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BY THE COMPTROLLER GENERAL
Report To The Chairman, Subcommittee On
Environment, Energy, And Natural Resources,
Committee On Government Operations
House Of Representatives
OF THE UNITED STATES

Economics Of The Great Plains
Coal Gasification Project

The Great Plains project will be the Nation's first commercial-scale plant producing synthetic gas from coal. The project's first annual economic report, released in March 1983, was much less optimistic than a similar analysis prepared in January 1982 to justify construction. GAO found that:

- The main reason for the changed economic outlook was that the assumed synthetic gas prices used in the March analysis were significantly lower than those used previously.
- Great Plains did not--nor was it required to--consider tax implications to the parent companies of the project's partners. If these implications are considered, the economics could be more optimistic than the March 1983 report indicates. Should the partners end their participation, some tax benefits would have to be repaid.
- Although the project is a potentially attractive investment, its financial viability is extremely sensitive to the future prices of synthetic gas. Even a small deviation in prices could significantly affect its economics.



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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

August 24, 1983

B-207876

The Honorable Mike L. Synar
Chairman, Subcommittee on Environment,
Energy, and Natural Resources
Committee on Government Operations
House of Representatives

Dear Mr. Chairman:

Your April 8, 1983, letter asked us to review certain aspects of the economics of the Great Plains coal gasification project. You expressed concern about the financial status of the project as shown in its March 31, 1983, cash-flow report to the Department of Energy (DOE) and DOE's role in monitoring this project (see app. II). A description of the project; statement of our objective, scope, and methodology; and our detailed response to the specific issues you raised are discussed in appendix I.

On January 29, 1982, the Secretary of Energy awarded a loan guarantee for up to \$2.02 billion to Great Plains Gasification Associates--a partnership of five companies¹--to construct the Nation's first commercial-scale plant producing synthetic natural gas from coal. The Department of the Treasury's Federal Financing Bank (FFB) also agreed to lend Great Plains up to \$2.02 billion, or about 75 percent of the total estimated construction costs of \$2.76 billion, with the Great Plains partners financing the remaining costs from their own funds or equity. Under the terms of the loan agreement, Great Plains can borrow funds from FFB until December 1985. As of June 30, 1983, Great Plains had borrowed \$726 million and the partners had contributed \$320 million. Great Plains currently estimates that it will need to borrow a total of about \$1.5 billion to complete the project, somewhat less than the maximum guaranteed loan. Although Great Plains began paying interest in July 1982, the first payment of principal is not due until January 1988.

Great Plains appointed ANG Coal Gasification Company (ANG) as project administrator. ANG is responsible for the project's day-to-day activities. Initial gas production is scheduled to

¹The partners and their percent of ownership are as follows: Tenneco SNG Inc. (30 percent), ANR Gasification Properties Company (25 percent), Transco Coal Gas Company (20 percent), MCN Coal Gasification Company (15 percent), and Pacific Synthetic Fuel Company (10 percent).

begin during August 1984, with full gas production scheduled for December 1984--the inservice date. As of June 30, 1983, the project was only slightly behind schedule but under cost.

Four pipeline companies, which are subsidiaries of four parent companies of the Great Plains partners, have agreed to purchase all the gas produced by the plant. The price of the gas is not fixed but will be controlled by gas purchase contracts, which contain a pricing formula. The formula sets certain maximum prices that Great Plains can charge for its synthetic gas. These prices are highly dependent on future prices of other energy products. As a result, the project's financial viability is closely linked to future energy prices.

The loan agreement requires that Great Plains annually submit to DOE an estimated cash-flow report demonstrating both its ability to repay the loan and the project's profitability. On March 31, 1983, Great Plains submitted its first cash-flow report to DOE since the agreement was signed. This report showed that the project's financial position is less optimistic than projected in January 1982, mainly because the assumed prices of the synthetic gas used in the 1983 report were significantly lower than those used in 1982. As a result, Great Plains estimates that the project will experience operating losses for the first 8 years, compared with the earlier projection of 3 years, and it will take the partners 16 years rather than 9 years to fully recover the equity they contributed.

However, Great Plains did not--nor was it required to--consider tax implications to the parent companies in this analysis. If taxes are considered, the project's economics could be more optimistic than Great Plains estimates. Although the Great Plains' partners do not directly benefit from taxes, their parent companies do--assuming they are profitable enough to make use of them. However, we do not know the current tax status of the parent companies.

Your letter asked that we address seven issues concerning the economics of the Great Plains project and DOE's monitoring of it. To respond to your request, we paraphrased these issues into questions. These questions and a summary of the information obtained follow.

Question 1: How much cash and inkind equity contributions will be made by the partners through December 1984? What return on equity do the partners expect to realize, and how does this compare with current returns for the energy and chemical industries?

The partners contributed \$320 million in equity as of June 30, 1983, and the amount estimated through December 1984 is

\$517 million. These have been cash contributions; the agreement prohibits the five partners from making in-kind or non-cash contributions.

Our analysis of Great Plains' March 1983 data showed that the partners could realize an average annual 20-percent return on their investment over the first 20 years the plant operates. Although Great Plains estimates significant losses during the first 8 years the plant operates, we found that there could be a positive cash flow to the partners throughout the life of the project if taxes are considered and if the parent companies are profitable enough to take full advantage of them.

Between 1970 and 1980, the after-tax profit on stockholders' equity for the chemical and allied products industries ranged from 11.4 percent to 16.7 percent. For petroleum and coal products industries, the range was between 11 percent and 20.4 percent. Although an annual rate was not available for 1982, we found that the quarterly returns for the year for the chemical and allied products industries ranged from 8.7 percent to 13 percent. For petroleum and coal products industries, the range was from 11 percent to 14.1 percent.

ANG officials pointed out that, because Great Plains is a one-of-a-kind project, its return on investment normally would be higher than returns for the industries cited above because those returns reflect both old and new investment undertakings. Considering new construction projects only, ANG officials stated that the return for those industries probably would be between 20 percent and 25 percent. (See app. I, p. 5.)

Question 2: What financial benefits accrued to the project by borrowing from FFB at lower than commercial interest rates? What additional benefits could the project realize if DOE provided new, below-market interest rate loans?

Great Plains potentially could have realized three benefits by borrowing from FFB--lower interest rates, flexibility in how much and how often funds are borrowed, and elimination of underwriter fees.² Although it is difficult to retrospectively quantify these benefits, an estimate is possible if some assumptions are made.

Lower interest rates--Assuming that the Federal Government had not guaranteed the loan but that the parent companies of the Great Plains partners had provided collateral, Great Plains

²Lending institution charges and attorney and accountant fees associated with granting or maintaining a loan.

might have been able to borrow the money to construct the project at or near AAA corporate bond rates. Based on these assumptions, there would have been no financial benefits to Great Plains by borrowing from FFB. If the parent companies did not provide collateral, then the financial risk would have been greater for private investors, and Great Plains probably would have had to pay the higher BAA corporate bond rate. On the basis of these assumptions and using the \$1.5 billion Great Plains expects to borrow, Great Plains might have saved up to \$227 million by borrowing from FFB.³ (See app. I, p. 7.)

Flexibility--There are some similarities between the terms Great Plains arranged with FFB and those offered in the commercial lending markets. For example, Great Plains has been borrowing varying amounts from FFB almost weekly, which allows it to enter the market quickly should interest rates decline. In fact, Great Plains has been taking advantage of favorable market conditions and has converted some of its short-term, high-rate borrowing to long-term, lower-rate borrowing. We do not know what type of flexibility Great Plains would have been able to negotiate with commercial lenders.

