (non-competitive) right leases where commercial quantities of coal were discovered. Future preference right leasing is permitted only where there was a valid existing right on August 4, 1976.

Interior is authorized to reserve lease tracts and offer them for lease to public bodies. These bodies include Federal agencies, rural electric cooperatives, and non-profit corporations controlled by any of these entities. The leased coal can only be used by the public body lessee to produce energy for its own use or for sale to its members or customers. Short-term sales can be made to other parties.

The fair market value of the tracts must be determined and opportunity given for public comment by Interior. At least 50 percent of the acreage must be leased under a system of deferred bonus payment. This allows a company to pay for a lease in a series of installments.

A coal lease is issued for an initial term of 20 years, and for so long thereafter as coal is produced annually in commercial quantities. Any lease which has not produced in commercial quantities at the end of the 10 years must be terminated. The terms and conditions of the lease are subject to readjustment at the end of its primary term of 20 years and at the end of each 10-year period thereafter if the lease is extended. A lease cannot be issued to an existing lessee who has held a lease for a period of 10 years, beginning August 4, 1976, and has not produced coal in commercial quantities.

The amount of acreage which can be leased to a single lessee is limited to 46,080 acres in any one State and 100,000 acres for all States. The single lessee is a person, association, or corporation, including any subsidiary, affiliate, or persons controlled by or under common control with such person, association, or corporation.

The minimum royalty for surface coal is 12-1/2 percent of the coal value. The base for determination of value is to be defined by regulation. A lesser royalty may be prescribed for underground coal.

Each lease must be subject to the conditions of diligent development and continued operation of the mine or mines, except where operations under the lease are interrupted by strikes, the elements, or casualties not attributable to the lessee. The continued operation requirement may be suspended for not more than 10 years by the payment of advance royalties. Advance royalties cannot offset the requirement for commencement of production at the end of the first 10 years of the lease.

Before lease issuance Interior is required to determine which mining method or sequence of mining methods achieves the maximum economic recovery of the coal within the proposed lease tract. After lease issuance, no mining plan can be approved if it is not found to achieve the maximum economic recovery of the coal within the tract. Mining plans must be submitted to Interior not later than 3 years after lease issuance. In addition, if it is determined that maximum economic recovery is secured thereby, coal leases may be consolidated into a logical mining unit. The 1976 Amendments do not define the term "maximum economic recovery."

The 1976 Amendments define a logical mining unit as

"an area of land in which the coal resources can be developed in an efficient, economical, and orderly manner as a unit with due regard to conservation of coal reserves and other resources. A logical mining unit may consist of one or more Federal leaseholds, and may include intervening or adjacent lands in which the United States does not own the coal resources, but all the lands in a logical mining unit must be under the effective control of a single operator, be able to be developed and operated as a single operation and be contiguous."

A logical mining unit cannot exceed 25,000 acres.

The mining plan for the logical mining unit must require diligent development, continued operation, and production so that the reserves of the entire unit will be mined within a

period not to exceed 40 years. Leases issued before August 4, 1976, may be included in a logical mining unit with the consent of the lessee. The act provides that by regulation the Secretary may require a lessee to form a logical mining unit, and may provide for determination of participating acreage within a unit.

The act also requires the Secretary of the Interior to consult with the Attorney General at each stage in the issuance, renewal, and readjustment of a coal lease. The Attorney General is required to review the lease and determine if it creates or maintains a situation inconsistent with the antitrust laws.

Mineral Leasing Act  
Amendments of 1978

The Mineral Leasing Act Amendments of 1978 authorized Interior to exchange unleased Federal coal properties for eight preference right lease applications in Utah and nine leases in Wyoming. The lands exchanged are required to be of equal value. For lands not of equal value, Interior may receive or pay cash in an amount up to 25 percent of the value of the coal lease or leases to be issued, in order to equalize the value. The exchange lease is required to contain the same terms and conditions as the surrendered lease.

Interior is also authorized to conduct negotiated sales where the removal of coal is necessary and incidental to the exercise of a right-of-way permit. The act requires the sale to be negotiated at fair market value.

The 1978 Amendments Act amends the lease modification requirement. It provides that the added acreage may corner the original lease as an alternative to being contiguous. The act also revises the terms and conditions requirement by specifying that the minimum royalty rate required by law (12-1/2 percent for surface mined coal) would not apply to any coal mined in the lands contained in the original lease until the lease is readjusted at the specified expiration date for the lease's terms and conditions.

Federal Land Policy and  
Management Act of 1976

The Federal Land Policy and Management Act of 1976 is the first comprehensive statutory statement of purposes,

goals, and authority for the use and management of about 448 million acres of Federally-owned lands administered by Interior. The department is required to develop, maintain, and when appropriate, revise land use plans. In the development and revision of these plans, Interior must:

- Consider present as well as future uses of public lands.
- Weigh long-term benefits to the public against shortterm benefits.
- Coordinate planning activities with those of Federal, State, and local agencies.
- Use the principles of multiple use and sustained yield. 1/
- Give priority to the protection of areas of critical environmental concern. 2/

Federal land use plans are required to be consistent with State and local plans to the extent that they are consistent with Federal law. The act requires that to the extent practical, inconsistencies between Federal and non Federal plans be resolved. State and local government officials are to be involved in the development of land use programs, regulations, and decisions.

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1/Multiple use means the combination of resource values that consider changing needs and conditions, long-term needs of renewable and non-renewable resources, land productivity, environmental values, and economic return.

Sustained yield means the achievement and maintenance in perpetuity of a high level output of public lands renewable resources consistent with multiple use.

2/Areas of critical environmental concern means areas within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic value, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards.

Interior must prepare and maintain an inventory of all public lands and their resource and other values, giving priority to areas of critical environmental concern. By October 21, 1991, Interior must have reviewed roadless areas of 5,000 acres or more and roadless islands of the public lands, identified during the inventory as having wilderness characteristics. During this wilderness review Interior is to submit recommendations to the President as to the suitability or unsuitability of such area or island for preservation as wilderness. Mineral surveys are required to be made on these lands prior to submitting any recommendations. During the period of review and until the Congress has determined otherwise, these lands are to be managed in a manner so as not to impair the suitability of such areas for preservation as wilderness.

The act also states that 50 percent of the sales, bonuses, royalties, and rentals of the public lands are to be paid to each State, other than Alaska which has a separate provision. The use of these revenues by the State and local governments is at the discretion of each State legislature, but with priority given to those areas that are socially or economically impacted by development of leased minerals.

In addition, Interior is authorized to make low interest loans to States and local governments in order to relieve social or economic impacts which occur as the result of the development of leased minerals. The amount of the loans are to be limited to the anticipated mineral revenues to be received by the recipients of the loans for any prospective 10-year period.

Land exchanges are also authorized by the act. The Secretary of the Interior or the Secretary of Agriculture can exchange a tract of public land for a tract of non-public land when the Secretary concerned determines that the exchange is in the public interest. In considering the public interest the Secretary is required to consider better Federal land management and the needs of State and local people.

Surface Mining Control and  
Reclamation Act of 1977

The Surface Mining Control and Reclamation Act of 1977 establishes uniform minimum Federal standards for

regulating surface mining and reclamation activities throughout the country on both public and private lands, and for assuring adequate protection from the environmental impacts of surface mining in all States. Some of the purposes of the act are

- establishing a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations,
- assuring that surface mining operations are not conducted where reclamation as required by the act is not feasible,
- assuring that surface coal mining operations are so conducted as to protect the environment,
- assuring that the coal supply essential to the Nation's energy requirements, and to its economic and social well-being is provided, and strike a balance between protection of the environment and agricultural productivity and the Nation's need for coal as an essential source of energy,
- assuring that appropriate procedures are provided for the public participation in the development, revision, and enforcement of regulations, standards, reclamation plans, or programs established by the Secretary or any State under the act, and
- wherever necessary, exercising the full reach of Federal constitutional powers to insure the protection of the public interest through effective control of surface coal mining operations.

The States can assume the primary responsibilities for administration and enforcement of the act under federally approved State programs. Interior will assume these responsibilities if a State does not submit a program for approval, or where a State program is inadequate.

The act contains performance standards to provide environmental protection during surface mining and assure environmentally sound reclamation. These standards include:



- Maximum utilization and conservation of the solid fuel resource being recovered.
- Restoration of disturbed land to support the same or better conditions.
- Restoration of the approximate original land contour.
- Stabilization and protection of all surface areas.
- Protection of prime farmlands through specific reclamation techniques.
- Minimization of disturbances to the existing hydrological balance.
- Limitation on mining of steep slopes.

The Surface Mining Act also requires Interior to review Federal lands to identify those which are unsuitable for all or certain types of surface coal mining operations. Prior to designating Federal lands as unsuitable, the Secretary of the Interior is required to consult with the appropriate State and local agencies.

If a State has been approved by Interior as the primary regulatory authority, it may designate non-Federal areas as unsuitable for surface mining if reclamation is not technologically and economically feasible. Furthermore, any person who has an interest which is or may be adversely affected may petition the regulatory authority to have an area designated as unsuitable, or to have such a designation terminated. A public hearing is required after a petition is filed and prior to a State's designation of an area as unsuitable.

Under the petition process, areas may be designated as unsuitable if surface coal mine operations will

- be incompatible with existing State or local land use plans or programs,
- affect fragile or historic lands in which such operations would significantly damage important historic, cultural, scientific, and aesthetic values or natural systems,

--affect renewable resource lands and substantially reduce water supplies, aquifers and aquifer recharge areas, and food and fiber products, and

--endanger life and property, and affect lands with natural hazards, including areas of frequent flooding or unstable geology.

The act provides that before designating any land areas as unsuitable for surface coal mining operations, the following information will be obtained:

- The potential coal resources of the area.
- The demand for coal resources.
- The impact of an unsuitable designation on the environment, the economy, and the supply of coal.

One of the criteria for identifying unsuitable lands pertains to alluvial valley floors. The Surface Mining Act restricts surface mining on alluvial valley floors 1/ if mining would interrupt, discontinue, or preclude farming in these areas or materially damage the quantity or quality of water in surface or underground water systems that supply these valley floors. A Federal coal lease or non-Federal private coal estate which contains an alluvial valley floor may be exchanged for Federal coal deposits. The exchange authority is limited to those mines where coal has not been mined in commercial quantities but for which substantial financial and legal commitments were made by an operator before January 1, 1977.

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1/Alluvial valley floor means the unconsolidated stream laid deposits holding streams where water availability is sufficient for subirrigation or flood irrigation agricultural activities but does not include upland areas which are generally overlain by a thin veneer of colluvial deposits composed chiefly of debris from sheet erosion, deposits by unconcentrated runoff or slope wash, together with talus, other mass movement accumulation and wind blown deposits.

The Surface Mining Act also prohibits the Secretary of the Interior from issuing a Federal coal lease when the surface owner has not given written consent to enter and commence surface mining operations. One is considered a surface owner if he or she (more than one person can be included)

- holds legal or equitable title to the land surface,
- has his or her principal place of residence on the land, or personally conducts farming or ranching operations upon a farm or ranch unit to be affected by surface coal mining operations, or receives directly a significant portion of income, if any, from such farming or ranching operations, and
- has met the above conditions for a period of at least 3 years before granting the consent.

Department of Energy  
Organization Act

The Department of Energy Organization Act requires the President to submit a National Energy Plan to the Congress not later than April 1, 1979, and biannually thereafter. The plan is required to contain energy production, utilization, and conservation objectives for periods of 5 and 10 years.

The objectives are those which are necessary to satisfy projected energy needs of the United States to meet the requirements of the general welfare and the commercial and industrial life of the Nation, with particular attention given to the needs for full employment, price stability, energy security, economic growth, environmental protection, nuclear non-proliferation, special regional needs, and the efficient utilization of public and private resources. To achieve such objectives, the Plan must identify the strategies that should be followed and the resources that should be committed.

The act also transfers several Interior functions to Energy. These include issuing regulations to foster competition, implement alternative bidding systems, and establish requirements for diligent development and production rates.

The act requires a Leasing Liaison Committee to be formed and composed of an equal number of members appointed by the Secretaries of the Departments of Energy and Interior. This committee has been established and it serves as an executive level coordinating mechanism on Federal energy leasing.

Clean Air Act  
Amendments of 1977

The Clean Air Act Amendments of 1977 contain two provisions that may have a significant impact on coal development. These are:

- New source performance standards requiring new facilities to employ the best technological system of continuous emission reduction.
- Requirements for preventing the significant deterioration of air quality.

Under the new source performance standards, new fossil fuel boilers are required to meet a numerical sulfur oxides emissions limit (such as pounds of emissions per hour) and if the plant can meet the emissions limit by burning low sulfur coal, some treatment must still be applied to reduce emissions by some unspecified percentage. Recent proposed regulations would require the removal of at least 85 percent of the sulfur dioxide. Credit would be given for sulfur removed in coal cleaning and preparation, and the balance would have to be removed by the use of scrubbers. According to the act, the control used must be continuous rather than intermittent and it must represent the best technological system of continuous emission reduction.

The prevention of significant deterioration requirement establishes three classes of geographic areas and defines the allowable pollution concentration increments for each area. In Class I areas (pristine areas) little or no change in air quality levels are allowed. Class I areas include but are not limited to international parks, national wilderness areas and national memorial parks which exceed 5,000 acres, and national parks existing as of August 7, 1977, which exceed 6,000 acres. In Class II areas a moderate change would be allowed. All non-Class I areas were initially designated Class II, subject to reclassification

by individual States. In Class III areas air quality would be allowed to deteriorate down to the national standards.

A new major emitting facility, defined in the act, must obtain a construction permit in any area subject to the prevention of significant deterioration provisions. The permit can only be obtained if it is demonstrated that the new source will not interfere with maintenance of the area classification.



Department of Energy  
Washington, D.C. 20461

APR 9 1979

Mr. J. Dexter Peach  
Director  
U. S. General Accounting Office  
Washington, DC 20548

Dear Mr. Peach:

This is in response to your request to Secretary Schlesinger to review and comment on the draft of a proposed report entitled, Federal Coal Leasing Issues Facing the New System, EMD-79-47. We appreciate the opportunity to review the report. We find the draft report to be quite thorough and the major issues discussed relevant to the future management of Federal coal reserves.

Our comments are limited to those issues relating to the Department of Energy (DOE) responsibilities.

The discussion of production goals in Chapter 4 seems somewhat misleading. The Department of Energy, in formulating production forecasts recognized the problems associated with unreliable data and numerous unquantifiable factors. As much as possible, all quantifiable factors were incorporated into the computer modeling effort. Also, the final DOE production projections appear as ranges (low, medium, and high), recognizing the problems associated with uncertainty. Therefore, this section should be reworded to clarify that methodology questions do not imply computer modeling problems.

This is not to say that DOE does not intend to review its current projection techniques. On the contrary, the Department is presently assessing the process used to develop the projections for DOI's environmental impact statement, including a review of the comments relevant to these projections received in public comments on the EIS. In addition to this review, we anticipate putting into place a continuous process of improvement in Federal coal production goal development methodology which would assume that the best state-of-the-art forecasting techniques are used.

In regard to DOI's application of DOE's goals, according to the Memorandum of Understanding (September 1978) between DOE and DOI, DOI agrees to be guided by DOE's goals. DOI has provided in its proposed coal management regulations a process for translating DOE's goals into leasing targets. We suggest that a discussion of this process be included in your final report.

