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**FEASIBILITY STUDY OF A
CORN-TO-ETHANOL PLANT IN
SARDIS, MISSISSIPPI**

MASTER

Volume I

JUNE 1982

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**For the U.S. Department of Energy
Office of Alcohol Fuels
Under Grant No. DE-FG07-81ID12277**

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ABSTRACT

Sun Belt Energy Corporation carried out a DOE-sponsored feasibility study for a corn-to-ethanol plant in Panola County, Mississippi. This area is well suited for the production of ethanol from corn, as it has a mild climate, a plentiful supply of wood fuel, and a well-developed agricultural infrastructure. The project was designed for 5 million gallons per year, using the ACR Process, a process proven in 6 plants now operating. It was determined to be technically feasible for this size. However, without a state financial incentive such as a gasoline excise tax or sales tax exemption, the plant is not economically feasible in Mississippi. Even though a 4¢ per gallon federal excise tax exemption will likely remain, the economics without any other incentive are not strong enough to obtain financing or equity funds. While the Mississippi legislature decided not to consider a financial incentive in their 1982 session, an attempt will be made to introduce a proposal for a suitable exemption during the 1983 legislative session. Until then, the project is on hold.

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PROJECT DESCRIPTION

Sun Belt Energy Corporation (Sun Belt) is dedicated to the planning, construction, and operation of a fuel alcohol plant in Panola County, Mississippi. The three principals of the corporation, Mr. Billie Shepard, Mr. Harold Graham, and Mr. Fred Klyce, are all residents of Panola County and are fully committed to the successful development of the project. That commitment is evidenced by a substantial investment of time and money by the principals in project planning and pre-feasibility study efforts to date.

Mr. Shepard, President of Sun Belt, is a retail gasoline dealer for Chevron U.S.A. and has major farming and livestock interests in the county. He is a former president of the Panola County Farm Bureau and has served as personal advisor to the Governor of Mississippi.

Mr. Graham, Vice President of Sun Belt, has substantial experience in agriculture and agricultural administration. He owns and operates a large soybean farm and cattle ranch, and for several years was a member of the Panola County Farmers Home Administration. In addition, Mr. Graham has experience in energy facility construction.

Mr. Klyce, Secretary-Treasurer of Sun Belt, has served as President of the Panola County Bank since 1964, is President of the Mississippi Cattlemen's Association, and is a former chairman of the Agricultural Committee of the Mississippi Bankers Association. As a local farmer and rancher, Mr. Klyce is thoroughly acquainted with local business and economic conditions.

To achieve its goal, Sun Belt has retained substantial professional services. Bechtel Petroleum, Incorporated, has conducted an engineering feasibility study that has verified the feasibility of the ACR process on Sun Belt's site. Within the past two years, Bechtel Petroleum, a leader in the engineering design of fuel alcohol plants,

has conducted more than a dozen fuel alcohol plant feasibility studies throughout the United States. Moreover, the firm has completed final designs of two projects specifically using the ACR process: a 2.5-million gallon per year (mgpy) facility in Oklahoma, which began operations in 1981; and a 20-MGY facility in Kentucky, which is under construction. Carothers and Carothers, a Mississippi general contractor with extensive experience in the design and construction of industrial facilities, has assessed the transportation and geotechnical requirements for the proposed plant.

Resource Planning Associates, Inc. (RPA), a management consulting firm specializing in energy and natural resources, has assisted Sun Belt in the market, resource supply, financial, and impact analyses for the project.

The major process steps of the fuel alcohol plant are shown in schematic form in Exhibit 1.1. Briefly, grain is delivered to the storage silos at a rate of 5,700 bushels per day and is then milled to produce a fine meal. The meal goes through a number of processes, including cooking, fermentation, and distillation, resulting in the production of ethanol and a byproduct, distillers' dried grain solubles (DDGS). The DDGS has a high protein content and can be sold as cattle feed.

The plant's equilibrium power capacity requirements are about 22,000 pounds per hour of steam and 1 MW of electric power.

Panola County, Mississippi, is well suited for the production of ethanol from corn and other grain. It enjoys a fine agricultural climate, with an average of 300 days of sunshine and less than 20 days of freezing weather each year. An adequate supply of grain and wood fuel, the presence of a well-developed agricultural infrastructure, and easily accessible road, rail, and water transportation systems provide Sun Belt with an excellent operating environment.

Sun Belt proposes to build the grain-to-ethanol plant on a 120-acre industrial park site. The site is between U.S. Highway 51 and Interstate 55, about one mile north of Sardis, Mississippi, and 45 miles south of Memphis, Tennessee (see Exhibit 1.2). It is adjacent to mainline trackage of the Illinois Central Gulf Railroad, and is

2 miles from Interstate Highway 55 and 30 miles from the Mississippi River. Sun Belt has acquired an option to purchase the property.

The site is located on gently sloping (2-5 percent grade) Grenada soil.* According to the Soil Conservation Service, U.S.D.A., "This area is not in a flood plain and would be suitable for the kind of light industry proposed.... No water problem exists. The area is moderately well drained."

Other important site characteristics include the following:

- It is zoned for industrial use
- There is an electric power substation within 1.5 miles
- Water supply and sewage disposal systems are available to the site.

Wood is planned as the fuel to fire the boilers that provide steam for the alcohol production process. The fuel requirements of such a facility would be 112 tons of wood per day. There are 500-1,000 tons per day of wood waste (low-quality timber, wood chips, and sawdust) currently available from nearby sawmills (e.g., Floyd Lumber Company, Yunt Lumber Company, and Tallahatchie Hardware, Inc.), plus 1,000-2,000 tons per day of locally harvestable timber.

* A site survey was made, topographic maps were obtained, and relevant soils factors were evaluated. The final plant layout (see Volume II) reflects this evaluation.

Exhibit 1.1

Sun Belt Ethanol Plant
Flow Diagram

Exhibit 1.2

Sun Belt Ethanol Plant
Proposed Plant Site

Scale

Exhibit 1.2 (continued)

**Sun Belt Ethanol Plant
Vicinity Map**

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PROJECT FEASIBILITY

The project, sited in Sardis, has been determined technically feasible, as well as feasible from a regulatory point of view (environmental and associated impacts). However, without a state financial incentive, such as a state gasoline excise tax or sales tax exemption, the project is not economically feasible at the Sardis site, or any other site in Mississippi. As of now, the state legislature has decided not to consider such a financial incentive. The factors affecting the feasibility of the project are summarized below, and discussed in detail in the report sections that follow.

Technical Feasibility

The plant, as designed for the Sardis site, has been determined by Bechtel Petroleum to be technically feasible. The capital and operating costs are based on a previously proven design of a 2.5-million gallon per year plant, scaled up for the 5-million gallon per year capacity of the proposed plant. The local transportation systems and utilities can physically accommodate the supply of resources, satisfactory operation of the plant, and movement of the product. The technical feasibility is discussed in detail in Volume II of this report.

Economic/Financial Feasibility

Without a state financial incentive, the economic feasibility of the proposed plant in Mississippi is not strong enough to obtain financing from any type of financing source. Likewise, the economic feasibility is not strong enough to attract the necessary equity funds. While the Mississippi legislature decided not to consider a financial incentive in the 1982 session just completed, an attempt will be made to introduce a proposal for a suitable exemption in the 1983 session. The project cannot

move forward before then unless the plan is shifted to another state with a sufficient incentive. Beyond the scope of this feasibility study, Sun Belt is exploring such opportunities. The economic/financial feasibility is discussed in Sections 3 and 4.

3

RESOURCE AND PRODUCT MARKET

3.1 RAW MATERIALS

Grain Feedstocks

The plant is designed for corn. Grain sorghum (milo) or wheat can be used, with some equipment changes, e.g., the screen size for the hammermill. Fifteen days of on-site grain storage will be provided, supplemented by another 30 days' storage in local cooperative and farm facilities. The on-farm storage facilities and local elevators assure continuous delivery for the plant.

The initial supply (2 million bushels per year) will be supplied by a large grain company at a price tied by formula to an established grain exchange price. I.S. Joseph has expressed an interest in supplying the corn and purchasing the DDGS output from the plant; International Multifoods and Ralston Purina have also expressed interest in purchasing the plant's DDGS output, priced as delivered to the plant site.*

Transportation systems for delivering the grain are excellent. Sardis is located 45 miles south of Memphis. There are several trucking companies, including Beard Truck Lines and Rebel Motor Freight. Further, large grain companies have multi-state trucking firms under contract for continuous delivery of their products. As shown in Exhibit 1.2, the site is well situated with regard to major highway and railroad systems.

Over time, as local crops can be shifted, local grain supplies will be phased in through a combination of farm cooperative and individual farm supply channels. Based on

* Exhibit 3.1 contains related letters of interest.

an analysis by the Mississippi Agricultural Extension Service, the local area clearly has the grain supply capability. See Exhibit 3.2. Exhibit 3.3 contains a draft contract to be used. Further, where the economics would be enhanced by it, distressed grain and low-price grain opportunities will be exploited to minimize the cost of the feedstock. Sun Belt has made contact with two sources of such lower-cost grain, one in Memphis and one in Houston, both of which have continuous supplies of such special grain.

Finally, in order to properly manage the commodity nature of the grain price, Sun Belt will include grain-brokering expertise in its plant organization. It is Sun Belt's intent to buy options to hedge against adverse changes in grain prices that could increase the cost and decrease the profits of the plant operation.

Fuel

Wood is planned as the boiler fuel, with 112 tons per day to be supplied from nearby sawmills and harvestable supplies. Due to the large quantity of locally available wood, only three days' on-site storage will be provided.

An extensive wood-supply survey has been conducted, which indicates the immediate availability of 500-1,000 tons per day of waste wood from nearby sawmills, and 1,000-2,000 tons per day of locally harvestable timber. Competition for these wood supplies is expected to be limited, as there are no sales now of such wood supplies, and the 112 tons per day required by the plant is small compared to the total available supply of wood. That is, a number of industrial plants using wood as a fuel could be constructed in northern Mississippi without demand even approaching the available supply of wood.

A contract has been preliminarily negotiated at \$10.70 per ton (1982 dollars), delivered and chipped, subject to an inflation escalation. The contract has been negotiated with Wood Services, Inc.*

* Exhibit 3.4 contains the draft contract language, and Exhibit 3.5 contains the wood supply study results.

3.2 DDGS BYPRODUCT

The DDGS byproduct (16-17 thousand tons per year) will initially be sold to a large grain company, priced according to an established DDGS exchange price. Over time, as local markets develop, the DDGS will be sold to local cattlemen.

At some point, wet stillage will be considered for direct sale on a daily basis. The Mississippi Agricultural Cooperative Extension Service will assist Sun Belt in the research required to determine the best mixtures of stillage for each class of livestock feed. Mr. Joe Hensley, Panola County Agent, and Dr. Robert Stewart, animal nutritionist at Mississippi State University, have agreed to assist Sun Belt.

Since wet stillage has a short shelf life and there are no good means of disposing spoiled product, there is no direct daily market for it in Panola County.* Once the plant starts up, small amounts of wet stillage will be analyzed and local purchase interest explored. If there is interest, the transportation would be provided by the purchaser. The most likely purchaser would be a feedlot. However, currently there are none in Panola County because of poor feedlot economics at this time.

3.3 ETHANOL PRODUCT

Fifteen days of on-site ethanol storage would be provided by the plant. The ethanol output of the plant (4.8 million gallons per year) will be sold to Mississippi gasoline marketers, if a Mississippi state financial incentive is provided. If such an incentive is not provided (at the latest, in the 1983 legislative session), attempts will be made to negotiate purchase agreements in other states with sufficient tax incentives. However, these states must have open tax incentives not requiring any reciprocal agreements, and the probability of successfully competing with in-state ethanol supplies in these states is low, given the additional transportation costs involved.

* An economic analysis of a wet stillage versus dry grain byproduct is contained in Volume II, Appendix B.

Currently, there is an increasing supply of ethanol in the U.S. Ethanol purchasers are now able to trade off several different sources of ethanol, which is causing ethanol prices to drop at a time when the competitive fuel price (for unleaded gasoline) is also dropping. Discussions with gasoline marketers in other states have indicated that they have no desire to commit themselves now to an ethanol purchase in the future, particularly from more remote sources where transportation costs would likely put them at a competitive disadvantage. As a result, Sun Belt has concluded that, for a plant in Mississippi, it is not possible to obtain either a volume commitment or a multi-year commitment, or even a set of agreed-upon price terms for any purchase other than one that would take place immediately. Gasoline marketers will continue to play the spot market for ethanol as long as motor fuels and ethanol are in abundant supply. This is not surprising, as it reflects good business practice on their part.

The above constraints on obtaining a purchase commitment do not exist in states with either in-state restricted tax incentives or reciprocal state tax incentives, as the supplies within these particular states may not be sufficient to satisfy the total demand of marketers in those states. In this case, it is possible to obtain a purchase commitment at least in terms of price, if not for a given volume over some period of time.

Blending on site was found to be infeasible, because each gasoline wholesaler desires a different octane product. Each needs the flexibility to blend as he wishes. Supplies of gasoline to the blenders are plentiful, since there is both a plentiful supply of crude oil to refiners and excess refining capacity available throughout the U.S.

Regarding the process efficiency and costs of varying denaturant-ethanol mixtures, a 5-percent mixture of gasoline in ethanol is optimal because (1) below 5 percent, the process uses more energy than for a benzene denaturant and (2) 5 percent is the maximum percentage of gasoline allowable and still have the gasoline sold as part of the ethanol at the ethanol price.

Ralston Purina
Company

December 8, 1981

Mr. Billie E. Shepherd
President
Sun Belt Energy Corporation
212 North Main Street
Sardis, Mississippi 38666

Dear Mr. Shepherd:

This is in reply to your note of November 18 to Danny Williams concerning Ralston Purina's interest in dried distillers grains.

We would need one pound samples of the dried grains from three different days productions for inspection and analyses before we would approve the grains. If they meet our standards, we might use them at our plants in such locations as Jackson, Mississippi; Memphis, Tennessee; or Montgomery, Alabama. The price of the dried grains in relation to other feed ingredients as well as quantities, etc., would also be involved in determining if they will be used.

Thank you,

L. D. Stewart, Director
Ingredient Division

jlh

I. S. JOSEPH COMPANY

INCORPORATED

GRAIN EXCHANGE BUILDING

MINNEAPOLIS, MINNESOTA U.S.A. 55415

PHONE
(612) 338-8431

DEX
(612) 338-1536

W.U. TELEX
29-0615
29-0629

October 13, 1981

Mr. Peter G. Bos, Principal
Resource Planning Associates, Inc.
50 Church Street
Cambridge, MA 02138

Dear Mr. Bos:

Thank you for your letter of October 9, 1981. We are certainly interested in both supplying corn to the alcohol plant you described and marketing the DDG produced from the plant. Our company is actively involved in just this type of thing and works with a number of major agricultural processors in the marketing of various by-products from their processing operations. We also have arrangements with a number of facilities to supply raw material such as corn.

Our company has a full logistical operation enabling us to move the products into the best possible markets available throughout the world and thus return the highest price to the processing plant. We would like to suggest that you and/or Mr. Shepard visit with us in Minneapolis to acquaint yourselves with our operation at a time that you consider to be appropriate. We will look forward to hearing from you concerning an appropriate time to meet to pursue this matter in more detail.

If there are any questions or further information that you would like to have prior to our meeting, please do not hesitate to call upon us.

Sincerely,

I. S. JOSEPH COMPANY, INC.

Robert D. Anderson
President

RDA/mmg

INTERNATIONAL MULTIFOODS
1200 MULTIFOODS BUILDING
EIGHTH AND MARQUETTE
MINNEAPOLIS, MINNESOTA 55402

INTERNATIONAL
MULTIFOODS

October 1, 1981

Mr. Billie Shepard, President
Sun Belt Energy Corporation
212 N. Main
Sardis, MS 38666

Dear Mr. Shepard:

This letter is to confirm that International Multifoods, which manufactures animal feeds selling under the brand name Supersweet Feeds, considers dried distillers grains with solubles as a viable feed ingredient. Assuming reasonable price competitiveness versus other feed ingredients, dried distillers grains with solubles might be 10% to 25% of an animal feed ration. As more production becomes available, we anticipate Supersweet will be using this feed ingredient.

Assuming your project will become a reality in the future, we would welcome further discussions regarding dried distiller grains with solubles when you get closer to production time.

Sincerely,

INTERNATIONAL MULTIFOODS

Dennis L. Brown
Director of Procurement

DLB/nmk

cooperative

EXTENSION SERVICE

AGRICULTURE - 4-H
HOME ECONOMICS

Mississippi State University,
United States Department of Agriculture, Counties Cooperating

P. O. Box 127
Sardis, Mississippi 38666
June 1, 1982

Sunbelt Energy Corp.
Billie E. Shepard, President
212 N. Main St.
Sardis, Miss. 38666

Dear Billie:

The question has surfaced again as to the capability of Panola County to produce the needed amount of grain (corn, grain sorghum) to supply Sunbelt Energy's proposed alcohol plant. A 5 million gallon per year plant with a need of 2 million bushels of local grain sounds like an enormous task for the producers of Panola County, but lets look at the facts.

There are 306,287 acres of farm land in Panola County. Approximately twenty percent of the county lies in the Mississippi delta. The balance of the county is in the brown loam region of the State. Almost 150,000 acres are annually put into row crops in the county with the remaining land being suited for grazing and hay purposes.

In 1981, two local grain elevators bought grain sorghum for a combined total of 420,993 bushels. Farmers were pleased with this crop for two reasons: one, for the most part, these farmers who grew grain sorghum had been growing soybeans on this land; devastating erosion coupled with diseases and lowered soybean yields caused them to switch; secondly, although the 1981 price for grain sorghum was not fantastic (around \$4.00/hundred wt.) producers were able to stay in the black with it. So in reality, during 1981 there was enough grain sorghum sold in Panola County to supply the plant for one-fifth of a year.

There is really no exact way of knowing how many bushels of grain sorghum were turned away at these two local grain elevators. We know from personally talking with many farmers who produced grain sorghum that getting the elevators to buy it was a job in itself.

Sorghum with even traces of foreign matter or a percentage point high or low on moisture was not bought. A conservative estimate for Panola County would be that as much sorghum was held and fed to livestock as was sold in 1981. So the total grain sorghum yield for Panola County in 1981 was approximately 842,000 bushels, 42 percent of what is needed for the Sunbelt Energy Plant.

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Speaking as a county worker for the Mississippi Cooperative Extension Service, I am totally convinced that Panola County can grow an abundance of corn and grain sorghum. Panola County farmers want and need to grow corn and grain sorghum. There is only one problem - no available market. American farmers are suffering under the worst set of economic conditions since the Great Depression. A farmer cannot make a living today and frankly, I would like to see something done about it. Creating a market in Panola County for corn and grain sorghum would answer many a man's prayers. If the money was in it for the farmer, much of the 150,000 acres of available cropland in Panola County would be planted to corn and grain sorghum.

In conclusion, to answer the initial question of the capability of Panola County to produce the needed amount of grain to supply Sunbelt Energy's proposed alcohol plant, I would answer with a resounding yes. To try and determine the amount of each that would be grown in any given year would be pure speculation. However, I will say that even in a bad year, enough grain sorghum alone could be grown in Panola County to supply the plant. For example, trials in Mississippi during 1980, although a terrible year for production, produced average grain sorghum yields of about 50 bushels per acre. At this output, 40,000 acres would need to be planted to produce 2,000,000 bushels; and this is during a bad year.

I hope this information and my opinions will help you in your ongoing plight to complete the alcohol plant. If I can be of any further help, please call.

Sincerely,

Bill DeWees

Bill DeWees
Assistant County Agent

BD/bbm

OPTION TO PURCHASE GRAIN

THIS OPTION IS TAKEN BY SUN BELT ENERGY CORPORATION FOR FUTURE ASSIGNMENT TO THE COMPANY THAT WILL COMMIT ITSELF TO BUILD AND OPERATE BOILERS UTILIZING BIOMASS AND OTHER FORMS OF ENERGY TO MANUFACTURE PROCESS STEAM TO BE UTILIZED PRIMARILY IN THE MANUFACTURE OF ALCOHOL FROM GRAINS.

1. PARTIES: The parties to this agreement are _____ hereinafter referred to as "Owner(s)", and Sun Belt Energy Corporation, a Mississippi corporation, hereinafter referred to as "SBEC" of 212 North Main Street, Sardis, Mississippi.
2. CONSIDERATION: The consideration for the granting of this Option is the benefit to Owner(s) of the continuing efforts of SBEC toward the establishment of a plant utilizing biomass and other forms of energy to manufacture process steam utilized primarily for the manufacture of alcohol from grain in Panola County, Mississippi.
3. OPTION: Owner(s) hereby grant(s) unto SBEC an exclusive option to purchase Owner(s) entire production output of _____ to be grown during the 1983-1984 crop year on the following described property, to-wit:
4. TERM: The term of this Option shall extend from the date hereof until 12:00 o'clock midnight CST, on _____, 1983.
5. RENEWALS AND EXTENSIONS: In the event that SBEC shall exercise its rights under this Option, or any renewal or extension thereof, prior to its expiration, then and in that event, this Option shall automatically be renewed and extended from the date of such exercise until 12:00 o'clock midnight, CST, on the 365th day therefrom, and such automatic renewal or extension shall cover and effect the next succeeding crop year, except that nothing contained herein shall be construed to renew or extend this Option past the 1993-1994 crop year.
6. EXERCISE: This Option, or any extension or renewal thereof, may only be exercised by SBEC's giving written notice to Owner of SBEC's intention to exercise the Option, extension or renewal, said notice to be deposited, postage prepaid with the United States Mail, before the expiration of the term of the Option.
7. NOTICE: All notice required by this Option shall be sent to the address of the appropriate party as set out in Number 1 above.
8. EXPIRATION: In the event that SBEC fails to exercise this Option, extension or renewal, according to the terms and conditions hereof, then and in that event, this Option, extension or renewal shall become null, void and of no legal effect.
9. PRICE: The price to be paid for _____ purchased under the terms of this Option, or any renewal or extension thereof, shall be the Chicago Board of Trade closing price for _____ on the date of the exercise of this Option, or any renewal or extension thereof, said price being F.O.B. SBEC plant site, wherever said plant site shall be located in Panola County, Mississippi.
10. PAYMENT: SBEC shall make payments to Owner(s) on a weekly basis as the _____ is delivered to SBEC's plant site. SBEC shall furnish to Owner(s) at time of payment, a statement setting out the manner in which the payments were calculated. All payments under this Option, or any extensions or renewals thereof, shall be made prior to expiration.
11. OTHER DOCUMENTS: Owner shall execute such other documents and instruments as are necessary to effectuate the purpose of this agreement.