Underwriter fees--Great Plains did not have to pay about \$13.8 million in underwriter fees when it borrowed from FFB. Before DOE signed the loan agreement, it recognized these savings and required Great Plains to agree to perform certain environmental monitoring activities over and above those already required. These activities are being financed at the project sponsors' expense. As a result, any benefits which Great Plains could have derived by not paying underwriter fees were offset by the costs of the additional environmental activities it agreed to perform.

The additional benefits that the project could realize from a new, below-market interest rate loan are discussed later. (See app. I, p. 6.)

Question 3: What tax credits and benefits will the partners realize from this project?

The Great Plains partners do not directly realize tax credits and benefits from this project. However, the tax credits and benefits are available to the parent companies of the partners, assuming the parent companies are profitable enough to make use of them. These benefits make this a potentially attractive investment.

³Bonds rated AAA are judged to be the best quality with the smallest degree of risk. Bonds rated BAA are considered medium-grade obligations and have speculative characteristics.

During construction, three types of tax benefits are available--investment tax credits, energy tax credits, and interest deductions. Through December 1984, the parent companies could reduce their tax liabilities by \$400 million based on an investment of \$517 million as a result of these benefits. During 1984, the last year of construction, the potential tax benefits exceed the equity contributions the partners are expected to make. If Great Plains stops construction, most of these tax benefits would have to be repaid to the Department of the Treasury.

In addition, tax benefits are available to the parent companies after the project becomes operational. To the extent that losses are incurred, they can be used to offset parent companies' profits and reduce their tax liability by as much as 46 percent of the losses incurred. For example, the March 1983 report shows that the partners would have to put \$841 million into the project during the first 8 years it operates. During this same time period, however, the parent companies' tax liability could be reduced by \$922 million. However, if Great Plains ends its participation in the project after the plant begins operating, the parent companies would lose some of the tax credits previously taken. (See app. I, p. 9.)

Question 4: How much would it cost the Federal Government and the project sponsors if the project had been terminated on June 30, 1983?

Stopping construction of the project could occur under various scenarios with complex legal ramifications. As a result, no precise cost estimate can be made.

Two situations are specifically cited in the agreement whereby Great Plains could end its participation in the project: (1) Great Plains terminates its participation within specific criteria defined in the agreement or (2) DOE declares a default. In each of these cases, DOE could continue the project, sell it to a third party, or abandon it. At a minimum, DOE would have had to pay the \$726 million Great Plains borrowed from FFB and the Great Plains partners would have lost the \$320 million of equity they had contributed if construction had stopped on June 30, 1983. Under certain circumstances, DOE could seek damages against the partners for up to \$100 million, but the total amount the partners would lose in equity and damages could not exceed \$740 million, the maximum amount they are required to contribute to the project under the agreement.

In addition, it could have cost between \$199 million and \$260 million as of June 30, 1983, over and above DOE's payment to FFB and the partners' lost equity to have closed down the project and paid outstanding bills, employee relocation costs,

and certain contractual expenses. We do not know, however, who would ultimately have paid these costs since this would have depended on the scenario under which construction stopped. In addition, these costs do not consider the tax implications of stopping construction. (See app. I, p. 10.)

Question 5: Are Great Plains' March 31, 1983, cash-flow projections reasonable?

Great Plains' projections are reasonable based on the assumptions made. However, Great Plains did not consider--nor did DOE require it to consider--the impact of taxes on the parent companies of the Great Plains partners when it analyzed the project's financial viability. The March 1983 report is much less optimistic than projections Great Plains made in January 1982 when the agreement was signed. Some of the major differences between the two analyses are shown below. The March 1983 report showed that

- the project will experience losses during each of the first 8 years, compared with 3 years in the 1982 report;
- the partners will not fully recover the equity they contributed for 16 years, compared with 9 years; and
- the project will incur a 10-year loss of \$773 million as compared with a \$1.2-billion profit projected in 1982.

The main reason for these differences is that the estimated synthetic gas prices used in the 1983 report were significantly lower than those Great Plains used in its 1982 estimates. We found that the project's financial viability is extremely sensitive to the assumed price of the synthetic gas. For example, if gas prices consistently increased or decreased 3 percent from Great Plains' estimates, the project could--before tax considerations--lose \$88 million under our high estimate or \$1.3 billion under our low estimate during the first 10 years, compared with Great Plains' estimated losses of \$773 million. However, if tax implications are considered, the partners might never be in the negative cash-flow position that Great Plains estimates. (See app. I, p. 13.)

Question 6: What is the cost to the Federal Government of five options Great Plains is considering for additional financial assistance--a below-market loan from DOE, a price guarantee from DOE, a postponement of the December 1984 inservice date, a stretchout of principal payments on the loan, and price supports from the U.S. Synthetic Fuels Corporation?

The three options which we evaluated--a below-market interest rate loan, a postponement of the inservice date, and a delay in repayment of the loan principal--vary in benefits to Great Plains and implications for the Federal Government.

1. Loans with interest rates lower than the estimated 13 percent Great Plains pays would be very attractive financially for Great Plains but would reduce the interest income the Government would have received by \$705 million, \$517 million, or \$321 million for a 6-percent, 8-percent, and 10-percent loan, respectively.
2. A 9-month postponement of the currently projected December 1984 inservice date could result in Great Plains' borrowing about \$185 million more than the currently estimated \$1.5 billion. This would occur because the loan agreement provides that Great Plains can continue borrowing funds for construction and startup expenses through the disbursement cutoff date, which is currently estimated to be December 1985. This option has only minimal impact on Great Plains' ability to repay the loan. The additional \$185 million would not increase the total amount borrowed to more than the \$2.02 billion DOE agreed to guarantee.
3. A delay in repayment of the loan principal from 1988 until 1993 or 1998 would increase the partners' after-tax average return on investment over 20 years. If Great Plains is able to make both principal and interest payments, then there should be no adverse effect on the Federal Government. The longer Great Plains delays in making payments of principal, the more interest it will have to pay on the outstanding debt. However, if the Federal Government's borrowing costs go above the estimated 13 percent Great Plains pays, the Government's costs could increase.

As agreed with your office, we did not evaluate the impacts of a price guarantee from DOE or price supports from the U.S. Synthetic Fuels Corporation because neither DOE nor Great Plains could tell us the price level or range of prices they were considering for these supports. (See app. I, p. 14.)

Question 7: What is the role of DOE in monitoring this project and what are its responsibilities under section 2.08 of the agreement?

DOE has plans, procedures, and a multidisciplined organization to monitor the project. Incorporated into its monitoring activities are monthly and quarterly meetings with ANG and

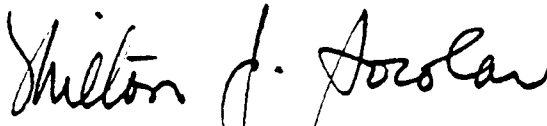
quarterly meetings with Great Plains. If certain conditions occur, section 2.08 of the agreement allows DOE to withdraw its commitment on additional borrowings from FFB. The purpose of this provision is to protect the Government's interest. The conditions under which DOE can withdraw its commitment include a default, abandonment, cost or schedule overrun, or if DOE determines that there is no longer reasonable assurance the loan will be repaid. If one of these conditions were to occur, it is likely, according to a DOE official, that DOE would have to pay FFB for the amounts Great Plains had borrowed. In DOE's opinion, however, none of these conditions have occurred, and DOE does not anticipate exercising its right to withdraw its commitment. (See app. I, p. 18.)