#### Comments on Conclusions of the Report

##### Land Use Planning

We agree the land use planning system and its proposed use to select coal lease tracts is not clearly discussed in the coal programmatic. However, we realize the difficulty in attempting to identify and quantify trade-offs between coal and other resource uses within a planning area. It may be unwise to require the DOI to set specific trade-offs criteria for coal which should be used in all planning areas. The preferred method to deal with non-quantifiable impacts is to rely upon the expertise and judgment of the specialists within DOI field offices. Their recommendations in conjunction with the input from the various public hearings will then serve as the basis for land use alternative trade-offs.

Any type of rigid economic model to determine trade-offs for land use would very likely result with coal, timber, grazing, or farming consistently winning out over recreation, environment and scenic values.

##### Maximum Economic Recovery

The DOE has raised concern about maximum economic recovery (MER) designation and the proposed DOI policy of requiring the mining of marginal seams as long as they return a marginal revenue which is greater than marginal cost when averaged with other seams in the field being mined. We are working with DOI on a task force to modify the MER determination.

The proposed policy could result in the operator high-grading the lease by accepting a lease in which the marginal coal seams were included as recoverable in the logical mining unit reserve calculations. The operator could then simply mine the most profitable coal and relinquish the lease with the less profitable coal unmined. Such action

would have the effect of distorting estimated recoverable coal reserves from leases and could result in a shortfall of coal production relative to the DOE production forecast.

#### Need For Leasing

Although the DOI may not have identified a need for additional leasing in the immediate future, we perceive this to be no major problem. It is considered to be prudent policy to evaluate, develop and have in place a Federal coal leasing program before additional leasing is deemed necessary rather than waiting until additional reserves are necessary and then implement a new leasing procedure.

Given the planned enforcement of diligent development regulations, we anticipate no problem of over-leasing Federal coal and the entry of speculators into Federal coal leasing in the future.

No mining plans have been filed on more than six billion tons of the seventeen billion tons of Federal coal currently under lease. We have not determined how much of the six billion tons will meet diligence requirements. Given the 1986 deadline for development, it is considered to be more effective to require the lessees to indicate their proposed development plans rather than the Government attempting to predict which leases will be developed or relinquished. If mining plans are not filed soon, it is unlikely many of these leases will meet the diligent development requirements.

If the DOI should resume leasing before an effective demand exists, this will show up in the marketplace as bonus bids insufficient to meet the fair market value of the lease tract being offered. An insufficient bid will result in a no sale, thus no over-leasing of Federal coal.

#### Unsuitability Criteria

The unsuitability criteria of the proposed DOI regulations are being thoroughly reviewed by DOE. The DOI is also in the process of evaluating the potential impact of the unsuitability criteria upon existing leases and future lease areas.



Logical Mining Units

A conclusion of the draft report is that the DOI should establish guidelines for the formation of logical mining units (LMU) and should then establish LMU's for all leases before a new coal leasing program is implemented. The identification of LMU's could ideally provide for an efficient and orderly development of Western coal. However, given the adequate reserves and the desire to allow the market to operate freely without undue Government control, it is not presently desirable to institute a totally controlled coal development plan for each coal area in the West. Furthermore, the combination of mineral and surface ownership patterns is not conducive to the expedient formation of LMU's in all areas. We do not believe a new coal leasing program should be delayed while awaiting the formation of LMU's.

Sincerely,



Robert J. Katter  
Director  
Leasing Policy Development



## United States Department of the Interior

OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20240

April 16, 1979

Mr. J. Dexter Peach  
Director  
U.S. General Accounting Office  
Washington, D. C. 20548

Dear Mr. Peach:

The Inspector General's office has asked me to review your draft report on Federal coal management on behalf of the Department of the Interior. Thank you for the opportunity of commenting.

This draft report is unlike any GAO report we have ever reviewed. The GAO reports with which we are familiar analyze policies and programs and formulate recommendations based on data, field investigations, and real-world case examples. This report, on the other hand, seems to provide a podium for anonymous "experts" and "observers" to speculate, unencumbered by fact or example, upon what might go wrong in a Federal coal management program because of decisions by the Congress and the Administration. We do find the approach taken in preparation of this document a very interesting and potentially valuable method for identifying issues for further GAO study. Although we would quarrel with the significance of some of the issues raised and with the wisdom of reraising previously legislated issues, we certainly recognize that several of the issues merit further attention by the GAO. Accordingly, were the report an internal memorandum to be employed by the GAO to further identify subjects for GAO external reports it would be a valuable document. However, we are deeply disturbed that this preliminary document, is instead, to be published as a finished GAO report and that it contains numerous conclusions about the proposed coal management program drawn directly from the issues raised without much attention to portraying on-going efforts of the Department.

These speculations are put forward without concrete support and with virtually no suggestions as to how we might improve our programs. The report alleges serious issues and asks a large number of questions but it is arguable whether it "demonstrates, there are serious issues which still confront the Department's objective of designing and implementing a sound program". The basic thrust of the report seems to be that the Nation should reconsider much of the legislation passed in the last two Congresses and that it should delay the possible date for full Federal

coal availability, already delayed 8 years, while the government conducts additional studies and analyses. Many of the speculations and concerns which are raised imply that rather than re-establishing the Federal government's capability to manage coal, these experts would prefer to begin a new era of fighting out the old issues. These issues, such as the role of comprehensive planning and the regulation of Federal coal to end speculation, were fully considered by the Congress and resolved in the Federal Coal Leasing Amendments Act of 1976, The Federal Land Policy and Management Act of 1976, the Surface Mining Control and Reclamation Act of 1977, and the Department of Energy Organization Act of 1977.

Interestingly, many of the features of Federal coal management that GAO now is questioning were supported in earlier GAO reports, adopted by the Congress, and are now being implemented. For instance in your April 1976 report RED-76-79, you state that:

Interior should require existing lessees and potential lessees and permittees to furnish information on (1) reserve holdings; (2) production plans; (3) reasons and justification for non-production; and (4) the need, if any for additional Federal coal reserves.

Whereas now, you are concerned about regulatory cost and whether diligent development requirements may not be too harsh.

Similarly in your April 1976 report, you called for--

- o Tighter control of national energy strategy:

"Under the (EMARS) process, the level of lease offerings would be determined from bidding results in competitive lease sales. Lease sales, if environmentally acceptable, would be offered as long as bids were sufficiently high.

"However, reliance on this process places Interior in the position of reacting rather than providing the leadership needed to develop sound national energy strategy."

- o Exclusively competitive sales and exploration without direct government incentive:

"The Congress should enact legislation that would . . . provide for (1) the award of leases only on a competitive basis and (2) issuance of prospecting permits under which persons could explore for coal for commercial purposes but have no exclusive rights to leases."

- o Better data to conduct tract evaluation:

"To insure that the public will receive fair value for coal resources leased."

But in this latest report, you no longer seem to feel these recommendations, now that they are law and being implemented, were adequately considered.

The Department does not assert that the preferred program described in the December 15, 1979, Draft Environmental Statement on the Federal coal management program (draft EIS) or the document itself, are beyond criticism.<sup>1/</sup> But, in general, the Department believes that recent acts by the Congress have created a coherent legal and policy foundation for Federal management decisions that can reconcile, satisfactorily, the many competing claims for use of Federal minerals and other Federal resources managed by the Department. Much of the conflict reflected in the GAO report is directly attributable to the years of start-and-stop attempts to manage Federal coal without the benefit of the comprehensive new legislation adopted in 1976, 1977, and 1978.

<sup>1/</sup> The EPA has, in fact suggested that the draft EIS should be a model "splendid example" for Interior's programmatic statements. Because it is instructive, set forth below is a more complete quotation from the EPA review.

"We commend the Interior staff for the conscientious work shown in the draft EIS. The current version of the EIS on the Coal Leasing Program is a dramatically improved document. We notice an open discussion of problems and issues, and candor in discussing environmental impacts of the various program alternatives. The EIS is also more clearly written than past DOI efforts. Many of EPA's past objections to the programmatic coal leasing EIS has been obviated by the detail in describing the scope of the EIS, the program itself and the approaches used in discussing impacts, mitigation measures, and impacts through the use of well-developed modeling techniques and occasionally outside consultants as necessary.

"We hope that the Department will continue to follow this splendid example in how to write a program EIS in its subsequent EIS efforts. Past DOI efforts have been overly formalistic, highly structured and very short on culling out issues of a significance. We think this present EIS does a commendable job in initiating the spirit of the Council of Environmental Quality's new regulations stressing conciseness and attention to decisionmaking issues in EISs."

The Department recognizes the complexity, diversity, and potential for conflict inherent in the operation of a minerals management program that calls for judgments about relative values of mineral, agricultural, wildlife, recreation, and other resources and resource uses. However, the Department does not share GAO's sense of foreboding about implementing a program to carry out the Department's Federal coal management responsibilities. Most of the questions raised by GAO have been, for years, debated by the Congress, reviewed by the courts, studied by the Department of the Interior, and other Federal agencies and subjected to the close scrutiny of the mining and utility industry, agricultural and environmental interests, State and local governments, and other parties with a stake in decisions about Federal coal management.

Because there has been no active program for managing Federal coal for almost a decade, it is understandable that the combination of new legislative mandates presents a challenge, to the Department, to the coal industry, and to all other interests affected by the development and possible implementation of a new program. The many years of delay and management paralysis that preceded development of the proposed new program have contributed to a sense of frustration, doubt, and fear about the government's ability to carry out its coal management responsibilities. The GAO report clearly reflects those fears. Unfortunately, the report does not go beyond expressions of concern, does not, with rare exception, offer specific comment about ways to improve the possible implementation of a Federal coal management program, and instead emphasizes GAO's doubts about the effectiveness of Congressional actions which are the foundation of current Federal resource management policy. The report completely ignores the impacts which the further delay in the Federal coal management program it recommends would have on implementing credible and consistent national energy policy and on the coal industry and the environment.

#### Comments on the Individual Sections

The Digest of the draft report reflects the contents of most of the report's individual chapters: a combination of re-stated general questions about prospective development of Federal coal, more detailed discussion of potential conflicts that may arise from decisions to lease and develop Federal coal, outdated and inaccurate references to current and proposed Department of the Interior coal management practices and, building on this foundation of confusion and uncertainty, repeated recommendations that the Department's work

to resume active management of Federal coal be delayed until the hypothetical problems posed by unidentified "experts" and "observers" and collected by GAO are studied.

After enumerating what are described as six overriding questions, which, as noted, are re-statements of basic questions addressed by the Congress in development of the legislation which guides and constrains the proposed new Federal coal management program, the report outlines, mostly by asking still more questions, a series of six sub-issues which are then amplified on in Chapters 3 through 8.

In responding to the draft report we must necessarily give our views on issues that will not be truly decided until after the final EIS is completed. Our views are subject to change after we have evaluated the EIS, the comments on the proposed regulations, and other information.

#### 1. Balancing of Multiple Resource Goals

GAO begins the main part of their report with the concern that, ". . . Interior may not achieve a reasonable balance between these (multiple resource) goals." The primary mission of the Department of the Interior is the achievement of balanced resource decisions. Of course, the key word here is "reasonable". What is "reasonable" to one interest group is rarely "reasonable" to another. GAO implies there is fully correct, unassailable position of equilibrium which can be discovered through some unnamed process, though later in the chapter it refutes this idea. The BLM makes its land use decisions based on entirely acceptable professional planning techniques. With respect to the coal management program BLM's land use decisions will be predicated on a decisionmaking process which at a minimum integrates State, environmental, coal, utility and other public participation in the formulation, development, and implementation of land use decisions.

The GAO report asks that Interior coherently define national policy goals for Federal coal development and then launches into a lengthy discussion expressing the need for energy independence, doubt about environmental protection goals, and general thoughts about socio-economic security, none of which is new or particularly relevant to the topic at hand. National policy goals are, in fact, set out in the legislation governing coal leasing, the DOE Organic Act, as well as in the President's national energy plan and environmental message to the Congress. Furthermore, the Secretary's goals for the coal program are prominently and unambiguously presented in Chapter 3 of the draft EIS and have guided the coal management program's development from the beginning.

The GAO report then proceeds to a discussion of how tradeoff analyses should be conducted in planning for coal leasing. This section begins by implying that the 3 to 4 year effort that would be conducted under the Department's preferred program to accomplish this purpose is a "casual approach to decisionmaking".

The report repeats a concern that industry would be somehow closed out of the decisionmaking process; industry has numerous opportunities to participate in the decisionmaking process. These opportunities begin early on the land use planning and continue all the way through the lease sales.

The GAO report then makes its first de rigueur nod at regulatory analysis, but softens it with such observations as "determining and quantifying all the costs and benefits might be extremely difficult" (p. 3-17) and "no individual analytical tool or mixture of tools can be relied on to provide a quantified objective decision in every case" (p. 3-18).

The chapter finally moves to a long section seemingly aimed at loosening existing and proposed regulations to correct past competitive and environmental abuses in coal and environmental management. The Department believes on the basis of its own analyses that the coal management program will have major economic benefits which would far outweigh any economic problems about which the experts and observers have speculated. The largest potential for economic harm in our estimation derives from not being able to lease Federal coal should it be needed. No further Federal leasing would by 1990 increase the cost of electricity to the consumer by \$2.4 billion according to an estimate prepared by ICF, Inc., for the Departments of the Interior and Energy under a cooperative agreement. For such reasons, the Department regards as truly unfortunate any suggestion that we re-consider the entire fabric of the Federal coal management and environmental law—reopen the Congressional debates of the last decade—before establishing a leasing program. The Department has been, and will continue to be, vigilant in uncovering and removing

potential unnecessary costs on the coal industry and the nation from the programs within its areas of responsibility.

## 2. Split Responsibility Between the Departments of Energy and the Interior

This discussion in the Digest, and the detailed review of the issue presented in Chapter 4, concentrates on two themes. First, doubt is expressed about the ability of the two Departments to effectively reconcile potential differences about how much coal should be leased. This doubt is based on an unsubstantiated assumption that there is an inherent, insoluble contradiction in the missions of the two Departments and on entirely hypothetical, undescribed conflicts which will arise during implementation of the Federal coal management program. There is no discussion of actual or specific conflicts over actions being taken or being proposed by the Department of the Interior. The report ignores the fact that constructive relationships have been established between the two Departments in the area of coal leasing. Second, and dealt with in much more (still hypothetical) detail, there are suggested problems that might arise if the Department were to fail to lease enough coal. The discussion simply assumes that the Secretary would, as a policy determination, use his discretion in a way that would prevent adequate amounts of Federal coal from being available for production.

Both criticisms are not truly directed at the structure of the proposed Federal coal management program, and the draft EIS, or at the institutional relationships between the Department of the Interior and the Department of Energy. Instead, the criticisms are directed at possible personal failure by the two Secretaries to adequately perform their duties. Such discussions of the problems that would arise if government officials exercise bad judgement would be relevant to a review of the Federal coal management program if they were accompanied by suggestions for regulations, standards, or other judgement limiting approaches that specify required actions and so eliminate or reduce the possibility that discretion would be abused. However, the report also contains repeated references to the need for discretion, judgment, balance, and flexibility in making coal management decisions. The Department of the



Interior believes that the program and alternatives described in the draft EIS represent a proper balance between the need for specific regulations and the need for the exercise of balanced judgement by professional resource managers. Efforts to impose greater rigidity or specificity would, at the local and regional levels where site-specific information about development possibilities and impacts must be balanced against regional and national energy needs, lead to needless restraints on development opportunities and to needless social, economic, and environmental conflict and damage.

