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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION

B-207876

OCTOBER 17, 1983

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The Honorable Byron L. Dorgan
House of Representatives

Dear Mr. Dorgan:

Subject: Financial Situation of the Great Plains Coal Gasification Project (GAO/RCED-84-59).

Your letter of October 3, 1983, requested that we answer four questions concerning the financial situation of the Great Plains Coal Gasification Project. Specifically you asked:

1. How do the most current oil price projections by the Department of Energy (DOE) for the National Energy Policy Plan IV (NEPP IV) compare to the estimates the sponsors used in their March 31, 1983, cash flow forecast?

2. What would be the annual and cumulative after-tax cash flow to the partner companies if the most recent DOE projections are used?

3. What would be the effect on the after-tax book earnings of the partner companies based on the current DOE middle and low case forecasts?

4. Are further solicitations for competive bids required before the U.S. Synthetic Fuels Corporation may enter into direct negotiations with Great Plains for price guarantees? (See Section 131(B)(4) of the Energy Security Act.)

You asked that we provide this information for your use during hearings on this project scheduled for October 18, 1983, before the Subcommittee on Environment, Energy, and Natural Resources, House Committee on Government Operations.

While we are able to provide you information on your first three questions, the fourth raises legal issues which are not

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readily answerable. We advised your office that the legal issue you raised is already being addressed by us as a prior request from the Ranking Minority Member, Subcommittee on Fossil and Synthetic Fuels, House Committee on Energy Conservation and Power.

OBJECTIVE, SCOPE, AND METHODOLOGY

The objective of our work was to respond to the three questions which you raised. We reviewed several drafts of the DOE's NEPP IV, calculated synthetic gas prices using Great Plains' methodology, converted these prices to current year dollars, and used DOE's computer model of the project's economics to conduct some of the analysis you requested. Previously, we had evaluated the assumptions used and the data produced by DOE's model and found it to be reliable.

PERSPECTIVE ON THE PROJECT

On January 29, 1982, the Secretary of Energy awarded a loan guarantee for up to $2.02 billion of the originally estimated $2.76 billion construction costs to Great Plains Gasification Associates--a partnership of five companies--to construct in Mercer County, North Dakota, the Nation's first commercial-scale plant producing synthetic gas from coal. The Department of the Treasury's Federal Financing Bank agreed to lend Great Plains the $2.02 billion DOE agreed to guarantee, with Great Plains financing the remaining costs from its own funds or equity. Great Plains currently estimates that it will borrow about $1.5 billion with the partners contributing about $517 million in equity. Initial gas production is scheduled to begin during August 1984 with full gas production scheduled for December 1984.

The loan guarantee 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. In March 1983, Great Plains submitted its first report since the agreement was signed. The March projection was much less optimistic than the projection Great Plains made at the time the agreement was signed. The main reason for this difference was that the assumed synthetic gas selling prices--which are set by a formula tied to future energy prices--used in the March report were significantly lower than those Great Plains used in 1982 to justify construction. For example, in January 1982 Great Plains estimated that in 1985 it could sell its gas for $10.34 per million Btu's and in March 1983 it estimated the 1985 selling price would be $6.61 per million Btu's. Since the project's economic viability is closely linked to future energy prices, its sponsors became concerned that the lower DOE energy price projections create a serious financial risk for them.

At the request of the Chairman, Subcommittee on Environment, Energy, and Natural Resources, House Committee on Government Operations, we issued a report in August 1983 on the economics of the Great Plains project.[1] We noted that Great Plains did not--nor was it required to--consider tax implications to the parent companies in its March 1983 analysis. If it had, the economics could be more optimistic than the March 1983 analysis showed. We also noted that although the project is a potentially attractive investment, its financial viability is extremely sensitive to the future prices of synthetic gas and even a small deviation in prices could significantly affect its economics.

We also issued in September 1983 our semiannual, legislatively mandated report[2] on the Great Plains project. That report is required by the Department of Energy Act of 1978--Civilian Applications (Public Law 95-238). This report also discusses the project's economic viability based on Great Plains' March 1983 analysis.

RESPONSE TO QUESTIONS

Question 1: How do the most current oil price projections by the Department of Energy for the National Energy Policy Plan IV compare to the estimates that the sponsors used in their March cash flow forecast?

The following table provides the world oil prices per barrel that Great Plains used in its March analysis and the most recent DOE estimates. In both cases the forecasts are based on NEPP IV preliminary forecasts as of the specified date. DOE plans to issue its final NEPP IV forecasts on October 17, 1983.