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As requested by your office, we did not obtain official comments on this report. However, we did discuss the material presented with DOE's Program Manager for the Great Plains project as well as ANG officials. Generally, they agreed with the material discussed. ANG officials pointed out, however, that while the long-term economic viability of the project is attractive, the partners are concerned that their stockholders will not be willing to risk losses for 8 years for the possibility of a more favorable return over a longer period of time. ANG officials also indicated that tax credits and benefits taken would have to be repaid to the Federal Government if Great Plains ended its participation in the project.

Unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of its issuance. At that time, we will send copies to the Secretary of Energy and other interested parties and make copies available to others upon request.

Sincerely yours,

for 
Comptroller General
of the United States

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APPENDIX

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ABBREVIATIONS

ANG	ANG Coal Gasification Company
DOE	Department of Energy
FFB	Federal Financing Bank
GAO	General Accounting Office

ECONOMICS OF THE GREAT PLAINSCOAL GASIFICATION PROJECTDESCRIPTION OF THE PROJECT

The Department of Energy Act of 1978--Civilian Applications (Public Law 95-238) authorizes the Department of Energy (DOE) to provide loan guarantees for alternative fuel demonstration projects. The Secretary of Energy awarded the first loan guarantee to Great Plains Gasification Associates, Detroit, Michigan, on January 29, 1982, for up to \$2.02 billion of the estimated \$2.76 billion cost for a project to produce synthetic natural gas from coal.

The Federal Government, through the Department of the Treasury's Federal Financing Bank (FFB), is lending Great Plains part of the money for the project, with Great Plains financing the remainder with its own equity. The financial terms and conditions of the loan agreement allow FFB to lend up to \$2.02 billion, or about 75 percent of total project costs, with repayment not to exceed 20 years.

The Great Plains coal gasification plant will be the Nation's first commercial-scale plant producing synthetic natural gas from coal. The facility, being built in Mercer County, North Dakota, consists of three components: a gasification plant, a lignite coal surface mine, and a pipeline connecting the plant to an interstate network of natural gas pipelines.¹ Full-scale construction of the plant began in August 1981. Initial gas production is scheduled to begin during August 1984, with full gas production scheduled for December 1984--the inservice date. The plant is designed to use about 14,000 tons of lignite coal daily to produce 125 million cubic feet of synthetic gas (the equivalent of 22,000 barrels of oil), 93 tons of ammonia, 85 tons of sulfur, and 200 million cubic feet of carbon dioxide.

Great Plains Gasification Associates--a partnership of five companies--owns the project. The partners and their percent of equity are as follows:

¹For a further description of the project, see our reports: "Status of the Great Plains Coal Gasification Project Loan Guarantee--February 1982" (EMD-82-55, Mar. 6, 1982) and "Status of the Great Plains Coal Gasification Project--August 1982" (GAO/EMD-82-117, Sept. 14, 1982).

	Percent of <u>equity</u>
Tenneco SNG, Inc. (a subsidiary of Tenneco, Inc.)	30
ANR Gasification Properties Company (controlled by American Natural Resources Company)	25
Transco Coal Gas Company (controlled by Transco Companies, Inc.)	20
MCN Coal Gasification Company (a subsidiary of MidCon Corporation, formerly Peoples Energy Corporation)	15
Pacific Synthetic Fuel Company (a subsidiary of Pacific Lighting Corporation)	<u>10</u>
Total	<u>100</u>

Four pipeline companies, which are subsidiaries of four parent companies of the Great Plains partners, have agreed to purchase all the gas produced by the plant. The production of the plant represents about 1 percent of the pipeline companies' average annual gas requirements. The price of the gas is not fixed but will be controlled by gas purchase contracts which contain a pricing formula. The pricing formula provides that the gas will be sold to the pipeline companies at \$6.75 per million Btu's plus quarterly increases beginning on April 1, 1981, based on the producers' price index and the producers' price index of No. 2 fuel oil. Great Plains chose the \$6.75 per million Btu's as a benchmark since it was comparable to the 1980 prices paid by interstate pipelines for unregulated natural gas.

The formula provides that for 5 years after the initial delivery of gas, the price cannot exceed the price of unregulated No. 2 fuel oil. From the sixth through tenth year, the price will be the greater of the average prices paid by the pipeline affiliates for the highest 10 percent of domestic natural gas or for Canadian and Mexican gas but in neither case higher than the unregulated price of No. 2 fuel oil. After 10 years, the price will be based on the price of unregulated domestic natural gas prices. If gas prices are regulated at that time, then the price paid for Canadian and Mexican gas will set the ceiling.

Great Plains appointed ANG Coal Gasification Company (ANG) as project administrator. ANG is responsible for the day-to-day planning, engineering, design, construction, and operation of the gasification plant, pipeline, and coal mine. Great Plains provides overall direction to ANG through a management committee composed of representatives from each of the partners.

At the Federal level, DOE's Office of Oil, Gas, Shale, and Coal Liquids, Office of the Assistant Secretary for Fossil Energy, is responsible for monitoring the construction of the project to ensure that it is completed on time and that the guaranteed debt is used appropriately. DOE's Chicago Operations Office is responsible for the day-to-day monitoring of the project, which includes determining that a reasonable assurance of debt repayment exists.

The loan agreement requires Great Plains to annually submit to DOE an estimated cash-flow report demonstrating both its ability to repay its loan and the project's profitability. On March 31, 1983, Great Plains submitted its first cash-flow report to DOE since the agreement was signed. This report showed that, as a result of the assumed synthetic gas prices used, revenues would decrease and it would take the partners 16 years, rather than 9 years as projected in January 1982, to fully recover the equity they contributed. According to Great Plains, the March analysis supports its right to terminate the project. However, Great Plains notified DOE on March 25, 1983, that it did not intend to do so at that time.

OBJECTIVE, SCOPE, AND METHODOLOGY

The objective of our review was to respond to seven issues raised by the Chairman, Subcommittee on Environment, Energy, and Natural Resources, House Committee on Government Operations, concerning the economics of the Great Plains project and DOE's monitoring of it. For ease of presentation, we paraphrased these issues into questions. We interviewed DOE, FFB, and ANG officials and obtained documentation supporting the verbal information provided.

We reviewed DOE and ANG documents supporting the amount of equity contributions made to date and those projected through December 1984. We also reviewed audit reports by the project's public accounting firm, Arthur Andersen & Co., regarding Great Plains financial statements, which include the amount and type of equity contributions made.

As the chairman requested, we obtained DOE's and ANG's estimates of costs if construction had stopped as of June 30, 1983. Because of time constraints in responding to this request and as agreed with the chairman's office, we did not conduct a detailed analysis of the project to verify the cost estimates

provided. We did, however, assess these estimates to determine if they were reasonable based on the assumptions made. We also reviewed (1) DOE's monitoring plan to determine the frequency of meetings held with ANG and Great Plains, (2) minutes of these meetings, and (3) DOE's role at these meetings.

To determine whether financial benefits accrued to the project by borrowing from FFB, we compared the interest rates Great Plains pays with those for AAA and BAA corporate borrowers without a Federal guarantee using Federal Reserve rates on the day closest to the day that FFB priced the Great Plains loans. The AAA bond rate normally indicates that the financial condition of the borrower is prime and there is only a small degree of risk for the lender. Considering the amount Great Plains expected to borrow--\$2.02 billion--and assuming the parent companies of the Great Plains partners provided collateral for the loans, the project might have been able to borrow at or near the AAA rate. However, if the parent companies did not provide collateral, the financial risk would have been greater and a BAA rate would have been more likely.