### 3. Need for More Leasing?

The discussion in the report's Digest notes that GAO believes a coal management program should be designed and established regardless of whether or not there is a need now for new leasing. Considering the Digest's earlier general conclusion that the Department has failed to clearly define the energy and other goals which should guide a coal management program, the assertion of GAO's belief in the need for a leasing program would, to most readers, imply that the Department has not concluded that a leasing program is needed. However, most of the report's Chapter 5 is devoted to a summary of the Department's draft EIS discussion of possible reasons why a leasing program should be implemented as soon as possible. Since the body of the GAO report makes it obvious that the Department has already acted forcefully to carry out the development of a Federal coal management program capable of leasing in those amounts necessary to meet national energy needs, it would seem that the report's Digest should accurately reflect the contents of the report by acknowledging, rather than questioning, the Department's lengthy analysis of this issue.

The report is critical of the Department for not having made more specific determination of the individual development potential of existing, nonproducing coal leases. Elsewhere, the report acknowledges that holders of a substantial number of these leases for a variety of economic and environmental reasons, may decide not to develop them. These leases will then be subject to cancellation under their diligence terms. The Department believes that making specific determinations of suitability for development, in the absence of site-specific environmental information and individual mining and reclamation plans, would subject leaseholders

to unfair, even illegal, determinations. The Department also believes that it would be a waste of company and Federal time and money to require the development of adequate site-specific information to make final determinations <sup>1/</sup>, if, in fact, the lease holder has not determined whether he plans to develop the lease. The review policy on existing leases included in the preferred program calls for review of outstanding leases if the lease holder files a proposed mining plan or if the lease is included in an area otherwise scheduled for multiple-use planning. It is at these points that existing leases are subject to application of mining unsuitability criteria. This approach is in the opinion of the Department the most cost-effective. The Departmental manpower and funds available for coal management are not committed prematurely; this is entirely in keeping with GAO's concern for economic efficiency. This approach would return the most genuinely useful information at the least cost to the taxpayer and to the prospective coal developer.

The report gives special emphasis to the need to consider access to transportation systems in evaluating the development potential of existing leases. The report asserts, as an example, that mine-mouth generation is the only possible use of coal from existing leases on the Kaiparowits Plateau in Southern Utah, because of the absence of rail facilities to transport coal from Kaiparowits to other markets. In fact, lease holders and potential railroad developers have been, for some time, studying the feasibility of railroad development from Kaiparowits, and other interests are pursuing the possibility of slurry pipeline transport of coal from Utah to California.

It is understandable that the GAO authors would not be familiar with current site-specific development proposals, but the use of the out-of-date Kaiparowits conclusions points to a major weakness of the report. Rather than analyzing the specific structure and goals of the Federal coal management program proposed by the Department of the Interior, the report devotes most of its attention to possible events or circumstances which might be encountered by the operators of any coal management program.

<sup>1/</sup> Note that the preferred program would only require unsuitability decisions during the land-use planning with "reasonable certainty" and, where that certainty is lacking, would allow lands to proceed forward in the process while the necessary data to make the decisions are being accumulated.

Without sufficient event-specific or site-specific information to relate the possible events to specific elements of the Department's proposed program, much of the discussion, throughout the report, is too generalized to be of use to anyone attempting to analyze those coal management actions which the Department is proposing to take. While the Departmental officials with responsibility for developing a Federal coal management program did have some contact with the GAO researchers working on this report, we feel that this contact was perfunctory. Surprisingly, those officials who are most familiar with the proposed program by virtue of having designed it are not among the "experts" and "observers" referred to by GAO throughout the report.

#### 4. Availability of Unleased Coal

The first question addressed in this section (Chapter 6) of the report, "Should Regional Coal Production Targets Be Considered Along with Other Resource Values in Developing Land Use Plans," displays a basic failure to understand both the general resource management responsibilities of the Department and the specific coal management program analyzed in the draft EIS.

The report is simply incorrect in asserting that the value of coal reserves is not considered in the Bureau of Land Management's land use planning system. The balancing and trade-off judgements called for by GAO are the foundation of the BLM planning system. The proposed Federal coal management program calls for consideration of production goals in determining how much Federal coal should be offered for lease in each BLM planning unit. Establishing leasing targets at the start of the activity planning process rather than at the start of land use planning simply assures that all trade-offs made will be based on a genuine understanding of all the resources in question. If the local land manager is given goals for coal tonnages, these goals could simply overwhelm other equally valid, but less measurable goals for resource uses such as recreation or wildlife. These resources would suffer in any multiple-use planning exercise which is dependent on "production goals". The Department believes in the interest of true comprehensive multiple-purpose planning, firm production goals should not enter the coal leasing process until regional activity planning. Comprehensive plan means just that—not a land use plan designed for coal lease sales.

This is not to say coal information is ignored during land use planning. Industry would be expected to argue forcefully for its interests and to submit detailed data in support of its arguments. Further, determination of coal development potential based on GS estimates is the first screen required for identifying lands acceptable for leasing. We believe that earlier assignment of specific production goals, however, could lead to pressures to diminish the value of non-coal resources so the necessary trade-offs would appear less in conflict with other resources—a process that would reduce the Secretary's ability to approve leasing in those areas where coal production would cause the least damage to stock grazing, farming, wildlife, other mineral development enterprises, local communities, and other values. The Department feels that these tradeoffs must be conducted over broad regional areas because of the greater decision latitude thus gained. Only by looking at the value of all resources without a predetermined level for one of them will the necessary judgments the Department must make about developing or protecting some resources at the expense of others be credible.

The report reiterates field test results of unsuitability criteria from early last summer. It fails to note that these early draft criteria were specifically changed as a result of that field test and that the Department continues to field test the changed criteria. The unsuitability criteria application process will, in fact, be the most intensively analyzed portion of the entire preferred program by the time the Secretary makes his decision. The report ignores the five months' work of the Departmentwide coal management data task force in developing guidelines for the most efficient, least costly methods of collecting and applying coal data at each step in the entire coal management process. It completely misses the point that a primary purpose of the unsuitability criteria is to remove most of the uncertainty about the developability of leases, but that the final determination of most of the unsuitability factors would be made at the time of mining plan approval by the regulatory

authority and the Office of Surface Mining Reclamation and Enforcement as part of their normal Federal lands program. These criteria screen out lands that would encounter environmental road blocks later. If expensive data collection is needed to assess the unsuitability during land use planning, the local land manager sets out a plan for acquiring these data and selects the appropriate later step in the process for doing this. Thus, the government is selling tracts on which the lessee will know that most of the major environmental constraints have been identified and in most cases have been cleared.

The report displays a lack of understanding of the exploration features of the preferred program. In particular it fails to differentiate among broad advanced exploration over wide areas to locate coal, field exploration to define recoverable coal deposits, and site-specific exploration to prepare for mining. In fact, locating new coal is not the problem that this section implies it is. FCLAA removed the prospector's first right to coal because of field exploration. There is relatively little challenge to locating recoverable coal deposits. It is difficult to understand why one would argue that incentives should again be given to companies for conducting this activity. The preferred program would license coal field exploration by private companies.

#### 5. Identifying, Evaluating, and Selling Lease Tracts

This section of the Digest, which is amplified in Chapter 7, addresses several distinct issues that are also covered in general terms in other chapters of the report.

The first issue, potential exchanges of undevelopable existing leases for new leases, is discussed in such a confusing and erroneous way that it's difficult to determine what the GAO report is suggesting. Exchange is described, on the one hand, as a possible solution to otherwise difficult problems. On the other hand, the report cites a timetable for one specific exchange authorized by Congress, the Utah Power and Light preference right lease application exchange, which illustrates that trying to accomplish an exchange could be too time-consuming to be worth-

while. In fact, the timetable cited in the report is, on its face, unrealistic to the point of absurdity, was never considered or adopted by the Department, and, as would be evident from analysis of the actual timetable adopted for processing as part of a settlement of a lawsuit the Utah Power and Light exchange, not a reflection of the work done by the Department to make exchange a genuinely useful tool. The report also neglects to mention that the Federal Coal Leasing Amendments Act of 1976 eliminated the Secretary of the Interior's general authority to exchange Federal coal leases, and the Secretary's attempt to have such authority restored was rejected by the Congress in 1978.

The speculations in the report that the exercise of surface owner consent could seriously interfere with necessary Federal coal leasing are based on inaccurate assumptions and information. First, the report fails to note that the Secretary is directed by law to obtain a fair return for coal and to conduct competitive lease sales and instead implies that these constraints on consent purchase in the proposed Federal coal management program were entirely discretionary in the Secretary. The report uses irrelevant data—figures about percentages of Federal coal under non-Federal surface—rather than acknowledging that only a fraction of non-Federal surface owners are qualified to protect their property under terms of the surface owner consent section of the Surface Mining Control and Reclamation Act. Failure to make the distinction between qualified and non-qualified surface owners distorts the appearance of conflict between the property rights of the limited class of landowners protected by the Surface Mining Act and the responsibility of the Department of the Interior to make adequate supplies of Federal coal available for development.

The report's comments on the maximum economic recovery (MER) policy of the proposed Federal coal management program are specific and helpful, and coincide with other comments the Department has received on the draft EIS. These comments have been seriously considered and will be reflected in the Secretary's final decision on the coal management program. As you may know, the Department is performing a more detailed economic analysis MER at the request of the Council of Economic Advisors. The Department, for reasons stated in testimony and reports submitted to the Congress, supports the minimum royalty provisions of the Federal Coal Leasing Amendments Act, and would not agree with the GAO conclusion that enforcement of a

fair return to the United States for development of Federal coal would serve to interfere with necessary levels of production at reasonable prices.

The report implies that the Department is using discounted cash flow (DCF) for determination of fair market value purely out of administrative whimsey. In fact, DCF is a sound technique for rationally assessing the legislatively required fair market value of the coal where comparable sales data are unavailable and the number of expected bidders is quite small, as is the case with current coal sales. Similarly, without stating firm numbers, the GAO implies that the Department is using unreasonably low discount rates. While there are grounds to debate what discount rate should be used, that used by the Department represents a reasonable after-tax rate of return for most American corporations. GAO suggests using a Monte Carlo approach to analyzing the effect of coal prices on coal evaluation. The Department has established an interagency task force to study fair market value. Among other things, this task force is contemplating using Monte Carlo analysis of a number of the DCF parameters to assess the variability of the model's estimates. This information should have been known to the authors of the report and should be noted in the report.

The report questions whether the public participation called for in the Department's proposed program will be meaningful or effective, observes that public participation has both benefits and costs, but makes no specific criticisms or recommendations for improving the Department's proposal.

In discussing industry's role in the proposed program, the report is inconsistent: acknowledging, on the one hand, that industry will be able to participate in all phases of planning, but referring, on the other hand, to industry's inability to have input until after planning decisions have been completed. The preferred program clearly invites industry information and opinion about development and application of criteria for deciding about which lands are unsuitable for mining, about identification of lands that should be considered for leasing, about the trade-offs that would be necessary

to designate those lands to actually be offered for leasing, about the production goals and levels of leasing required to achieve the production goals, and about the individual tracts of Federal coal which are of interest to individual developers. This was not sufficiently stressed in the draft EIS but will be in the final EIS. Again, if the researchers for this report had been in contact with the proper parties they would have been aware of this development. The report's implication that industry does not have clear, specific, and timely opportunities to assure that adequate amounts of coal are offered for leasing in appropriate locations is not accurate.

The report discusses concerns expressed by State officials who point out problems that could arise in the absence of close cooperation between States and the Department of the Interior. Ending the open hostility that characterized State-Federal relationships during previous, unsuccessful attempts to implement Federal coal leasing programs has been one of the Secretary's highest priorities. The Department worked closely with coal-State Governors and their representatives during development of the program and alternatives described in the draft EIS. While the effectiveness of the resulting cooperative State-Federal process can be tested only through experience, the Department believes that the almost decade-long conflict between the States and the Department over coal development has been replaced by a mutually respectful relationship which will be the foundation for satisfactory cooperation, reconciliation, and planning to assure adequate production of Federal and non-Federal coal reserves while protecting the other resource and economic values of interest to State and local governments.

This view is shared by the States. For instance, the March 23, 1979, issue of the newsletter of the Western Interstate Energy Board/WINB, which has been coordinating State input into the coal management review, called the involvement of States in the Federal coal management program a "precedent for State/Federal cooperation".



The newsletter continues:

"While the rules are only draft at this time and additional changes may be forthcoming, the amount and quality of State participation in all Federal coal leasing decisions is significant. Although no veto power is given to States, the draft rules, if successfully implemented, makes States through the Governors a major participant in all Federal coal decisions. Major State participation in Federal coal leasing decisions has consistently been a significant energy objective of Western Governors over the past five years.

"While some critical issues remain to be resolved in the regulations, the process used in developing the program and the proposed regulations may be exemplary of good State/Federal cooperation. During the past 10 months the major coal States in the West—North Dakota, Montana, Wyoming, Utah, Colorado, and New Mexico and South Dakota—through the WIEB Coal Committee have reviewed all the Department's major working papers, met innumerable times with the persons in DOI who were developing the program and participated in DOI working sessions on the draft environmental statement including the example regulations contained therein. Together with the strong backing of coal State Governors, the Committee was able to significantly influence the program's development."

Yet the GAO report couches its presentation of State/Federal relations so as to cast doubt on this relationship.

The report's concerns about possible conflicts between satisfaction of the leasing demands of both public and non-public bodies are based on the report's inaccurate assertion that the public bodies themselves, rather than Bureau of Land Management planners, would choose those tracts to be set aside for public body leasing. The Department recognizes the potential for conflict between public and non-public prospective lessees, as well as conflicts between bidders who would operate captive mines and those who would sell to utility or industrial coal users, where particular tracts

are uniquely suited to service specific users. Such competition is inevitable. As in all cases where judgement must be exercised in trade-offs between resources or resource uses, the Department will make decisions that attempt to balance competing interests fairly while meeting the needs which, on a case-by-case basis, must be satisfied. Neither the public bodies set-aside nor other elements of the proposed Federal coal management program surrender that responsibility for decisionmaking in the balanced public interest to any category of resource users.

#### 6. Coal Lease Management

These comments are divided into two categories, neither of them specific to elements of the Department's proposed Federal coal management program or the draft EIS. One question, posed by the report without even minimal evidence in support, is whether Federal coal leases can be developed in a timely manner in view of the many Federal, State, and local permits required of coal developers. The number of permits required is, in fact, much greater than the 15 to 20 suggested by the GAO report. Greater efficiency in the permitting process is an important goal; however, the Department does not believe that objective analysis would indicate Departmental permitting requirements to be an obstacle to the timely production of coal from Federal leases. Furthermore, it should be emphasized that where there may be substantive conflicts between mining proposals and standards for the health and safety, community protection, air quality, water quality, diligent development, return of fair market value, or other requirements, individual companies will often meet delays or even denials in their attempts to secure and develop specific tracts of coal.