Exhibit 3.3 (continued)

12. DUTIES OF OWNER(S): Upon the exercise of this Option, or any extension or renewal thereof, the Owner(s) shall plant, fertilize, cultivate and otherwise grow the _____ sold hereunder in a good husbandlike manner and shall supply at his own cost and expense all labor, water, fertilizer, chemicals and other material necessary for the proper cultivation and growth of the _____.

It shall further be the duty of the Owner(s) to harvest and store said _____ upon its reaching a mature stage, and to deliver same to SBEC at such times and in such amounts as SBEC may require from time to time, all to be done at Owner(s) cost and expense.

13. DISPUTES: In the event that disputes arise under this Option, or any renewal or extension thereof, between Owner(s) and SBEC regarding any of the terms hereof, and same cannot be mutually resolved within _____ days, then and in that event, said disputes shall be referred to arbitration and decision by three (3) arbitrators, one of whom shall be appointed by Owner (s) and one of whom shall be appointed by SBEC, and two (2) arbitrators so appointed shall appoint a third arbitrator by agreement between themselves. The three (3) arbitrators so appointed shall reach a decision as to the dispute and shall submit same to Owner and to SBEC in writing. The decision of the arbitrators shall be final as between Owner(s) and SBEC.

14. ASSIGNMENT: SBEC as used herein refers to Sun Belt Energy Corporation, its successors or assigns. SBEC covenants and agrees that it shall make no assignment of this Option and conditional conveyance other than to an entity which shall, subsequent to the date hereof: (a) enter into a contract for the construction of a plant for the utilization of biomass and other forms of energy for the manufacture of alcohol in Panola County, Mississippi, or (b) enter into a contract for the operation of steam boilers in connection with such a plant, or (c) enter into a contract to supply grain for the production of alcohol at such plant. Any assignment in violation of this restriction, whether by voluntary or involuntary means, shall be utterly void and of no legal effect.

OWNER(S), BY HIS (THEIR) SIGNATURE(S) HEREON, COVENANTS: THAT HE HAS READ AND UNDERSTANDS THE ENTIRE FOREGOING OPTION TO PURCHASE GRAIN; THAT THIS AGREEMENT CONTAINS THE ENTIRE AGREEMENT BETWEEN OWNER(S) AND SBEC; AND THAT OWNER, HIS HEIRS, SUCCESSORS AND ASSIGNS SHALL BE BOUND BY THE TERMS HEREOF.

EXECUTED this the _____ day of _____, 198_____.

WITNESS:

OWNER

OWNER'S ADDRESS

Phone Number: _____

OPTION TO PURCHASE WOOD AND/OR WOOD PRODUCTS

THIS OPTION IS TAKEN BY SUN BELT ENERGY CORPORATION FOR FUTURE ASSIGNMENT TO THE COMPANY THAT WILL COMMIT ITSELF TO BUILD AND OPERATE BOILERS UTILIZING BIOMASS AND OTHER FORMS OF ENERGY TO MANUFACTURE PROCESS STEAM TO BE UTILIZED PRIMARILY IN THE MANUFACTURE OF ALCOHOL.

1. PARTIES: The parties to this agreement are

hereinafter referred to as "Owner(s)", and Sun Belt Energy Corporation, a Mississippi corporation, hereinafter referred to as "SBEC" of 212 North Main Street, Sardis, Mississippi.

2. CONSIDERATION: The consideration for the granting of this Option is the benefit to Owner(s) of the continuing efforts of SBEC toward the establishment of a plant utilizing biomass and other forms of energy to manufacture process steam utilized primarily for the manufacture of alcohol in Panola County, Mississippi.

3. OPTION: Owner(s) hereby grants to SBEC an exclusive option to purchase and conditional conveyance of certain wood and wood products, subject to existing liens thereon, located in _____ County, Mississippi, to-wit:

Approximately _____ tons of qualified wood and/or wood products, being approximately _____ percent of the qualified wood and/or wood products/approximately _____ acres of the qualified wood and/or wood products, standing, lying, growing, being produced or otherwise situated on the following described property owned by Owner(s), to-wit:

4. QUALIFIED WOOD AND/OR WOOD PRODUCTS: Qualified wood and/or wood products shall be defined for the purposes of this Option as including:

Those types and species of forestry products not ordinarily used in the lumber or pulpwood industry, commonly referred to as "scrubby hardwoods" located primarily on ridgetops and upslopes; and those types of by-products from the timber, lumber and/or pulpwood business including, but not limited to, sawdust, shavings, bark and tops.

5. TERM: The term of this Option shall extend from the date hereof until 12:00 o'clock midnight, CST on February 28, 1983. In the event that this Option is not exercised according to the conditions and agreements set forth herein, then this Option shall become null, void and of no legal effect.

6. EXERCISE: This Option may only be exercised by SBEC's giving written notice to Owner(s) of SBEC's intention to exercise the Option, said notice to be deposited, postage prepaid with the United States Mail, before the expiration of the term of the Option.

7. NOTICE: All notice required by this Option shall be sent to the address of the appropriate party as set out in Number 1 above.

8. PRICE: It is understood and agreed by both Owner(s) and SBEC that the qualified wood and/or wood products which are the subject of this Option have traditionally been unsaleable and that no market price now exists for same. It is further agreed and understood that the price to be paid to Owner(s) by SBEC in the event that SBEC exercises his Option shall be the Mississippi market price on a per ton basis for that qualified wood and/or wood products harvested or produced from the premises described in Number 2 above, on the date that the Option is exercised. In the event that no Mississippi market price exists on the date that the Option is exercised, then price shall be as then agreed upon by Owner(s) and SBEC. In the event that no Mississippi market price exists, as said above, and in the further

Exhibit 3.4 (continued)

event that no agreement can be arrived at by Owner(s) and SBEC within ten (10) days of the exercise of the Option, then the issue of the price on a per ton basis shall be referred to arbitration and decision by three (3) arbitrators, one of whom shall be appointed by Owner(s) and one of whom shall be appointed by SBEC, and the two (2) arbitrators so appointed shall appoint a third arbitrator by agreement between themselves. The three (3) arbitrators so appointed shall reach a decision as to contract price on a per ton basis and shall submit same to Owner(s) and to SBEC in writing. The decision of the arbitrators shall be final as between Owner(s) and SBEC.

9. PAYMENT: SBEC shall make payments to Owner(s) on a weekly basis as the qualified wood or wood products are harvested and/or transported. SBEC shall furnish Owner(s), at the time of payment, with a statement setting out the manner in which the payments were calculated. All weights shall be determined by SBEC at its future plant site. All payments under this Option shall be made prior to 12:00 o'clock midnight, CST February 28, 1993.

11. MODIFICATION AND RESCISSION: This Option shall automatically be modified and rescinded in part without further action of Owner(s) or SBEC as it applies to the conveyance of that part of the qualified wood and/or wood products which may suffer loss, damage or deterioration prior to harvest and as a result does not meet the needs and requirements of SBEC.

12. OTHER DOCUMENTS: Owner(s) shall execute such other documents and instruments as are necessary to effectuate the purpose of this agreement.

13. HARVEST AND/OR TRANSPORTATION: SBEC shall consult with Owner(s) concerning harvest and/or transportation of the qualified wood and/or wood products and SBEC shall make good faith effort to conform to Owner(s) objectives. The decision of SBEC regarding the time and manner of harvest and/or transportation shall control.

14. EXPIRATION OF CONVEYANCE: All rights of SBEC arising upon the exercise of this Option shall cease and expire at 12:00 o'clock midnight, CST, February 28, 1993.

15. ASSIGNMENT: SBEC as used herein refers to Sun Belt Energy Corporation, its successors or assigns. SBEC covenants and agrees that it shall make no assignment of this Option and conditional conveyance other than to an entity which shall, subsequent to the date hereof: (a) enter into a contract for the construction of a plant for the utilization of biomass and other forms of energy for the manufacture of alcohol in Panola County, Mississippi, or (b) enter into a contract for the operation of steam boilers in connection with such a plant, or (c) enter into a contract to supply qualified wood and/or wood products for the operation of such steam boilers at such plant. Any assignment in violation of this restriction, whether by voluntary or involuntary means, shall be utterly void and of no legal effect.

OWNER(S) BY _____ SIGNATURE HEREON, COVENANTS: THAT _____ HAS READ AND UNDERSTANDS THE ENTIRE FOREGOING OPTION TO PURCHASE WOOD AND/ OR WOOD PRODUCTS: THAT THIS AGREEMENT CONTAINS THE ENTIRE AGREEMENT BETWEEN OWNER(S) AND SBEC: AND THAT OWNER(S) _____ HEIRS, SUCCESSORS AND ASSIGNS SHALL BE BOUND BY THE TERMS HEREOF.

EXECUTED this the _____ day of _____, 198_____.

WITNESS:

OWNER(S)

OWNER'S ADDRESS

Phone Number: _____

Exhibit 3.4 (continued)

STATE OF MISSISSIPPI

COUNTY OF

PERSONALLY appeared before me, the undersigned authority in and for the jurisdiction aforesaid, _____, who acknowledged that _____ signed and delivered the foregoing instrument on the day and in the month and year thereof as _____ free and voluntary act and deed.

GIVEN under my hand and official seal of office on this the _____ day of _____, 198____.

NOTARY PUBLIC

(SEAL)

My Commission expires: _____

Wood Services Inc.

P.O. Box 314
Sardis, Mississippi 38666
Phone 601-487-3024

March 30, 1982

Bill Shepard
Sun Belt Energy Corp.
212 North Main Street
Sardis, Miss. 38666

Dear Bill:

Enclosed is the reduced study for the 120 ton per day requirements of wood waste boilers. 93% of all waste is in saw dust or chip form. The remaining 5% to 8% is in slabs or round wood.

As stated earlier, the production of the wood products industry is as low as it has been in history. The 50% level of production at this time is still sufficient to supply our needs. The additional development of the round wood production for our needs will keep the requirement at a very comfortable point.

As you can see, there is a wide range of pricing from some points. There is a market to some extent in the state. The average market price for saw dust and chips not used in paper or press board is \$15.00 to \$20.00 per ton delivered. This is what we will have to compete with.

The development of round wood is a question at this time, at the price we are trying to work with. With wood at no cost it is possible, but if the contractor has to purchase the scrub timber it is not possible to develop large volume and keep the production sound. You need to think in terms of \$12.00 to \$15.00 per ton delivered, where we have to. We now have several large producers of waste at about \$3.00 out of our range.

If you need any additional information, please give me a call.

Sincerely,

David D. Floyd

Encl.

DDF:mm

WOOD SUPPLY STUDY

Company/Contact	Location # of Miles	Summary	Comments
FISACKERLY LUMBER CO., INC. WINONA, MISS. BILLY FISACKERLY	75 MILES	5 TONS PER DAY HARDWOOD - SAW DUST	ONE TRUCK LOAD PER WK. @ 25 TONS - EST. COS @ \$10.50 DEL.
CARTER LUMBER CO. HOUSTON, MISS. JAMES W. CARTER	93 MILES	HAS OWN TRUCK - WILL DELIVER 40 TONS PER DAY MIXED HARDWOOD - SAW DUST	COST EST. @ \$10.50 to \$14.00 DEL.
PREST MFG. CO. MEMPHIS, TENN. WILLIAM M. PREST/ROB PREST	N/A		
BRUCE HARDWOOD FLOORS JACKSON, TENN. ROBERT DUEL	N/A	100 TONS DRY WASTE	\$25.00 PER TON DEL.
DESOTO HARDWOOD MEMPHIS, TENN./BOLIVAR, TN. RICHARD G. TAYLOR	N/A		

WOOD SUPPLY STUDY

Company/Contact	Location # of Miles	Summary	Comments
OUNT SAWMILL SKEW, MISS.	25 MILES \$2.00 EST. COST PER TON DEL.	20 TONS PER DAY - SAW DUST	COST EST. @ \$10.50 PER TON DEL.
DELTA DIMENSION, INC. JONESTOWN, MISS.	35 MILES \$3.50 EST. COST PER TON DEL.	5 TONS DRY WASTE	COST EST. @ \$10.50 PER TON DEL.
E.A. FLOYD LBR. CO. EATESVILLE, MISS.	AVERAGE 25 MILES \$2.00 PER TON	20 TONS ROUND WOOD MIXED 25 TONS CHIPS GREEN MIXED	COST EST. @ \$12.00 TO \$15.00 PER TON DEL.
CKKNIGHT PLYWOOD EST HELENA, ARK.	57 MILES \$4.50 PER TON	IN SUMMER ONLY 20 TONS MIXED SAW DUST & BARK	COST EST. @ \$10.50 PER TON DEL.
LOCAL PICK UP FROM 3 LOCATIONS	20 MILE RADIUS \$2.50 EST. COST	20 TONS MIXED WASTE, DUST, & CHIPS	COST EST. @ \$10.50 PER TON DEL.

WOOD SUPPLY STUDY

Company/Contact	Location # of Miles	Summary	Comments
SEITZ LUMBER CO., INC. WEST POINT, MISS. ED SEITZ, JR.			
TALLAHATCHIE HARDWOODS, INC. CHARLESTON, MISS.	55 MILES	HAS OWN TRUCKS - WILL DELIVER 35 TONS OF MIXED HARDWOOD - SAWDUST	COST EST. @ \$10.50 DEL.
HERMAN YOUNG LUMBER CO. FORREST CITY, ARKANSAS HERMAN YOUNG	85 MILES EST. COST PER TON @ \$6.61	40 TONS OF MIXED HARDWOOD , SAW DUST & SLAB	COST EST. @ \$13.00 to \$15.00 PER TON DEL.
MEMPHIS FURNITURE MFG. CO. MEMPHIS, TENN. JAMES W. LOVING			
CHARLES O. COX CORP. MEMPHIS, TENN. STANLEY H. WANZER			
MEMPHIS FOLDING STAIRS MEMPHIS, TENN. JOHN STUCKER	N/A 55 MILES \$4.50 EST PER TON	3.6 TONS PER DAY	COST EST. @ \$10.50 PER TON D
LINDEN LUMBER CO. LINDEN, ALABAMA DON OVERMYER/JACK KELLY			
GRIFFITH LUMBER CO. MADISON, ARKANSAS GRAHAM GRIFFITH			

WOOD SUPPLY STUDY

Company/Contact	Location # of Miles	Summary	Comments
SPELTZ PLYWOOD CORP. MEMPHIS, TENN. W. J. BARRETT	55 MILES EST. COST @ \$4.50 PER TON	4 TONS DRY WASTE	COST EST. @ \$10.50 TON DEL.
FAUST BAND SAW MILL, INC. WEST HELENA, ARKANSAS THOMAS E. FAUST	57 MILES EST. COST @ \$4.45 PER TON	HAS OWN TRUCK 5 TONS SUMMER ONLY	COST EST. @ \$10.50 PER TON DEL.
RIVES & REYNOLDS LBR. CO. LOUISVILLE, MISS. TERRY REYNOLDS	140 MILES EST. COST @ \$9.80 PER TON	70 TONS PER DAY SAW DUST & BARK	COST EST. @ \$15.00 PER TON DEL.
FUTORIAN CORP. EUPORA, MISS. STEVE CARROLL	N/A	25 TONS DRY WASTE	COST EST. @ \$25.00 PER TON DEL.
RIDGELY SAWMILL CO. RIDGELY, TENN. WILKES MOORE, JR.	N/A OUT OF BUSINESS		
WILSON LUMBER CO. MEMPHIS, TENN. CHARLES F. WILSON	N/A		
ANDERSON-TULLY COMPANY VICKSBURG, MISS. PARKER HALL	N/A	100 TONS MIXED WASTE	COST EST. @ \$25.00 PER TON DEL.
NORTON MFG. CO. MEMPHIS, TENN. JOHN D. WILSON, JR.	55 MILES EST. COST @ \$4.50 PER TON FRT.	20 TONS OF SAW DUST MIXED HARDWOOD	COST EST. @ \$10.50 PER TON DEL.

4 ECONOMIC AND FINANCIAL ANALYSIS

Without a state financial incentive, a grain-to-alcohol-fuels project is not economically and financially feasible in Mississippi. Even if the federal gasoline excise tax exemption remains, the ethanol could only be sold at a price of \$1.25 - \$1.35 per gallon, a price well below that required to provide sufficient debt coverage and an acceptable return on equity. As a result, the only possibility -- and it is a slight one -- for a Mississippi-based plant to be economical is to find an ethanol market in a state with at least a 4¢ per gallon tax incentive. Such an incentive, coupled with a clearly stated federal policy to retain the 4¢ federal excise tax exemption, would provide sufficiently attractive economics.

On this basis the analysis that follows assumes a 4¢ tax incentive in a state where the ethanol is sold, and a 4¢ federal excise tax incentive, and examines sensitivities in financial performance to changes in key assumptions for the project.

4.1 PROJECT COST ESTIMATES AND ASSUMPTIONS*

The estimated maximum plant cost is \$15.5 million, as shown in Exhibit 4.1. Construction interest is estimated at \$2.5 million. Land acquisition and rights (\$.3 mil), financing costs (\$.2 mil), the process fee (\$.4 mil), and detailed resource and market assessment (\$.1 mil) are estimated to be \$1 million, and working capital required at plant start-up an additional \$2 million, for a total project capital cost requirement of \$21 million. The annual operating cost estimates are shown in Exhibit 4.1, second page.

* Details of the plant cost estimates are included in Volume II.

Sun Belt intends to guarantee the reliability of the capital-cost projection by negotiating a fixed-price turnkey construction contract. This contract will include a retainage clause, which will allow Sun Belt to withhold 10 percent of the agreed-upon construction fees until project completion.

4.2 CASH FLOW/PROFITABILITY

The projected discounted cash flow return on total investment of the project is estimated at about 20 percent, the return on equity with 75-percent debt at about 25-30 percent, and the debt coverage ratio* at about 2:1 in the first year of operation, increasing thereafter. Employing a sale and leaseback or similar financing structure to use the tax benefits more effectively, the return on net equity would exceed 50 percent. These projections are based on the following key assumptions:

- Capital costs (installed dollars): \$ 15.5 million
- Ethanol sales price (1982 dollars, f.o.b. plant): \$ 1.70 per gallon**
- Net ethanol cost to blender (1982 dollars): \$ 0.90 per gallon
- DDG sales price (1982 dollars): \$170.00 per ton
- Corn cost (1982 dollars): \$ 2.30 per bushel
- Wood cost (1982 dollars): \$ 10.70 per ton

* Operating cash flow divided by the debt service requirement.

** Based on a 4¢ per gallon exemption for alcohol blended fuels from the federal gasoline excise tax, and a 4¢ per gallon tax exemption in the state where the alcohol fuel is sold.

Exhibits 4.2 through 4.5 present a summary of the assumptions and financial results for the project, and the projected income/cash flow statement, balance sheet, and sources and uses of funds statement for the project. Under the assumptions used, the project would pay back within 3 years of the start of operations.

4.3 RISK AND SENSITIVITY

For alcohol fuels there is currently an exemption from the 4¢/gallon federal gasoline excise tax, and a special 10 percent energy tax credit. With at least a 4¢/gallon state tax exemption, the project cash flow would be slightly positive (after debt service) without these federal incentives.

The debt service coverage under a range of possible adverse price and cost developments is important to the financing of the project. Accordingly, Sun Belt has carried out a range of sensitivity analyses of gasoline and corn prices in terms of their impact on the debt coverage and the return on equity. In Exhibit 4.6 these sensitivities are shown for a range of ethanol sales prices and corn purchase prices. Note that while the debt coverage ratios are for a given year, the after-tax return on equity (ROE) represents the entire stream of cash flows over the operating life of the project. Hence, the cash flow in any given year may not be indicative of the overall return on equity.

Further sensitivities of the debt coverage in the first year are shown with respect to the cost of wood, inflation rate, interest rate, operating output level, elimination of federal tax incentives, and combinations of various factors that could produce negative impacts. These downside risk analyses are compared to the base case that is reflected in Exhibits 4.2 - 4.5.

For reference, Exhibit 4.8 shows historical price trends of various grains and gasoline. Further, Appendix B contains the computer model result of the sensitivity analyses shown in Exhibits 4.6 and 4.7.

4.4 FURTHER FINANCIAL CONSIDERATIONS

Several factors could improve the financial performance of the project. Each of these is briefly described qualitatively below.

- Interest costs lower than 16 percent would increase the ROI.
- A drop in corn prices below the existing price would increase the ROI.
- Use of grains other than corn, at those times when their price was more economically attractive, would increase the ROI. (Downside sensitivities for corn price were analyzed in the previous section.)
- Use of lower-priced distressed grain as part of the feedstock supply could increase the ROI.
- Development of a wet stillage market through local cattle feedlots would eliminate the need for grain drying, thus reducing energy costs and increasing the ROI.
- A tightening by the U.S. Environmental Protection Agency of refiner lead content standards would increase the attractiveness of ethanol as an octane enhancer, which would increase the demand and price for ethanol and enhance the project's profitability.
- An above-inflation increase in oil, gasoline, and related ethanol prices would increase the ROI. (Exhibit 4.6 shows the downside risk.)
- Operation of the plant at higher than rated capacity, a capability already demonstrated in other plants, would increase the ROI.
- Operation above 333 days per year would increase the ROI.
- Lower wood fuel costs would increase the ROI.
- Start-up of the plant earlier than December 31, 1984, would produce revenues in 1984 (not assumed in the financial analysis), and would thus increase the project ROI.
- Start-up of the plant later than December 31, 1984, would increase construction interest and delay the initial revenues, which would decrease the ROI. However, these effects would be mitigated by qualification for a more attractive depreciation schedule (effective January 1, 1985) under the 1981 Economic Recovery Tax Act.