To determine the reasonableness of Great Plains' March 1983 cash-flow projections and the tax credits and benefits available to the project, we evaluated the assumptions used and the data produced by DOE's and ANG's computer models, which analyze the project's economics. We found that the data produced by both models were similar except that DOE's model includes tax assumptions which Great Plains' does not. We also reviewed DOE's tax assumptions and compared them with existing tax laws. We did not, however, obtain information on the tax status of each of the parent companies of the Great Plains partners.

Using DOE's model, we conducted sensitivity analyses of various gas price scenarios to determine what effect changing gas prices could have on the project's profitability. To conduct these sensitivity analyses, we analyzed the gas price projections Great Plains used in its March 1983 cash-flow report. To compare these projections, we developed our own estimated prices by increasing and decreasing Great Plains prices by 3 percent compounded annually over the life of the project. We believe that this 3-percent estimate is reasonable because of the fluctuations in energy prices over the last 10 years, and it approximates the range of other published estimates.

Although the chairman requested information on the costs to the Federal Government of five additional financial assistance options, we limited our analysis to three of the options--a below-market loan, a delay in the inservice date, and a postponement in repayment of principal on the guaranteed debt. We did not analyze the effect of a DOE price guarantee or price supports from the U.S. Synthetic Fuels Corporation because

neither DOE nor Great Plains could provide an estimated price level or range of prices they were considering.

Our review was conducted between May and July 1983. As requested by the chairman's office, we did not obtain official comments from either DOE or Great Plains on this report. We did, however, discuss the material presented with DOE's Program Manager for the Great Plains project as well as with ANG officials. Generally, they agreed with the material discussed. Except as noted, our review was performed in accordance with generally accepted government auditing standards.

The following sections discuss our analysis of the economics of the Great Plains project and DOE's monitoring of it.

Question 1: How much cash and inkind equity contributions will be made by the partners through December 1984? What return on equity do the partners expect to realize and how does this compare with current returns for the energy and chemical industries?

DOE agreed to guarantee and FFB agreed to lend up to \$2.02 billion of the originally estimated \$2.76 billion for the project. The partners agreed to contribute up to \$740 million from their own equity. The amount of the guarantee and equity contributions will, of course, depend on actual project costs. In March 1983, Great Plains estimated it would need to borrow \$1.552 billion from FFB and that the partners would contribute \$517 million in equity to complete the project. As of June 30, 1983, actual borrowing from FFB amounted to \$726 million and the partners had contributed \$320 million.

All equity contributions by the partners are cash contributions--the agreement prohibits the partners from making inkind or noncash contributions.

We could not calculate a return on equity based on Great Plains' March 1983 cash-flow report because that report does not consider tax implications which are necessary to make these calculations. Using Great Plains' March data and DOE's model which considers net equity and after-tax cash flow,² we found that the partners could realize an average annual 20-percent return on their investment over the first 20 years the plant operates.

Great Plains estimates significant losses during the first 8 years the plant operates. ANG officials pointed out that,

²Throughout this report, we refer to (1) equity which is the partners "out of pocket" investment, (2) net equity which is equity after recognizing the associated tax benefits, (3) net income before taxes, and (4) after-tax cash flow which is net income adjusted for depreciation, income taxes, etc.

although the long-term economic viability is attractive, the partners are concerned that their stockholders will not be willing to risk losses for the first 8 years for the possibility of a more favorable return over a longer period. However, Great Plains did not consider the implication of taxes when projecting these losses. If taxes are considered, there could be a positive cash flow to the partners throughout the life of the project if the parent companies are profitable enough to take full advantage of the tax benefits available to them.

The 20-percent rate of return cited above is based on the gas price assumptions used in the March 1983 report. Changing these prices could significantly affect the return on investment. For example, we found that the partners could earn an average annual return of as high as 27 percent or as low as nothing at all over 20 years if gas prices increased or decreased 3 percent from Great Plains' estimates.

The following table shows the after-tax profit on stockholders' equity for 4 sample years for the chemical and allied products industries and the petroleum and coal products industries.

<u>Industry</u>	<u>1970</u>	<u>1975</u>	<u>1979</u>	<u>1980</u>
	-----percent-----			
Chemical and allied products	11.4	15.2	16.7	15.4
Petroleum and coal products	11.0	12.5	20.4	20.0

Source: Statistical Abstract of the United States, 1981.

Annual returns on investment for these industries were not available for 1982, but we found that the quarterly returns for the chemical and allied products industries ranged from 8.7 percent to 13 percent. For petroleum and coal products industries, the range was from 11 percent to 14.1 percent.

ANG officials pointed out that, because Great Plains is a one-of-a-kind project, its return on investment would normally be higher than returns for these industries which reflect both old and new investment undertakings. Considering new investment projects only, ANG stated that the return for these industries probably would be between 20 percent and 25 percent.

Question 2: What financial benefits accrued to the project by borrowing from FFB at lower than commercial interest rates? What additional benefits could the project realize if DOE provides new, below-market interest rate loans?

Three potential benefits were available to Great Plains in using FFB compared with commercial financing. These are (1) reduced interest rates, (2) greater flexibility in terms of how much and how often money is borrowed, and (3) the elimination of underwriter fees. Quantifying these benefits retrospectively is difficult because of the uncertainties of the investment market, that is, the volatility of interest rates and the special characteristics of the project then being financed. However, an estimate of benefits is possible if some assumptions are made.

Reduced interest rates

To determine whether Great Plains obtained below-market interest rates by borrowing from FFB, we compared its estimated 13-percent FFB borrowing cost to costs it would have paid if it had borrowed at or near AAA or BAA corporate bond rates. We discounted the loan payments on 16 long-term (20 year) loans--totaling \$376.5 million--which FFB made to Great Plains between July and December 1982. The AAA rates which we used ranged from 11.70 percent to 14.32 percent and the BAA rates ranged from 14.16 percent to 16.70 percent. We assumed that the savings on these loans would provide a reasonable indication of the cost savings on the \$1.552 billion Great Plains expects to borrow.

We found that Great Plains would not have realized any savings by borrowing from FFB if one assumes that it would have borrowed at AAA corporate bond rates. The amount of savings due to the differentials between the FFB and BAA interest rates is 14.6 percent of the amount loaned. This percentage represents a weighted average of the savings for each of the 16 loans. Assuming the average savings would apply to the total projected borrowings of \$1.552 billion, the estimated savings to Great Plains by borrowing from FFB could have been up to \$227 million if it is assumed that Great Plains would have borrowed at BAA corporate rates.

Our estimates of the benefits to Great Plains by borrowing from FFB may be only part of the cost savings Great Plains derived. During the time the agreement was negotiated, new corporate bond yields averaged between 16 percent and 17 percent. Therefore, Great Plains could have had to pay in excess of the 13 percent it pays FFB to secure a loan from private investors.

Flexibility

FFB financing offers some similarities between the terms Great Plains arranged with FFB and those offered in the commercial lending markets. Great Plains has been borrowing varying amounts almost on a weekly basis which, according to FFB officials, allows it to enter the market quickly should interest rates decline.

During the construction phase, Great Plains has the option of short-term borrowing with maturity from 45 days to 1 year or long-term borrowing up to 20 years. Within 1 year of the inservice date, all short-term borrowing, however, must be converted to long-term loans. Great Plains has been taking advantage of the favorable market conditions in borrowing and has converted some of its short-term, high-rate borrowing to long-term, lower-rate borrowing.