Reference is also made to "regulations" that require submission of a mine plan within a specific time period, and "observers" are cited as being concerned whether these "regulations" might be an expediency to terminate leases which might become an embarrassment to the government. In fact, the FCLAA (Sec. 7(c)) requires mine plans be submitted within 3 years. The GAO draft report fails to distinguish between its skepticism about the substantive value of individual standards, and the efficiency of the methods used for implementation of the standards.

GAO Recommendations to the Secretary

The Department has responded, or is responding, to nearly all the reports' major recommendations.

- Our response to the first recommendation for more reasonable tradeoff decisions is already given in this letter and does not require further elaboration.
- There are really three parts to the second recommendation. We have improved our description of land use planning from that in the draft EIS, and the improved material will appear in the final EIS. As previously mentioned, we are conducting a more detailed economic study of maximum economic recovery, and though this material will not appear in the final EIS, it will be included in the Secretary's June 1st decision materials. We analyzed the potential production from nonproducing existing leases in a task force report issued last spring, we analyzed it further in the draft EIS, together with other future sources of coal production, and we have recently released a major report on management of existing leases that will appear in the final EIS.
- In response to the third recommendation, we would apply unsuitability criteria to existing leases in the most efficient means possible.
- We reject the recommendation for "flexible" production objectives as being counter to the DOE Organization Act; we are seeking, however, to encourage industry participation in land use planning processes.
- We have implemented a long-range coal exploration plan, your fifth recommendation <sup>1/</sup>.
- The Department has investigated the economic, energy, and environmental implications of the lawful alternatives of the surface owner consent requirement.
- We, frankly, do not understand what GAO would like us to do to "streamline" the process for public participation, your seventh recommendation; it is the Secretary's policy to operate the coal management program activities as openly as possible. This recommendation can be interpreted in many ways, but to the extent that it would diminish the opportunity for public participation in coal leasing decisions, we believe it to be an inadvisable recommendation.
- We are not convinced of the need for more regulations on maximum economic recovery and logical mining units, but we will consider this recommendation further.
- Finally, we are and will continue to search out means to streamline permitting processes.

<sup>1/</sup> See "Federal Coal Management Program: Fiscal Year 1978," Report of the Secretary to the Congress, March 1978, pp. 29-37.

Conclusion

Past years of failure to actively manage Federal coal have produced an environment in which both government and industry will be challenged to improve their effectiveness in dealing with the real issues which must be faced if Federal coal is, in fact, to be produced in growing amounts to meet national energy needs. It is essential that coal be produced, as needed, to carry out the President's policy for increasing the Nation's reliance on coal. While the country has enjoyed, for some years, a surplus of coal production capacity over demand, it is also true that plans for leasing additional Federal coal have been delayed. The Department believes that these delays are attributable to indecision, failure to act, and ambiguity about performance of the responsibilities which are, or should be, implemented through the planning and permitting processes. Uncertainty about where development of Federal coal could, or should, take place, about what the impacts of coal production would be on grazing, farming, wildlife, and local communities, established the climate of legal and political conflict which frustrated previous attempts to plan for the leasing of additional Federal coal. The Department believes that great care must be taken in pursuing the necessary and commendable goal of improving the efficiency of the resource management process. The Congress, through enactment of laws referred to earlier in these comments, has provided the foundation for bringing stability and certainty to the management of Federal coal. We believe the GAO report, by calling for reconsideration of numerous provisions of those laws and a significant delay in implementation of the Federal coal management program to conduct additional studies, would have the inevitable result of dissipating the stability and certainty which the Congress has provided and, instead, would reopen the very conflicts and debates over coal policy which have characterized the last decade.

I understand that since this response was first drafted members of my staff have had an opportunity to discuss their difficulties with the draft report with the staff of GAO responsible for the preparation of the report. I was happy to learn that we have reached some level of mutual understanding of one another's positions on this matter. Your report does do a good job of surveying issues bearing on Federal coal management—issues that

we have been working on, for some time. We would welcome GAO investigations that were specific to coal management issues. I have instructed the members of my staff responsible for coal management to continue this good start towards improving relations between the Department and GAO.

Once again, thank you for allowing us the opportunity to comment on the draft.

Sincerely,

A handwritten signature in black ink, appearing to read "Guy R. Martin". The signature is fluid and cursive, with a large initial "G" and "M".

Guy R. Martin  
Assistant Secretary, Land  
and Water Resources



(FULL TEXT OF INTERIOR'S COMMENTS  
AND GAO'S DETAILED RESPONSES)

## United States Department of the Interior

OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20240

April 16, 1979

Mr. J. Dexter Peach  
Director  
U.S. General Accounting Office  
Washington, D. C. 20548

Dear Mr. Peach:

The Inspector General's office has asked me to review your draft report on Federal coal management on behalf of the Department of the Interior. Thank you for the opportunity of commenting.

This draft report is unlike any GAO report we have ever reviewed. The GAO reports with which we are familiar analyze policies and programs and formulate recommendations based on data, field investigations, and real-world case examples. This report, on the other hand, seems to provide a podium for anonymous "experts" and "observers" to speculate, unencumbered by fact or example, upon what might go wrong in a Federal coal management program because of decisions by the Congress and the Administration. We do find the approach taken in preparation of this document a very interesting and potentially valuable method for identifying issues for further GAO study. Although we would quarrel with the significance of some of the issues raised and with the wisdom of reraising previously legislated issues, we certainly recognize that several of the issues merit further attention by the GAO. Accordingly, were the report an internal memorandum to be employed by the GAO to further identify subjects for GAO external reports it would be a valuable document. However, we are deeply disturbed that this preliminary document, is instead, to be published as a finished GAO report and that it contains numerous conclusions about the proposed coal management program drawn directly from the issues raised without much attention to portraying on-going efforts of the Department.

*(GAO response: We believe that Interior may have misinterpreted the basic purpose and thrust of our report. The report is mainly concerned with the identification and analysis of a broad range of issues affecting coal leasing which go beyond the proposed program. Many of the questions and issues raised are not raised in a critical or conclusive sense but for the purpose of providing an analytical framework for further study. To the extent the*

*questions and issues are addressed (or are not addressed) in Interior's proposed program, they are discussed--and sometimes critiqued--in our report. Where we felt we could draw conclusions and make recommendations now, we did so. But our basic purpose was to look beyond the proposed program and provide overall perspective for evaluating the entire spectrum of Federal coal management activities.*

*We have employed a similar approach in studying not only other energy issues but also non-energy issues and have found this to be useful to congressional committees having legislative and oversight responsibilities. Interior's comments should not divert attention from the unresolved coal management issues which need to be scrutinized, or preclude congressional committees from considering the important questions which affect the future of Federal coal, a significant domestic energy resource in the Nation's overall energy picture.*

*Appendix VII to this report lists those individuals we interviewed or who received draft copies of the report for comment. The individuals were carefully selected to achieve a balance of input from among different groups affected by Federal coal leasing. Although not everybody interviewed fully agreed with the way all the issues were presented and the questions posed, most recognized that these were the issues and questions in need of attention. Interestingly, Interior--on the one hand--charges that these experts and observers are merely speculating on what might go wrong in a Federal coal management program but, on the other hand, agrees the approach is valuable for identifying issues for further study. The very purpose behind our identification and analysis of these issues was to uncover what might go wrong so that proper policy decisions can be formulated early-on in the decision-making process, particularly since many of the issues are yet unresolved. Interior seems to recognize this in its letter (see page VI-11) when it states: "In responding to the draft report we must necessarily give our views on issues that will not be truly decided until after the final EIS is completed. Our views are subject to change after we have evaluated the EIS, the comments on the proposed regulations, and other information."*

These speculations are put forward without concrete support and with virtually no suggestions as to how we might improve our programs. The report alleges serious issues and asks a large number of questions but it is arguable whether it "demonstrates, there are serious issues which still confront the Department's objective of designing and implementing a sound program". The basic thrust of the report seems to be that the Nation should reconsider much of the legislation passed in the last two Congresses and that it should delay the possible date for full Federal coal availability, already delayed 8 years, while the government conducts additional studies and analyses. Many of the speculations and concerns which are raised imply that rather than re-establishing the Federal government's capability to manage coal, these experts would prefer to begin a new era of fighting out the old issues. These issues, such as the role of comprehensive planning and the regulation of Federal coal to end speculation, were fully considered by the Congress and resolved in the Federal Coal Leasing Amendments Act of 1976, The Federal Land Policy and Management Act of 1976, the Surface Mining Control and Reclamation Act of 1977, and the Department of Energy Organization Act of 1977.

*(GAO response: Interior's basic impression seems to be that we are calling for a reconsideration of much of the legislation related to coal leasing that the Congress has passed in recent years. Whereas there are certain aspects of these laws that should be reviewed, we are not calling for a sweeping review of such legislation and have no quarrel with such basic tenets as the need for comprehensive land-use plans or an end to speculative holding of Federal coal, as suggested by Interior.*

*We are concerned, however, with how the Administration will implement programs to support congressionally-established environmental, energy, and social policies. Contrary to Interior's comment, we feel our report includes many constructive suggestions on how to approach these objectives. Interior's charges should not divert attention from the unresolved coal management issues which need to be scrutinized.*

*Interior also expresses concern that delaying implementation of the Federal coal management program to study various issues would only cause further uncertainty about the Government's ability to manage its coal resources. We believe some issues must be resolved before long-term leasing is resumed-- e.g., questions about the need for more leasing and guidelines determining maximum economic recovery and logical mining units. For the most part, however, the issues identified in this report should be evaluated by the Congress, Interior, and Energy during the early stages of program development and implementation.)*



Interestingly, many of the features of Federal coal management that GAO now is questioning were supported in earlier GAO reports, adopted by the Congress, and are now being implemented. For instance in your April 1976 report RED-76-79, you state that:

Interior should require existing lessees and potential lessees and permittees to furnish information on (1) reserve holdings; (2) production plans; (3) reasons and justification for non-production; and (4) the need, if any for additional Federal coal reserves.

Whereas now, you are concerned about regulatory cost and whether diligent development requirements may not be too harsh.

*(GAO response: We continue to believe in Interior's need to have reliable information on coal reserve holdings, production plans, reasons for non-production, and the need for additional Federal coal leasing. Our position is not inconsistent with that taken in our 1976 report, as Interior asserts, but we do identify issues and raise questions concerning data needs and policy implications associated with new laws and Federal coal regulations proposed since we issued our 1976 report. For example, reports to the Congress and testimony before congressional committees since 1976 have dealt with the accuracy and reliability of coal reserve estimates under Federal lease; the importance of such estimates to the question of the need for additional leasing; the impact that certain provisions of the Federal Coal Leasing Amendments Act of 1976 could have on data needs and on policy decisions if reliable data is not available; and the impact on reserve estimates, coal production costs, and data needs associated with certain provisions of the Surface Mining Control and Reclamation Act.*

*In this report we identify issues and alternatives regarding diligent development regulations and regulatory cost impacts. While we continue to believe in the need for diligent development, we also believe in placing the role of diligent development regulations in perspective with other issues and alternatives that have been expressed by experts inside and outside government. We noted Interior's final EIS also raises concerns about diligent development requirements and their potential adverse impacts on coal development patterns, efficiencies in planning for coal leasing and production, fair market value return to the government, and coal companies incentives to develop coal leases.)*

Similarly in your April 1976 report, you called for--

- o Tighter control of national energy strategy:

"Under the (EMARS) process, the level of lease offerings would be determined from bidding results in competitive lease sales. Lease sales, if environmentally acceptable, would be offered as long as bids were sufficiently high.

"However, reliance on this process places Interior in the position of reacting rather than providing the leadership needed to develop sound national energy strategy."

*(GAO response: This report, which identifies many issues related to legislation enacted since 1976, is not inconsistent with our 1976 report as Interior is suggesting. This legislation--including the Federal Coal Leasing Amendments Act of 1976, Federal Land Policy and Management Act, and the Surface Mining Control and Reclamation Act--provides many environmental safeguards which are now part of the legal and policy framework governing coal leasing. This framework is quite different from the framework that existed before 1976. In this regard, a comprehensive analysis of coal leasing issues must interrelate these environmental safeguards with the energy and leasing objectives that are also now part of the policy framework. We are concerned that Interior may implement a new leasing program that is not well thought out in terms of the interrelationships between environmental protection safeguards, fair market value determinations, competitive lease sales, and national energy objectives.)*

- o Exclusively competitive sales and exploration without direct government incentive:

"The Congress should enact legislation that would . . . provide for (1) the award of leases only on a competitive basis and (2) issuance of prospecting permits under which persons could explore for coal for commercial purposes but have no exclusive rights to leases."

*(GAO response: We continue to support competitive leasing as a general policy. This report, however, identifies issues affecting the competitiveness of lease sales and post lease-sale competition. For example, we raise the issue of (1) whether certain short-term lease tracts, which can only be mined by the existing lessee of adjacent coal land, should be leased non-competitively--particularly if the existing operator is the most logical and efficient producer of the coal, and (2) whether, under other circumstances, Interior should be allowed to conduct negotiated short-term lease sale agreements to avoid costly delays and possible coal bypassing. Additionally, maximum economic recovery, the reliability of fair market value estimates, and alternative bidding systems are other issues affecting pre-lease and post-lease sale competition.*

*Regarding exploration, the report identifies issues concerning Interior's proposed Federal coal management regulations, the current Federal coal exploration program, private sector exploration incentives and the need for a longer-term exploration program. We recognize that exploration activities and strategies can be expected to change over time, particularly as national energy policy evolves. A key issue is whether and, if so, how exploration objectives can be better accomplished through incentives to industry to identify and analyze coal deposits. Interior's final EIS provides little insight into these issues other than a description of the current exploration program activities.)*

o Better data to conduct tract evaluation:

"To insure that the public will receive fair value for coal resources leased."

*(GAO response: We continue to believe in the need for better data to conduct tract evaluation and to determine fair market value for the coal leased. Our concern in this report is with those issues impacting on Interior's effort to identify and evaluate tracts that are responsive to national energy needs and environmental safeguards. These issues, for example, include application of unsuitability criteria, coal exploration, coal lease exchange, short-term non-competitive leasing, surface owner consent, maximum economic recovery, and fair market value estimates. Additionally, we question whether Interior is taking into proper account determinations of fair market value either before implementing a new program or during the early stages of program development and implementation.)*

But in this latest report, you no longer seem to feel these recommendations, now that they are law and being implemented, were adequately considered.

*(GAO response: Interior's impression that our report takes issue with our past recommendations and resultant legislation concerning the Federal coal leasing program is not a correct perception. Some of the issues we identify are related to legislation enacted by the Congress since we issued our 1976 report. Because of the evolution of energy and coal leasing policy since 1976, we see no inconsistencies between this report and our 1976 recommendations, as Interior is suggesting, particularly in light of the policy and regulatory framework which is now a part of the current coal leasing debate. Interior is taking our 1976 report and mistakenly relating it to coal leasing issues being debated in 1979, without taking note of the policy changes that have taken place since 1976.)*

The Department does not assert that the preferred program described in the December 15, 1979, Draft Environmental Statement on the Federal coal management program (draft EIS) or the document itself, are beyond criticism.<sup>1/</sup> But, in general, the Department believes that recent acts by the Congress have created a coherent legal and policy foundation for Federal management decisions that can reconcile, satisfactorily, the many competing claims for use of Federal minerals and other Federal resources managed by the Department. Much of the conflict reflected in the GAO report is directly attributable to the years of start-and-stop attempts to manage Federal coal without the benefit of the comprehensive new legislation adopted in 1976, 1977, and 1978.