4.5 PROJECT FINANCING PLAN

Discussions were held with commercial banks, insurance companies, pension fund managers, and potential equity participants. Complete financing interest has been obtained, subject to passage of a Mississippi state tax incentive.*

While the specific project financing plan must be developed in close collaboration with the debt financing and equity participants, the following considerations are presented, based on the financial structure of the Sun Belt Energy Corporation and previous financing experience with plants of this type:

- The fixed plant costs can be financed up to 75 percent through debt financing by an institution with funds available for long-term commitment (e.g., insurance company, pension fund, trust fund). The fixed plant costs are estimated at \$19 million, which includes the plant capital costs (\$15.5 million), construction interest (\$2.5 million), and cost of land acquisition and rights (\$1.0 million).**
- The \$2 million working capital costs can be largely funded by a commercial bank line of credit, secured by the accounts receivable.
- The ability to fund current assets through accounts payable and other current liabilities is limited, since it is the practice with this type of plant to pay upon receipt of the grain feedstock and wood fuel.
- The portion of the fixed plant costs and working capital not financed by debt financing sources must be supplied by equity participants. These would likely fall into two categories:
 - Equity participants not involved in the management of the plant, whose equity investment would be related mainly to the investment tax credit (\$1.6

* The names of the financing parties cannot be supplied for confidentiality reasons.

** Federal funding or guarantees were found to be unnecessary if a 7¢/gallon state tax incentive was provided. Without a state tax incentive, the plan would not be economically viable enough to meet federal funding requirements. Also, the availability of federal funding support continues to be uncertain.

million available the first year of operation) and the equipment depreciation benefits (\$16 million in tax deductions over the first 5 years of operation). Since the Sun Belt Energy Corporation has no other operating and taxable income, the financing structure must provide for the use of these tax benefits by another equity participant.

- Equity owners with a direct interest in the management and operation of the plant.
- A construction loan to cover the fixed plant costs can be acquired from short-term financing sources (e.g., commercial bank) or longer-term funding sources, contingent on permanent financing to take out the construction loan at the time of plant start-up.

The following guarantees and assurances will be available to the debt financiers and equity participants.

- The construction and start-up of the plant will be completed under a fixed-price, turnkey contract with the general contractor and design firm
- The design firm will warrant the total production capacity and technical performance of the plant
 - (a) for the grain:
 - gallons ethanol/bushel and lbs DDGS/bushel
 - (b) for the plant:
 - total steam consumption
 - quantity and quality of ethanol and DDGS & CO₂
 - total electricity use
 - total water use
 - total chemical use
- The general contractor will be bonded
- Non-completion and business interruption insurance will be purchased.

Exhibit 4.1
 Sun Belt Ethanol Plant Capital Cost Summary
 (thousands of dollars)

Item	Cost	
Equipment	\$ 5,450	
Instruments	770	
Piping	970	
Steel	550	
Insulation	80	
Electrical	350	
Concrete	480	
Buildings	230	
Site Improvements	500	
Painting	40	
Construction Indirects	110	
Subtotal	\$ 9,530	\$ 9,530
Engineering, including burdens		\$ 1,720
Procurement, administration, technical services (including burden)		480
Construction management		300
Full service engineering contractor's fee		450
Construction contingency		1,690
Subtotal	(1982 dollars)	\$14,170
Inflation contingency		1,330
Total	(installed)	<u>\$15,500</u>

Exhibit 4.1 (continued)
Ethanol Plant Annual Operating Cost Summary

Item	Annual Cost (million 1982 dollars)
<u>Variable Costs</u>	
Grain feedstock	4.4 ^a
Fuel	.4
Electric power	.3
Drying agent	.3
Other (e.g., supplier, chemicals)	.6
<u>Fixed Costs</u>	
Labor	.75
G&A	.3
Depreciation	2.5 - 3.6 ^b
Interest	.3 - 2.1 ^c

a. Assuming a corn price of \$2.30 per bushel.

b. Varies in the first 5 years according to the equipment depreciation schedule.

c. Varies during the debt repayment period.

Exhibit 4.2

FINANCIAL ANALYSIS OF GLN BELT ENERGY CORPORATION PROJECT

DATE OF ANALYSIS: 14/04/82

CORN -TO-ETHANOL PLANT

4.8 MIL GPY RATED CAPACITY

FUEL: WOOD

ASSUMPTIONS (1982 \$)

14285 GPD RATED CAP	100 % ACT CAP	333 DAYS PER YEAR	2.5 GAL ETH/BU	18 LBS DDG/BU
CAPITAL COSTS	\$ 14.2 MIL	PERCENT LT DEBT	75 %	
CONSTR INT. RATE	16.0 %	LT DEBT INT RATE	16.0 %	INFLATION RATE 8.0 %
		LT DEBT REPAY	10 YRS	CAP COST REAL ESC 5.0 %
		BANK LINE INT RT	16.0 %	
ETH SALE PRICE 1.70 \$/GAL				ETH REAL ESC 0.0 %
NET ETH PRICE .90 \$/GAL		ELECTR PURCH COST 5.0 C/KWH		CORN & DDG REAL ESC 0.0 %
DDG PRICE 170.00 \$/TON				ELECTR REAL ESC 0.0 %
CORN COST 2.30 \$/BU				WOOD REAL ESC 0.0 %
WOOD COST 10.70 \$/TON				
DAYS REC ETH/DRY AG 30		DAYS PAY CORN 0		LIFO INVENTORY POLICY
DAYS REC DDG 30		DAYS PAY WOOD 0		15 DAYS ETH STORAGE
DAYS REC ELECTR 30				15 DAYS CORN STORAGE
				15 DAYS DDG STORAGE
FED INC TAX 46.0 %		EQUIP DEPR LIFE 5 YRS		
STATE INC TAX 4.0 %		EQUIP ITC 20 %		
STATE SALES TAX EXEMPT 0.0 C/GAL		BLDG ITC 0 %		
STATE GASOLINE EXCISE TAX EXEMPT 4.0 C/GAL				
FED GASOLINE EXCISE TAX EXEMPT 4.0 C/GAL				
LAST YR OF STATE TAX EXEMPT 1979				

RESULTS

ROE	33.8 %	NPV (25 % DISC RATE)	2.3 MIL	PAYBACK	1987
DEBT COV:	1.9 IN OPER YR 1	2.7 IN OPER YR 6			
ENG COSTS \$	.6 MIL	INITIAL DEBT \$	12.4 MIL	MAXIMUM CASH EQUITY \$	7.6 MIL
ANNUAL SALES:	4.8 MIL GALS ETH	16649 TONS DDG	0.0 MW ELECT		
ANNUAL PLANT REQS	1.9 MIL BU CORN	29273 ACRES CORN	16649 HEAD CATTLE		
AT FULL CAPACITY	6 MIL KWH	166 MIL LB STEAM			

Exhibit 4.3

INCOME AND CASH FLOW (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
REVENUES									
ETHANOL	0.0	0.0	0.0	10.2	11.0	11.9	12.8	13.9	15.0
DDG	0.0	0.0	0.0	3.6	3.9	4.2	4.5	4.9	5.2
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	0.0	0.0	0.0	14.1	15.2	16.4	17.7	19.2	20.7
VARIABLE COST									
FEEDSTOCK	0.0	0.0	0.0	5.5	6.0	6.4	6.9	7.5	8.1
WOOD	0.0	0.0	0.0	.5	.5	.6	.6	.7	.7
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT	0.0	0.0	0.0	.4	.4	.4	.5	.5	.5
OTHER	0.0	0.0	0.0	.6	.7	.7	.8	.9	.9
TOTAL VC	0.0	0.0	0.0	7.3	7.9	8.6	9.2	10.0	10.8
FIXED COSTS									
LABOR	0.0	0.0	0.0	.9	1.0	1.1	1.2	1.3	1.4
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
G & A	0.0	0.0	0.0	.4	.4	.4	.5	.5	.6
OTHER	0.0	0.0	0.0	.3	.3	.3	.3	.3	.4
TOTAL FC	0.0	0.0	0.0	4.1	5.3	5.3	5.4	5.5	2.4
STARTUP COSTS	0.0	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	0.0	0.0	.7	11.4	13.2	13.8	14.6	15.5	13.2
OPERATING INCOME	0.0	0.0	-.7	2.6	2.0	2.6	3.1	3.6	7.5
INTEREST	0.0	0.0	0.0	2.1	2.1	2.0	1.8	1.7	1.5
INC. REF. LCF/TAX	0.0	0.0	-.7	.5	-.1	.6	1.3	1.9	6.0
LCF USED	0.0	0.0	0.0	.5	0.0	.3	0.0	0.0	0.0
TAXABLE INCOME	0.0	0.0	-.7	0.0	-.1	.4	1.3	1.9	6.0
ITC USED	0.0	0.0	0.0	0.0	0.0	.2	.6	1.0	1.4
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
INCOME AFTER TAX	0.0	0.0	-.7	.5	-.1	.6	1.3	1.9	4.3
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
CHG IN OTH ASSETS	0.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	0.0	0.0	0.0	-.6	-.7	-.8	-.9	-1.1	-1.2
CHG IN WC	0.0	0.0	-2.0	-.1	-.1	-.1	-.1	-.1	-.1
CHG IN BANK LINE	0.0	0.0	1.0	.0	.1	.1	.1	.1	.1
ENG COST	-.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	-9.4	-4.6	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	-.7	-1.9	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	7.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-.6	-2.5	-4.5	2.4	2.8	3.2	3.7	4.2	3.1
CUMUL CASH FLOW	-.6	-3.1	-7.6	-5.2	-2.4	.8	4.5	8.8	11.9

Exhibit 4.3 (continued)

INCOME AND CASH FLOW (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
REVENUES									
ETHANDL	16.2	17.5	18.9	20.4	22.0	23.8	25.7	27.7	29.9
DDG	5.7	6.1	6.6	7.1	7.7	8.3	9.0	9.7	10.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	22.3	24.1	26.1	28.1	30.4	32.8	35.5	38.3	41.4
VARIABLE COST									
FEEDSTOCK	8.7	9.4	10.2	11.0	11.9	12.9	13.9	15.0	16.2
WOOD	.8	.9	.9	1.0	1.1	1.2	1.3	1.4	1.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT	.6	.6	.7	.7	.8	.8	.9	1.0	1.1
OTHER	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.9
TOTAL VC	11.6	12.6	13.6	14.7	15.8	17.1	18.5	20.0	21.5
FIXED COSTS									
LABOR	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.6	2.8
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
G & A	.6	.6	.7	.8	.8	.9	1.0	1.0	1.1
OTHER	.4	.4	.5	.5	.5	.6	.6	.7	.7
TOTAL FC	2.6	2.8	3.0	3.2	3.5	3.7	4.0	4.4	4.7
STARTUP COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	14.2	15.3	16.6	17.9	19.3	20.8	22.5	24.3	26.2
OPERATING INCOME	8.1	8.8	9.5	10.3	11.1	12.0	12.9	14.0	15.1
INTEREST	1.4	1.1	.9	.6	.3	.3	.3	.3	.3
INC. BEF. LCF/TAX	6.8	7.6	8.6	9.7	10.8	11.7	12.6	13.7	14.8
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXABLE INCOME	6.8	7.6	8.6	9.7	10.8	11.7	12.6	13.7	14.8
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	3.4	3.8	4.3	4.8	5.4	5.9	6.3	6.8	7.4
INCOME AFTER TAX	3.4	3.8	4.3	4.8	5.4	5.9	6.3	6.8	7.4
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
CHG IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	-1.4	-1.6	-1.9	-2.2	0.0	0.0	0.0	0.0	0.0
CHG IN WC	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.3	-.3
CHG IN BANK LINE	.1	.1	.1	.1	.1	.1	.1	.1	.1
ENG COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	2.0	2.2	2.4	2.6	5.4	5.8	6.3	6.8	7.3
CUMUL CASH FLOW	13.9	16.0	18.4	21.0	26.4	32.2	38.5	45.3	52.6

Exhibit 4.4

BALANCE SHEET (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
CURRENT ASSETS									
CASH	0.0	0.0	0.0	2.4	5.2	8.4	12.2	16.4	19.5
ACCTS REC	0.0	0.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7
FDSTK INV	0.0	0.0	.2	.2	.2	.2	.2	.2	.2
DRY AGT INV	0.0	0.0	.0	.0	.0	.0	.0	.0	.0
WOOD INV	0.0	0.0	.0	.0	.0	.0	.0	.0	.0
ETH INV	0.0	0.0	.4	.4	.4	.4	.4	.4	.4
BDG INV	0.0	0.0	.1	.1	.1	.1	.1	.1	.1
OTHER	0.0	0.0	.2	.3	.3	.3	.3	.3	.4
TOTAL CA	0.0	0.0	2.1	4.6	7.5	10.9	14.7	19.1	22.4
FIXED ASSETS									
EQUIP	.6	9.9	15.7	13.4	9.9	6.6	3.3	0.0	0.0
BUILDING	0.0	.9	1.4	1.2	1.1	1.0	.9	.8	.7
TOTAL FA	.6	10.7	17.1	14.6	11.0	7.6	4.2	.8	.7
OTHER ASSETS	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
TOTAL ASSETS	.6	10.7	20.4	20.4	19.7	19.7	20.1	21.0	24.3
CURRENT LIAB									
FDSTK PAY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DRY AGT. PAY	0.0	0.0	.0	.0	.0	.0	.0	.0	.0
WOOD PAY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CL	0.0	0.0	.1	.1	.1	.1	.2	.2	.2
TOTAL CL	0.0	0.0	.1	.2	.2	.2	.2	.2	.2
BANK LINE	0.0	0.0	1.0	1.0	1.1	1.1	1.2	1.3	1.3
LT DEBT	0.0	7.6	12.4	11.8	11.1	10.4	9.5	8.4	7.2
EQUITY	.6	3.1	6.9	7.4	7.3	8.0	9.3	11.2	15.5
TOTAL LIABILITY/EQ	.6	10.7	20.4	20.4	19.7	19.7	20.1	21.0	24.3

Exhibit 4.4 (continued)

BALANCE SHEET (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
CURRENT ASSETS									
CASH	21.5	23.6	26.0	28.6	34.0	39.8	46.1	52.9	60.2
ACCTS REC	1.9	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.5
FDSTK INV	.2	.2	.2	.2	.2	.2	.2	.2	.2
DRY AGT INV	.0	.0	.0	.0	.0	.0	.0	.0	.0
WOOD INV	.0	.0	.0	.0	.0	.0	.0	.0	.0
ETH INV	.4	.4	.4	.4	.4	.4	.4	.4	.4
BDG INV	.1	.1	.1	.1	.1	.1	.1	.1	.1
OTHER	.4	.4	.5	.5	.5	.6	.6	.7	.7
TOTAL CA	24.5	26.9	29.5	32.3	37.9	43.9	50.5	57.6	65.2
FIXED ASSETS									
EQUIP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BUILDING	.6	.5	.4	.4	.3	.2	.1	.1	0.0
TOTAL FA	.6	.5	.4	.4	.3	.2	.1	.1	0.0
OTHER ASSETS	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
TOTAL ASSETS	26.3	28.6	31.1	33.8	39.4	45.4	51.8	58.8	66.4
CURRENT LIAB									
FDSTK PAY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DRY AGT. PAY	.0	.0	.1	.1	.1	.1	.1	.1	.1
WOOD PAY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CL	.2	.2	.2	.3	.3	.3	.3	.3	.4
TOTAL CL	.2	.3	.3	.3	.3	.4	.4	.4	.4
BANK LINE	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.3
LT DEBT	5.8	4.1	2.2	0.0	0.0	0.0	0.0	0.0	0.0
EQUITY	19.9	22.7	27.0	31.9	37.3	43.1	49.4	56.3	63.7
TOTAL LIABILITY/EQ	26.3	28.6	31.1	33.8	39.4	45.4	51.8	58.8	66.4

Exhibit 4.5

SOURCES AND USES OF FUNDS (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
SOURCES									
REVENUES	0.0	0.0	0.0	14.1	15.2	16.4	17.7	19.2	20.7
DEBT FINANCING	0.0	7.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0
DECR IN WC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCR IN BK LINE	0.0	0.0	1.0	.0	.1	.1	.1	.1	.1
EQUITY INVEST	.6	2.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	.6	10.1	10.3	14.1	15.3	16.5	17.8	19.2	20.8
USES									
OPER COSTS (- DEPR)	0.0	0.0	0.0	8.9	9.6	10.4	11.2	12.1	13.1
INTEREST	0.0	0.0	0.0	2.1	2.1	2.0	1.8	1.7	1.5
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
PRINC. REPAY	0.0	0.0	0.0	.6	.7	.8	.9	1.1	1.2
INCR. IN WC	0.0	0.0	2.0	.1	.1	.1	.1	.1	.1
DECR. IN BK LINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCR. IN OTH ASSETS	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0
ENG./STARTUP	.6	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR. COSTS	0.0	9.4	4.6	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR. INT.	0.0	.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0
EQUITY RETURN & CASH	0.0	0.0	0.0	2.4	2.8	3.2	3.7	4.2	3.1
TOTAL	.6	10.1	10.3	14.1	15.3	16.5	17.8	19.2	20.8

Exhibit 4.5 (continued)

SOURCES AND USES OF FUNDS (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
SOURCES									
REVENUES	22.3	24.1	26.1	28.1	30.4	32.8	35.5	38.3	41.4
DEBT FINANCING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DECR IN WC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCR IN BK LINE	.1	.1	.1	.1	.1	.1	.1	.1	.1
EQUITY INVEST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	22.4	24.2	26.2	28.2	30.5	32.9	35.6	38.4	41.5
USES									
OPER COSTS (- DEPR)	14.1	15.3	16.5	17.8	19.2	20.8	22.4	24.2	26.2
INTEREST	1.4	1.1	.9	.6	.3	.3	.3	.3	.3
TAXES PAID	3.4	3.8	4.3	4.8	5.4	5.9	6.3	6.8	7.4
PRINC. REPAY	1.4	1.6	1.9	2.2	0.0	0.0	0.0	0.0	0.0
INCR. IN WC	.2	.2	.2	.2	.2	.2	.2	.3	.3
DECR. IN BK LINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCR. IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENG/STARTUP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR. COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR. INT.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EQUITY RETURN & CASH	2.0	2.2	2.4	2.6	5.4	5.8	6.3	6.8	7.3
TOTAL	22.4	24.2	26.2	28.2	30.5	32.9	35.6	38.4	41.5

Exhibit 4.6

**Sensitivity of Corn-to-Ethanol Project Performance
to Changes in Corn and Ethanol Price**

* Debt coverage = operating cash flow ÷ debt service.

Exhibit 4.7

Downside Risk Analyses
5-Million GPY Corn-to-Ethanol Project
(First Operating Year Cash Flow Adequacy)

*Results similar to retention of federal exemption,
but with loss of the state exemption.

**Debt coverage ratio = operating cash flow ÷ debt service requirement.

Exhibit 4.8a

10-Year Average Cash Prices for Selected Grains and Unleaded Gasoline

Exhibit 4.8b

Long-Term Historical Cash Price Trends for Selected Grains

5

ENVIRONMENTAL, HEALTH, SAFETY, AND SOCIOECONOMIC CONSIDERATIONS

Sun Belt Energy Corporation views the analysis of the effects of the proposed plant on the environment, health, safety, and socioeconomic conditions of Sardis, Mississippi, and Panola County as an important element of the feasibility study. As residents of Panola County, the project's principals are concerned with the plant's impact on their community.

The firm has been in close communication with government officials and prominent community leaders. The plant has received wide publicity, including newspaper and television coverage. The local community overwhelmingly supports the construction of the proposed plant, primarily because of its positive economic effect on the community. Moreover, since the plant site lies within a designated industrial zone, no public opposition to its location is expected.

Since there are few unknowns regarding the plant's process and the site, we believe our assessments of impacts and project costs to be reliable. The plant's process has been used on a commercial scale in many fuel ethanol plants across the country. The effluents and emissions from the plant are well known. A wood-burning boiler was selected because of the availability of vast amounts of surplus waste wood and scrub timber in the vicinity of the plant, and because its air emissions would be environmentally benign. Furthermore, the site is in a county-designated industrial area with excellent transportation access and available utilities.

This section covers the environmental, health, safety, and social and economic considerations regarding the proposed plant. It also includes a description of regulatory and permit requirements and a management schedule for meeting them.

5.1 SITE DESCRIPTION

The proposed plant site has excellent industrial potential. It is located in North Panola County, Mississippi, about 45 miles south of Memphis, Tennessee, and approximately 168 miles north of Jackson, Mississippi. Panola County, organized in 1836, ranks 20th in land area in Mississippi and covers 704 square miles. The Tallahatchie River forms a dividing line between North and South Panola County. The county seat for North Panola County is Sardis. Relevant population and economic data for Panola County and Sardis, Mississippi, are shown in Exhibit 5.1.

The plant site is located in Sardis and is part of the Panola County industrial park of 120 acres. The site is served by a county road, and is about 2 miles from access to Interstate 55 to the east and 1 mile from access to U.S. Highway 51 to the west. The mainline track of the Illinois Central Railroad fronts the site on the west.

The industrial park is an abandoned prisoner-of-war camp that was used during World War II. The camp was decommissioned during the war, and all structures were removed. The site extends across relatively level pasture land with a stream bed that is dry most of the year.