Further, FFB agreed to provide three prepayment features in the Great Plains loan which are not normally included in FFB financing. These three features include (1) DOE's right after 10 years to require Great Plains to prepay all outstanding debt at par (100 percent of the principal amount of the loan being paid), (2) Great Plains' option beginning in 1988 to prepay loans twice a year in addition to FFB-specified mandatory payments, and (3) Great Plains' right after January 1992 to prepay at par plus a premium equal to a percent of the principal to be repurchased. Including these prepayment options provided Great Plains with flexibility similar to what it could have obtained in the private market. Because of these provisions, however, FFB charges Great Plains a 7/8-percent fee rather than its normal 1/8-percent fee. FFB set this fee because it believed this would be similar to what the private markets would charge for a loan with comparable features. While Great Plains may have been able to arrange similar terms from commercial sources, we do not know what types of flexibility Great Plains may have been able to negotiate with them.

Elimination of underwriter fees

Great Plains does not pay any underwriter fees to FFB. Underwriter fees are lending institution charges and attorney and accountant fees associated with granting or maintaining a loan. DOE estimated that Great Plains saved about 7/8 percent on the amount loaned by borrowing from FFB. We estimate that based on a \$1.552 billion loan these fees would have been about \$13.8 million.

Recognizing these savings, however, DOE required Great Plains to agree to perform up to \$12 million in environmental monitoring activities over and above those already required by permitting or licensing regulations. These activities are being carried out at the project sponsors' expense. Therefore, the benefits to Great Plains of not paying underwriter fees were offset, in whole or in part, by the costs of the additional environmental monitoring activities which DOE required Great Plains to agree to perform.

The additional benefits that the project could realize from a new, below-market interest rate loan are discussed on pages 14 and 15.

Question 3: What tax credits and benefits will the partners realize from this project?

The Great Plains partners do not directly realize tax credits and benefits from the project. However, the tax credits and benefits are available to the parent companies assuming they are profitable enough to make use of them. These benefits make this a potentially attractive investment for the parent companies.

During construction, the companies can take tax benefits for which they qualify on total project costs even though they contribute only 25 percent of the project's financing. During construction, three types of tax benefits are available-- investment tax credits and energy tax credits for construction progress payments made and interest deductions. Once the plant begins operating, additional tax benefits such as depreciation could reduce the companies' taxable income. Should Great Plains stop construction, most of these benefits would have to be repaid to the Department of the Treasury.

Tax benefits are also available to the parent companies after the project becomes operational. Any losses that are incurred can be used to offset the parent companies' profits. At the current marginal corporate tax rate, the parent companies' tax liability could be reduced by as much as 46 percent of the losses incurred. However, if Great Plains ends its participation in the project after the plant begins operating, the parent companies could lose some of the tax credits previously taken.

Great Plains did not consider--nor did DOE require it to consider--tax credits and benefits in its March 1983 cash-flow report. DOE, however, has considered the effect of taxes in its analyses of the project's economics.

DOE's assumptions are based on existing tax laws. DOE made the following assumptions: the project could qualify as a long-term project making the construction period interest deductible, the parent companies of the Great Plains partners will remain profitable enough to have sufficient tax liability to make use of the credits, and the current 46-percent corporate tax rate remains unchanged. DOE also assumes that the parent companies would be able to realize investment tax credits on the total costs of the gasification plant, coal mine, and pipeline and energy tax credits on the total cost of the gasification plant even though they contribute only 25 percent of the money to build the project.

Using DOE's model and the data provided in Great Plains' March 1983 report, we found that the tax benefits available to the parent companies during construction could reduce their

combined tax liabilities by \$400 million based on an investment of \$517 million. The net equity contributed (\$117 million) would be fully recovered within 2 years after the plant begins operating if after-tax cash flow is considered.

During 1984, the last year of construction, the partners could begin to earn a return on the money they invested because of the tax benefits available. The partners will contribute about \$116 million in equity in 1984, but the parent companies' tax liability could be reduced by \$155 million. Therefore, the parent companies could realize about \$39 million.

Tax benefits are also available after the project becomes operational. For example, the March report shows that the partners would have to put \$841 million into the project during the first 8 years it operates. During this same time period, however, the parent companies' tax liability could be reduced by \$922 million. In fact, there could be a positive cash flow to the partners throughout the life of the project if tax implications are considered.

Question 4: How much would it have cost the Federal Government and the project sponsors if the project had been terminated on June 30, 1983?

The Federal Government and the partners could have incurred substantial costs if Great Plains had ended its participation in the project on June 30, 1983. Since stopping construction could have occurred under various scenarios with complex legal ramifications, no precise cost estimate can be made. At a minimum, however, DOE, as loan guarantor, would have had to pay the \$726 million FFB loaned Great Plains, and the sponsors would have lost the \$320 million of equity they had contributed as of June 30, 1983. In addition, it could have cost between \$199 million and \$260 million to close down the project and pay outstanding orders, employee relocation costs, and certain contractual expenses. We do not know, however, who would have paid these additional costs since this would have depended on the scenario under which construction stopped.

Two situations are specifically cited in the agreement whereby Great Plains could end its participation in the project. These situations are termination of participation and default. Although the circumstances which trigger each of these situations and the amounts of liability differ, the costs to stop construction and many of DOE's subsequent remedies would be similar. The underlying uncertainty, however, is who would have to pay these costs since complex legal issues would have to be resolved.

The following sections discuss the criteria for termination of participation and default; the partners' liability under

each of these; the costs to stop construction; and DOE's remedies.

Termination of participation - Great Plains could terminate its participation in the project and not violate the agreement. The agreement includes criteria that allow Great Plains both during construction and after the plant begins operating to terminate its participation.³ During the construction phase, Great Plains could terminate its participation if unanticipated governmental actions (Federal, State, or local) cause the gross revenues for the first full year of operation to be less than \$300 million or (1) eligible costs, excluding pipeline costs, exceed \$2.6 billion, (2) the inservice date is delayed beyond June 1, 1986, or (3) reasonable assurance no longer exists that the project will generate funds sufficient (a) to pay all principal and interest on the guaranteed debt, (b) for the partners to fully realize the equity contributed within 10 years, and (c) to pay any other eligible debt by the end of 10 years. The partners are required to notify DOE 10 business days before they terminate.

According to Great Plains, the March 1983 cash-flow report shows that one of these criteria--that the partners will not recoup their \$517 million of contributed equity within 10 years--exists and Great Plains could legally terminate its participation. However, on March 25, 1983, Great Plains notified DOE that it did not intend to exercise its right to terminate at that time. If Great Plains were to terminate its participation, the partners would lose the amount of equity contributed up to that time.

Default - There could be a financial default whereby Great Plains is unable to pay the interest and principal on the guaranteed debt. There could also be nonfinancial default if Great Plains misrepresents or does not perform any of the covenants made with DOE that do not involve payments of debt. The agreement defines numerous occurrences which would constitute a breach or misrepresentation of covenants. In most cases, Great Plains has a grace period to cure the default before DOE assesses any liability. These time periods range from 5 to 30 days. If Great Plains does not act to cure the default within the grace period specified, DOE has a number of remedies.

In the case of a financial default, DOE could pay the principal and interest on the guaranteed debt if it determined, in part, that it would be in the public interest to allow Great Plains to continue with the project and Great Plains agrees to repay DOE for the payment made. DOE's other remedies for default are discussed below. If DOE declares a default, the partners would lose the equity contributed at the time of

³For purposes of this report, we concentrated on the criteria applicable for the construction period only.

default and, under certain circumstances, DOE could charge up to \$100 million for damages, but the partners would never lose more than \$740 million, the maximum amount they are required to contribute to the project under the agreement.