<sup>1/</sup> The EPA has, in fact suggested that the draft EIS should be a model "splendid example" for Interior's programmatic statements. Because it is instructive, set forth below is a more complete quotation from the EPA review.

"We commend the Interior staff for the conscientious work shown in the draft EIS. The current version of the EIS on the Coal Leasing Program is a dramatically improved document. We notice an open discussion of problems and issues, and candor in discussing environmental impacts of the various program alternatives. The EIS is also more clearly written than past DOI efforts. Many of EPA's past objections to the programmatic coal leasing EIS has been obviated by the detail in describing the scope of the EIS, the program itself and the approaches used in discussing impacts, mitigation measures, and impacts through the use of well-developed modeling techniques and occasionally outside consultants as necessary.

"We hope that the Department will continue to follow this splendid example in how to write a program EIS in its subsequent EIS efforts. Past DOI efforts have been overly formalistic, highly structured and very short on culling out issues of a significance. We think this present EIS does a commendable job in initiating the spirit of the Council of Environmental Quality's new regulations stressing conciseness and attention to decisionmaking issues in EISs."

The Department recognizes the complexity, diversity, and potential for conflict inherent in the operation of a minerals management program that calls for judgments about relative values of mineral, agricultural, wildlife, recreation, and other resources and resource uses. However, the Department does not share GAO's sense of foreboding about implementing a program to carry out the Department's Federal coal management responsibilities. Most of the questions raised by GAO have been, for years, debated by the Congress, reviewed by the courts, studied by the Department of the Interior, and other Federal agencies and subjected to the close scrutiny of the mining and utility industry, agricultural and environmental interests, State and local governments, and other parties with a stake in decisions about Federal coal management.

*(GAO response: Interior's comment that we are concerned about Interior's implementation of a coal management program is correct, although we feel our concern reflects something more substantive than a "sense of foreboding" as Interior is saying. Our concern deals with basic economy and efficiency aspects of implementing a program as important as Interior's proposed coal management program. We realize that Interior has limited resources with which to implement and manage such a program and that reasonable priorities must be established if plans are to be formulated and implemented in a manner that is efficient and responsive to the Nation's need for Federal coal. Although some of the questions we raised have been asked before, the leasing environment in which they were raised in the past is not the same as today's. Interior even recognizes this fundamental feature and, in this letter, acknowledges that its proposed program is subject to change as policies are debated and evaluations continue.)*

Because there has been no active program for managing Federal coal for almost a decade, it is understandable that the combination of new legislative mandates presents a challenge, to the Department, to the coal industry, and to all other interests affected by the development and possible implementation of a new program. The many years of delay and management paralysis that preceded development of the proposed new program have contributed to a sense of frustration, doubt, and fear about the government's ability to carry out its coal management responsibilities. The GAO report clearly reflects those fears. Unfortunately, the report does not go beyond expressions of concern, does not, with rare exception, offer specific comment about ways to improve the possible implementation of a Federal coal management program, and instead emphasizes GAO's doubts about the effectiveness of Congressional actions which are the foundation of current Federal resource management policy. The report completely ignores the impacts which the further delay in the Federal coal management program it recommends would have on implementing credible and consistent national energy policy and on the coal industry and the environment.

*(GAO response: Interior seems to view the report solely as a critical analysis of the Department's proposed coal management program. As mentioned earlier, the main purpose of this report is to identify and analyze issues affecting Federal coal leasing and not the efficacy of Interior's proposed program. Our analysis of the issues, however, clearly indicates that improvements are needed in certain areas if an efficient and responsive program will be ready and working when needed. We believe some of our recommendations can be acted on in the early stages of program implementation and thus should not cause delays in necessary leasing. However, to help further reduce uncertainties and prevent unnecessary leasing delays in the long-term, our recommendations pertaining to maximum economic recovery, logical mining units, and multiple-use trade-off analysis should be acted on before resumption of new long-term leasing. Interior too recognizes the importance of these issues by having included them in special on-going task forces evaluating or re-evaluating policy options.)*

Comments on the Individual Sections

The Digest of the draft report reflects the contents of most of the report's individual chapters: a combination of re-stated general questions about prospective development of Federal coal, more detailed discussion of potential conflicts that may arise from decisions to lease and develop Federal coal, outdated and inaccurate references to current and proposed Department of the Interior coal management practices and, building on this foundation of confusion and uncertainty, repeated recommendations that the Department's work to resume active management of Federal coal be delayed until the hypothetical problems posed by unidentified "experts" and "observers" and collected by GAO are studied.

*(GAO response: Interior's reference to our use of "outdated and inaccurate references to current and proposed Department of the Interior coal management practices..." is unclear and no specifics are offered. Certain information not available to us at the time the draft report was prepared has been added in this report, but these changes do not affect our conclusions and recommendations. Interior's comment that our recommendations call for a delay in active coal management is not correct, for reasons discussed earlier. Interior's further reference to "hypothetical problems" is also inconsistent with its own action to establish task forces to consider many of these same problems.)*

After enumerating what are described as six overriding questions, which, as noted, are re-statements of basic questions addressed by the Congress in development of the legislation which guides and constrains the proposed new Federal coal management program, the report outlines, mostly by asking still more questions, a series of six sub-issues which are then amplified on in Chapters 3 through 8.

In responding to the draft report we must necessarily give our views on issues that will not be truly decided until after the final EIS is completed. Our views are subject to change after we have evaluated the EIS, the comments on the proposed regulations, and other information.



*(GAO response: We understand Interior's point and agree that its posture ought to be one of remaining open to change as it evaluates the final EIS, comments on proposed coal management regulations, and other information. One of our concerns, however, is over whether Interior is actually receptive at this point to feasible alternatives involving Federal coal leasing, some of which may surface as a result of the special task forces, and public comments received on the draft EIS and proposed coal management regulations. The tone of Interior's letter gives the impression that the Department may not be too receptive to alternatives to its preferred program.*

*We realize that Interior must consider many statutory requirements in the development of a new coal leasing program. We also believe that future decisions affecting the implementation of various elements of the program should take account of alternatives--and their relative costs and benefits--that could achieve statutory requirements and, at the same time, be flexible enough to meet program objectives. Choosing among alternatives to achieve a proper balance among competing goals should not connote an attempt to disregard regulations established to protect the public interest, as the Interior has suggested.)*

#### 1. Balancing of Multiple Resource Goals

GAO begins the main part of their report with the concern that, ". . . Interior may not achieve a reasonable balance between these (multiple resource) goals." The primary mission of the Department of the Interior is the achievement of balanced resource decisions. Of course, the key word here is "reasonable". What is "reasonable" to one interest group is rarely "reasonable" to another. GAO implies there is fully correct, unassailable position of equilibrium which can be discovered through some unnamed process, though later in the chapter it refutes this idea. The BLM makes its land use decisions based on entirely acceptable professional planning techniques. With respect to the coal management program BLM's land use decisions will be predicated on a decisionmaking process which at a minimum integrates State, environmental, coal, utility and other public participation in the formulation, development, and implementation of land use decisions.

The GAO report asks that Interior coherently define national policy goals for Federal coal development and then launches into a lengthy discussion expressing the need for energy independence, doubt about environmental protection goals, and general thoughts about socio-economic security, none of which is new or particularly relevant to the topic at hand. National policy goals are, in fact, set out in the legislation governing coal leasing, the DOE Organic Act, as well as in the President's national energy plan and environmental message to the Congress. Furthermore, the Secretary's goals for the coal program are prominently and unambiguously presented in Chapter 3 of the draft EIS and have guided the coal management program's development from the beginning.

*(GAO response: Interior asserts that one of our concerns is that Interior may not achieve a reasonable balance between multiple resource goals and that what is "reasonable" to one interest group is rarely "reasonable" to another. This is an accurate reflection of our overall concern from a land use planning perspective. Our use of the word "reasonable" is in the sense that Interior should develop a workable, environmentally sound, and legally defensible program that would respond with some certainty to the country's need for coal production.)*

The GAO report then proceeds to a discussion of how tradeoff analyses should be conducted in planning for coal leasing. This section begins by implying that the 3 to 4 year effort that would be conducted under the Department's preferred program to accomplish this purpose is a "casual approach to decisionmaking".

*(GAO response: Our reference to a "casual approach to decision-making" did not pertain to the "3 to 4 year effort." A reading of the section of the report where this is discussed clearly shows the context in which the statement is made. (See p. 3-13.)*

The report repeats a concern that industry would be somehow closed out of the decisionmaking process; industry has numerous opportunities to participate in the decisionmaking process. These opportunities begin early on the land use planning and continue all the way through the lease sales.

*(GAO response: Interior's position is that industry can and will take the initiative to submit inputs without being asked. The open question is whether Interior should specifically request certain types of input from industry and make this requirement a formal, recognised part of the program. Our report does not take a position on this but we believe it's an important question which must be considered.)*

The GAO report then makes its first de rigueur nod at regulatory analysis, but softens it with such observations as "determining and quantifying all the costs and benefits might be extremely difficult" (p. 3-17) and "no individual analytical tool or mixture of tools can be relied on to provide a quantified objective decision in every case" (p. 3-18).

*(GAO response: Interior's implication that our treatment of the regulatory issue is simply "de rigueur"--in plain English, "faddish"--suggests that the Department may be treating the issue too lightly. We hope this does not indicate a lack of willingness to objectively view and evaluate the issue. The need to explore and evaluate alternative methods for regulatory control is a contemporary issue which is being debated in many forums including the private sector, the public at large, the Congress, and the White House.)*

The chapter finally moves to a long section seemingly aimed at loosening existing and proposed regulations to correct past competitive and environmental abuses in coal and environmental management. The Department believes on the basis of its own analyses that the coal management program will have major economic benefits which would far outweigh any economic problems about which the experts and observers have speculated. The largest potential for economic harm in our estimation derives from not being able to lease Federal coal should it be needed. No further Federal leasing would by 1990 increase the cost of electricity to the consumer by \$2.4 billion according to an estimate prepared by ICF, Inc., for the Departments of the Interior and Energy under a cooperative agreement. For such reasons, the Department regards as truly unfortunate any suggestion that we reconsider the entire fabric of the Federal coal management and environmental law—reopen the Congressional debates of the last decade—before establishing a leasing program. The Department has been, and will continue to be, vigilant in uncovering and removing potential unnecessary costs on the coal industry and the nation from the programs within its areas of responsibility.

*(GAO response: Interior's charge that part of our report is "seemingly aimed at loosening existing and proposed regulations to correct past competitive and environmental management" is not correct. The report seeks to identify the issues and questions--including regulatory and economic ones--affecting Federal coal leasing but does not necessarily offer solutions to all the problems. Alternative approaches nevertheless exist and they must be recognized and evaluated early if the Nation's energy, environmental, and socio-economic objectives are to be achieved in an efficient and orderly manner.")*

## 2. Split Responsibility Between the Departments of Energy and the Interior

This discussion in the Digest, and the detailed review of the issue presented in Chapter 4, concentrates on two themes. First, doubt is expressed about the ability of the two Departments to effectively reconcile potential differences about how much coal should be leased. This doubt is based on an unsubstantiated assumption that there is an inherent, insoluble contradiction in the missions of the two Departments and on entirely hypothetical, undescribed conflicts which will arise during implementation of the Federal coal management program. There is no discussion of actual or specific conflicts over actions being taken or being proposed by the Department of the Interior. The report ignores the fact that constructive relationships have been established between the two Departments in the area of coal leasing. Second, and dealt with in much more (still hypothetical) detail, there are suggested problems that might arise if the Department were to fail to lease enough coal. The discussion simply assumes that the Secretary would, as a policy determination, use his discretion in a way that would prevent adequate amounts of Federal coal from being available for production.

Both criticisms are not truly directed at the structure of the proposed Federal coal management program, and the draft EIS, or at the institutional relationships between the Department of the Interior and the Department of Energy. Instead, the criticisms are directed at possible personal failure by the two Secretaries to adequately perform their duties. Such discussions of the problems that would arise if government officials exercise bad judgement would be relevant to a review of the Federal coal management program if they were accompanied by suggestions for regulations, standards, or other judgement limiting approaches that specify required actions and so eliminate or reduce the possibility that discretion would be abused. However, the report also contains repeated references to the need for discretion, judgment, balance, and flexibility in making coal management decisions. The Department of the Interior believes that the program and alternatives described in the draft EIS represent a proper balance between the need for specific regulations and the need for the exercise of balanced judgement by professional resource managers. Efforts to impose greater rigidity or specificity would, at the local and regional levels where site-specific information about development possibilities and impacts must be balanced against regional and national energy needs, lead to needless restraints on development opportunities and to needless social, economic, and environmental conflict and damage.

*(GAO response: We believe that Interior is viewing our report from too narrow a perspective by stating that the issues we identify are not directed at the structure of the Department's proposed coal management program and draft EIS but at personal failure by the two Secretaries to adequately perform their duties. Contrary to Interior's comment, our report does discuss specific conflicts over actions taken by Interior or proposed by Interior and Energy--such as conflicts over maximum economic recovery and the establishment of production goals by Energy and their use by Interior. These are not "hypothetical" problems as Interior charges. They represent real issues confronting the two agencies.*

*Interior, naturally, supports its coal program, and suggests that the imposition of greater rigidity or specificity would result in unacceptable results. We believe that varying degrees of rigidity or specificity should be evaluated--not just greater degrees. As Interior points out, an example is the trade-off between specific regulations and the judgment of resource managers.*

*In a letter report soon to be issued to the Secretaries of Energy and Interior, we conclude that initial coordination efforts between the Departments are not working smoothly because each interprets its roles and responsibilities differently and that the Leasing Liaison Committee--established to help resolve these differences--is not functioning effectively. We believe that the Leasing Liaison Committee has assumed more of a ceremonial function than a problem-solving function. The Committee charter states that it is not a policy-making body, but clearly it was the intent of the Congress and the charter that the Committee become a problem-solving function. If the Committee does not assume this problem solving function, there currently is no other practical mechanism to resolve interdepartmental problems--at least at the departmental level.)*

### 3. Need for More Leasing?

The discussion in the report's Digest notes that GAO believes a coal management program should be designed and established regardless of whether or not there is a need now for new leasing. Considering the Digest's earlier general conclusion that the Department has failed to clearly define the energy and other goals which should guide a coal management program, the assertion of GAO's belief in the need for a leasing program would, to most readers, imply that the Department has not concluded that a leasing program is needed. However, most of the report's Chapter 5 is devoted to a summary of the Department's draft EIS discussion of possible reasons why a leasing program should be implemented as soon as possible. Since the body of the GAO report makes it obvious that the Department has already acted forcefully to carry out the development of a Federal coal management program capable of leasing in those amounts necessary to meet national energy needs, it would seem that the report's Digest should accurately reflect the contents of the report by acknowledging, rather than questioning, the Department's lengthy analysis of this issue.