There are no archaeological sites on or near the plant site. Extensive work has been done on archaeology in the state of Mississippi by the University of Mississippi, the Mississippi Archaeological Association, Harvard University, the National Park Service, and other renowned archaeological groups. Although Mississippi is rich with artifacts of ancient Indian cultures, the site of archaeological interest nearest to the plant site is in Batesville, Mississippi, about 10 miles south of Sardis.*

5.2 ENVIRONMENTAL CONSIDERATIONS**

All environmental discharges from the plant will be within the limitations allowed by the Mississippi Air

* Calvin S. Brown. Archaeology of Mississippi. AMS Press, New York, 1973.

** Prepared by Bechtel Petroleum, Inc.

and Water Pollution Control Commission. Appropriate commercially available pollution abatement equipment and controls will be employed to meet these requirements. The anticipated environmental discharges are discussed below.

Air Emissions

Dust generated from the normal operation of the hammer mill, conveyors, elevators, DDGS dryer, and storage areas will be aspirated. The dust-laden streams will be passed through centrifugal cyclones to minimize fire hazard and particulate emissions.

The wood-fired boiler system will include a separate cyclone to remove particulate matter from the spent flue gases discharged through the DDG dryer system and into the atmosphere. The cyclone will have a removal efficiency of 94-95 percent. In the unlikely event that the cyclone alone proves to be inadequate, the boiler system can be retrofitted with a bag filter in series with the cyclone. Emission of NO_x will be minimal because the fluidized-bed combustion temperature will be limited to 1500-1600°F. Since wood fuel is normally low in sulfur content (relative to coal), no SO_2 removal equipment will be required. The SO_2 and CO emissions will be within allowable limits.

Some hydrocarbon emissions will come from the product surge tanks and the denaturant tanks. The main alcohol storage tanks will have internal floating roofs to minimize vapor losses from tank breathing or displaced vapors during filling operations. The gasoline storage tank will be provided with a vapor recovery balance-back system to eliminate the escape of gasoline vapors into the atmosphere during transfer operations from tank truck to storage. The minimal amount of vapor displaced from the alcohol tank trucks during filling operations will be piped away from the truck rack area to minimize fire hazard. Since vapor losses from these tanks is insignificant relative to state environmental standards, a vapor recovery system will not be necessary.

Liquid Effluents and Wastes

Approximately 70 gpm of process and sanitary wastes will be piped to an activated sludge wastewater treatment

system. The wastewater will flow initially to an equalization basin for stabilization, and then to two aeration basins connected in series. Compressed air supplied through a diffuser system provides the oxygen necessary to satisfy the demands of the micro-organisms responsible for consuming the organic waste material. The basins will be constructed of concrete to prevent the possibility of wastewater leaching into the groundwater.

The BOD level of the treated effluent will be reduced from 1000 mg/l in the combined wastewater stream (2,000 mg/l in stripper bottom and evaporator condensate) to 30 mg/l for eventual discharge into McIvor Canal, which flows approximately 2 miles south of the plant site. Computer model studies (to be made by the Mississippi Air and Water Pollution Control Commission) will evaluate the possibility of discharging the treated effluent into the dry stream bed that runs from the plant site to the canal. Allowances have been made to provide a 6-inch subgrade outfall line from the site to the canal in the event that use of the dry stream bed is unacceptable.

A closed-loop cooling system will be used, the only discharge being from occasional cooling tower blowdown. This flow, along with the boiler blowdown, is combined with the activated sludge wastewater for a total effluent flow of 100 gpm. All alcohol and gasoline storage tanks as well as the fermenters will be diked for spill containment.

Solid Waste

Debris from grain handling and ash from the wood-fired boiler system will be trucked off-site for use as a soil nutrient. Accumulated solids which will be periodically dredged from the waste water treatment basin will be trucked to a land fill.

Thermal

The principal source of thermal discharge will be from the boiler/DDGS dryer system exhaust stack. The existing gases will be comprised of the products of wood fuel combustion and moisture evaporated in the DDGS dryer. The temperature of this discharge will be approximately 200-250° F. Thermal radiation from process equipment will be minimal because most of the system and interconnecting piping will be insulated for operating economy and personnel

protection. The only point of constant stream exhaust will be from the evaporator and cooking air ejector systems. The heat from these sources is negligible.

Noise

External noise is not expected to be a problem, as most of the noise-producing process equipment will be housed in the main process building. Noise emanating from the outdoor evaporator air ejector system will be muffled to a non-objectionable level.

Odor

A slight corn and DDGS odor will prevail in the area at times but is not expected to be significant. The dryer exhaust duct can be retrofitted with an absorber if the DDGS odor proves to be objectionable. The fermenters will be of enclosed-top design since they will be outdoors. Prevailing winds will normally not carry unpleasant odors to nearby communities.

Visibility

Since the only exhaust points are at the boiler/DDGS dryer system stack, the dust control system, cooling tower, evaporator, cooking air ejectors, and an occasional boiler blowoff, the exhaust plumes will consist mostly of water vapor, which would have a minimal effect on local atmospheric visibility. The elevation profile of the plant will be similar to that of other chemical processing plants, with tanks, buildings, and open steel structures set as far back from the road as possible.

5.3 HEALTH AND SAFETY CONSIDERATIONS

The proposed plant will involve complex machinery operating at low to medium temperatures and pressures, and the handling and storage of hazardous chemicals and materials. However, the hazards in this facility are relatively well known because of long experience in the grain-processing and beverage distillery industries. With the use of proper procedures and controls, the plant will be safe and healthful.

Common-sense controls and standard precautions should be rigorously followed. Training will be provided for plant operators and other personnel. The following steps for training plant personnel will be taken:

- Detailed operating procedures (including safety procedures) will be documented in a technical operation manual. Detailed process diagrams or a scale model with color-coded piping illustrations will be provided.
- Operators will be trained to wear hardhats and be aware of plant safety features and location of fire equipment.
- Training by the equipment supplier at the factory or on the job will be provided.
- Training by the suppliers of such materials as enzymes and yeast will be provided.

Many precautions will be taken to avoid the possibility of injury at the plant site. The training programs will cover operator procedures. The plant will be designed to incorporate safety features to minimize hazards. At a minimum the following precautions will be taken.

Hazards	Precautions
Overpressurization; explosion of boiler	<ul style="list-style-type: none">● Regularly maintained and checked safety boiler "pop" valves will be installed, set to relieve pressure when it exceeds the maximum safe pressure of the boiler or delivery lines.● Strict adherence to boiler manufacturer's operating procedure will be ensured.● Continuous operator attendance during boiler operation will be required.
Scalding from steam gasket leaks	<ul style="list-style-type: none">● Baffles will be placed around flanges to direct steam jets away from operating areas.
Contact burns from lines	<ul style="list-style-type: none">● All steam delivery lines will be insulated.

Hazards	Precautions
Ignition of ethanol and gasoline leaks/fumes or grain dust	<ul style="list-style-type: none">● Fully enclosed explosion-proof electric motors will be used.● All equipment will be fully grounded to prevent static electricity buildup.● No smoking or striking of matches around ethanol tanks, dehydration section, distillation columns, or condensers will be allowed.● Metal grinders, cutting torches, welders, etc., will not be used around systems or equipment containing ethanol. All vessels will be flushed and vented prior to performing any of these operations.
Handling acids/bases	<ul style="list-style-type: none">● Protection of fumes from concentrated acids or bases will be provided.● Goggles will be worn whenever concentrated acids or bases are handled.● Acids or bases will not be stored in overhead work areas or equipment.● Acids or bases will not be carried in open buckets.● Proper materials will be used for construction for all acid or base storage containers, delivery aides, valves, etc.
Suffocation	<ul style="list-style-type: none">● Fermenters, beer well, and stillage tanks will be properly vented.

The design and construction of the plant will be in compliance with the following standards and codes:

Title	Code*
Prevention of Dust Explosion in Industrial Plants	NFPA63
Basic Classification of Flammable and Combustible Materials	NFPA321
Liquids Static Electricity	NFPA77
Flammable and Combustible Liquids Code	NFPA30
Occupational Noise Exposure	OSHA191094
Machinery and Machine Guarding	OSHA Subpart O
Power Piping	ANSI B31, 1
Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids	UL142
Boiler and Pressure Vessel Code (B&PV)	ASME Code Section IV & VII Division I
All electrical instrumentation	NFPA70-1978
National Electric Code	Class II Division I

* Abbreviations:

NFPA - National Fire Protection Association
OSHA - Occupational Safety and Health Administration
UL - Underwriters Laboratory
ASME - American Society of Mechanical Engineers
ANSI - American National Standards Institute

Fire protection is also a major concern. At a minimum, the following precautions will be taken.

- Provide automatic sprinkler protection, preferably of a type designed to flood the area.
- Sprinkler control valves, dry-pipe valves, and riser drains will be readily accessible at all times to plant personnel.
- Small hoses with combination shutoff nozzles will be provided throughout the plant. Hose stream demand is a minimum of 500 gpm (190 dm³/min) for at least 60 minutes.
- Suitable portable fire extinguishers will be provided throughout the plant.

In cooperation with the Panola County Hospital, located in Sardis, Sun Belt will include first aid information and training sessions in the overall training program for plant personnel.

5.4 SOCIOECONOMIC CONSIDERATIONS

Sun Belt Energy Corporation is sensitive to any possible adverse socioeconomic impact that the plant may have on the local community. Our analysis indicates that Panola County and the community of Sardis will derive an economic benefit from the plant, and no adverse community or social impact is anticipated.

The proposed plant will create 36 full-time jobs, including 7 in management, 16 for plant operators, and 13 for unskilled labor. These positions will be filled primarily from among local residents. Unemployment in Panola County is well over 15 percent. Two major manufacturing companies in Sardis, Roper Luggage and Poloron Products, closed down in 1981, thereby eliminating 1,200 jobs. The remaining manufacturers currently operating in Sardis are the following.

Company	Number of Employees
Affiliated Hospital Products, Inc.	130
D.B. Floyd Lumber Company	5
Midsouth Gravel, Inc.	10
Midsouth Stamping, Inc.	35
Mississippi Mills, Inc.	25
Panola County Ready Mix, Inc.	3
Erwin M.B. Schwabb Company, Inc.	88
The Southern Reporter	5
Coca Cola Bottling Company	30
Hygiene Products	50

Because there will be no net population growth from the proposed plant, no shortage of facilities or community services will result. Sardis has a local police and fire department, a hospital with 70 beds, a public school, churches, hotels, waterworks, and sanitary sewers. (Since water will be obtained from a well on the plant site and wastewater will be treated at the site, the community water and wastewater facilities will not be affected.)

As previously described, transportation facilities are adequate for the proposed plant. Furthermore, Sardis is served by 4 motor freight carriers: Beard Truck Line, J&G Express, Shippers Express, and Yellow Freight System. Anticipated daily truck and rail traffic to serve the plant is as follows: 13 to 15 tractor-trailer trucks to transport wood fuel and ethanol and DDGS products; and 3 to 4 railroad hopper cars per day carrying grain feedstocks.

Land use and housing stock in Panola County have been stable for over two decades. The impacts of the plant will not change the land use, and should have a small change in the number of houses in the 3-county area.

5.5 IMPACT ON REGIONAL ECONOMIC ACTIVITY

The proposed plant would significantly increase economic activity in northern Mississippi. The production of ethanol and DDGS from local agricultural (corn) and forestry (wood fuel) feedstocks would stimulate secondary economic benefits in addition to the direct effect of the plant. Dr. Robert L. Williams, an economist at Mississippi State University, estimates that the economic impact of the plant on the local economy would be about \$60 million annually.*

To supplement Dr. Williams's analysis, we took a different analytical approach to identify a lower bound of economic activity. To calculate net economic effects, we used the Bureau of Economic Analysis (BEA), U.S. Department of Commerce, gross output multipliers for Sector 5 (food, feed grains, and grass seeds) and Sector 42 (chemicals and allied products). While Sector 53 (transportation, communications, and utilities) may be affected, we assumed those benefits to be relatively insignificant because of the offsetting decrease in the use of gasoline.

The result of the analysis was a net increase in annual economic activity from the proposed plant of over \$21 million. The analysis is shown in Exhibit 5.4. For Sector 5, corn, wood, and fertilizer were assumed to be produced in Mississippi. For Sector 42, wood, corn, denaturant, electricity, and chemicals were subtracted so as to account only for the value added in this sector.

Of the \$21-million increase in economic activity, over \$18 million would be in the agricultural sector (Sector 5). This would be a tremendous boost to local farmers, who currently face financial problems. From 1950 to 1980, Mississippi's net farm income declined by 20 percent. During that time, the consumer price index advanced by 242 percent.** Furthermore, in 1981, low crop prices and high interest rates were especially damaging to Mississippi farmers.

* See Exhibits 5.2 and 5.3.

** R. Williams, "61 Percent Net Income. Decline Staggering." Delta Farm Press, August 28, 1981.

In addition to economic impacts, increased corn and wood production would improve crop and forestry management in Panola and surrounding counties. In recent years, local farmers have planted soybeans as their principal crop. However, according to the Cooperative Extension Service (CES) of Mississippi State University, most of the soybean crop is infested with cyst nematodes, a problem that can be solved only by crop rotation with crops such as corn or grain sorghum. The proposed plant would provide a good market for corn and grain sorghum (milo). Furthermore, added crop residue plowed under from these crops would increase soil productivity.

In addition to acting as a local market for low-quality hardwoods, the proposed plant would assist many landowners who are attempting to convert their forest reserves to grow more efficient loblolly pine. According to Dr. Thomas A. Manahan of the Extension Forestry Department, "The harvest and utilization of much of this heretofore unmerchantable wood could significantly lower site preparation costs for landowners. If low-quality hardwood becomes an asset that can be liquidated, many landowners may be able to afford to initiate a forest management program on their land rather than do nothing."

5.6 REGULATORY AND PERMIT REQUIREMENTS

Sun Belt Energy Corporation is interested in minimizing any construction delays arising from regulatory or permit requirements. Accordingly, the company has held meetings with the Mississippi Department of Natural Resources and local officials to review key regulatory requirements and the proposed project schedule. Then research was done to develop the master list of regulatory requirements and to prepare a comprehensive schedule for obtaining permits. Appendix A presents a data sheet for each permit or regulation, which includes a listing of the administering agency, the agency contact and telephone number, the action that triggers the requirement, permit timing, and information requirements.

No regulatory barriers have been identified and none are anticipated. Because of the plant's small size, a prevention of significant deterioration permit from the

U.S. Environmental Protection Agency is not needed. Furthermore, no other federal permits are required for the plant. A listing of definite regulatory and permit requirements is shown in Exhibit 5.5. Our schedule of regulatory requirements is shown in Exhibit 5.6, which indicates duration, lead times, and milestones.

Exhibit 5.1

Population and Economic Characteristics
of Panola County and Sardis, Mississippi

Population

	<u>1960</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>
Panola County	28,791	26,829	27,587	27,579
Sardis	2,098	2,391	2,547	2,481

Median School Years Completed in (1970)

Panola County	9.2
N. Delta	8.9
Mississippi	10.7
U.S.	12.1

Total Employment

(Place of Work) 1976 Panola County

Percent

Manufacturing	2,200	26
Government	1,440	17
Services	1,240	15
Wholesale & Retail Trade	1,320	16
Agriculture: Domestics, Self-employed, etc.	1,980	23
Construction	190	2
Mining	80	1
Total	8,450	100

Panola County Median Family Income (1969)

Panola County	\$4,982
N. Delta Area	\$4,885
Mississippi	\$6,071
U.S.	\$9,590

Percent of Persons Living Below the Poverty Level (1969)

Panola County	44.8%
N. Delta Area	42.4%
Mississippi	35.4%
U.S.	13.7%

Economic Impact of Ethanol Plant

Prepared by: Dr. Robert L. Williams
 Extension Economist
 Mississippi State University
 April 1980

PLANT

5,000,000 gallons (Annual Production)
 x \$2.00 per gallon
 \$10,000,000 Sales (Annually)
 x4 (output Multiplier)
 \$40,000,000 - Economic Impact

CORN

2,000,000 Bu. (Annual plant requirement) will require
 28,571 acres of corn at 70 Bu. per acre.

Some of the 28,571 acres will come out of cotton acreage and some from soybean acreage.

The value of soybeans produced per acre is less than the value of corn produced; however, the value of cotton produced per acre is higher than the value of corn produced so these are assumed to be off setting as far as the economic impact is concerned.

The plant would use 5000 bu. of corn per day. About 200,000 gallons of feed by-product will be produced daily.

When sold at \$25.00 per 1000 gallons this would generate \$5,000 income daily or \$1,825,000 annually.

200,000 gallons of feed-by-products produced daily will feed about 10,000 head of beef cattle. A gain of 2.5 lbs. per day will cause beef production to increase 25,000 lbs. daily or 9.1 millions lbs. annually. When this is valued at 70 cents per pound the increase in beef sales in the area will be about \$6,370,000 annually.

\$6,370,000 (Annual Sales)
 x 3 (Adjusted output Multiplier)
 \$19,100,000 Economic Impact

Adding the economic impact resulting from the sale of alcohol and the sale of beef produced in the area yields a total Economic Impact in the area of almost \$60,000,000 annually. This will provide a tremendous boost to the economy of the entire area.

ECONOMY - PANOLA COUNTY

Mississippi Research and Development Center 1978

Economic Development Blueprint for North Delta Region of Miss.
(Panola County Included)

	1974	1973
Per Capita Income (N. Delta Area -----	\$3,384	\$3,245
Mississippi-----	\$3,804	\$3,542
U. S.-----	\$5,449	\$5,041

Employment Distribution in N. Delta Area (1976)

Agriculture, Domestic & Self Employed -----	28%
Manufacturing -----	20%
Government -----	19%
Services -----	15%
Trade -----	15%
Construction -----	3%

Manufacturing Employment Distribution in the North Delta Area (1976)

Lumber & Wood -----	5%
Furniture & Fixtures -----	13%
Food -----	8%
Textiles -----	7%
Apparel -----	16%
Non-Electrical Machinery -----	9%

Socio Economic Characteristics of Panola County

Per Capita Income -----	\$3,008 (Panola County)
1974 -----	\$3,804 (Mississippi)
1975 County Population -----	27,587
1975 Sardis Population -----	2,547

Good rail and interstate connections make Panola County attractive to new industry. The county has a particular need for additional manufacturing jobs for men.

In 1978 R & D estimated 42% of housing in Panola County is substandard.

Panola County Median Family Income (1969)

Panola County -----	\$4,982
N. Delta Area -----	\$4,885
Mississippi -----	\$6,071
U. S. -----	\$9,590

Percent of Persons living below the poverty levels (1969)

Panola County -----	44.8%
N. Delta Area -----	42.4%
Mississippi -----	35.4%
U. S. -----	13.7%

Total Employment - Place of Residence - 1976

Panola County -----	9,150
N. Delta -----	56,370

Total Employment (Place of Work) 1976 Panola County

Manufacturing -----	2,200
Govt. -----	1,440
Services -----	1,240
Wholesale & Retail Trade -----	1,320
Agriculture; Domestics;	
Self employed etc.....	1,980
Construction -----	190
Mining -----	80
Total -----	8,450

Populations

	<u>1960</u>	<u>1970</u>	<u>1975</u>
Panola County	28,791	26,829	27,587
Sardis	2,098	2,391	2,547

Median School Years Completed in (1970)

Panola County -----	9.2
N. Delta -----	8.9
Mississippi -----	10.7
U. S. -----	12.1

CROP PRODUCTION (1978)(Mississippi Crop & Livestock Reporting Service)PANOLA COUNTY

	<u>Acres</u>	<u>Yield/Acre</u>
Soybeans	112,500	20.4 (Bu.)
Cotton	30,400	557 (Lbs.)
Wheat	4,200	28.3 (Bu.)
Corn	1,100	76.0 (Bu.)

	<u>Number</u>
Beef Cows	26,000
Hogs & Pigs	3,100

PANOLA COUNTY AGRICULTURAL STATISTICS (1974 Census)

All Farms	-----1078
Land in Farms	-----314205 (Acres)
Average size of Farm	-----291 (Acres)
Total Cropland	-----184266 (Acres)
Woodland	-----51573 (Acres)

Value of Ag. Products Sold

(A) Per Farm	-----16858 dollars
(B) Crops	-----14,572,000 dollars
(C) Forest Products	-----14,000 dollars
(D) Livestock	-----3,587,000 dollars
Cattle & Calves	-----47,083
Hogs & Pigs	-----3,349
Full Owner Farms	-----734
Part Owner Farms	-----236
Tenant Farms	-----108

Farm Production Expenses

Total	-----15,124,000 dollars
Feed Purchased for Livestock	-----1,186,000 dollars
Mixed Formula Feeds	-----772,000 dollars
Gasoline & Other Petroleum Fuel	
and oil	-----1337,000 dollars

Value of Products Sold (Total)-----18,173,000 dollars

CROPS HARVESTED 9(1974)

Corn ---Farms	-----145
Acres -- --	-----1021
Bu.-----	-----33918

Exhibit 5.2 (continued)

Sorghum --- Farms --- 23
Acres --- 881
Bu.-----35566

Wheat ----- Farms --- 26
Acres----- 1714
Bu.-----47585

Soybeans--- Farms --- 381
Acres-----63425
Bu.-----1101815

Cotton -----Farms --- 393
Acres----- 38455
Bales----- 32852

Grain Storage Facilities

1,000 Bu. & Over -----55 (Farms)

Fattened Cattle Sold

Farms -----8
Cattle -----345

1970 POPULATION (MAFES BULLETIN 809)

Total -----26,829
White -----13,061
Non-white-----13,768
Urban ----- 3,796
Rural-Non Farm---18,495
Farm ----- 4,538

*Total Land Area -----450,600 Acres
Commerical Forest-----123,500 Acres

Growing Stock Volume on Commerical Forest Land by Species Group - 1973

55,600,000 Cubic Feet

Mississippi Research & Development Center

P.O. DRAWER 2470 JACKSON, MS 39205 (3825 RIDGEWOOD ROAD) PHONE (601) 982-6606

March 15, 1982

Mr. Billie E. Shepard, President
Sun Belt Energy Corporation
212 North Main Street
Sardis, MS 38666

Dear Mr. Shepard:

Per your request, I have reviewed the employment impact statement of a proposed power alcohol plant located in Panola County, and have estimated increased Mississippi tax revenues from the proposed power alcohol plant. Time limitations prevent a review of supporting materials provided by the Bechtel study and Dr. Robert Williams of Mississippi State University relative to the tax revenues. Therefore, the economic impact provided by your study of \$2,452,500 in additional employment dollars was used to calculate additional tax revenues.