DOE's remedies and estimated costs if construction stops

If either of the situations discussed above occur, DOE would have to pay the principal and interest on the FFB loan. Because of the nonrecourse nature of the loan and guarantee, DOE cannot attach the assets of the parent companies but rather can only look to the value of the project assets for reimbursement. This would probably be done through a foreclosure sale. In addition, DOE would have a number of options that it could pursue such as completing construction, selling the project to a third party, or abandoning it. DOE's choice of options would depend on the circumstances existing at the time the termination or default occurred, such as the status of construction and the project's economic outlook.

However, these situations could entail numerous legal ramifications. Under certain circumstances, according to DOE, it might be able to sue the Great Plains partners and obtain a court order requiring Great Plains to complete the project. DOE may also be able to sue the partners for monetary damages based upon Great Plains' failure to conform to its agreement with DOE. DOE states, however, that its claim for damages against the partners could be based only on fraud or failure to meet the agreement obligations. If DOE could show that the partners acted fraudulently, the partners could be held liable for damages suffered by DOE. Conversely, under other circumstances, such as DOE declaring a default, the partners might have a basis for holding DOE responsible for damages.

We asked DOE and Great Plains to estimate costs if construction had stopped as of June 30, 1983. In arriving at these estimates, neither DOE nor Great Plains conducted a detailed review of the project and neither could say who would have paid these costs. DOE estimated it could have cost about \$260 million more than the \$1.05 billion already spent to wind up activities on the project. DOE's estimate includes interest expenses, payments for outstanding orders, costs for mining equipment, and administrative and personnel costs. Great Plains estimated that stopping construction could have cost about \$601 million. Although Great Plains included costs similar to DOE's, it also included \$286 million for plant dismantling and land reclamation costs and \$116 million to terminate an existing contract to purchase electricity. Neither DOE's nor ANG's estimates considered the tax implications of stopping construction.

Both DOE's and Great Plains' estimates are reasonable based on the assumptions made. DOE did not assume that the plant would be dismantled, the land reclaimed, nor termination costs incurred for electricity because it has the option of continuing with the project through an appointed designee or selling it. As a result, DOE assumes these costs would not be incurred. Taking these costs out of Great Plains' estimate, the total would be \$199 million. Therefore, it could have cost between \$199 million and \$260 million to close down the project if construction had stopped on June 30, 1983. This cost would be over and above the amount DOE would have to pay FFB and the equity losses the partners would incur.

Question 5: Are Great Plains' March 1983 cash-flow projections reasonable?

Great Plains' March 1983 projections are reasonable based on the assumptions made. However, Great Plains did not consider--nor did DOE require it to consider--the impact of taxes on the parent companies of the Great Plains partners when it analyzed the project's financial viability. The March projections are much less optimistic than the projections Great Plains made at the time the agreement was signed. The main reason for this difference is that the assumed synthetic gas prices used in the 1983 report are significantly lower than those Great Plains used in its 1982 analysis.

The following information highlights the differences between Great Plains' March 1983 cash-flow report and the projections provided DOE in January 1982.

- The project will experience losses during each of the first 8 years the plant operates, compared with 3 years. As a result of these losses, the partners will have to put \$841 million into the project over the 8 years to maintain a positive cash flow.
- The partners will not fully realize a return on the equity they contributed until 16 years after the plant begins operating, compared with 9 years.
- The project will incur a 10-year loss of \$773 million compared with a \$1.2-billion profit.
- Great Plains will borrow less money to construct the project--\$1.552 billion compared with \$1.585 billion.
- Great Plains would pay both the principal and interest on the guaranteed debt by the year 2000 rather than 1996.

The projected decreases for income in the 1983 analysis resulted mainly from decreased revenues because of the assumed

energy prices used. We found that 6 percent of the decrease was due to increased expenses and 94 percent to declining revenues. Therefore, since the project's financial viability largely depends on the assumed price of synthetic gas, we analyzed various price scenarios to illustrate their effect on the project's economics.

Using Great Plains' projections, we increased and decreased these prices by 3 percent per year compounded. Under our high estimate, the project could lose \$88 million during the first 10 years it operates, and under our low estimate, it could lose \$1.3 billion compared with Great Plains' estimate of \$773 million. In addition, under our high price estimate the partners would fully recover the equity they contributed within 12 years rather than the 16 years Great Plains estimates (before tax analysis). These examples demonstrate the project's sensitivity to the assumed future prices of synthetic gas.

In addition to being sensitive to gas prices, Great Plains' projections do not consider the implication of taxes. By excluding these implications, Great Plains provides only a limited analysis of the project's financial viability. For example, Great Plains estimates that it will take 8 years for the partners to realize income from the project. Considering after-tax cash flow, however, the partners might never be in a negative cash-flow position.

Question 6: What is the cost to the Federal Government of five options Great Plains is considering for additional financial assistance?

The chairman requested that we analyze five options which Great Plains could consider for obtaining additional Federal financial assistance. These options include a below-market interest rate loan, price guarantees from DOE, a postponement of the December 1984 inservice date, a stretchout of the repayment of principal on the guaranteed debt, and price supports from the U.S. Synthetic Fuels Corporation. As agreed with the chairman's office, we limited our analysis to three of these options. We could not analyze the options dealing with price guarantees from DOE or price supports from the U.S. Synthetic Fuels Corporation since neither DOE nor Great Plains could provide an estimated price level or range of prices which would be requested. The three options we evaluated--a below-market interest rate loan, a postponement of the inservice date, and a delay in repayment of the loan principal--vary in benefits to Great Plains and implications for the Federal Government.

Option: Below-market interest rate loan

According to DOE, the estimated overall interest rate on Great Plains' current borrowings is about 13 percent. In order

to show the effect on the project's profitability and on the Federal Government of lower interest rates, we analyzed the effect of a 6-percent, 8-percent, and 10-percent loan using DOE's model of the project's economics. In making this analysis, we assumed that the entire amount Great Plains borrowed to construct the project would be borrowed at these rates. As a result of this assumption, the amount of guaranteed debt would be less than the currently estimated \$1.5 billion because less debt-related expense (interest) would have been financed.

Our analysis showed that with one exception, the project would be profitable after 10 years of operation both before and after taxes if construction costs were financed at either a 6-percent, 8-percent, or 10-percent loan. The following table compares the data in Great Plains' March 1983 report with the income potential if Great Plains negotiated a loan at these rates.

	<u>Net income before taxes</u>		<u>After-tax cash flow</u>		<u>Average annual return on investment over 20 years</u> (percent)
	<u>10 years</u>	<u>20 years</u>	<u>10 years</u>	<u>20 years</u>	
	------(in millions) ^a -----				
GAO's analysis of March data ^b	\$ (764.8)	\$4,477.7	\$ 49.5	\$2,335.4	20.0
Lower interest rate analysis:					
6 percent	289.4	5,902.7	643.3	3,174.4	28.9
8 percent	7.5	5,521.9	483.9	2,948.5	26.9
10 percent	(286.2)	5,124.7	318.0	2,713.7	24.6

^aCurrent year dollars—not discounted.

^bSince Great Plains does not show after-tax cash flow or return on investment in its analysis, we used DOE's model to analyze Great Plains data.

While these options are very attractive for the project, the Federal Government could lose \$705 million, \$517 million, and \$321 million in interest income for a 6-percent, 8-percent, and 10-percent loan, respectively.