The report is critical of the Department for not having made more specific determination of the individual development potential of existing, nonproducing coal leases. Elsewhere, the report acknowledges that holders of a substantial number of these leases for a variety of economic and environmental reasons, may decide not to develop them. These leases will then be subject to cancellation under their diligence terms. The Department believes that making specific determinations of suitability for development, in the absence of site-specific environmental information and individual mining and reclamation plans, would subject leaseholders to unfair, even illegal, determinations. The Department also believes that it would be a waste of company and Federal time and money to require the development of adequate site-specific information to make final determinations <sup>1/</sup>, if, in fact, the lease holder has not determined whether he plans to develop the lease. The review policy on existing leases included in the preferred program calls for review of outstanding leases if the lease holder files a proposed mining plan or if the lease is included in an area otherwise scheduled for multiple-use planning. It is at these points that existing leases are subject to application of mining unsuitability criteria. This approach is in the opinion of the Department the most cost-effective. The Departmental manpower and funds available for coal management are not committed prematurely; this is entirely in keeping with GAO's concern for economic efficiency. This approach would return the most genuinely useful information at the least cost to the taxpayer and to the prospective coal developer.

<sup>1/</sup> Note that the preferred program would only require unsuitability decisions during the land-use planning with "reasonable certainty" and, where that certainty is lacking, would allow lands to proceed forward in the process while the necessary data to make the decisions are being accumulated.

*(GAO response: Interior's final programmatic EIS includes a discussion paper on the management of existing leases and lease applications which is a reprint of a March 20, 1979, memorandum to the Under Secretary of the Interior from the Director, Office of Coal Leasing, Planning and Coordination. One of the paper's conclusions is that existing leases are subject to substantial uncertainty until a number of legal and policy issues are resolved. The paper says that it will be difficult to predict the production potential of existing leases--even though Interior has done so in the development of its preferred coal management program--until existing land use plans have been supplemented with updates that apply Interior's unsuitability criteria. The extent to which these uncertainties will affect Interior's lease sale scheduling is unknown.*

*Interior has made efforts within the last year to evaluate land use plans for unsuitability criteria in portions of 9 planning units. It does not appear willing to aggressively follow through with this effort to evaluate the remaining planning units that contain coal leases to which unsuitability criteria must be applied.*

*We disagree that Interior's program is the most "cost-effective" and that it could be defended on the grounds of "economic efficiency." The present plan of applying unsuitability criteria to only certain specified leases is an inefficient and ineffective way to manage existing leases. An inefficient and ineffective program should not be construed to be economically efficient. The production potential of existing leases to which unsuitability criteria applies cannot be known unless the criteria is applied. Once this is done, additional data needs may be identified before unsuitability determinations can be made. We believe that Interior's position is not wholly responsive to answering the question about need for additional leasing and that it is not actively seeking to resolve this question.)*



The report gives special emphasis to the need to consider access to transportation systems in evaluating the development potential of existing leases. The report asserts, as an example, that mine-mouth generation is the only possible use of coal from existing leases on the Kaiparowits Plateau in Southern Utah, because of the absence of rail facilities to transport coal from Kaiparowits to other markets. In fact, lease holders and potential railroad developers have been, for some time, studying the feasibility of railroad development from Kaiparowits, and other interests are pursuing the possibility of slurry pipeline transport of coal from Utah to California.

It is understandable that the GAO authors would not be familiar with current site-specific development proposals, but the use of the out-of-date Kaiparowits conclusions points to a major weakness of the report. Rather than analyzing the specific structure and goals of the Federal coal management program proposed by the Department of the Interior, the report devotes most of its attention to possible events or circumstances which might be encountered by the operators of any coal management program.

*(GAO response: It appears the Interior reviewers of our draft report overlooked our discussion in the draft of the recent proposal for the Kaiparowits area that would require about 200 miles of tract for a rail transportation corridor. We do not say "...that mine-mouth generation is the only possible use of coal from existing leases on the Kaiparowits Plateau..." The Kaiparowits example was included to illustrate the need to consider access to coal leases in evaluating production potential. Interior is not correct in stating the "use of the out-of-date Kaiparowits conclusions points to a major weakness of the report." The report identifies and analyzes issues to uncover what might go wrong so that proper policy decisions can be formulated early-on in the decision-making process, particularly when many of the issues are unresolved.)*

Without sufficient event-specific or site-specific information to relate the possible events to specific elements of the Department's proposed program, much of the discussion, throughout the report, is too generalized to be of use to anyone attempting to analyze those coal management actions which the Department is proposing to take. While the Departmental officials with responsibility for developing a Federal coal management program did have some contact with the GAO researchers working on this report, we feel that this contact was perfunctory. Surprisingly, those officials who are most familiar with the proposed program by virtue of having designed it are not among the "experts" and "observers" referred to by GAO throughout the report.

*(GAO response: We disagree that our report has limited usefulness to those analyzing proposed coal management actions because it lacks development of problems on a site-specific or event-specific level. The analyst must have, as a starting point, a well developed understanding of coal policy issues--in the generic sense. If not, proposed actions and analyses may be unresponsive and inconsistent with broader concerns. The report builds a foundation for analyzing and interrelating complex issues and thus should be useful to anyone trying to better understand coal leasing and the consequence of prospective Government actions in a changing environment characterized by uncertainty.*

*A common theme throughout our interviews was the uncertainties characterizing the future, whatever the viewpoints were. With so much uncertainty about the future, we raise questions about whether a major coal management program will allow sufficient flexibility to deal with uncertainty. For example, even if production forecasting errors are recognized early, an insufficient amount of flexibility may make mid-course corrections costly and time-consuming. A reasonable degree of flexibility must be built into a program to assure that it can respond without imposing unreasonable disruptions and unnecessary costs on those affected by the program, be they consumers, industry, environmental groups, state governments, or others.*

*Throughout our study we were in contact with Interior Officials, including the Director of the Office of Coal Leasing, Planning and Coordination, who was responsible for the design and preparation of the draft and final programmatic EIS. At the time we distributed an earlier draft of the report, we also personally delivered several copies to the Director's Office for comment. After scheduling a meeting with the Director to discuss the issues and the draft, he did not attend the meeting--although we did meet with two of his staff--and he made no attempt to meet with us subsequently.)*

#### 4. Availability of Unleased Coal

The first question addressed in this section (Chapter 6) of the report, "Should Regional Coal Production Targets Be Considered Along with Other Resource Values in Developing Land Use Plans," displays a basic failure to understand both the general resource management responsibilities of the Department and the specific coal management program analyzed in the draft EIS.

The report is simply incorrect in asserting that the value of coal reserves is not considered in the Bureau of Land Management's land use planning system. The balancing and trade-off judgements called for by GAO are the foundation of the BLM planning system. The proposed Federal coal management program calls for consideration of production goals in determining how much Federal coal should be offered for lease in each BLM planning unit. Establishing leasing targets at the start of the activity planning process rather than at the start of land use planning simply assures that all trade-offs made will be based on a genuine understanding of all the resources in question. If the local land manager is given goals for coal tonnages, these goals could simply overwhelm other equally valid, but less measurable goals for resource uses such as recreation or wildlife. These resources would suffer in any multiple-use planning exercise which is dependent on "production goals". The Department believes in the interest of true comprehensive multiple-purpose planning, firm production goals should not enter the coal leasing process until regional activity planning. Comprehensive plan means just that--not a land use plan designed for coal lease sales.

This is not to say coal information is ignored during land use planning. Industry would be expected to argue forcefully for its interests and to submit detailed data in support of its arguments. Further, determination of coal development potential based on GS estimates is the first screen required for identifying lands acceptable for leasing. We believe that earlier assignment of specific production goals, however, could lead to pressures to diminish the value of non-coal resources so the necessary trade-offs would appear less in conflict with other resources—a process that would reduce the Secretary's ability to approve leasing in those areas where coal production would cause the least damage to stock grazing, farming, wildlife, other mineral development enterprises, local communities, and other values. The Department feels that these tradeoffs must be conducted over broad regional areas because of the greater decision latitude thus gained. Only by looking at the value of all resources without a predetermined level for one of them will the necessary judgements the Department must make about developing or protecting some resources at the expense of others be credible.

*(GAO response: A detailed discussion of our response to Interior's above comments is presented in Chapter 9 of this report. In summary, we believe that multiple-use trade-off analysis--using demand estimates for all resources, including a range (e.g., low, medium, and high estimates) of coal production goals--needs to be built into the evaluation of land use alternatives. We recognize that this may result in coal production as the selected land use, when otherwise it might not. We also recognize that other resources may not be as easily quantified because of a lack of market transactions, the difficulty in estimating reliable measures of consumers' willingness to pay, or other reasons. Nevertheless, the application of resource demand to all resources would encourage comprehensive land use decisions that are based not only on supply, environmental, socio-economic, and other legal or policy criteria, but also on demand factors.*

*The selection of coal as an acceptable land use will not automatically result in coal being leased and developed. Moreover, Interior has established controls in the coal management program to prevent this from happening. For example, leasing targets, tract ranking, State consultation, and other environmental and socioeconomic controls--in addition to coal economics and demand--will play decisive roles in determinations of production levels in a given area.*

*In addition, by rejecting our recommendation regarding the use of production goals in land use planning, Interior is inconsistent with its own policy. It states that "...production goals should not enter the coal leasing process until regional activity planning." However, BLM's proposed coal management regulations require that prior to assessing Federal lands for unsuitability criteria, a detailed statement must be prepared which specifies (a) the potential coal resources, (b) the demand for coal resources, and (c) the impact of such designation on the environment, the economy, and the supply of coal. Consequently, estimates of coal demand will be used explicitly during land use planning. Furthermore, BLM officials, including the Director, state that demand for resources has been implicitly a part of land use planning. In other words, demand has been used even though Interior guidance has not dictated this.)*

The report reiterates field test results of unsuitability criteria from early last summer. It fails to note that these early draft criteria were specifically changed as a result of that field test and that the Department continues to field test the changed criteria. The unsuitability criteria application process will, in fact, be the most intensively analyzed portion of the entire preferred program by the time the Secretary makes his decision. The report ignores the five months' work of the Departmentwide coal management data task force in developing guidelines for the most efficient, least costly methods of collecting and applying coal data at each step in the entire coal management process. It completely misses the point that a primary purpose of the unsuitability criteria is to remove most of the uncertainty about the developability of leases, but that the final determination of most of the unsuitability factors would be made at the time of mining plan approval by the regulatory

authority and the Office of Surface Mining Reclamation and Enforcement as part of their normal Federal lands program. These criteria screen out lands that would encounter environmental road blocks later. If expensive data collection is needed to assess the unsuitability during land use planning, the local land manager sets out a plan for acquiring these data and selects the appropriate later step in the process for doing this. Thus, the government is selling tracts on which the lessee will know that most of the major environmental constraints have been identified and in most cases have been cleared.

*(GAO response: Interior correctly notes that our draft report did not discuss changes in the criteria as a result of the field test conducted by Interior but fails to point out that (1) the old field tests were reported in the draft programmatic EIS--which we reviewed--and (2) the results of the new field tests conducted in Alabama, Colorado, Montana, Utah, and Wyoming were not available at the time we prepared our draft report. We have updated our final report to include the results of later tests. Regardless of which test is used, however, the issues are the same and remain unanswered--namely uncertainties regarding data availability, cost and time of data acquisition, and impacts of certain unsuitability criteria such as a shift in future mining sites from relatively low mining cost areas to relatively higher cost areas.*

*The Interior reviewer apparently overlooked the section of our report that refers to Interior's admission that data to evaluate unsuitability criteria may have to be obtained after lease sale, and that the land use plan will be the vehicle to identify information needs.)*

The report displays a lack of understanding of the exploration features of the preferred program. In particular it fails to differentiate among broad advanced exploration over wide areas to locate coal, field exploration to define recoverable coal deposits, and site-specific exploration to prepare for mining. In fact, locating new coal is not the problem that this section implies it is. FCLAA removed the prospector's first right to coal because of field exploration. There is relatively little challenge to locating recoverable coal deposits. It is difficult to understand why one would argue that incentives should again be given to companies for conducting this activity. The preferred program would license coal field exploration by private companies.

*(GA) response: The Interior reviewer must have overlooked our discussion in the draft report of exploration activities because it did differentiate between exploration activities designed to identify the geographical extent of coal fields and activities designed to identify and evaluate coal leasing areas and, more specifically, lease tracts.*

*Interior maintains that exploration for locating new recoverable coal deposits is not a problem. We do not express an opinion, particularly such a broadly generalized one, at this time because a number of questions need answers. The report presents questions for further analysis concerning Interior's exploration program and private sector exploration. Exploration licenses are discussed and issues identified about the method proposed by Interior for permitting private sector exploration. The question of whether it might be desirable to offer incentives for exploration needs to be analyzed and answered in terms of the following factors: competition, cost, uncertainty, investment risk, shortfall risk, adequacy of Federal funding levels, and adequacy of Federal manpower. These factors are crucial to the successful outcome of an exploration program and the successful tie-in of exploration with leasing.)*

### 5. Identifying, Evaluating, and Selling Lease Tracts

This section of the Digest, which is amplified in Chapter 7, addresses several distinct issues that are also covered in general terms in other chapters of the report.

The first issue, potential exchanges of undevelopable existing leases for new leases, is discussed in such a confusing and erroneous way that it's difficult to determine what the GAO report is suggesting. Exchange is described, on the one hand, as a possible solution to otherwise difficult problems. On the other hand, the report cites a timetable for one specific exchange authorized by Congress, the Utah Power and Light preference right lease application exchange, which illustrates that trying to accomplish an exchange could be too time-consuming to be worthwhile. In fact, the timetable cited in the report is, on its face, unrealistic to the point of absurdity, was never considered or adopted by the Department, and, as would be evident from analysis of the actual timetable adopted for processing as part of a settlement of a lawsuit the Utah Power and Light exchange, not a reflection of the work done by the Department to make exchange a genuinely useful tool. The report also neglects to mention that the Federal Coal Leasing Amendments Act of 1976 eliminated the Secretary of the Interior's general authority to exchange Federal coal leases, and the Secretary's attempt to have such authority restored was rejected by the Congress in 1978.

*(GAO response: The timetable we discussed in the draft report referred to an estimate by the BLM Utah State Office in October 1978. Even though Interior desires to make exchange a genuinely useful tool--e.g., their March 1979 agreement with the exchange applicant in the above example which does not reflect the BLM State Office estimate--questions remain about the workability of an exchange program. A key issue concerns potential conflicts that could arise between exchanging versus selecting tracts for competitive leasing.*

*Contrary to Interior's comment, we did include a statement in our draft report about the exchange restrictions imposed by the Federal Coal Leasing Amendments Act of 1976 and the limited exchange authority granted Interior in the 1978 amendments to the Mineral Leasing Act.)*



The speculations in the report that the exercise of surface owner consent could seriously interfere with necessary Federal coal leasing are based on inaccurate assumptions and information. First, the report fails to note that the Secretary is directed by law to obtain a fair return for coal and to conduct competitive lease sales and instead implies that these constraints on consent purchase in the proposed Federal coal management program were entirely discretionary in the Secretary. The report uses irrelevant data—figures about percentages of Federal coal under non-Federal surface—rather than acknowledging that only a fraction of non-Federal surface owners are qualified to protect their property under terms of the surface owner consent section of the Surface Mining Control and Reclamation Act. Failure to make the distinction between qualified and non-qualified surface owners distorts the appearance of conflict between the property rights of the limited class of landowners protected by the Surface Mining Act and the responsibility of the Department of the Interior to make adequate supplies of Federal coal available for development.