The employment multiplier of 2 is valid based on present employment ratios in Mississippi. Estimating the number of additional agricultural workers needed to supply the plant with grain is a difficult undertaking. Assuming that this grain production is in excess of present agricultural production, the creation of 170 additional related jobs appears to be feasible.

Assuming an increase in payrolls of \$2,452,500 as a direct result of the proposed power plant and an income multiplier of 1.7, the total increase in personal income would be \$4,169,250. A publication by the U. S. Bureau of the Census, "Government Finances in 1979-80," indicates that for every increase of \$1,000 in personal income in Mississippi, state and local tax revenues increase approximately \$100. An increase of \$4,169,250 in personal income would result in an increase of \$416,925 in state and local taxes.

The above estimates of an additional \$416,925 in state and local taxes collected in Mississippi would come from direct wages and salaries paid to workers employed by the development of a power alcohol plant. The above figure does not include the total economic impact of \$70 million as presented in Dr. Williams' study. From this \$70 million, additional state and local taxes would be generated.

Sincerely,

Jim W. Meredith
Director

JWM/kh

Exhibit 5.4

Annualized Increase in Economic Activity

	Economic Activity (\$ millions)
<u>Sector 5*</u>	
Corn	\$ 4.75
DDG	2.83
Wood	0.43
Fertilizer	0.06
Sum	7.95
Multiplier	2.10
Total Sector 5	\$18.12
<u>Sector 42*</u>	
Ethanol	\$ 8.50
Wood	(0.43)
Corn	(4.75)
Denaturant (gasoline)	(0.22)
Chemicals	(1.25)
Electricity	(0.33)
Sum	1.52
Multiplier	2.00
Total Sector 42	\$ 3.04
Total Increase in Economic Activity	\$21.16

* Bureau of Economic Analysis, U.S. Department of Commerce, sectors for economic activity multipliers.

Exhibit 5.5

Regulatory Requirements

Before Construction

Air Emission and Wastewater Control Permit
Approval of Location and Construction of
Water Works
Site Approval of Wastewater Treatment
Facility

Agency

Mississippi Department of Natural Resources
Mississippi Department of Natural Resources
Mississippi Department of Natural Resources

Before Operation

Compliance with OSHA
Compliance with Noise Regulations
Certificate for Boilers
Septic System Permit
Approval of Potable Water Supply

Agency

U.S. Department of Labor
Mississippi Department of Natural Resources
Mississippi Department of Labor
Mississippi State Board of Health
Mississippi State Board of Health

Exhibit 5.6

Schedule for Regulatory Requirements

Key

- Application Submitted
- Permit Approved

6

ORGANIZATION AND MANAGEMENT PLAN

Good management is vital to a fuel ethanol project's success. It relies on thorough analysis, planning, and clear communication. Sun Belt Energy Corporation will provide these important ingredients. We have performed a detailed analysis of factors that are important to implementation of this project. With the assistance of Bechtel Petroleum, Inc., and Resource Planning Associates, Inc., two firms with extensive experience in designing, planning, and managing major energy projects, we have prepared a detailed project schedule, a project organization structure, and a discussion of key management activities, each of which is described in this section.

6.1 SCHEDULE FOR PROJECT IMPLEMENTATION

The Sun Belt fuel ethanol plant would be the ninth plant constructed in the United States using the ACR process. Six plants using the ACR process are now in operation. Therefore, the critical activities in construction and their timing are well known to the ACR Process Corporation and Bechtel Petroleum, Inc. (Bechtel has designed the most recent fuel ethanol plant using the ACR process.)

Our project schedule, shown in Exhibit 6.1, is based on that experience and allows for contingencies. The exhibit depicts major project implementation activities, from the project feasibility study phase to plant operation. The total schedule covers 36 months, from the start of the feasibility study (July 1981) to full plant operation (July 1984). The implementation activities are grouped into four categories: (1) Preconstruction; (2) Detailed Design, Procurement, and Construction; (3) Regulatory; and (4) Plant Operation. The activities in each category are described below.

Preconstruction Activities

Three major activities require management attention prior to detailed engineering and construction. These activities are:

- Conduct project feasibility study
- Develop community awareness and support
- Secure equity and long-term financing.

The schedule for these activities covers 14 months. As part of the feasibility study, Sun Belt completed an initial financial analysis of the project in January 1982. That analysis was sufficiently positive that Sun Belt began to arrange for equity and long-term financing for the project. The schedule allows 4 months after the feasibility study for financing prior to the start of engineering.

A great deal of work has been and will continue to be done to publicize the project and its potential benefits to the community. Sun Belt has received substantial support from community leaders in Sardis and Panola County. Sun Belt intends to maintain its public relations program throughout project implementation.

Detailed Design, Procurement, and Construction

The schedule for this group of activities covers 20 months. The first 2 months would be spent in preparing and finalizing contracts, first with the construction management firm and then with the engineering firm and the construction contractor. Detailed engineering would then begin, covering a period of 12 months. During the first several months, specifications for major equipment would be prepared for procurement items requiring a long lead time. The ACR process equipment would be ordered first, followed by the boiler, DDGS drying equipment, and wastewater treatment equipment. After 4 months of detailed engineering, other equipment would be ordered, including grain handling and receiving equipment, pumps, cooling tower, and miscellaneous equipment. Site clearing and preparation would be started after 8 months of detailed engineering. Foundations would then be installed, and the remainder of the plant would be built over a period of 9 months.

Regulatory Activities

The major regulatory activity requiring management attention will be to obtain permits for air and water pollution control. Applications will be prepared and filed with the Mississippi Department of Natural Resources (MDNR). Discussions with MDNR indicate that the permit approval process should take about 30 to 60 days; however, we have allowed over 120 days. Site inspections will also be required by the MDNR, the State Board of Health, and the Mississippi Department of Labor, for the wastewater treatment systems and the boiler after installation.

Plant Operation

Three major activities will be required before full operation of plant. Prior to long-term financing, contracts with feedstock suppliers and ethanol and DDGS customers will be executed. Sun Belt has already initiated discussions with these suppliers and buyers. The next activity is to search for, hire, and train plant operating personnel. The plant manager and engineer will be hired 8 months before plant start-up. They will assist in the recruitment of other supervisory and technical personnel to be on board 2 months prior to start-up. As part of his turnkey agreement, the general contractor will manage the process of recruiting all plant personnel. The entire plant staff will begin training and orientation 2 months before plant start-up.

Plant start-up will cover a period of about 3 months. During that period, the plant will operate 24 hours a day and seven days a week. Based on the experience of the plants now operating, we expect production to reach 90 percent of full capacity within the first 2 months, and 100 percent capacity by the end of the third month.

Our schedule represents a fast-track, but achievable, set of activities from the start of detailed engineering through the completion of construction. This is facilitated by long-lead procurement of important equipment and by close coordination among the engineering, process supplier, and construction firms. Coordination is provided by a centralized management organization with the assistance of a construction management firm. The project organization and management strategy are described in the remainder of this section.

6.2 PROJECT ORGANIZATION

Sun Belt Energy Corporation will use a tightly knit management structure and will rely on highly qualified individuals in the key technical and management functions.

The proposed management organization for the construction period is shown in Exhibit 6.2. The Sun Belt Energy Corporation President, Mr. Billie E. Shepard, will retain final decision-making authority. In the construction phase of the project, he will be supported by an independent construction management firm with special expertise in construction cost control and scheduling. The engineering firm and general contractor will be selected on the basis of experience, quality assurances, and cost. Planning for maximum operating revenues (e.g., ethanol and DDGS contract negotiations) and reduced operating costs (e.g., grain supply contract negotiations, co-op storage participation), and assistance in financing implementation will be provided by Resource Planning Associates, Inc. The process supplier will be the ACR Process Corporation.

The responsibilities for key construction activities are shown in Exhibit 6.3. The construction management firm will facilitate coordination among the team members, since each activity will involve more than one firm.

The type of contract used for engineering and construction will be important in managing the construction process. Where possible, Sun Belt will use fixed-price contracts for engineering and construction services. Warranties and other contract assurances for construction timeliness, quality, and process efficiencies will be required.

Several months prior to start-up, the management organization for operating the plant will be formed. This management structure is shown in Exhibit 6.4. The plant personnel requirements for operation are shown in Exhibit 6.5, which includes the necessary personnel for continuous 24-hour operation of the plant. Approximately 36 persons will be required to maintain full production (3 shifts per day). The plant manager will be responsible for the overall operation of the plant and will report to the president of Sun Belt. The shift supervisors, plant engineer, and controller will report to the plant manager. The shift supervisors will be directly responsible for the day-to-day operation of the plant. The plant engineer

will be responsible for maintenance and plant performance, using a maintenance and utility crew 3 shifts per day. A laboratory technician will be responsible for maintaining a quality assurance testing program and will report directly to the plant engineer. Services of an independent testing laboratory will be used for product quality and certifications as required.

The plant manager and engineer will be on staff 8 months before plant construction is completed. Two months before plant start-up, shift supervisors and other managerial personnel will be on staff for orientation and training. The purpose of early staffing is to minimize start-up time and costs. The more familiar the personnel are with the systems and operations of the equipment, the more efficiently and quickly the plant can be brought to full production capacity. The plant will be staffed by well-qualified personnel with chemical process industry experience.

6.3 KEY MANAGEMENT ACTIVITIES

Sun Belt management's aim is to focus on the project elements that are most important to project construction cost control and operating revenue enhancement. Although this seems an obvious goal, it is often difficult for management to identify and concentrate attention on the most important issues. Since the managers' time will be limited, given the day-to-day activities in the construction phase of the project, it is critical that they focus only on the essential issues; other issues can be easily delegated.

Based on an analysis of factors that will affect the project's financial performance, and on interviews with other fuel ethanol plant owners and constructors, Sun Belt has carefully identified the elements that are key to project implementation and has an understanding of their relative importance. These issues and our approach for handling them are described below.

- Prices for products and feedstocks. Although it has no control over market prices for corn or wood feedstocks or ethanol prices, Sun Belt intends to sign

contracts with feedstock suppliers and buyers of its products that will minimize sharp price fluctuations over a specified period. For grain, wood purchases, and DDGS sales, the contracts will have prices tied to gross economic indicators. For ethanol sales, we have structured contracts with prices tied to market prices of unleaded regular gasoline.

- Long-term financing. Significant management attention will be placed on securing long-term financing for the project.

- State permit approvals. Sun Belt will be keenly responsive to the requirements for obtaining air and water pollution control permits from the State of Mississippi, and will diligently prepare the permit applications and closely monitor them through the MDNR approval process.

- Construction schedule and equipment delivery. Sun Belt will retain a well-qualified construction management firm to monitor the construction schedule closely and to expedite delivery of important plant equipment. To encourage timeliness, payments for services will be based on percent completion.

- Plant performance. Plant performance will depend on two factors, equipment performance and operator performance. Equipment performance will be assured by guarantees provided by the process supplier, ACR Corporation, and by the design engineering firm. Sun Belt will provide an extensive training program for the plant operators, which will include training by the equipment vendors and the process suppliers. Sun Belt also intends to fully meet all Occupational Health and Safety Act requirements for operational procedures and workers' safety.

- Detailed engineering quality and schedule. Sun Belt's contract for detailed engineering services will be fixed-price with payments tied to deliverables. Furthermore, Sun Belt intends to engage an engineering firm that has substantial experience in designing fuel ethanol plants. Bechtel Petroleum, Inc., would be a candidate for this project, as would other firms of a similar caliber.

- Cash flow management. Sun Belt will use its financial analysis model to plan and control the cash flows during plant construction and operation. Financial management will be a discrete function that will

receive the highest level of Sun Belt management's attention.

- Construction cost. In the first instance, construction cost will be controlled by the use of well-established cost-estimating techniques prior to the start of construction. The engineering firm will prepare the initial estimates, which will then be checked by the construction management firm. Costs will be further controlled by using a fixed-price turnkey contract. Change orders that may result in additional costs will be carefully reviewed by the construction management firm and by Sun Belt before approval.
- Personnel hiring and training. Sun Belt recognizes that the success of the project will be a function of the quality of its personnel. Sun Belt will provide sufficient compensation to attract people with outstanding capability and experience.

Exhibit 6.1

Schedule of Major Project Implementation Activities

Exhibit 6.2

Management Organization for Construction

Exhibit 6.3

Responsibilities for Key Construction Activities

Team Member	<u>Key Construction Activities</u>						
	Plant Design	Engineering Process Equipment	Procurement	Expedite Procurement	Construction	Initial Start-up	Other
Engineering Firm	Detailed Engineering	General Specifications	Initiate Procurement	Maintain Contact with Vendor	Field Inspection	Monitor	Assist Obtaining Necessary Permits/ Design Changes
Construction Management Firm	Review Cost and Schedule Revisions		Maintain Schedule/ Cost Control	Expedite Delivery/ Monitor Cost	Monitor/ Review Change Orders		Consult on Development of Engineering and Construction Contracts
Equipment Vendors		Work with Process Supplier	Fabricate Equipment	Expedite Delivery			
Process Supplier	Consult on Process Requirements	Detailed Specifications	Review Process Equipment Orders	Maintain Contact with Vendor	Inspect Equipment Installation	Develop Operating Procedures and Consult	Assist in Pre-operation Training
General Contractor	Consult on Site Engineering				Build Plant/ Manage Subcontractors	Hire Operators Run Shake-Down Under Turnkey Agreement	Prepare As-built Drawings

Exhibit 6.4
Management Organization for Plant Operation

* The plant manager will be qualified to fill in for the plant engineer or a shift supervisor when vacation or sickness occurs.

** The plant engineer will be qualified to fill in for a shift supervisor when vacation or sickness occurs.

Exhibit 6.5

Sun Belt Ethanol Plant
Personnel Required

	<u>Persons</u>	<u>Shift/Day</u>	<u>Total</u>
<u>ADMINISTRATION</u>			
Plant Manager	1	1	1
General--Typist, Accounting, Payroll, Buying, Receiving	1	1	1
Feedstock Procurement DDGS/Alcohol Sales	1	1	<u>1</u>
SUBTOTAL			3
<u>SUPERVISION</u>			
Plant Engineer	1	1	1
Plant Controller	1	1	1
Shift Supervisor	1	3	<u>4*</u>
SUBTOTAL			6
<u>OPERATIONS</u>			
Control Room	2	3	8*
Operators	2	3	8*
Grain Handling/Alcohol Shipping	1	1	1
Laboratory	1	1	1
Maintenance	1	3	4*
Utility	1	3	4*
Security and Service	1	1	<u>1</u>
SUBTOTAL			27
TOTAL			36

* Includes additional persons for the swing shift.

Appendix A

PERMITS REQUIRING MANAGEMENT ATTENTION

PERMIT/REGULATION DATA FORM

A.2

Permit/Regulation:

Obtain permit to construct a facility that will discharge waste
into the atmosphere or any stream.

Administering Agency:

MS Department of Natural Resources

Bureau of Pollution Control

Agency Contact:

Conald Scharr

Agency Telephone:

961-5159

Triggering Action:

Fill out application - usually no problem, if you comply with
EPA regulation.

Permit Timing:

Information Requirements:

Comments:

PERMIT/REGULATION DATA FORM

A.3

Permit/Regulation:

Approval of Potable water supply

Administering Agency:

MS State Board of Health

Jackson, MS

Agency Contact:

Mr. Redding

Agency Telephone:

354-6616

Triggering Action:

No strict laws - on an industry with 25 or more employees the
agency checks once a year on water. Best bet would be to hook
up with Como, MS water supply. If other source is required, a
registered engineer would have to do preliminary work. The Board
would then review and approve.

Permit Timing:

2 - 3 weeks

Information Requirements:

Comments:

PERMIT/REGULATION DATA FORM

A.4

Permit/Regulation:

Obtain state permit to operate a waste water treatment facility
from which no discharge occurs.

Administering Agency:

MS Department of Natural Resources

Bureau of Pollution Control

Agency Contact:

Donald Scharr

Agency Telephone:

961-5159

Triggering Action:

Fill out application

Permit Timing:

30 - 60 days

Information Requirements:

Comments:

PERMIT/REGULATION DATA FORM

A.5

Permit/Regulation:

Qualify as an interstate fuel user.

Administering Agency:

Motor Vehicle Comptroller

Motor Fuel Tax Section

Jackson, MS 39205

Agency Contact:

Jay Duckworth - Supervisor

Agency Telephone:

601-354-7447

Triggering Action:

\$1,000 motor fuel permit tax surety bond is required.

Permit Timing:

Two weeks after submitting surety bond.

Information Requirements:

Comments:

ADDITIONAL PERMITS/REGULATIONS

WORKMEN'S COMPENSATION

PERMIT/REGULATION DATA FORM

A.7

Permit/Regulation:

Provide workmen's compensation insurance or qualify as a self-insured compnay.

Administering Agency:

Workmen's Compensation Commission

POINTER INSURANCE AGENCY

Main Street - Como, MS 38619

Agency Contact:

Monroe Pointer

Agency Telephone:

. 601-526-5101

Triggering Action:

Policy can be written when estimated payroll given by job description is given. He sees no problems with getting an okay.

Permit Timing:

Can call Jackson and ter an okay when information reaches him.

Information Requirements:

Comments:

PERMIT/REGULATION DATA FORM

A.8

Permit/Regulation:

Obtain copies of the solid waste law and regulations

Administering Agency:

MS State Board of Health

Jackson, MS

Agency Contact:

C. Burks

Agency Telephone:

961-5171

Triggering Action:

Copies are at printers and will not be back until first of April.

They have adopted the EPA regulations.

Permit Timing:

A few days.

Information Requirements:

Comments:

TAX

PERMIT/REGULATION DATA FORM

A.9

Permit/Regulation:

Obtain County License and Pay Tax

Administering Agency:

Panola County Tax Collector

215 Pacahontas

Sardis, MS 38666

Agency Contact:

Pat Holley

Agency Telephone:

601-487-2641

Triggering Action:

Go to office and license will be issued - it is paid yearly.

Permit Timing:

30 minutes

Information Requirements:

Comments:

PERMIT/REGULATION DATA FORM

A.10

Permit/Regulation:

License Trucks

Administering Agency:

Panola County Tax Collector

215 Pocahontas

Sardis, MS 38666

Agency Contact:

Pat Holley

Agency Telephone:

601-487-2641

Triggering Action:

Present titles, etc., paid yearly

Permit Timing:

30 - 45 minutes

Information Requirements:

Comments:

TAXES

PERMIT/REGULATION DATA FORM

A.11

Permit/Regulation:

Tax Payments

Administering Agency:

Mississippi State Tax Commission

Revenue Department

Agency Contact:

Jerry Miles

Agency Telephone:

601-354-6274

Triggering Action:

Annual Corporate Tax Return

Permit Timing:

Information Requirements:

Comments:

Appendix B

COMPUTER MODEL SENSITIVITY RESULTS

FINANCIAL ANALYSIS OF SUN BELT ENERGY CORPORATION PROJECT

DATE OF ANALYSIS: 31/03/82

CORN -TO-ETHANOL PLANT

4.8 MIL GPY RATED CAPACITY

FUEL: WOOD

1.50 ethanol
2.80 corn

ASSUMPTIONS (1982 \$)

14285 GPD RATED CAP

100 % ACT CAP

333 DAYS PER YEAR

2.5 GAL ETH/BU

18 LBS DDG/BU

CAPITAL COSTS \$ 12.4 MIL
CONSTR INT. RATE 16.0 %

PERCENT LT DEBT 75 %
LT DEBT INT RATE 16.0 %
LT DEBT REPAY 10 YRS
BANK LINE INT RT 16.0 %

INFLATION RATE 8.0 %
CAP COST REAL ESC 5.0 %

ETH SALE PRICE 1.50 \$/GAL
NET ETH PRICE .70 \$/GAL
DDG PRICE 170.00 \$/TON
CORN COST 2.80 \$/BU
WOOD COST 10.70 \$/TON

ELECTR SALES PRICE 5.0 C/KWH
ELECTR PURCH COST 5.0 C/KWH

ETH REAL ESC 0.0 %
CORN & DDG REAL ESC 0.0 %
ELECTR REAL ESC 0.0 %
WOOD REAL ESC 0.0 %

DAYS REC ETH/DRY AG 30
DAYS REC DDG 30
DAYS REC ELECTR 30

DAYS PAY CORN 0
DAYS PAY WOOD 0

LIFO INVENTORY POLICY
15 DAYS ETH STORAGE
15 DAYS CORN STORAGE
15 DAYS DDG STORAGE
15 DAYS WOOD STORAGE

FED INC TAX 46.0 %
STATE INC TAX 4.0 %
STATE SALES TAX EXEMPT 0.0 C/GAL
STATE GASOLINE EXCISE TAX EXEMPT 4.0 C/GAL
FED GASOLINE EXCISE TAX EXEMPT 4.0 C/GAL