Option: Postponement of inservice date

Great Plains continues to project a December 1984 startup or inservice date for the gasification plant. However, the agreement provides that the inservice date could be as late as June 1986. If Great Plains delayed starting the plant, it would continue borrowing money for the project.

As part of its monitoring of the project, DOE has analyzed the impact of a 1-month delay and a 6-month delay of the project's inservice date. According to DOE officials, the impact of either a 1- or 6-month delay would have a minimal effect on Great Plains' profitability and ability to repay the loan.

Because DOE analyzed 1- and 6-month delays and since Great Plains had discussed a 9-month delay with DOE, we limited our analysis to a 9-month delay. The results of this analysis substantiated DOE's findings for 1- and 6-month delays that the project would be in a position similar to what is presented in Great Plains' March 1983 cash-flow report. The following table compares the impact of a 9-month delay on the project's economics to Great Plains' March projections:

	<u>Net income before taxes</u>		<u>After-tax cash flow</u>		<u>Average annual return on investment over 20 years</u>
	<u>10 years</u>	<u>20 years</u>	<u>10 years</u>	<u>20 years</u>	<u>(percent)</u>
	----- (in millions) ^a -----				
GAO's analysis of March data ^b	\$ (764.8)	\$ 4,477.7	\$ 49.5	\$ 2,335.4	20.0
9-month delay	(910.9)	4,272.5	58.7	2,224.7	23.8

^aCurrent year dollars--not discounted.

^bSee explanation on previous table.

Great Plains would continue borrowing money for the project if it delayed the inservice date by 9 months. This would occur because the loan agreement provides that Great Plains can continue borrowing funds for construction and startup expenses through the disbursement cutoff date, which is currently estimated to be December 1985. According to our assessment, a 9-month delay could result in Great Plains' borrowing about \$185 million to maintain a work force and pay electricity and insurance. This amount would be over and above the \$1.5 billion

Great Plains currently expects to borrow. The additional \$185 million would not increase the total amount borrowed to more than the \$2.02 billion DOE agreed to guarantee.

Option: Delay repayment of loan principal

Although the interest on the FFB loans are due and payable semiannually beginning in July 1982, the first principal payment on these loans is not due until January 2, 1988. Therefore, the agreement already includes a delay in the payment of principal.

We analyzed the impact of an additional 5-year delay and a 10-year delay until 1993 and 1998, respectively. If agreement was reached to delay payments by either 5 or 10 years, the project's after-tax cash flow would be better for the tenth year the plant operated but worse after 20 years than Great Plains projected in its March 1983 report. The following table compares the results of our analysis with Great Plains' March cash-flow report:

	<u>Net income before taxes</u>		<u>After-tax cash flow</u>		<u>Average annual return on investment over 20 years</u>
	<u>10 years</u>	<u>20 years</u>	<u>10 years</u>	<u>20 years</u>	
	----- (in millions) ^a -----				(percent)
GAO's analysis of March 31 data ^b	\$ (764.8)	\$4,477.7	\$ 49.5	\$2,335.4	20.0
Delay principal:					
5-year delay	(1,026.2)	3,973.1	315.7	2,062.7	24.1
10-year delay	(1,054.1)	3,468.6	593.1	1,790.6	25.9

^aCurrent year dollars—not discounted.

^bSee explanation on previous table.

If Great Plains pays both the principal and interest, there should be no adverse effect on the Federal Government. The longer Great Plains delays in paying principal, the more interest it will have to pay on the outstanding debt. However, if the Federal Government's borrowing costs go above the overall estimated 13-percent rate Great Plains pays, then the Government's costs would increase. But if the Government's rates go below Great Plains' rate, the Government would benefit.

From the project's standpoint, delaying repayment of principal could be a very attractive alternative. Although Great Plains would be paying the additional interest, the average annual return on investment over 20 years would be higher than projected in the March report.

Question 7: What is DOE's role in monitoring this project and what are its responsibilities under section 2.08 of the agreement?

DOE has plans, procedures, and a multidisciplined organization of governmental employees and support contractors to monitor the Great Plains project.⁴ As part of its monitoring functions, DOE conducts monthly status meetings and quarterly technical meetings with ANG to discuss the status of the project, problem areas, and corrective actions ANG has taken or proposes to take. DOE prepares agendas prior to and minutes after each meeting. DOE queries the members of its various management organizations to select topics for discussion at these meetings. The matters discussed reflect DOE's concerns at the time. For example, DOE discussed the proposed acquisition by Pacific Synthetic Fuel of a portion of the project and the reason for ANR Gasification Properties Company selling a portion of its share at the June 1982 meeting. In March 1983, structural repairs to the gasification and coal storage facilities were discussed.

In addition, each quarter DOE meets with the Great Plains Management Committee, which is composed of representatives of the five partners. DOE suggests items for discussion, but Great Plains prepares the agendas for these meetings. Topics discussed are of a broader nature. For example, in April 1982, one of the topics was the effect on the project's economics of proposed reductions in investment tax credits and the basis for Great Plains' optimism for a December 1984 startup date. In March 1983, the meeting centered on Great Plains' cash-flow projections and additional financial assistance options. DOE also has the option of convening other meetings with both Great Plains and ANG when the situation warrants. In February and March 1983, special meetings were held to discuss the then pending March cash-flow projections.

Overall, DOE officials stated that they have been satisfied with ANG's and Great Plains' responses at these meetings and believe they contribute to an amenable working relationship between all parties involved in the project.

⁴For a further description of DOE's monitoring activities, see our reports: "Status of the Great Plains Coal Gasification Project Loan Guarantee--February 1982" (EMD-82-55, Mar. 6, 1982) and "Status of the Great Plains Coal Gasification Project--August 1982" (GAO/EMD-82-117, Sept. 14, 1982).

If certain conditions occur, section 2.08 of the agreement allows DOE to withdraw its guarantee for amounts not already loaned. The purpose of this provision is to protect the Government's interest. The conditions under which DOE can withdraw the guarantee include

- either a financial or nonfinancial default occurs,
- DOE determines there no longer exists a reasonable assurance that the loan will be repaid,
- the gas pricing formula is amended to adversely affect the project's economics,
- abandonment occurs, and
- a cost or schedule overrun occurs and either 2 months elapse or \$45 million in disbursements is authorized without Great Plains having taken corrective actions satisfactory to DOE.

In DOE's opinion, none of these conditions have occurred, and it is not anticipating exercising its right to withdraw the guarantee. As of July 19, 1983, Great Plains had not defaulted on the payment of principal (which is not required until 1988) or interest (which is rolled in with new borrowings when due). Also, according to DOE, Great Plains has not breached any of the covenants made to DOE. Further, the gas pricing formula is still in place, Great Plains has not abandoned the project, and construction is almost on schedule and under cost. In addition, since August 1982, DOE has conducted analyses of the project's economics which show that under varying conditions Great Plains could repay the loan. If DOE were to withdraw its guarantee, it is likely, according to a DOE official, that DOE would have to pay FFB for the amounts Great Plains had borrowed. As of July 19, 1983, DOE still believed that the project--although in a somewhat less favorable financial position than in January 1982--could generate sufficient funds to repay the loan.

Although DOE can under certain circumstances withdraw Great Plains' loan guarantee, DOE will not do so at this time. DOE does not believe that any of the conditions necessary for it to institute such an action have occurred.