[1] Economics of the Great Plains Coal Gasification Project (GAO/RCED-83-210, Aug. 24, 1983).

[2] Status of the Great Plains Coal Gasification Project--Summer 1983 (GAO/RCED-83-212, Sept. 20, 1983).

World Oil Prices Per Barrel

Year	Great Plains March 1983[a] Low	Mid	High	Department of Energy September 1983 Low	Mid	High
1985	$22.79	$26.71	$30.21	$21.00	$25.90	$30.50
1990	27.03	36.57	49.29	26.00	31.90	40.00
1995	37.10	47.70	59.36	30.00	46.50	60.00
2000	47.70	58.30	69.43	36.00	57.40	80.00

[a]These prices have been inflated to 1982 dollars by the rate (6 percent) Great Plains uses in order to be comparable to DOE's September prices which are in 1982 dollars.

The price at which Great Plains will sell synthetic gas is controlled by gas purchase contracts which contain a pricing formula. However, the formula sets certain caps on the price Great Plains can charge for its gas. For example, during the first 5 years of production, the price cannot exceed the unregulated price of No. 2 fuel oil.[3]

Question 2: What would be the annual and cumulative after-tax cash flow to the partner companies if the most recent DOE projections are used?

The following table provides both the annual and cumulative after-tax cash flow for the most recent (September 1983) DOE prices. This information is shown for DOE's three price ranges (low, mid, and high). The table also shows the average rate of return that would be anticipated over the first 20 years of plant operations based on the September 1983 prices.

[3]For a detailed discussion of the pricing formula, see our report entitled Status of the Great Plains Coal Gasification Project--Summer 1983 (GAO/RCED-83-212, Sept. 20, 1983).

Annual and Cumulative After-Tax Cash Flow Using September 1983 DOE Projections

Year	Low case[a] Annual	Low case[a] Cumulative	Mid case[a] Annual	Mid case[a] Cumulative	High case[a] Annual	High case[a] Cumulative
1985	$ -9.7	$ -9.7	$ 12.4	$ 12.4	$ 33.0	$ 33.0
1986	140.8	131.1	170.8	183.2	206.4	239.4
1987	89.7	220.8	130.9	314.1	181.8	421.2
1988	-32.0	188.8	18.7	332.8	80.0	501.2
1989	-82.6	106.2	-48.3	284.5	-3.9	497.3
1990	-169.4	-63.2	-144.5	140.0	-113.3	384.0
1991	-156.1	-219.3	-125.3	14.7	-84.9	299.1
1992	-140.0	-359.3	-102.2	-87.5	-52.4	246.7
1993	-128.4	-487.7	-83.3	-170.8	-21.3	225.4
1994	-113.6	-601.3	-59.1	-229.9	16.8	242.2
1995	-103.8	-705.1	-39.2	-269.1	51.9	294.1
1996	-89.0	-794.1	-10.0	-279.1	99.7	393.8
1997	-59.0	-853.1	36.4	-242.7	167.2	561.0
1998	-43.6	-896.7	70.6	-172.1	227.1	788.1
1999	-13.1	-909.8	123.4	-48.7	309.7	1,097.8
2000	11.0	-898.8	174.0	125.3	393.2	1,491.0
2001	32.2	-866.6	217.6	342.9	473.9	1,964.9
2002	92.8	-773.8	303.3	646.2	602.4	2,567.3
2003	145.8	-628.0	383.8	1,030.0	733.1	3,300.4
2004	194.5	-433.5	464.2	1,494.2	870.4	4,170.8
Average annual rate of return	Negative		13.2%		26.1%	

[a]Expressed in millions, current year dollars.

Question 3: What would be the effect on the after-tax book earnings of the partner companies based on the current DOE mid and low case forecasts?

Calculation of after-tax book earnings for the individual partner companies would be impossible without access to proprietary company books. However, as shown in the following table, the amounts that would be distributed to the partners vary from what they would have been in March 1983. For example, over the first 20 years of operations, the partners could receive from $2.8 billion less to $1.8 billion more than what they would have received using the March 1983 projection.

September 1983 projection	Difference between March and September 1983
	(billions)
Low case	$(2.8)
Mid case	(.8)
High case	1.8

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We plan to release this report on October 18, 1983. At that time we will send copies to the Secretary of Energy, ANG Coal Gasification Company (Great Plains project administrator), and other interested parties and make copies available to others upon request.

Sincerely yours,

J. Dexter Peach

J. Dexter Peach
Director