EQUIP DEPR LIFE 5 YRS
EQUIP ITC 20 %
BLDG ITC 0 %

RESULTS

ROE 13.1 % NPV (25 % DISC RATE) -3.3 MIL PAYBACK 1993

DEBT COV: 1.0 IN OPER YR 1 1.5 IN OPER YR 6

ENG COSTS \$.6 MIL

INITIAL DEBT \$ 12.4 MIL

MAXIMUM CASH EQUITY \$ 7.6 MIL

ANNUAL SALES: 4.3 MIL GALS ETH 16649 TONS DDG

0.0 MW ELECT

ANNUAL PLANT REQS 1.9 MIL BU CORN
AT FULL CAPACITY 6 MIL KWH

29273 ACRES CORN
166 MIL LB STEAM

16649 HEAD CATTLE

INCOME AND CASH FLOW (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
REVENUES									
ETHANOL	0.0	0.0	0.0	9.0	9.7	10.5	11.3	12.2	13.2
DDG	0.0	0.0	0.0	3.6	3.9	4.2	4.5	4.9	5.2
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	0.0	0.0	0.0	12.9	13.9	15.0	16.2	17.5	18.9
VARIABLE COST									
FEEDSTOCK	0.0	0.0	0.0	6.7	7.2	7.8	8.5	9.1	9.9
WOOD	0.0	0.0	0.0	.5	.5	.6	.6	.7	.7
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT	0.0	0.0	0.0	.4	.4	.4	.5	.5	.5
OTHER	0.0	0.0	0.0	.6	.7	.7	.8	.9	.9
TOTAL VC	0.0	0.0	0.0	8.5	9.2	10.0	10.8	11.6	12.5
FIXED COSTS									
LABOR	0.0	0.0	0.0	.9	1.0	1.1	1.2	1.3	1.4
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
G & A	0.0	0.0	0.0	.4	.4	.4	.5	.5	.6
OTHER	0.0	0.0	0.0	.3	.3	.3	.3	.3	.4
TOTAL FC	0.0	0.0	0.0	4.1	5.3	5.3	5.4	5.5	2.4
STARTUP COSTS	0.0	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	0.0	0.0	.7	12.6	14.5	15.2	16.2	17.2	14.9
OPERATING INCOME	0.0	0.0	-.7	.3	-.6	-.2	.1	.4	4.0
INTEREST	0.0	0.0	0.0	2.1	2.0	1.9	1.8	1.7	1.5
INC. BEF. LCF/TAX	0.0	0.0	-.7	-1.9	-2.7	-2.1	-1.8	-1.3	2.5
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
TAXABLE INCOME	0.0	0.0	-.7	-1.9	-2.7	-2.1	-1.8	-1.3	0.0
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME AFTER TAX	0.0	0.0	-.7	-1.9	-2.7	-2.1	-1.8	-1.3	2.5
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
CHG IN OTH ASSETS	0.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	0.0	0.0	0.0	-.6	-.7	-.8	-.9	-1.1	-1.2
CHG IN WC	0.0	0.0	-1.9	-.1	-.1	-.1	-.1	-.1	-.1
CHG IN BANK LINE	0.0	0.0	.9	.0	.0	.1	.1	.1	.1
ENG COST	-.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	-2.4	-4.6	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	-.7	-1.9	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	7.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-.6	-2.5	-4.4	.0	.2	.5	.7	1.0	1.3
CUMUL CASH FLOW	-.6	-3.1	-7.6	-7.5	-7.3	-6.9	-6.2	-5.2	-3.9

INCOME AND CASH FLOW (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
REVENUES									
ETHANOL	14.3	15.4	16.4	18.0	19.4	21.0	22.6	24.4	26.4
DDG	5.7	6.1	6.6	7.1	7.7	8.3	9.0	9.7	10.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	20.4	22.1	23.8	25.8	27.8	30.0	32.4	35.0	37.8
VARIABLE COST									
FEEDSTOCK	10.7	11.5	12.4	13.4	14.5	15.6	16.9	18.3	19.7
WOOD	.8	.9	.9	1.0	1.1	1.2	1.3	1.4	1.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT	.6	.6	.7	.7	.8	.8	.9	1.0	1.1
OTHER	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.9
TOTAL VC	13.5	14.6	15.8	17.1	18.4	19.9	21.5	23.2	25.1
FIXED COSTS									
LABOR	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.6	2.8
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
G & A	.6	.6	.7	.8	.8	.9	1.0	1.0	1.1
OTHER	.4	.4	.5	.5	.5	.6	.6	.7	.7
TOTAL FC	2.6	2.8	3.0	3.2	3.5	3.7	4.0	4.4	4.7
STARTUP COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	16.1	17.4	18.8	20.3	21.9	23.6	25.5	27.6	29.8
OPERATING INCOME	4.3	4.7	5.1	5.5	5.9	6.4	6.9	7.5	8.1
INTEREST	1.3	1.1	.9	.6	.3	.3	.3	.3	.3
INC. BEF. LCF/TAX	3.0	3.5	4.2	4.9	5.7	6.1	6.6	7.2	7.8
LCF USED	3.0	3.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
TAXABLE INCOME	0.0	0.0	2.7	4.9	5.7	6.1	6.6	7.2	7.8
ITC USED	0.0	0.0	1.4	1.8	0.0	0.0	0.0	0.0	0.0
TAXES PAID	0.0	0.0	0.0	.6	2.8	3.1	3.3	3.6	3.9
INCOME AFTER TAX	3.0	3.5	4.2	4.2	2.8	3.1	3.3	3.6	3.9
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
CHG IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	-1.4	-1.6	-1.9	-2.2	0.0	0.0	0.0	0.0	0.0
CHG IN WC	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.3
CHG IN BANK LINE	.1	.1	.1	.1	.1	.1	.1	.1	.1
ENG COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	1.6	1.9	2.3	2.0	2.8	3.0	3.3	3.5	3.8
CUMUL CASH FLOW	-2.4	-.5	1.8	3.8	6.6	9.7	12.9	16.5	20.3

FINANCIAL ANALYSIS OF SUN BELT ENERGY CORPORATION PROJECT

DATE OF ANALYSIS: 31/03/82

CORN -TO-ETHANOL PLANT

4.8 MIL GPY RATED CAPACITY

FUEL: WOOD

\$ 1.50 ethanol

ASSUMPTIONS (1982 \$)

14285 GPD RATED CAP 100 % ACT CAP 333 DAYS PER YEAR 2.5 GAL ETH/BU 18 LBS DDG/BU

CAPITAL COSTS	\$ 12.4 MIL	PERCENT LT DEBT	75 %	INFLATION RATE	8.0 %
CONSTR INT. RATE	16.0 %	LT DEBT INT RATE	16.0 %	CAP COST REAL ESC	5.0 %
		LT DEBT REPAY	10 YRS		
		BANK LINE INT RT	16.0 %		

ETH SALE PRICE	1.50 \$/GAL	ELECTR SALES PRICE	5.0 C/KWH	ETH REAL ESC	0.0 %
NET ETH PRICE	.70 \$/GAL	ELECTR PURCH COST	5.0 C/KWH	CORN & DDG REAL ESC	0.0 %
IDG PRICE	170.00 \$/TON			ELECTR REAL ESC	0.0 %
CORN COST	2.30 \$/BU			WOOD REAL ESC	0.0 %
WOOD COST	10.70 \$/TON				

DAYS REC ETH/DRY AG	30	DAYS PAY CORN	0	LIFO INVENTORY POLICY	
DAYS REC DDG	30	DAYS PAY WOOD	0	15 DAYS ETH STORAGE	
DAYS REC ELECTR	30			15 DAYS CORN STORAGE	
				15 DAYS DDG STORAGE	
				15 DAYS WOOD STORAGE	

FED INC TAX	46.0 %	EQUIP DEPR LIFE	5 YRS
STATE INC TAX	4.0 %	EQUIP ITC	20 %
STATE SALES TAX EXEMPT	0.0 C/GAL	BLDG ITC	0 %
STATE GASOLINE EXCISE TAX EXEMPT	4.0 C/GAL		
FED GASOLINE EXCISE TAX EXEMPT	4.0 C/GAL		

RESULTS

ROE 24.0 % NPV (25 % DISC RATE) -.3 MIL PAYBACK 1989

DEBT COV: 1.5 IN OPER YR 1 2.1 IN OPER YR 6

ENG COSTS \$.6 MIL INITIAL DEBT \$ 12.4 MIL MAXIMUM CASH EQUITY \$ 7.5 MIL

ANNUAL SALES: 4.8 MIL GALS ETH 16649 TONS DDG 0.0 MW ELECT

ANNUAL PLANT REQS 1.9 MIL BU CORN 29273 ACRES CORN 16649 HEAD CATTLE
AT FULL CAPACITY 6 MIL KWH 166 MIL LB STEAM

INCOME AND CASH FLOW (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
REVENUES									
ETHANOL	0.0	0.0	0.0	9.0	9.7	10.5	11.3	12.2	13.2
DDG	0.0	0.0	0.0	3.6	3.9	4.2	4.5	4.9	5.2
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	0.0	0.0	0.0	12.9	13.9	15.0	16.2	17.5	18.9
VARIABLE COST									
FEEDSTOCK	0.0	0.0	0.0	5.5	6.0	6.4	6.9	7.5	8.1
WOOD	0.0	0.0	0.0	.5	.5	.6	.6	.7	.7
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT	0.0	0.0	0.0	.4	.4	.4	.5	.5	.5
OTHER	0.0	0.0	0.0	.6	.7	.7	.8	.9	.9
TOTAL VC	0.0	0.0	0.0	7.3	7.9	8.6	9.2	10.0	10.8
FIXED COSTS									
LABOR	0.0	0.0	0.0	.9	1.0	1.1	1.2	1.3	1.4
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
G & A	0.0	0.0	0.0	.4	.4	.4	.5	.5	.6
OTHER	0.0	0.0	0.0	.3	.3	.3	.3	.3	.4
TOTAL FC	0.0	0.0	0.0	4.1	5.3	5.3	5.4	5.5	2.4
STARTUP COSTS	0.0	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	0.0	0.0	.7	11.4	13.2	13.8	14.6	15.5	13.2
OPERATING INCOME	0.0	0.0	-.7	1.5	.7	1.2	1.6	2.0	5.7
INTEREST	0.0	0.0	0.0	2.1	2.0	1.9	1.8	1.7	1.5
INC. BEF. LCF/TAX	0.0	0.0	-.7	-.7	-1.4	-.7	-.2	.3	4.2
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	3.4
TAXABLE INCOME	0.0	0.0	-.7	-.7	-1.4	-.7	-.2	0.0	.8
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME AFTER TAX	0.0	0.0	-.7	-.7	-1.4	-.7	-.2	.3	4.2
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
CHG IN OTH ASSETS	0.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	0.0	0.0	0.0	-.6	-.7	-.8	-.9	-1.1	-1.2
CHG IN WC	0.0	0.0	-1.8	-.1	-.1	-.1	-.1	-.1	-.1
CHG IN BANK LINE	0.0	0.0	.9	.0	.0	.1	.1	.1	.1
ENG COST	-.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	-9.4	-4.6	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	-.7	-1.9	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	7.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-.6	-2.5	-4.4	1.2	1.5	1.9	2.2	2.6	3.0
CUMUL CASH FLOW	-.6	-3.1	-7.5	-6.3	-4.8	-2.9	-.7	1.9	4.9

INCOME AND CASH FLOW (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
REVENUES									
ETHANOL	14.3	15.4	16.6	18.0	19.4	21.0	22.6	24.4	26.4
DDG	5.7	6.1	6.6	7.1	7.7	8.3	9.0	9.7	10.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	20.4	22.1	23.8	25.8	27.8	30.0	32.4	35.0	37.8
VARIABLE COST									
FEEDSTOCK	8.7	9.4	10.2	11.0	11.9	12.9	13.9	15.0	16.2
WOOD	.8	.9	.9	1.0	1.1	1.2	1.3	1.4	1.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT	.6	.6	.7	.7	.8	.8	.9	1.0	1.1
OTHER	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.9
TOTAL VC	11.6	12.6	13.6	14.7	15.8	17.1	18.5	20.0	21.5
FIXED COSTS									
LABOR	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.6	2.8
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
G & A	.6	.6	.7	.8	.8	.9	1.0	1.0	1.1
OTHER	.4	.4	.5	.5	.5	.6	.6	.7	.7
TOTAL FC	2.6	2.8	3.0	3.2	3.5	3.7	4.0	4.4	4.7
STARTUP COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	14.2	15.3	16.6	17.9	19.3	20.8	22.5	24.3	26.2
OPERATING INCOME	6.2	6.7	7.3	7.9	8.5	9.2	9.9	10.7	11.6
INTEREST	1.3	1.1	.9	.6	.2	.3	.3	.3	.3
INC. BEF. LCF/TAX	4.9	5.6	6.4	7.3	8.3	8.9	9.7	10.4	11.3
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXABLE INCOME	4.9	5.6	6.4	7.3	8.3	8.9	9.7	10.4	11.3
ITC USED	2.4	.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	0.0	2.5	3.2	3.6	4.1	4.5	4.8	5.2	5.6
INCOME AFTER TAX	4.9	3.1	3.2	3.6	4.1	4.5	4.8	5.2	5.6
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
CHG IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	-1.4	-1.6	-1.9	-2.2	0.0	0.0	0.0	0.0	0.0
CHG IN WC	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.3
CHG IN BANK LINE	.1	.1	.1	.1	.1	.1	.1	.1	.1
ENG COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	3.5	1.5	1.3	1.4	4.1	4.4	4.8	5.2	5.6
CUMUL CASH FLOW	8.4	9.8	11.1	12.5	16.6	21.1	25.9	31.0	36.6

FINANCIAL ANALYSIS OF SUN BELT ENERGY CORPORATION PROJECT

DATE OF ANALYSIS: 31/03/82

CORN -TO-ETHANOL PLANT

4.8 MIL GPD RATED CAPACITY

FUEL: WOOD

1.30 ethanol

ASSUMPTIONS (1982 \$)

14285 GPD RATED CAP

100 % ACT CAP

333 DAYS PER YEAR

2.5 GAL ETH/BU

18 LBS DDG/BU

CAPITAL COSTS \$ 12.4 MIL
CONSTR INT. RATE 16.0 %PERCENT LT DEBT 75 %
LT DEBT INT RATE 16.0 %
LT DEBT REPAY 10 YRS
BANK LINE INT RT 16.0 %INFLATION RATE 8.0 %
CAP COST REAL ESC 5.0 %ETH SALE PRICE 1.30 \$/GAL
NET ETH PRICE .50 \$/GAL
DDG PRICE 170.00 \$/TON
CORN COST 2.30 \$/BU
WOOD COST 10.70 \$/TONELECTR SALES PRICE 5.0 C/KWH
ELECTR PURCH COST 5.0 C/KWHETH REAL ESC 0.0 %
CORN & DDG REAL ESC 0.0 %
ELECTR REAL ESC 0.0 %
WOOD REAL ESC 0.0 %DAYS REC ETH/DRY AG 30
DAYS REC DDG 30
DAYS REC ELECTR 30DAYS PAY CORN 0
DAYS PAY WOOD 0LIFO INVENTORY POLICY
15 DAYS ETH STORAGE
15 DAYS CORN STORAGE
15 DAYS DDG STORAGE
15 DAYS WOOD STORAGEFED INC TAX 46.0 %
STATE INC TAX 4.0 %
STATE SALES TAX EXEMPT 0.0 C/GAL
STATE GASOLINE EXCISE TAX EXEMPT 4.0 C/GAL
FED GASOLINE EXCISE TAX EXEMPT 4.0 C/GALEQUIP DEPR LIFE 5 YRS
EQUIP ITC 20 %
BLDG ITC 0 %

RESULTS

ROE 13.4 % NPV (25 % DISC RATE) -3.2 MIL PAYBACK 1993

DEBT COV: 1.0 IN OPER YR 1 1.5 IN OPER YR 6

ENG COSTS \$.6 MIL

INITIAL DEBT \$ 12.4 MIL

MAXIMUM CASH EQUITY \$ 7.5 MIL

ANNUAL SALES: 4.8 MIL GALS ETH 16649 TONS DDG 0.0 MW ELECT

ANNUAL PLANT REQS 1.9 MIL BU CORN
AT FULL CAPACITY 6 MIL KWH29273 ACRES CORN
166 MIL LB STEAM

16649 HEAD CATTLE

INCOME AND CASH FLOW (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
REVENUES									
ETHANOL	0.0	0.0	0.0	7.8	8.4	9.1	9.8	10.6	11.4
DDG	0.0	0.0	0.0	3.6	3.9	4.2	4.5	4.9	5.2
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	0.0	0.0	0.0	11.7	12.6	13.6	14.7	15.9	17.2
VARIABLE COST									
FEEDSTOCK	0.0	0.0	0.0	5.5	6.0	6.4	6.9	7.5	8.1
WOOD	0.0	0.0	0.0	.5	.5	.6	.6	.7	.7
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT	0.0	0.0	0.0	.4	.4	.4	.5	.5	.5
OTHER	0.0	0.0	0.0	.6	.7	.7	.8	.9	.9
TOTAL VC	0.0	0.0	0.0	7.3	7.9	8.6	9.2	10.0	10.8
FIXED COSTS									
LABOR	0.0	0.0	0.0	.9	1.0	1.1	1.2	1.3	1.4
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
G & A	0.0	0.0	0.0	.4	.4	.4	.5	.5	.6
OTHER	0.0	0.0	0.0	.3	.3	.3	.3	.3	.4
TOTAL FC	0.0	0.0	0.0	4.1	5.3	5.3	5.4	5.5	2.4
STARTUP COSTS	0.0	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	0.0	0.0	.7	11.4	13.2	13.8	14.6	15.5	13.2
OPERATING INCOME	0.0	0.0	-.7	.3	-.6	-.2	.1	.4	4.0
INTEREST	0.0	0.0	0.0	2.1	2.0	1.9	1.8	1.7	1.5
INC. BEF. LCF/TAX	0.0	0.0	-.7	-1.9	-2.6	-2.1	-1.7	-1.3	2.5
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
TAXABLE INCOME	0.0	0.0	-.7	-1.9	-2.6	-2.1	-1.7	-1.3	0.0
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME AFTER TAX	0.0	0.0	-.7	-1.9	-2.6	-2.1	-1.7	-1.3	2.5
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
CHG IN OTH ASSETS	0.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	0.0	0.0	0.0	-.6	-.7	-.8	-.9	-1.1	-1.2
CHG IN WC	0.0	0.0	-1.7	-.1	-.1	-.1	-.1	-.1	-.1
CHG IN BANK LINE	0.0	0.0	.8	.0	.0	.0	.1	.1	.1
ENG COST	-.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	-9.4	-4.6	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	-.7	-1.9	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	7.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-.6	-2.5	-4.3	.0	.2	.5	.7	1.0	1.3
CUMUL CASH FLOW	-.6	-3.1	-7.5	-7.4	-7.2	-6.7	-6.0	-5.0	-3.7

INCOME AND CASH FLOW (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
REVENUES									
ETHANOL	12.4	13.4	14.4	15.6	16.8	18.2	19.6	21.2	22.9
DDG	5.7	6.1	6.6	7.1	7.7	8.3	9.0	9.7	10.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	18.5	20.0	21.6	23.4	25.2	27.2	29.4	31.8	34.3
VARIABLE COST									
FEEDSTOCK	8.7	9.4	10.2	11.0	11.9	12.9	13.9	15.0	16.2
WOOD	.8	.9	.9	1.0	1.1	1.2	1.3	1.4	1.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT	.6	.6	.7	.7	.8	.8	.9	1.0	1.1
OTHER	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.9
TOTAL VC	11.6	12.5	13.6	14.7	15.8	17.1	18.5	20.0	21.5
FIXED COSTS									
LABOR	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.6	2.8
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
G & A	.6	.6	.7	.8	.8	.9	1.0	1.0	1.1
OTHER	.4	.4	.5	.5	.5	.6	.6	.7	.7
TOTAL FC	2.6	2.8	3.0	3.2	3.5	3.7	4.0	4.4	4.7
STARTUP COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	14.2	15.3	16.6	17.9	19.3	20.8	22.5	24.3	26.2
OPERATING INCOME	4.3	4.7	5.1	5.5	5.9	6.4	6.9	7.5	8.1
INTEREST	1.3	1.1	.9	.6	.2	.2	.3	.3	.3
INC. BEF. LCF/TAX	3.0	3.6	4.2	4.9	5.7	6.2	6.7	7.2	7.8
LCF USED	3.0	3.6	1.3	0.0	0.0	0.0	0.0	0.0	0.0
TAXABLE INCOME	0.0	0.0	2.9	4.9	5.7	6.2	6.7	7.2	7.8
ITC USED	0.0	0.0	1.4	1.7	0.0	0.0	0.0	0.0	0.0
TAXES PAID	0.0	0.0	0.0	.7	2.8	3.1	3.3	3.6	3.9
INCOME AFTER TAX	3.0	3.6	4.2	4.2	2.8	3.1	3.3	3.6	3.9
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
CHG IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	-1.4	-1.6	-1.9	-2.2	0.0	0.0	0.0	0.0	0.0
CHG IN WC									
kr									
kr									
krkrkrkrkrkrkrkr									
CHG IN BANK LINE			.1	.1	.1	.1	.1	.1	.1
ENG COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	1.6	1.9	2.3	1.9	2.8	3.1	3.3	3.6	3.8

FINANCIAL ANALYSIS OF SLN BELT ENERGY CORPORATION PROJECT

DATE OF ANALYSIS: 31/03/82

CORN -TO-ETHANOL PLANT

4.8 MIL GPY RATED CAPACITY

FUEL: WOOD

2.80 corn

ASSUMPTIONS (1982 \$)