*(GAO response: Our report explicitly recognizes that the Federal Coal Leasing Amendments Act requires that all leases be issued by competitive bidding procedures and that fair market value be determined. We raise a question about alternatives for obtaining surface owner consent and its affect on fair market value. We state that "the extent to which future tract selection and leasing actions will require surface owner consent is not known."*

*The figures cited in our draft report indicate that large areas may be affected by surface owner consent provisions. The actual size of the areas to be affected is not known, but Interior is looking at this in its land use planning activities, although a recent ongoing Interior task force report indicates that surface owner consent alternatives should be carefully evaluated.*

*We also recognized the distinction between qualified and non-qualified surface owners in our detailed discussion of the Surface Mining Control and Reclamation Act--which was included as an appendix to the draft report. We have brought this discussion forward in the text of our final report.)*

The report's comments on the maximum economic recovery (MER) policy of the proposed Federal coal management program are specific and helpful, and coincide with other comments the Department has received on the draft EIS. These comments have been seriously considered and will be reflected in the Secretary's final decision on the coal management program. As you may know, the Department is performing a more detailed economic analysis MER at the request of the Council of Economic Advisors. The Department, for reasons stated in testimony and reports submitted to the Congress, supports the minimum royalty provisions of the Federal Coal Leasing Amendments Act, and would not agree with the GAO conclusion that enforcement of a fair return to the United States for development of Federal coal would serve to interfere with necessary levels of production at reasonable prices.

*(GAO response: We believe minimum royalty provisions should be analyzed to determine if there are circumstances which would justify a variance from the statutory requirements. Our report illustrates some situations that should be given attention. The issue is not characterized appropriately by stating that we conclude that to obtain a fair return would interfere with necessary levels of production at reasonable prices. The issue is more complex and attuned to site-specific conditions rather than to over-all production requirements.)*

The report implies that the Department is using discounted cash flow (DCF) for determination of fair market value purely out of administrative whimsey. In fact, DCF is a sound technique for rationally assessing the legislatively required fair market value of the coal where comparable sales data are unavailable and the number of expected bidders is quite small, as is the case with current coal sales. Similarly, without stating firm numbers, the GAO implies that the Department is using unreasonably low discount rates. While there are grounds to debate what discount rate should be used, that used by the Department represents a reasonable after-tax rate of return for most American corporations. GAO suggests using a Monte Carlo approach to analyzing the effect of coal prices on coal evaluation. The Department has established an interagency task force to study fair market value. Among other things, this task force is contemplating using Monte Carlo analysis of a number of the DCF parameters to assess the variability of the model's estimates. This information should have been known to the authors of the report and should be noted in the report.

*(GAO response: Our discussion of fair market value estimation concerns the technical aspects of the estimation process. In discussing these we are not taking issue with a specific discount rate, but rather our concern is with the concepts used and their interrelation with various elements comprising fair market value. We have been aware of Interior's task force regarding fair market value and Monte Carlo approaches and have had discussions with some of its members. We do not suggest, at this time, that Interior adopt a particular estimation process but do discuss implications associated with the various approaches that could be employed.)*

The report questions whether the public participation called for in the Department's proposed program will be meaningful or effective, observes that public participation has both benefits and costs, but makes no specific criticisms or recommendations for improving the Department's proposal.

*(GAO response: Our discussion of public participation requirements is presented simply as an issue of some concern, and we make no claim to have a solution. Public participation requirements raise questions as to the extent the public should be afforded an opportunity to comment or otherwise participate in particular phases of Government decisionmaking and how Interior should encourage and invite public participation that is meaningful and constructive. Our point is that if the process is considered routine and is performed perfunctorily, it may be time-consuming and possibly result in legal or other delays to leasing. The process should provide the Government with important information to consider in making decisions.)*

In discussing industry's role in the proposed program, the report is inconsistent: acknowledging, on the one hand, that industry will be able to participate in all phases of planning, but referring, on the other hand, to industry's inability to have input until after planning decisions have been completed. The preferred program clearly invites industry information and opinion about development and application of criteria for deciding about which lands are unsuitable for mining, about identification of lands that should be considered for leasing, about the trade-offs that would be necessary to designate those lands to actually be offered for leasing, about the production goals and levels of leasing required to achieve the production goals, and about the individual tracts of Federal coal which are of interest to individual developers. This was not sufficiently stressed in the draft EIS but will be in the final EIS. Again, if the researchers for this report had been in contact with the proper parties they would have been aware of this development. The report's implication that industry does not have clear, specific, and timely opportunities to assure that adequate amounts of coal are offered for leasing in appropriate locations is not accurate.

*(GAO response: Our report is not inconsistent regarding industry's role in the preferred program. The program would permit industry to make their concerns known during land use planning, but would not request expressions of interest until land use planning is completed. If Interior perceives an inconsistency in this, it should be in the context of the preferred program. The issue of industry participation reflects the degree to which certain information is to be used by Interior during the various phases of the leasing system, including unsuitability criteria application, tract selection and ranking, etc. Our discussion of this issue was based on our discussion with Interior officials and other experts.)*

The report discusses concerns expressed by State officials who point out problems that could arise in the absence of close cooperation between States and the Department of the Interior. Ending the open hostility that characterized State-Federal relationships during previous, unsuccessful attempts to implement Federal coal leasing programs has been one of the Secretary's highest priorities. The Department worked closely with coal-State Governors and their representatives during development of the program and alternatives described in the draft EIS. While the effectiveness of the resulting cooperative State-Federal process can be tested only through experience, the Department believes that the almost decade-long conflict between the States and the Department over coal development has been replaced by a mutually respectful relationship which will be the foundation for satisfactory cooperation, reconciliation, and planning to assure adequate production of Federal and non-Federal coal reserves while protecting the other resource and economic values of interest to State and local governments.

This view is shared by the States. For instance, the March 23, 1979, issue of the newsletter of the Western Interstate Energy Board/WINEB, which has been coordinating State input into the coal management review, called the involvement of States in the Federal coal management program a "precedent for State/Federal cooperation".

The newsletter continues:

"While the rules are only draft at this time and additional changes may be forthcoming, the amount and quality of State participation in all Federal coal leasing decisions is significant. Although no veto power is given to States, the draft rules, if successfully implemented, makes States through the Governors a major participant in all Federal coal decisions. Major State participation in Federal coal leasing decisions has consistently been a significant energy objective of Western Governors over the past five years.

"While some critical issues remain to be resolved in the regulations, the process used in developing the program and the proposed regulations may be exemplary of good State/Federal cooperation. During the past 10 months the major coal States in the West--North Dakota, Montana, Wyoming, Utah, Colorado, and New Mexico and South Dakota--through the WIEB Coal Committee have reviewed all the Department's major working papers, met innumerable times with the persons in DOI who were developing the program and participated in DOI working sessions on the draft environmental statement including the example regulations contained therein. Together with the strong backing of coal State Governors, the Committee was able to significantly influence the program's development."

Yet the GAO report couches its presentation of State/Federal relations so as to cast doubt on this relationship.

*(GAO response: Our discussion of State participation is not critical of either Interior efforts or State concerns. It merely presents some of these State/Federal issues that are of major concern. The resolution of the issues is not simple, and we recognize that Interior and the States have made considerable strides in developing an effective relationship. We have updated our report to reflect these efforts.)*

The report's concerns about possible conflicts between satisfaction of the leasing demands of both public and non-public bodies are based on the report's inaccurate assertion that the public bodies themselves, rather than Bureau of Land Management planners, would choose those tracts to be set aside for public body leasing. The Department recognizes the potential for conflict between public and non-public prospective lessees, as well as conflicts between bidders who would operate captive mines and those who would sell to utility or industrial coal users, where particular tracts are uniquely suited to service specific users. Such competition is inevitable. As in all cases where judgement must be exercised in trade-offs between resources or resource uses, the Department will make decisions that attempt to balance competing interests fairly while meeting the needs which, on a case-by-case basis, must be satisfied. Neither the public bodies set-aside nor other elements of the proposed Federal coal management program surrender that responsibility for decisionmaking in the balanced public interest to any category of resource users.

*(GAO response: Our discussion of the public body tract selection issue does not assert or imply that public bodies would select specific tracts-- but that the set-aside program could have implications affecting private body tract selection opportunities, particularly under a limited leasing policy restricting the number of tracts that the Government makes available over a period of time.)*

## 6. Coal Lease Management

These comments are divided into two categories, neither of them specific to elements of the Department's proposed Federal coal management program or the draft EIS. One question, posed by the report without even minimal evidence in support, is whether Federal coal leases can be developed in a timely manner in view of the many Federal, State, and local permits required of coal developers. The number of permits required is, in fact, much greater than the 15 to 20 suggested by the GAO report. Greater efficiency in the permitting process is an important goal; however, the Department does not believe that objective analysis would indicate Departmental permitting requirements to be an obstacle to the timely production of coal from Federal leases. Furthermore, it should be emphasized that where there may be substantive conflicts between mining proposals and standards for the health and safety, community protection, air quality, water quality, diligent development, return of fair market value, or other requirements, individual companies will often meet delays or even denials in their attempts to secure and develop specific tracts of coal.

Reference is also made to "regulations" that require submission of a mine plan within a specific time period, and "observers" are cited as being concerned whether these "regulations" might be an expediency to terminate leases which might become an embarrassment to the government. In fact, the FCLAA (Sec. 7(c)) requires mine plans be submitted within 3 years. The GAO draft report fails to distinguish between its skepticism about the substantive value of individual standards, and the efficiency of the methods used for implementation of the standards.

*(GAO response: Even though Interior "does not believe that objective analysis would indicate Departmental permitting requirements to be an obstacle to the timely production of coal from Federal leases," they state that "we are and will continue to search out means to streamline permitting processes." We believe this commitment to improved efficiency is essential to performing an objective analysis.*

*The statutory requirement for mine plans pertains only to leases issued after August 4, 1976. Interior refers to "the efficiency of the methods used for implementation of the standards," without explaining how the efficiency would be achieved and in what way it would be efficient. For example, if mining plans are required before market forces are allowed to act, it is questionable how useful, valid, or meaningful the plans would be.)*



GAO Recommendations to the Secretary

The Department has responded, or is responding, to nearly all the reports' major recommendations.

- Our response to the first recommendation for more reasonable tradeoff decisions is already given in this letter and does not require further elaboration.
- There are really three parts to the second recommendation. We have improved our description of land use planning from that in the draft EIS, and the improved material will appear in the final EIS. As previously mentioned, we are conducting a more detailed economic study of maximum economic recovery, and though this material will not appear in the final EIS, it will be included in the Secretary's June 1st decision materials. We analyzed the potential production from nonproducing existing leases in a task force report issued last spring, we analyzed it further in the draft EIS, together with other future sources of coal production, and we have recently released a major report on management of existing leases that will appear in the final EIS.
- In response to the third recommendation, we would apply unsuitability criteria to existing leases in the most efficient means possible.
- We reject the recommendation for "flexible" production objectives as being counter to the DOE Organization Act; we are seeking, however, to encourage industry participation in land use planning processes.
- We have implemented a long-range coal exploration plan, your fifth recommendation 1/.
- The Department has investigated the economic, energy, and environmental implications of the lawful alternatives of the surface owner consent requirement.
- We, frankly, do not understand what GAO would like us to do to "streamline" the process for public participation, your seventh recommendation; it is the Secretary's policy to operate the coal management program activities as openly as possible. This recommendation can be interpreted in many ways, but to the extent that it would diminish the opportunity for public participation in coal leasing decisions, we believe it to be an inadvisable recommendation.
- We are not convinced of the need for more regulations on maximum economic recovery and logical mining units, but we will consider this recommendation further.
- Finally, we are and will continue to search out means to streamline permitting processes.

1/ See "Federal Coal Management Program: Fiscal Year 1978," Report of the Secretary to the Congress, March 1978, pp. 29-37.

*(GAO response): Our detailed discussion of Interior's proposed action on our draft recommendations is included in Chapter 9. Briefly, concerning our first recommendation, we continue to believe in the need for better mechanisms--both for the Congress, and the Administration--to assure an appropriate balance is achieved between energy, socio-economic and environmental goals.*

*Our second recommendation dealt with shortcomings in the draft EIS. While some important changes have since been made in the final EIS, we believe certain matters still require attention before Federal leasing can be resumed. The description of land use planning has been expanded, although it is vague about the application of the "threshold concept" to future coal management. Interior recognizes the problems about maximum economic recovery and is working on them. In addition--and very importantly--the final EIS still does not adequately analyze the production potential of existing leases, and thus does not make a case establishing the need for new leasing.*

*As to the third recommendation, already discussed on page VI-19, we disagree with Interior's concept of efficiency in applying unsuitability criteria to existing leases.*

*Interior's response to our fourth recommendation--using flexible production goals in land use planning--is discussed in depth on page VI-23 and 24. We believe Interior's desire to exclude the use of resource demand estimates in land use planning would inhibit the development of sound and comprehensive plans.*

*Contrary to Interior's comment, we cannot agree that Interior has implemented a long-range exploration plan--our fifth recommendation. This is discussed in more detail on page 9-15.*

*The sixth recommendation--evaluating various implications of the surface owner consent requirement--has been investigated according to Interior. In view of Congressional oversight responsibilities, Interior's investigation should be reported to the Congress.*

*Our seventh recommendation--"streamlining" the public participation process has been clarified in the final report. We continue to support meaningful and constructive public participation and our recommendation is directed to help assure that this actually happens.*

*Concerning our recommendation on publishing maximum economic recovery and logical mining unit regulations--we believe it is essential for industry and the various affected offices within the Interior Department and the Department of Energy to know exactly what the criteria and rules are for making the determinations. We are happy to see Interior's willingness to consider this recommendation further.*

*The ninth recommendation--streamlining the permitting process--is a matter of serious concern to many in the private sector and State government. We note Interior is open on this. Further comments are on page VI-35.*

### Conclusion

Past years of failure to actively manage Federal coal have produced an environment in which both government and industry will be challenged to improve their effectiveness in dealing with the real issues which must be faced if Federal coal is, in fact, to be produced in growing amounts to meet national energy needs. It is essential that coal be produced, as needed, to carry out the President's policy for increasing the Nation's reliance on coal. While the country has enjoyed, for some years, a surplus of coal production capacity over demand, it is also true that plans for leasing additional Federal coal have been delayed. The Department believes that these delays are attributable to indecision, failure to act, and ambiguity about performance of the responsibilities which are, or should be, implemented through the planning and permitting processes. Uncertainty about where development of Federal coal could, or should, take place, about what the impacts of coal production would be on grazing, farming, wildlife, and local communities, established the climate of legal and political conflict which frustrated previous attempts to plan for the leasing of additional Federal coal. The Department believes that great care must be

taken in pursuing the necessary and commendable goal of improving the efficiency of the resource management process. The Congress, through enactment of laws referred to earlier in these comments, has provided the foundation for bringing stability and certainty to the management of Federal coal. We believe the GAO report, by calling for reconsideration of numerous provisions of those laws and a significant delay in implementation of the Federal coal management program to conduct additional studies, would have the inevitable result of dissipating the stability and certainty which the Congress has provided and, instead, would reopen the very conflicts and debates over coal policy which have characterized the last decade.