MIKE JYMAR, OREGON, CHAIRMAN
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MAJORITY—228-427
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NINETY-EIGHTH CONGRESS

Congress of the United States

House of Representatives

ENVIRONMENT, ENERGY, AND NATURAL RESOURCES
SUBCOMMITTEE

OF THE

COMMITTEE ON GOVERNMENT OPERATIONS
RAYBURN HOUSE OFFICE BUILDING, ROOM B-371-B-C
WASHINGTON, D.C. 20515

April 8, 1983

Honorable Charles Bowsher
Comptroller General
U.S. General Accounting Office
Washington, D.C. 20538

Dear Mr. Bowsher:

Yesterday I received a copy of a March 31, 1983, report from the Great Plains Gasification Associates to the Department of Energy which projected that the net income of the Great Plains synthetic fuels plant during the first 10 years of its existence would be \$1.96 billion less than was estimated by the sponsor when the department signed a loan guarantee agreement for this project just over a year ago.

More specifically, the project sponsors have estimated that the project will have a net loss of \$773 million -- "significant partnership losses" -- during its first 10 years of operation, even taking into account the above-market price support it had already received for its synthetic gas in a rate proceeding at the Federal Energy Regulatory Commission (FERC).

According to the sponsor's projections, these losses will begin immediately after plant start-up, and will be in the hundreds of millions of dollars annually. The projected loss will be \$253.8 million in 1985; \$200 million in 1986; in 1987, \$133.2 million; in 1988, \$54.4 million; in 1989, \$77.4 million; and in 1990, \$106.1 million. (Annual Cash Flow Projection, Great Plains Gasification Associates, March 31, 1982, copy attached.) The result is that, "as compared with a projected return of equity within nine years under assumptions used in the Information Memorandum, the current cash flow projection indicates that equity would not be returned for 16 years." (Annual Cash Flow Projection, p. 7.)

The loan guarantee agreement which the Energy Department signed includes a "Partners Consent and Agreement" which would allow the five partners in the Great Plains project to terminate participation in the project if a determination is made that:

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"there no longer exists reasonable assurance that the Project will generate cash sufficient to permit Borrower to (i) pay when due all principal of, and interest on, all then outstanding Guaranteed Indebtedness, (ii) making Distributions in an aggregate amount during the ten year period following the In-Service Date which is at least equal to the Contributed Equity as of the Disbursement Cut-Off Date, and (iii) repay any other Debt of Borrower permitted under the Guarantee Agreement by the end of the ten year period following the In-Service Date, regardless of when such Debt by its terms is due." (Loan Guarantee Agreement, Great Plains Gasification Associates, Exhibit G, p. G-4-5, Jan. 29, 1982.)

From the information provided by the sponsors of the Great Plains project, it appears that they now have the option of terminating their participation in this \$2.1-billion plant, of which approximately 75 percent of the capital investment is supported by a federal loan guarantee. Press reports and a preliminary investigation by the Subcommittee staff indicate that those sponsors may begin looking to the Federal Government for a solution to their projected financial dilemma. A number of their options (which could be used singly or in combination) are listed below, all of which will have significant adverse effects on the Federal Treasury. These include:

1. A loan at a favorable, well-below-market interest rate from the Department of Energy to Great Plains Gasification Associates, with the proceeds to be used to repay GPCA's existing loans. The result would be a lowering of the interest rate (now at 12.8 percent) paid by the sponsors for their government funds. Under this option, hundreds of millions of dollars could be provided to the project and lost to the Federal Treasury.
2. A federal price guarantee for the synthetic gas, over and above the subsidy already provided by FERC. If the project is to maintain its projected return on equity, this price guarantee over the first ten years of operation would be \$2 billion.
3. A postponement of the "in-service" date for the project. This date is currently December 1, 1984. Such a postponement would allow the project to borrow additional hundreds of millions of dollars for working capital during its first years of existence.
4. A stretch-out of the repayment of the principal amounts of the federal debt. Such an option would allow the company to pay off its equity during the

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first 10 years of operation and postpone its debt until later when, presumably, energy prices would be more favorable than they are expected to be in the early years.

5. Obtaining price supports from the Synthetic Fuels Corporation in addition to existing federal support.

The first two options listed above would require Congressional approval; it appears that none of the rest would be subject to Congressional review. There may, of course, be other options of which we are not yet aware.

It is anticipated that the sponsors of this project will be making proposals for further financial assistance within the next 30 to 60 days. It is of great concern to me that, in its decision-making process, Congress have complete and unbiased information about the potential costs and benefits of completing and operating this plant both for the American taxpayer and for the private sponsors.

I therefore am requesting that the General Accounting Office undertake a full investigation of this project and report back to me by June 15, 1983. Your investigation should include, but need not be limited to, addressing the following issues:

1. Equity

- a. Equity contributions of the partners to the Great Plains project, breaking out cash and in-kind contributions to date and those anticipated through the start-up period.
- b. Return-on-equity projections, as estimated in the Information Memorandum and as projected in the most recent annual report to the Department of Energy. Include calculations of net income to the project under existing contract if return-on-equity is reduced, and compare to current returns for the energy and chemical industries.

2. Interest

- a. Compare interest rates provided for under the present loan guarantee with those available for comparable non-government loans on an annual basis, and the benefit (cost) to the project of a federal guarantee.

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- b. Analyze the potential additional annual benefit to the Great Plains project of utilization of Option 1 described above under which the Department of Energy would provide new below-market-interest loans to this project.

3. Tax Benefits

Analyze in full the tax credits and benefits that will be available to the partners in this project throughout its life, if it is completed, or up to the present time if it is terminated.

4. Termination

- a. Review the costs of termination to (i) the federal government, and (ii) the project sponsors if the project is terminated as of June 30, 1983. This analysis should include a discussion of the collateral available to the government if there is a default on existing loans, and should account for any tax benefits that may have already accrued to the project sponsors.

5. Projections

- a. Analysis of the projections provided in the March 31, 1983, submission to the Department of Energy. GAO's review should include an analysis of materials costs, including coal, operation and maintenance costs, and by-product sales projections and a comparison of the March projections with those in the Information Memorandum.

6. Options

Analysis of the cost to the federal government of exercising each of the five options listed above and any other options that may be proposed to assure that the Great Plains project will receive the revenues projected in the Information Memorandum. For the price support options, please provide a support figure per mcf.

7. Role of the Department of Energy

- a. Review the role of the Department of Energy as a member of the management committee of the Great Plains project.

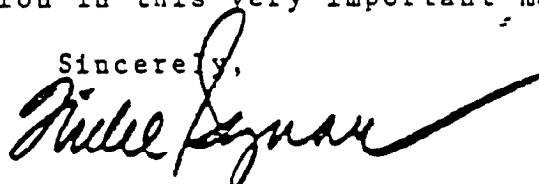
Honorable Charles Bowsher
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April 8, 1983

- b. Analyze the responsibility of the Department of Energy under Section 2.08 of the loan guarantee agreement (Reduction of Withdrawal of Guarantee) which states that the Energy Secretary may halt the loan guarantee if he determines that "the conditions related to the construction or operation of the Facilities, the Pipeline or the Mine are such that there no longer exists a continuing reasonable assurance that the Guaranteed Indebtedness and interest thereon will be paid." Please discuss in full the actions of the Energy Department to monitor and analyze this contract.

I am also requesting that during your investigation your staff provide periodic briefings to the Subcommittee staff so that we can determine if this request should be modified or expanded in any way that will benefit our oversight responsibilities. If you have any questions or require any additional information or clarification, please contact Edith Holleman or Steven Engelman of my staff at 225-6427.

Thank you for your cooperation in this very important matter.

Sincerely,



MIKE SYNAR
Chairman

Enclosure

EH/bm

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