14285 GPD RATED CAP

100 % ACT CAP

333 DAYS PER YEAR

2.5 GAL ETH/BU

18 LBS DDG/BU

CAPITAL COSTS \$ 12.4 MIL
CONSTR INT. RATE 16.0 %PERCENT LT DEBT 75 %
LT DEBT INT. RATE 16.0 %
LT DEBT REPAY 10 YRS
BANK LINE INT RT 16.0 %INFLATION RATE 8.0 %
CAP COST REAL ESC 5.0 %ETH SALE PRICE 1.70 \$/GAL
NET ETH PRICE .90 \$/GAL
DDG PRICE 170.00 \$/TON
CORN COST 2.80 \$/BU
WOOD COST 10.70 \$/TONELECTR SALES PRICE 5.0 C/KWH
ELECTR PURCH COST 5.0 C/KWHETH REAL ESC 0.0 %
CORN & DDG REAL ESC 0.0 %
ELECTR REAL ESC 0.0 %
WOOD REAL ESC 0.0 %DAYS REC ETH/DRY AG 30
DAYS REC DDG 30
DAYS REC ELECTR 30DAYS PAY CORN 0
DAYS PAY WOOD 0LIFO INVENTORY POLICY
15 DAYS ETH STORAGE
15 DAYS CORN STORAGE
15 DAYS DDG STORAGE
15 DAYS WOOD STORAGEFED INC TAX 46.0 %
STATE INC TAX 4.0 %
STATE SALES TAX EXEMPT 0.0 C/GAL
STATE GASOLINE EXCISE TAX EXEMPT 4.0 C/GAL
FED GASOLINE EXCISE TAX EXEMPT 4.0 C/GALEQUIP DEPR LIFE 5 YRS
EQUIP ITC 20 %
BLDG ITC 0 %

RESULTS

ROE 23.6 % NPV (25 % DISC RATE) -.4 MIL PAYBACK 1989

DEBT COV: 1.5 IN OPER YR 1 2.1 IN OPER YR 6

ENG COSTS \$.6 MIL

INITIAL DEBT \$ 12.4 MIL

MAXIMUM CASH EQUITY \$ 7.6 MIL

ANNUAL SALES: 4.8 MIL GALS ETH 16649 TONS DDG

0.0 MW ELECT

ANNUAL PLANT REQS 1.9 MIL BU CORN
AT FULL CAPACITY 6 MIL KWH29273 ACRES CORN
166 MIL LB STEAM

16649 HEAD CATTLE

INCOME AND CASH FLOW (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
REVENUES									
ETHANOL	0.0	0.0	0.0	10.2	11.0	11.9	12.8	13.9	15.0
DDG	0.0	0.0	0.0	3.6	3.9	4.2	4.5	4.9	5.2
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	0.0	0.0	0.0	14.1	15.2	16.4	17.7	19.2	20.7
VARIABLE COST									
FEEDSTOCK	0.0	0.0	0.0	6.7	7.2	7.8	8.5	9.1	9.9
WOOD	0.0	0.0	0.0	.5	.5	.6	.6	.7	.7
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT	0.0	0.0	0.0	.4	.4	.4	.5	.5	.5
OTHER	0.0	0.0	0.0	.6	.7	.7	.8	.9	.9
TOTAL VC	0.0	0.0	0.0	8.5	9.2	10.0	10.8	11.6	12.5
FIXED COSTS									
LABOR	0.0	0.0	0.0	.9	1.0	1.1	1.2	1.3	1.4
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
G & A	0.0	0.0	0.0	.4	.4	.4	.5	.5	.6
OTHER	0.0	0.0	0.0	.3	.3	.3	.3	.3	.4
TOTAL FC	0.0	0.0	0.0	4.1	5.3	5.3	5.4	5.5	2.4
STARTUP COSTS	0.0	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	0.0	0.0	.7	12.6	14.5	15.2	16.2	17.2	14.9
OPERATING INCOME	0.0	0.0	-.7	1.5	.7	1.2	1.6	2.0	5.7
INTEREST	0.0	0.0	0.0	2.1	2.1	2.0	1.8	1.7	1.5
INC. REF. LCF/TAX	0.0	0.0	-.7	-.7	-1.4	-.8	-.3	.3	4.2
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	3.5
TAXABLE INCOME	0.0	0.0	-.7	-.7	-1.4	-.8	-.3	0.0	.7
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME AFTER TAX	0.0	0.0	-.7	-.7	-1.4	-.8	-.3	.3	4.2
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
CHG IN OTH ASSETS	0.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	0.0	0.0	0.0	-.4	-.7	-.8	-.9	-1.1	-1.2
CHG IN WC	0.0	0.0	-2.0	-.1	-.1	-.1	-.1	-.1	-.1
CHG IN BANK LINE	0.0	0.0	1.0	.0	.1	.1	.1	.1	.1
ENG COST	-.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	-9.4	-4.6	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	-.7	-1.9	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	7.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-.6	-2.5	-4.5	1.2	1.5	1.8	2.2	2.6	3.0
CUMUL CASH FLOW	-.6	-3.1	-7.6	-6.4	-4.9	-3.1	-.9	1.7	4.7

INCOME AND CASH FLOW (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
REVENUES									
ETHANOL	16.2	17.5	18.9	20.4	22.0	23.8	25.7	27.7	29.9
DDG	5.7	6.1	6.6	7.1	7.7	8.3	9.0	9.7	10.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	22.3	24.1	26.1	28.1	30.4	32.8	35.5	38.3	41.4
VARIABLE COST									
FEEDSTOCK	10.7	11.5	12.4	13.4	14.5	15.6	16.9	18.3	19.7
WOOD	.8	.9	.9	1.0	1.1	1.2	1.3	1.4	1.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT	.6	.6	.7	.7	.8	.8	.9	1.0	1.1
OTHER	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.9
TOTAL VC	13.5	14.6	15.8	17.1	18.4	19.9	21.5	23.2	25.1
FIXED COSTS									
LABOR	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.6	2.8
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
G & A	.6	.6	.7	.8	.8	.9	1.0	1.0	1.1
OTHER	.4	.4	.5	.5	.5	.6	.6	.7	.7
TOTAL FC	2.6	2.8	3.0	3.2	3.5	3.7	4.0	4.4	4.7
STARTUP COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	16.1	17.4	18.8	20.3	21.9	23.6	25.5	27.6	29.8
OPERATING INCOME	6.2	6.7	7.3	7.9	8.5	9.2	9.9	10.7	11.6
INTEREST	1.4	1.1	.9	.6	.3	.3	.3	.3	.3
INC. BEF. LCF/TAX	4.9	5.6	6.4	7.3	8.2	8.9	9.6	10.4	11.3
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXABLE INCOME	4.9	5.6	6.4	7.3	8.2	8.9	9.6	10.4	11.3
ITC USED	2.4	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	0.0	2.4	3.2	3.6	4.1	4.5	4.8	5.2	5.6
INCOME AFTER TAX	4.9	3.1	3.2	3.6	4.1	4.5	4.8	5.2	5.6
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
CHG IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	-1.4	-1.6	-1.9	-2.2	0.0	0.0	0.0	0.0	0.0
CHG IN WC	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.3	-.3
CHG IN BANK LINE	.1	.1	.1	.1	.1	.1	.1	.1	.1
ENG COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	3.4	1.5	1.3	1.4	4.1	4.4	4.8	5.1	5.6
CUMUL CASH FLOW	8.1	9.6	10.9	12.3	16.4	20.8	25.6	30.7	36.3

FINANCIAL ANALYSIS OF SUN BELT ENERGY CORPORATION PROJECT

DATE OF ANALYSIS: 31/03/82

CORN -TO-ETHANOL PLANT

4.8 MIL GPY RATED CAPACITY

FUEL: WOOD

3.20 corn

ASSUMPTIONS (1982 \$)

14285 GPD RATED CAP 100 % ACT CAP 333 DAYS PER YEAR 2.5 GAL ETH/BU 18 LBS DDG/BU

CAPITAL COSTS	\$ 12.4 MIL	PERCENT LT DEBT	75 %		
CONSTR INT. RATE	16.0 %	LT DEBT INT RATE	16.0 %		INFLATION RATE
		LT DEBT REPAY	10 YRS		CAP COST REAL ESC
		BANK LINE INT RT	16.0 %		8.0 %
					5.0 %

ETH SALE PRICE	1.70 \$/GAL	ELECTR SALES PRICE	5.0 C/KWH	ETH REAL ESC	0.0 %
NET ETH PRICE	.90 \$/GAL	ELECTR PURCH COST	5.0 C/KWH	CORN & DDG REAL ESC	0.0 %
DDG PRICE	170.00 \$/TON			ELECTR REAL ESC	0.0 %
CORN COST	3.20 \$/BU			WOOD REAL ESC	0.0 %
WOOD COST	10.70 \$/TON				

DAYS REC ETH/DRY AG	30	DAYS PAY CORN	0	LIFO INVENTORY POLICY
DAYS REC DDG	30	DAYS PAY WOOD	0	15 DAYS ETH STORAGE
DAYS REC ELECTR	30			15 DAYS CORN STORAGE
				15 DAYS DDG STORAGE
				15 DAYS WOOD STORAGE

FED INC TAX	46.0 %	EQUIP DEPR LIFE	5 YRS
STATE INC TAX	4.0 %	EQUIP ITC	20 %
STATE SALES TAX EXEMPT	0.0 C/GAL	BLDG ITC	0 %
STATE GASOLINE EXCISE TAX EXEMPT	4.0 C/GAL		
FED GASOLINE EXCISE TAX EXEMPT	4.0 C/GAL		

RESULTS

ROE 15.0 % NPV (25 % DISC RATE) -2.7 MIL PAYBACK 1992

DEBT COV: 1.1 IN OPER YR 1 1.6 IN OPER YR 6

ENG COSTS \$.6 MIL INITIAL DEBT \$ 12.4 MIL MAXIMUM CASH EQUITY \$ 7.7 MIL

ANNUAL SALES: 4.8 MIL GALS ETH 16649 TONS DDG 0.0 MW ELECT

ANNUAL PLANT REQS 1.9 MIL BU CORN 29273 ACRES CORN 16649 HEAD CATTLE
AT FULL CAPACITY 6 MIL KWH 166 MIL LB STEAM

INCOME AND CASH FLOW (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
REVENUES									
ETHANOL	0.0	0.0	0.0	10.2	11.0	11.9	12.8	13.9	15.0
DDG	0.0	0.0	0.0	3.6	3.9	4.2	4.5	4.9	5.2
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	0.0	0.0	0.0	14.1	15.2	16.4	17.7	19.2	20.7
VARIABLE COST									
FEEDSTOCK	0.0	0.0	0.0	7.7	8.3	8.9	9.7	10.4	11.3
WOOD	0.0	0.0	0.0	.5	.5	.6	.6	.7	.7
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT	0.0	0.0	0.0	.4	.4	.4	.5	.5	.5
OTHER	0.0	0.0	0.0	.6	.7	.7	.8	.9	.9
TOTAL VC	0.0	0.0	0.0	9.5	10.3	11.1	12.0	12.9	13.9
FIXED COSTS									
LABOR	0.0	0.0	0.0	.9	1.0	1.1	1.2	1.3	1.4
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
G & A	0.0	0.0	0.0	.4	.4	.4	.5	.5	.6
OTHER	0.0	0.0	0.0	.3	.3	.3	.3	.3	.4
TOTAL FC	0.0	0.0	0.0	4.1	5.3	5.3	5.4	5.5	2.4
STARTUP COSTS	0.0	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	0.0	0.0	.7	13.6	15.6	16.3	17.4	18.5	16.3
OPERATING INCOME	0.0	0.0	-.7	.5	-.3	.1	.4	.7	4.3
INTEREST	0.0	0.0	0.0	2.1	2.1	2.0	1.8	1.7	1.6
INC. BEF. LCF/TAX	0.0	0.0	-.7	-1.7	-2.4	-1.9	-1.5	-1.0	2.8
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
TAXABLE INCOME	0.0	0.0	-.7	-1.7	-2.4	-1.9	-1.5	-1.0	0.0
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME AFTER TAX	0.0	0.0	-.7	-1.7	-2.4	-1.9	-1.5	-1.0	2.8
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
CHG IN OTH ASSETS	0.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	0.0	0.0	0.0	-.6	-.7	-.8	-.9	-1.1	-1.2
CHG IN WC	0.0	0.0	-2.0	-.1	-.1	-.1	-.1	-.1	-.1
CHG IN BANK LINE	0.0	0.0	1.0	.0	.1	.1	.1	.1	.1
ENG COST	-.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	-9.4	-4.6	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	-.7	-1.9	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	7.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-.6	-2.5	-4.5	.2	.5	.7	1.0	1.3	1.6
CUMUL CASH FLOW	-.6	-3.1	-7.7	-7.4	-6.9	-6.2	-5.2	-4.0	-2.4

INCOME AND CASH FLOW (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
REVENUES									
ETHANOL	16.2	17.5	18.9	20.4	22.0	23.8	25.7	27.7	29.9
DDG	5.7	6.1	6.6	7.1	7.7	8.3	9.0	9.7	10.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	22.3	24.1	26.1	28.1	30.4	32.8	35.5	38.3	41.4
VARIABLE COST									
FEEDSTOCK	12.2	13.1	14.2	15.3	16.6	17.9	19.3	20.9	22.5
WOOD	.8	.9	.9	1.0	1.1	1.2	1.3	1.4	1.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT	.6	.6	.7	.7	.8	.8	.9	1.0	1.1
OTHER	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.9
TOTAL VC	15.1	16.3	17.6	19.0	20.5	22.1	23.9	25.8	27.9
FIXED COSTS									
LABOR	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.6	2.8
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
G & A	.6	.6	.7	.8	.8	.9	1.0	1.0	1.1
OTHER	.4	.4	.5	.5	.5	.6	.6	.7	.7
TOTAL FC	2.6	2.8	3.0	3.2	3.5	3.7	4.0	4.4	4.7
STARTUP COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	17.6	19.0	20.6	22.2	24.0	25.9	27.9	30.2	32.6
OPERATING INCOME	4.7	5.1	5.5	6.0	6.4	7.0	7.5	8.1	8.8
INTEREST	1.4	1.2	.9	.6	.3	.3	.3	.3	.3
INC. BEF. LCF/TAX	3.3	3.9	4.6	5.3	6.2	6.7	7.2	7.8	8.4
LCF USED	3.3	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXABLE INCOME	0.0	.9	4.6	5.3	6.2	6.7	7.2	7.8	8.4
ITC USED	0.0	.5	2.3	.4	0.0	0.0	0.0	0.0	0.0
TAXES PAID	0.0	0.0	0.0	2.3	3.1	3.3	3.6	3.9	4.2
INCOME AFTER TAX	3.3	3.9	4.6	3.0	3.1	3.3	3.6	3.9	4.2
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
CHG IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	-1.4	-1.6	-1.9	-2.2	0.0	0.0	0.0	0.0	0.0
CHG IN WC	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.3	-.3
CHG IN BANK LINE	.1	.1	.1	.1	.1	.1	.1	.1	.1
ENG COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	1.9	2.3	2.7	.8	3.1	3.3	3.6	3.8	4.1
CUMUL CASH FLOW	-.5	1.8	4.5	5.3	8.4	11.7	15.2	19.1	23.2

FINANCIAL ANALYSIS OF SUN BELT ENERGY CORPORATION PROJECT

DATE OF ANALYSIS: 31/03/82

CORN -TO-ETHANOL PLANT

4.8 MIL GPY RATED CAPACITY

FUEL: WOOD

\$ 16 wood

ASSUMPTIONS (1982 \$)

14285 GPD RATED CAP 100 % ACT CAP 333 DAYS PER YEAR 2.5 GAL ETH/BU 18 LBS DDG/BU

CAPITAL COSTS	\$ 12.4 MIL	PERCENT LT DEBT	75 %	INFLATION RATE	8.0 %
CONSTR INT. RATE	16.0 %	LT DEBT INT RATE	16.0 %	CAP COST REAL ESC	5.0 %
		LT DEBT REPAY	10 YRS		
		BANK LINE INT RT	16.0 %		

ETH SALE PRICE	1.70 \$/GAL	ELECTR SALES PRICE	5.0 C/KWH	ETH REAL ESC	0.0 %
NET ETH PRICE	.90 \$/GAL	ELECTR PURCH COST	5.0 C/KWH	CORN & DDG REAL ESC	0.0 %
DDG PRICE	170.00 \$/TON			ELECTR REAL ESC	0.0 %
CORN COST	2.30 \$/BU			WOOD REAL ESC	0.0 %
WOOD COST	16.00 \$/TON				

DAYS REC ETH/DRY AG	30	DAYS PAY CORN	0	LIFO INVENTORY POLICY
DAYS REC DDG	30	DAYS PAY WOOD	0	15 DAYS ETH STORAGE
DAYS REC ELECTR	30			15 DAYS CORN STORAGE
				15 DAYS DDG STORAGE
				15 DAYS WOOD STORAGE

FED INC TAX	46.0 %	EQUIP DEPR LIFE	5 YRS
STATE INC TAX	4.0 %	EQUIP ITC	20 %
STATE SALES TAX EXEMPT	0.0 C/GAL	BLDG ITC	0 %
STATE GASOLINE EXCISE TAX EXEMPT	4.0 C/GAL		
FED GASOLINE EXCISE TAX EXEMPT	4.0 C/GAL		

RESULTS

ROE 31.7 % NPV (25 % DISC RATE) 1.8 MIL PAYBACK 1987

DEBT COV: 1.8 IN OPER YR 1 2.6 IN OPER YR 6

ENG COSTS \$.6 MIL INITIAL DEBT \$ 12.4 MIL MAXIMUM CASH EQUITY \$ 7.6 MIL

ANNUAL SALES: 4.8 MIL GALS ETH 16649 TONS DDG 0.0 MW ELECT

ANNUAL PLANT REQS 1.9 MIL BU CORN 29273 ACRES CORN 16649 HEAD CATTLE
AT FULL CAPACITY 6 MIL KWH 166 MIL LB STEAM

INCOME AND CASH FLOW (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
REVENUES									
ETHANOL	0.0	0.0	0.0	10.2	11.0	11.9	12.8	13.9	15.0
DIG	0.0	0.0	0.0	3.6	3.9	4.2	4.5	4.9	5.2
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	0.0	0.0	0.0	14.1	15.2	16.4	17.7	19.2	20.7
VARIABLE COST									
FEEDSTOCK	0.0	0.0	0.0	5.5	6.0	6.4	6.9	7.5	8.1
WOOD	0.0	0.0	0.0	.8	.8	.9	.9	1.0	1.1
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT	0.0	0.0	0.0	.4	.4	.4	.5	.5	.5
OTHER	0.0	0.0	0.0	.6	.7	.7	.8	.9	.9
TOTAL VC	0.0	0.0	0.0	7.6	8.2	8.8	9.6	10.3	11.1
FIXED COSTS									
LABOR	0.0	0.0	0.0	.9	1.0	1.1	1.2	1.3	1.4
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
G & A	0.0	0.0	0.0	.4	.4	.4	.5	.5	.6
OTHER	0.0	0.0	0.0	.3	.3	.3	.3	.3	.4
TOTAL FC	0.0	0.0	0.0	4.1	5.3	5.3	5.4	5.5	2.4
STARTUP COSTS	0.0	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	0.0	0.0	.7	11.7	13.5	14.1	15.0	15.9	13.5
OPERATING INCOME	0.0	0.0	-.7	2.4	1.7	2.3	2.8	3.3	7.1
INTEREST	0.0	0.0	0.0	2.1	2.1	2.0	1.8	1.7	1.5
INC. BEF. LCF/TAX	0.0	0.0	-.7	.3	-.3	.4	.9	1.6	5.6
LCF USED	0.0	0.0	0.0	.3	0.0	.4	.4	0.0	0.0
TAXABLE INCOME	0.0	0.0	-.7	0.0	-.3	0.0	.5	1.6	5.6
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	.3	.8	2.1
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.7
INCOME AFTER TAX	0.0	0.0	-.7	.3	-.3	.4	.9	1.6	4.9
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
CHG IN OTH ASSETS	0.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	0.0	0.0	0.0	-.6	-.7	-.8	-.9	-1.1	-1.2
CHG IN WC	0.0	0.0	-2.0	-.1	-.1	-.1	-.1	-.1	-.1
CHG IN BANK LINE	0.0	0.0	1.0	.0	.1	.1	.1	.1	.1
ENG COST	-.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	-9.4	-4.6	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	-.7	-1.9	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	7.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-.6	-2.5	-4.5	2.2	2.5	2.9	3.4	3.9	3.7
CUMUL CASH FLOW	-.6	-3.1	-7.6	-5.5	-2.9	.0	3.4	7.3	11.0

INCOME AND CASH FLOW (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
REVENUES									
ETHANOL	16.2	17.5	18.9	20.4	22.0	23.8	25.7	27.7	29.9
DDG	5.7	6.1	6.6	7.1	7.7	8.3	9.0	9.7	10.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	22.3	24.1	26.1	28.1	30.4	32.8	35.5	38.3	41.4
VARIABLE COST									
FEEDSTOCK	8.7	9.4	10.2	11.0	11.9	12.9	13.9	15.0	16.2
WOOD	1.2	1.3	1.4	1.5	1.6	1.8	1.9	2.0	2.2
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT	.6	.6	.7	.7	.8	.8	.9	1.0	1.1
OTHER	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.9
TOTAL VC	12.0	13.0	14.0	15.2	16.4	17.7	19.1	20.6	22.3
FIXED COSTS									
LABOR	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.6	2.8
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
G & A	.6	.6	.7	.8	.8	.9	1.0	1.0	1.1
OTHER	.4	.4	.5	.5	.5	.6	.6	.7	.7
TOTAL FC	2.6	2.8	3.0	3.2	3.5	3.7	4.0	4.4	4.7
STARTUP COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	14.6	15.8	17.0	18.4	19.8	21.4	23.1	25.0	27.0
OPERATING INCOME	7.7	8.4	9.0	9.8	10.6	11.4	12.3	13.3	14.4
INTEREST	1.4	1.1	.9	.6	.3	.3	.3	.3	.3
INC. BEF. LCF/TAX	6.4	7.2	8.1	9.2	10.3	11.1	12.0	13.0	14.0
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXABLE INCOME	6.4	7.2	8.1	9.2	10.3	11.1	12.0	13.0	14.0
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	3.2	3.6	4.1	4.6	5.1	5.6	6.0	6.5	7.0
INCOME AFTER TAX	3.2	3.6	4.1	4.6	5.1	5.6	6.0	6.5	7.0
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
CHG IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	-1.4	-1.6	-1.9	-2.2	0.0	0.0	0.0	0.0	0.0
CHG IN WC	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.3	-.3
CHG IN BANK LINE	.1	.1	.1	.1	.1	.1	.1	.1	.1
ENG COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	1.8	2.0	2.1	2.3	5.1	5.5	6.0	6.4	7.0
CUMUL CASH FLOW	12.8	14.7	16.9	19.2	24.3	29.8	35.8	42.2	49.2