*(GAO response): We believe we have adequately dealt with these comments in previous responses.)*

I understand that since this response was first drafted members of my staff have had an opportunity to discuss their difficulties with the draft report with the staff of GAO responsible for the preparation of the report. I was happy to learn that we have reached some level of mutual understanding of one another's positions on this matter. Your report does do a good job of surveying issues bearing on Federal coal management—issues that

we have been working on, for some time. We would welcome GAO investigations that were specific to coal management issues. I have instructed the members of my staff responsible for coal management to continue this good start towards improving relations between the Department and GAO.

Once again, thank you for allowing us the opportunity to comment on the draft.

Sincerely,

A handwritten signature in black ink, appearing to read "Guy R. Martin". The signature is fluid and cursive, with a large initial "G" and "M".

Guy R. Martin  
Assistant Secretary, Land  
and Water Resources

*(GAO's final comment: Interior has a most important and difficult responsibility in developing a sound and viable leasing program. The issues are complex and viewed by persons with differing and sometimes conflicting perspectives. We have stressed in the remarks to Interior's letter that our primary purpose is to identify and analyze coal leasing issues --issues that any coal leasing program should be responsive to. We hope Interior will view the final report in this constructive manner.)*

INDIVIDUALS GAO INTERVIEWED  
OR WHO RECEIVED COPIES OF  
THE ISSUES DOCUMENT OR  
DRAFT REPORT FOR COMMENT

More than 100 experts from over 60 different organizations were interviewed by GAO. Although some of those interviewed did not fully agree with the way the issues were presented and the questions posed, most recognized that these were the issues and questions especially in need of attention. In this report, we do not attribute statements or opinions to any particular individual, unless the individual is in a Government policymaking position.

<u>ORGANIZATION</u>	<u>INDIVIDUALS INTERVIEWED</u>
Alabama State Geological Survey	Thomas Joiner, State Geologist
American Mining Congress	Charles Cook, Vice President Charles Dietrich, Chairman, Coal Leasing Committee
Atlantic Richfield Company	F.C. Witmer, Manager, Resource Development Group Gerald F. Rupp, Manager, Permits and Compliance
Attorney at Law	Sheldon Bierman, Attorney Washington, DC
Bank of America	Richard Larsen, Vice President and Senior Economist Renold D. Thompson, Jr., Assistant Vice President

<u>ORGANIZATION</u>	<u>INDIVIDUALS INTERVIEWED</u>
Burlington Northern, Inc.	James R. Walker, General Counsel George Morrison, Associate General Counsel Mike Donahue, Vice Presi- dent, Transportation Gerald K. Davies, Assis- tant to the Vice Pres- ident
Cameron Engineers	John Baker, Vice President, Information Services John Hand, Vice President, Special Projects
Colorado Department of Natural Resources	David Walker, Assistant to the Director
Colorado Energy Research Institute	Joan Martin, Program Mana- ger, Policy
Colorado Mining Association	David Cole, Manager
Colorado School of Mines Research Institute	Albert G. Melcher, Assist- ant Manager for Business Development
Consolidation Coal Company	Larry C. Fuller, Vice-Pres- ident, Mining
Continental Illinois National Bank and Trust Company	James R. Coleman, Second Vice President, Mining Division Stanley Suboleski, Mining Engineer
Council of Energy Resources Tribes	Ed Gabriel, Executive Direc- tor Ellen Brown, Director of Policy and Analysis
Council on Wage and Price Stability	Jack Campbell, Research and Government Affairs Division
Duncan, Brown, Weinberg, and Palmer	Edward Weinberg, Attorney

<u>ORGANIZATION</u>	<u>INDIVIDUALS INTERVIEWED</u>
Electric Power Research Institute	Dr. Richard A. Schmidt, Geologist
Empire Energy Corporation	Alan Barnes, Director of Planning
ITEL Corporation	William R. Rose, Vice President, Marketing, Rail Division
Independent Consultant	Frank Meek, retired, U.S. Bureau of Land Management
Montana Bureau of Mines and Geology	Robert Matson, Geologist
Montana Department of State Lands	Leo Barry, Jr., Commissioner Timothy Gallagher, Research Specialist
National Academy of Sciences	Dr. Robert Shelton, Associ- ate Director, Behavioral and Social Sciences
National Coal Associa- tion	Ray Peck, Director of Regulatory Affairs Committee on Coal Leasing
Natural Resources Defense Council	Jonathan Lash, Attorney
New Mexico Department of Energy and Minerals	Jim Hill, Division of Mining and Minerals
Office of the Governor of North Dakota	Dwight Conner, Energy Coordinator
North Dakota State Land Department	Dick Loman, Commissioner of University and School Lands
Northern Energy Resources Company	Gerard Drummond, President Garth Duell, Senior Vice President William Lyons, Vice Pres- ident, Administration



## APPENDIX VII

## APPENDIX VII

<u>ORGANIZATION</u>	<u>INDIVIDUALS INTERVIEWED</u>
Northern Plains Resource Council	Patrick Sweeny, Staff Director Bill Cook, Staff Assistant
Office of Management and Budget	Gary Bennethum, Budget Examiner, Energy Technology Branch
Peabody Coal Company	David H. Gambrell, Director, Federal Coal Leasing Gregory Leisse, Attorney Jim Hobbs, Vice President, Resource Management John Arnold, Vice President, Engineering
Pennsylvania State University	Dr. Richard L. Gordon, Professor of Mineral Economics
Public Service Company of Colorado	Don Lancaster, Manager of Fuel Supply Development
Republic National Bank of Dallas	Peter Szabo, Vice President and Mining Engineer
Resources for the Future, Inc.	Dr. Milton Russell, Senior Fellow, Center for Energy Policy Research
Rocky Mountain Center on Environment	John D. Kennedy, Executive Director
Rocky Mountain Energy Company	Steve Berg-Hansen, Director for Governmental Affairs and Policy Analysis Linda Rathbun, Manager of Economic Research
Sierra Club	Brandt Calkin, Staff Director, Sante Fe, New Mexico Office
Sierra Club Legal Defense Fund	Gregory Thomas, Attorney, Washington, DC

## APPENDIX VII

## APPENDIX VII

ORGANIZATIONINDIVIDUAL INTERVIEWED

Sunoco Energy Development Company	Lamont Laue, Manager, Exploration and Acquisition Department Merritt Kirk, Jr., Manager, Special Project Leasing Program Jody Sweringhouse, Govern- ment Relations Department
University of Arizona	Dr. Donald Wells, Professor, Department of Economics Dr. DeVerl Harris, Professor, Department of Mining and Mineral Engineering
University of Michigan	Dr. Gregory A. Daneke, Pro- fessor, School of Natural Resources
University of Wyoming	George Gould, Professor, College of Law
U.S. Bureau of Land Management, Colorado State Office	Dale Andrus, State Director Cecil Roberts, Energy Minerals Coordinator Ed Parsons, Mineral Economist
U.S. Bureau of Land Management, Denver Service Center	Ed Montgomery, Chief, Ener- gy and Minerals Pat Geehan, Staff Economist
U.S. Bureau of Land Management, Utah State Office	William G. Leavell, Associ- ate State Director Earl Hindley, Regional Planner Lyman Moore, Resources Branch
U.S. Bureau of Land Management, Washington, DC	Monte Jordan, Staff Chief, Program Development Staff, Office of Coal Management Dale Zimmerman, Chief, Mineral Resources

ORGANIZATIONSINDIVIDUALS INTERVIEWED

U.S. Department of Energy	Robert Kalter, Director, Office of Leasing Policy Development Robert Lawton, Assistant Director, Office of Leasing Policy Development Daniel Dick, Economist, Office of Leasing Policy Development
U.S. Department of the Interior, Washington, DC	Hon. Guy Martin, Assistant Secretary for Land & Water Resources Steven Quarles, Director, Office of Coal Leasing, Planning and Coordination Joe Browder, Special Assis- tant to the Assistant Secretary Charlie Towle, Economist, Office of Coal Leasing, Planning & Coordination Robert Uram, Assistant Solicitor, Branch for Onshore Minerals, Division of Energy & Resources (former acting Director, Office of Coal Leasing, Planning & Coordination)
U.S. Department of Justice	Nancy McMillen, Attorney, Antitrust Division Gregory J. Werden, Economist, Economic Policy Office, Antitrust Division
U.S. Environmental Protec- tion Agency	Dr. Irving (Jack) White, Special Assistant for Strategic Analysis, Office of Research & Development

## APPENDIX VII

ORGANIZATIONS

U.S. Geological Survey,  
Denver

U.S. Geological Survey,  
Reston, VA

U.S. Steel Corporation

Utah Division of Oil, Gas,  
and Mining

Utah House of Representatives

Utah International, Inc.

## APPENDIX VII

INDIVIDUALS INTERVIEWED

George Horn, Conservation  
Manager, Central Region,  
Conservation Division  
William Feldmiller, Deputy  
Conservation Manager,  
Central Region, Conser-  
vation Division  
Earl Cox, Staff Advisor,  
Mining, Central Region,  
Conservation Division  
Thomas Blair, Chief, Econo-  
mic Evaluation Unit  
John A. Peterson, Staff  
Advisor, Mineral Econo-  
mics, Central Region,  
Conservation Division

Dr. Thomas Friz, Deputy  
Assistant Director,  
Energy & Mineral Resour-  
ces (Coal)  
Richard Bernknopf, Econo-  
mist, Program Analysis  
Office

George Robbins, Manager,  
Mineral Property  
Furman Burge, Chief Geolo-  
gist, Resources Develop-  
ment, Coal & Stone  
Bruno Scipioni, Director,  
Raw Materials  
J.K. Hayes, District Geolo-  
gist, Western District  
G.H. Sides, Chief Engineer,  
Western District

Ron Daniels, Chairman, Coal  
Leasing Task Force

Representative John Garr

W. Drew Leonard, Vice Presi-  
dent  
Robert D. Wheaton, Vice  
President, Exploration  
Charles Dietrich, Senior  
Council

ORGANIZATIONS

Utah International, Inc.  
(con't.)

Western Energy Company

Western Interstate Energy  
Board

Western Slope Carbon, Inc.

Wyoming Department of  
Economic Planning  
and Development

Wyoming Department of  
Environmental Quality

Wyoming Office of State  
Planning Coordinator

Wyoming State Geological  
Survey

INDIVIDUALS INTERVIEWED

David Crouch, Senior  
Environmental  
Engineer

A.P. Coglianchio, Mineral  
Products Marketing

Paul Schmechel, President  
Arthur K. Neill, Manager of  
Planning

Doug Larsen, Deputy Director  
Rick Griffith, Staff Assis-  
tant

Al Perry, Sales Manager

John Goodier, Chief, Mineral  
Development

Robert Sundin, Director

Richard Hartman, State  
Planning Coordinator  
Al Minier, Staff Assistant

Dan Miller, State Geologist  
Gary Glass, Deputy Director

DEPARTMENT OF THE INTERIORTASK FORCE EFFORTS

<u>Task Force</u>	<u>Objectives</u>
1. Access	Initiate study on an experimental basis of the cost effectiveness and resources management implications of establishing guaranteed public access to coal tracts. As time permits, recommend further efforts needed for tract unitization.
2. Small Business	Investigate opportunities for an agreement between Small Business Administration and Interior to incorporate small businesses and minority-owned businesses in the preferred leasing program alternative.
3. Fee Coal Exchange Program	Develop procedures and guidelines on the processing of private fee coal qualifying under the Surface Mining Act for possible exchange and and recommend regulatory language.
4. Tract Delineation	Develop procedures for preliminary tract delineation from lands acceptable for further consideration for leasing.
5. Tract Ranking, Selection, and Sales Scheduling Process	Develop procedures for tract ranking, selection, and scheduling and some specific analysis requirements. (Note: State and local government involvement should be considered part of the delineation and selection process.)

<u>Task Force</u>	<u>Objective</u>
6. Surface Owner Consultation	Develop a more detailed analysis of surface owner consultation procedures for implementation by the Bureau of Land Management. Details relating to qualifying surface owners under the Surface Mining Act must be studied.
7. Unsuitability Criteria-- Memorandum of Understanding Between the Forest Service and the Bureau of Land Management	Develop an umbrella agreement between the agencies, specifying how the Forest Service will apply unsuitability criteria.
8. Energy Minerals Rehabilitation Inventory and Analysis (EMRIA)	Analyze the EMRIA program as to the role it might play in the Federal Coal Program. Study should identify the critical steps in the process where special expertise in acquiring reclamation data would be most needed.
9. Intertract Bidding	Develop specific procedures to incorporate the intertract sales method in the preferred Federal coal leasing alternative.
10. Memorandum of Understanding With Advisory Council on Historic Preservation	Develop a Memorandum of Understanding to cover cultural resources pertaining to Federal coal management.
11. Maximum Economic Recovery	Define operational approaches to maximum economic recovery. Propose necessary modifications for Secretary's consideration.

<u>Task Force</u>	<u>Objectives</u>
12. Fair Market Value	Define fair market value process for use in Secretary's preferred leasing program. Analyze and define specific procedures to develop these values.
13. Preference Right Lease Applications	Develop procedures to qualify, approve, or disapprove PRLAs. Determine PRLA priorities for processing. Study commercial quantities definition.
14. Filing Fee Amounts	Determine administrative charges needed to adjust the current filing fee for coal lease licenses under the preferred leasing program.
15. Emergency Leasing	Develop criteria and specific procedures to incorporate emergency leasing as part of preferred leasing program. Propose needed regulatory language.
16. Bonding	Develop procedures for having consistent requirements to assure payment of all rentals and royalties, and satisfaction of all lease terms including reclamation.
17. Public Body Interest	Define "public body" specifically as to what entities would qualify, including government agencies and integrate in preferred leasing program.
18. Current Coal Regional EIS Correlation to New Coal Regional EIS.	Develop approach for scoping and outlining new regional EISs. Review all on-going regional EISs and determine usefulness of their content to new coal regional EISs if Secretary selects preferred leasing program.



<u>Task Force</u>	<u>Objectives</u>
19. Regional Coal Targets	Develop details of process for defining regional production goals and leasing targets. Study development of coal projection models, resource data, and production intention data.
20. Study of Data Needs and Methods Of Preferred Leasing Program	Review data needs of the preferred program. Define strategies for maximizing return for budgets used for data efforts. Identify opportunities for greater efficiency and coordination.
21. Correlation Between State and Federal Coal Regulatory and Leasing Processes	Examine State and Federal processes to identify opportunities for improving management. This should include opportunities for unifying Federal and State data or filing requirements.
22. Economic Impact of Unsuitability Criteria and Maximum Economic Recovery	Perform economic analysis of alternative approaches to accompanying objectives of unsuitability criteria and maximum economic recovery.
23. Office of Surface Mining, Geological Survey, and Bureau of Land Management Working Agreements	Draft memorandum of understanding between the agencies.  (Initiate after Secretary's Federal coal program decision.)
24. End Use Requirements	(Hold pending Solicitor's opinion on legality.)

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