FINANCIAL ANALYSIS OF SUN BELT ENERGY CORPORATION PROJECT

DATE OF ANALYSIS: 31/03/82

CORN -TO-ETHANOL PLANT

4.8 MIL GPY RATED CAPACITY

FUEL: WOOD

INFL = 5% / yr

ASSUMPTIONS (1982 \$)

14285 GPD RATED CAP 100 % ACT CAP 333 DAYS PER YEAR 2.5 GAL ETH/BU 18 LBS DDG/BU

CAPITAL COSTS	\$ 12.4 MIL	PERCENT LT DEBT	75 %	INFLATION RATE	5.0 %
CONSTR INT. RATE	16.0 %	LT DEBT INT RATE	16.0 %	CAP COST REAL ESC	5.0 %
		LT DEBT REPAY	10 YRS		
		BANK LINE INT RT	16.0 %		

ETH SALE PRICE	1.70 \$/GAL	ELECTR SALES PRICE	5.0 C/KWH	ETH REAL ESC	0.0 %
NET ETH PRICE	.90 \$/GAL	ELECTR PURCH COST	5.0 C/KWH	CORN & DDG REAL ESC	0.0 %
DDG PRICE	170.00 \$/TON			ELECTR REAL ESC	0.0 %
CORN COST	2.30 \$/EU			WOOD REAL ESC	0.0 %
WOOD COST	10.70 \$/TON				

DAYS REC ETH/DRY AG	30	DAYS PAY CORN	0	LIFO INVENTORY POLICY
DAYS REC DDG	30	DAYS PAY WOOD	0	15 DAYS ETH STORAGE
DAYS REC ELECTR	30			15 DAYS CORN STORAGE
				15 DAYS DDG STORAGE
				15 DAYS WOOD STORAGE

FED INC TAX	46.0 %	EQUIP DEPR LIFE	5 YRS
STATE INC TAX	4.0 %	EQUIP ITC	20 %
STATE SALES TAX EXEMPT	0.0 C/GAL	BLDG ITC	0 %
STATE GASOLINE EXCISE TAX EXEMPT	4.0 C/GAL		
FED GASOLINE EXCISE TAX EXEMPT	4.0 C/GAL		

RESULTS

ROE 28.5 % NPV (25 % DISC RATE) .8 MIL PAYBACK 1988

DEBT COV: 1.8 IN OPER YR 1 2.3 IN OPER YR 6

ENG COSTS \$.6 MIL INITIAL DEBT \$ 12.0 MIL MAXIMUM CASH EQUITY \$ 7.4 MIL

ANNUAL SALES: 4.8 MIL GALS ETH 16649 TONS DDG 0.0 MW ELECT

ANNUAL PLANT REQS	1.9 MIL BU CORN	29273 ACRES CORN	16649 HEAD CATTLE
AT FULL CAPACITY	6 MIL KWH	166 MIL LB STEAM	

INCOME AND CASH FLOW (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
REVENUES									
ETHANOL	0.0	0.0	0.0	9.4	9.8	10.3	10.8	11.4	11.9
DDG	0.0	0.0	0.0	3.3	3.4	3.6	3.8	4.0	4.2
DRY AGENT	0.0	0.0	0.0	.3	.3	.3	.4	.4	.4
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	0.0	0.0	0.0	12.9	13.6	14.3	15.0	15.7	16.5
VARIABLE COST									
FEEDSTOCK	0.0	0.0	0.0	5.1	5.3	5.6	5.9	6.2	6.5
WOOD	0.0	0.0	0.0	.5	.5	.5	.5	.6	.6
DRY AGENT	0.0	0.0	0.0	.3	.3	.3	.4	.4	.4
ELECT	0.0	0.0	0.0	.3	.3	.4	.4	.4	.4
OTHER	0.0	0.0	0.0	.6	.6	.6	.7	.7	.7
TOTAL VC	0.0	0.0	0.0	6.7	7.1	7.4	7.8	8.2	8.6
FIXED COSTS									
LABOR	0.0	0.0	0.0	.9	.9	1.0	1.0	1.1	1.1
DEPREC	0.0	0.0	0.0	2.4	3.5	3.3	3.3	3.3	.1
G & A	0.0	0.0	0.0	.3	.4	.4	.4	.4	.4
OTHER	0.0	0.0	0.0	.2	.2	.3	.3	.3	.3
TOTAL FC	0.0	0.0	0.0	3.9	5.0	4.9	5.0	5.0	1.9
STARTUP COSTS	0.0	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	0.0	0.0	.7	10.6	12.1	12.3	12.8	13.2	10.5
OPERATING INCOME	0.0	0.0	-.7	2.3	1.5	1.9	2.2	2.5	6.0
INTEREST	0.0	0.0	0.0	2.1	2.0	1.9	1.8	1.6	1.5
INC. DEF. LCF/TAX	0.0	0.0	-.7	.3	-.5	.1	.4	.9	4.5
LCF USED	0.0	0.0	0.0	.3	0.0	.1	.4	.4	0.0
TAXABLE INCOME	0.0	0.0	-.7	0.0	-.5	0.0	0.0	.5	4.5
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	2.3
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME AFTER TAX	0.0	0.0	-.7	.3	-.5	.1	.4	.9	4.5
DEPREC	0.0	0.0	0.0	2.4	3.5	3.3	3.3	3.3	.1
CHG IN OTH ASSETS	0.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	0.0	0.0	0.0	-.6	-.7	-.8	-.9	-1.0	-1.2
CHG IN WC	0.0	0.0	-1.8	-.1	-.1	-.1	-.1	-.1	-.1
CHG IN BANK LINE	0.0	0.0	.9	.0	.0	.0	.0	.0	.0
ENG COST	-.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	-9.1	-4.3	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	-.7	-1.8	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	7.4	4.6	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-.6	-2.5	-4.3	2.1	2.3	2.6	2.8	3.1	3.4
CUMUL CASH FLOW	-.6	-3.1	-7.4	-5.3	-2.9	-.4	2.5	5.6	9.0

INCOME AND CASH FLOW (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
REVENUES									
ETHANOL	12.5	13.2	13.8	14.5	15.2	16.0	16.8	17.7	18.5
DDG	4.4	4.6	4.8	5.1	5.3	5.6	5.9	6.2	6.5
DRY AGENT	.4	.4	.4	.5	.5	.5	.5	.6	.6
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	17.3	18.2	19.1	20.1	21.1	22.1	23.2	24.4	25.6
VARIABLE COST									
FEEDSTOCK	6.8	7.1	7.5	7.9	8.3	8.7	9.1	9.6	10.0
WOOD	.6	.7	.7	.7	.8	.8	.8	.9	.9
DRY AGENT	.4	.4	.4	.5	.5	.5	.5	.6	.6
ELECT	.4	.5	.5	.5	.5	.6	.6	.6	.7
OTHER	.8	.8	.9	.9	.9	1.0	1.0	1.1	1.1
TOTAL VC	9.0	9.5	10.0	10.5	11.0	11.5	12.1	12.7	13.3
FIXED COSTS									
LABOR	1.2	1.2	1.3	1.3	1.4	1.5	1.6	1.6	1.7
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
G & A	.5	.5	.5	.5	.6	.6	.6	.7	.7
OTHER	.3	.3	.3	.4	.4	.4	.4	.4	.5
TOTAL FC	2.0	2.1	2.2	2.3	2.4	2.5	2.7	2.8	2.9
STARTUP COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	11.0	11.6	12.2	12.8	13.4	14.1	14.8	15.5	16.3
OPERATING INCOME	6.3	6.6	7.0	7.3	7.7	8.1	8.5	8.9	9.3
INTEREST	1.3	1.1	.8	.5	.2	.2	.2	.2	.2
INC. REF. LCF/TAX	5.0	5.5	6.1	6.8	7.5	7.8	8.2	8.7	9.1
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXABLE INCOME	5.0	5.5	6.1	6.8	7.5	7.8	8.2	8.7	9.1
ITC USED	.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	2.0	2.8	3.1	3.4	3.7	3.9	4.1	4.3	4.6
INCOME AFTER TAX	3.0	2.8	3.1	3.4	3.7	3.9	4.1	4.3	4.6
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
CHG IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	-1.4	-1.6	-1.8	-2.1	0.0	0.0	0.0	0.0	0.0
CHG IN WC	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1
CHG IN BANK LINE	.0	.0	.0	.0	.0	.0	.1	.1	.1
ENG COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	1.7	1.2	1.3	1.3	3.8	3.9	4.1	4.3	4.6
CUMUL CASH FLOW	10.7	11.9	13.1	14.4	18.2	22.1	26.3	30.6	35.2

FINANCIAL ANALYSIS OF SUN BELT ENERGY CORPORATION PROJECT

DATE OF ANALYSIS: 31/03/82

CORN -TO-ETHANOL PLANT

4.8 MIL GPY RATED CAPACITY

FUEL: WOOD

Handwritten:
 Corn & wood 8% exc
 Ethanol 5% exc

ASSUMPTIONS (1982 \$)

14285 GPD RATED CAP

100 % ACT CAP

333 DAYS PER YEAR

2.5 GAL ETH/BU

18 LBS DDG/BU

CAPITAL COSTS \$ 12.4 MIL
 CONSTR INT. RATE 16.0 %

PERCENT LT DEBT 75 %
 LT DEBT INT RATE 16.0 %
 LT DEBT REPAY 10 YRS
 BANK LINE INT RT 16.0 %

INFLATION RATE 5.0 %
 CAP COST REAL ESC 5.0 %

Handwritten:
 INFL 5%
 ←

ETH SALE PRICE 1.70 \$/GAL
 NET ETH PRICE .90 \$/GAL
 DDG PRICE 170.00 \$/TON
 CORN COST 2.30 \$/BU
 WOOD COST 10.70 \$/TON

ELECTR SALES PRICE 5.0 C/KWH
 ELECTR PURCH COST 5.0 C/KWH

ETH REAL ESC 0.0 %
 CORN & DDG REAL ESC 3.0 %
 ELECTR REAL ESC 0.0 %
 WOOD REAL ESC 3.0 %

Handwritten:
 CORN/ DDG 3%
 ←
 WOOD 3%
 ←

DAYS REC ETH/DRY AG 30
 DAYS REC DDG 30
 DAYS REC ELECTR 30

DAYS PAY CORN 0
 DAYS PAY WOOD 0

LIFO INVENTORY POLICY
 15 DAYS ETH STORAGE
 15 DAYS CORN STORAGE
 15 DAYS DDG STORAGE
 15 DAYS WOOD STORAGE

FED INC TAX 46.0 %
 STATE INC TAX 4.0 %
 STATE SALES TAX EXEMPT 0.0 C/GAL
 STATE GASOLINE EXCISE TAX EXEMPT 4.0 C/GAL
 FED GASOLINE EXCISE TAX EXEMPT 4.0 C/GAL

EQUIP DEPR LIFE 5 YRS
 EQUIP ITC 20 %
 BLDG ITC 0 %

RESULTS

ROE 25.0 % NPV (25 % DISC RATE) -0.0 MIL PAYBACK 1988

DEBT COV: 1.7 IN OPER YR 1 2.1 IN OPER YR 6

ENG COSTS \$.6 MIL INITIAL DEBT \$ 12.0 MIL

MAXIMUM CASH EQUITY \$ 7.4 MIL

ANNUAL SALES: 4.8 MIL GALS ETH 16649 TONS DDG 0.0 MW ELECT

ANNUAL PLANT REQS 1.9 MIL BU CORN 29273 ACRES CORN 16649 HEAD CATTLE
 AT FULL CAPACITY 6 MIL KWH 166 MIL LB STEAM

INCOME AND CASH FLOW (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
REVENUES									
ETHANOL	0.0	0.0	0.0	9.4	9.8	10.3	10.8	11.4	11.9
DDG	0.0	0.0	0.0	3.6	3.9	4.2	4.5	4.9	5.3
DRY AGENT	0.0	0.0	0.0	.3	.3	.3	.4	.4	.4
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	0.0	0.0	0.0	13.2	14.0	14.8	15.7	16.6	17.6
VARIABLE COST									
FEEDSTOCK	0.0	0.0	0.0	5.5	6.0	6.5	7.0	7.6	8.2
WOOD	0.0	0.0	0.0	.5	.5	.5	.5	.6	.6
DRY AGENT	0.0	0.0	0.0	.3	.3	.3	.4	.4	.4
ELECT	0.0	0.0	0.0	.3	.3	.4	.4	.4	.4
OTHER	0.0	0.0	0.0	.6	.6	.6	.7	.7	.7
TOTAL VC	0.0	0.0	0.0	7.2	7.7	8.3	8.9	9.6	10.3
FIXED COSTS									
LABOR	0.0	0.0	0.0	.9	.9	1.0	1.0	1.1	1.1
DEPREC	0.0	0.0	0.0	2.4	3.5	3.3	3.3	3.3	.1
G & A	0.0	0.0	0.0	.3	.4	.4	.4	.4	.4
OTHER	0.0	0.0	0.0	.2	.2	.3	.3	.3	.3
TOTAL FC	0.0	0.0	0.0	3.9	5.0	4.9	5.0	5.0	1.9
STARTUP COSTS	0.0	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER CCSTS	0.0	0.0	.7	11.1	12.7	13.2	13.9	14.7	12.3
OPERATING INCOME	0.0	0.0	-.7	2.2	1.3	1.6	1.8	2.0	5.4
INTEREST	0.0	0.0	0.0	2.1	2.0	1.9	1.8	1.6	1.5
INC. BEF. LCF/TAX	0.0	0.0	-.7	.1	-.7	-.3	.0	.4	3.9
LCF USED	0.0	0.0	0.0	.1	0.0	0.0	.0	.4	1.2
TAXABLE INCOME	0.0	0.0	-.7	0.0	-.7	-.3	0.0	0.0	2.7
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME AFTER TAX	0.0	0.0	-.7	.1	-.7	-.3	.0	.4	3.9
DEPREC	0.0	0.0	0.0	2.4	3.5	3.3	3.3	3.3	.1
CHG IN OTH ASSETS	0.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	0.0	0.0	0.0	-.6	-.7	-.8	-.9	-1.0	-1.2
CHG IN WC	0.0	0.0	-1.9	-.1	-.1	-.1	-.1	-.1	-.1
CHG IN BANK LINE	0.0	0.0	.9	.0	.0	.0	.0	.0	.0
ENG COST	-.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	-9.1	-4.3	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	-.7	-1.8	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	7.4	4.6	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-.6	-2.5	-4.3	1.9	2.1	2.3	2.4	2.6	2.8
CUMUL CASH FLOW	-.6	-3.1	-7.4	-5.5	-3.4	-1.1	1.3	3.9	6.7

INCOME AND CASH FLOW (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
REVENUES									
ETHANOL	12.5	13.2	13.8	14.5	15.2	16.0	16.8	17.7	18.5
DDG	5.7	6.2	6.7	7.2	7.8	8.5	9.2	9.9	10.7
DRY AGENT	.4	.4	.4	.5	.5	.5	.5	.6	.6
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	18.7	19.8	21.0	22.2	23.6	25.0	26.5	28.1	29.9
VARIABLE COST									
FEEDSTOCK	8.9	9.6	10.4	11.2	12.1	13.1	14.2	15.3	16.6
WOOD	.6	.7	.7	.7	.8	.8	.8	.9	.9
DRY AGENT	.4	.4	.4	.5	.5	.5	.5	.6	.6
ELECT	.4	.5	.5	.5	.5	.6	.6	.6	.7
OTHER	.8	.8	.9	.9	.9	1.0	1.0	1.1	1.1
TOTAL VC	11.1	11.9	12.8	13.8	14.8	16.0	17.2	18.5	19.9
FIXED COSTS									
LABOR	1.2	1.2	1.3	1.3	1.4	1.5	1.6	1.6	1.7
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
G & A	.5	.5	.5	.5	.6	.6	.6	.7	.7
OTHER	.3	.3	.3	.4	.4	.4	.4	.4	.5
TOTAL FC	2.0	2.1	2.2	2.3	2.4	2.5	2.7	2.8	2.9
STARTUP COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	13.1	14.0	15.0	16.1	17.3	18.5	19.9	21.3	22.8
OPERATING INCOME	5.6	5.8	5.9	6.1	6.3	6.5	6.7	6.8	7.0
INTEREST	1.3	1.1	.8	.6	.2	.2	.2	.3	.3
INC. BEF. LCF/TAX	4.3	4.7	5.1	5.6	6.1	6.3	6.4	6.6	6.8
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXABLE INCOME	4.3	4.7	5.1	5.6	6.1	6.3	6.4	6.6	6.8
ITC USED	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	.5	2.3	2.5	2.8	3.0	3.1	3.2	3.3	3.4
INCOME AFTER TAX	3.8	2.3	2.5	2.8	3.0	3.1	3.2	3.3	3.4
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
CHG IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	-1.4	-1.6	-1.8	-2.1	0.0	0.0	0.0	0.0	0.0
CHG IN WC	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.2
CHG IN BANK LINE	.0	.0	.1	.1	.1	.1	.1	.1	.1
ENG COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	2.5	.8	.7	.7	3.1	3.1	3.2	3.3	3.4
CUMUL CASH FLOW	9.1	9.9	10.6	11.3	14.3	17.5	20.7	24.0	27.4

FINANCIAL ANALYSIS OF SUN BELT ENERGY CORPORATION PROJECT

DATE OF ANALYSIS: 31/03/82

CORN -TO-ETHANOL PLANT

4.8 MIL GPY RATED CAPACITY

FUEL: WOOD

20% interest

ASSUMPTIONS (1982 \$)

14285 GPD RATED CAP

100 % ACT CAP

333 DAYS PER YEAR

2.5 GAL ETH/BU

18 LBS DDG/BU

CAPITAL COSTS \$ 12.4 MIL
CONSTR INT. RATE 20.0 %PERCENT LT DEBT 75 %
LT DEBT INT RATE 20.0 %
LT DEBT REPAY 10 YRS
BANK LINE INT RT 20.0 %INFLATION RATE 8.0 %
CAP COST REAL ESC 5.0 %ETH SALE PRICE 1.70 \$/GAL
NET ETH PRICE .90 \$/GAL
DDG PRICE 170.00 \$/TON
CORN COST 2.30 \$/BU
WOOD COST 10.70 \$/TONELECTR SALES PRICE 5.0 C/KWH
ELECTR PURCH COST 5.0 C/KWHETH REAL ESC 0.0 %
CORN & DDG REAL ESC 0.0 %
ELECTR REAL ESC 0.0 %
WOOD REAL ESC 0.0 %DAYS REC ETH/DRY AG 30
DAYS REC DDG 30
DAYS REC ELECTR 30DAYS PAY CORN 0
DAYS PAY WOOD 0LIFO INVENTORY POLICY
15 DAYS ETH STORAGE
15 DAYS CORN STORAGE
15 DAYS DDG STORAGE
15 DAYS WOOD STORAGEFED INC TAX 46.0 %
STATE INC TAX 4.0 %
STATE SALES TAX EXEMPT 0.0 C/GAL
STATE GASOLINE EXCISE TAX EXEMPT 4.0 C/GAL
FED GASOLINE EXCISE TAX EXEMPT 4.0 C/GALEQUIP DEPR LIFE 5 YRS
EQUIP ITC 20 %
BLDG ITC 0 %

RESULTS

ROE 29.9 % NPV (25 % DISC RATE) 1.4 MIL PAYBACK 1988

DEBT COV: 1.6 IN OPER YR 1 2.3 IN OPER YR 6

ENG COSTS \$.6 MIL

INITIAL DEBT \$ 12.9 MIL

MAXIMUM CASH EQUITY \$ 7.8 MIL

ANNUAL SALES: 4.8 MIL GALS ETH 16649 TONS DDG 0.0 MW ELECT

ANNUAL PLANT REQS 1.9 MIL BU CORN
AT FULL CAPACITY 6 MIL KWH29273 ACRES CORN
166 MIL LB STEAM

16649 HEAD CATTLE

INCOME AND CASH FLOW (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
REVENUES									
ETHANOL	0.0	0.0	0.0	10.2	11.0	11.9	12.8	13.9	15.0
DDG	0.0	0.0	0.0	3.6	3.9	4.2	4.5	4.9	5.2
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	0.0	0.0	0.0	14.1	15.2	16.4	17.7	19.2	20.7
VARIABLE COST									
FEEDSTOCK	0.0	0.0	0.0	5.5	6.0	6.4	6.9	7.5	8.1
WOOD	0.0	0.0	0.0	.5	.5	.6	.6	.7	.7
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT	0.0	0.0	0.0	.4	.4	.4	.5	.5	.5
OTHER	0.0	0.0	0.0	.6	.7	.7	.8	.9	.9
TOTAL VC	0.0	0.0	0.0	7.3	7.9	8.6	9.2	10.0	10.8
FIXED COSTS									
LABOR	0.0	0.0	0.0	.9	1.0	1.1	1.2	1.3	1.4
DEPREC	0.0	0.0	0.0	2.6	3.7	3.6	3.5	3.5	.1
G & A	0.0	0.0	0.0	.4	.4	.4	.5	.5	.6
OTHER	0.0	0.0	0.0	.3	.3	.3	.3	.3	.4
TOTAL FC	0.0	0.0	0.0	4.2	5.4	5.4	5.5	5.7	2.4
STARTUP COSTS	0.0	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	0.0	0.0	.7	11.5	13.4	14.0	14.8	15.7	13.2
OPERATING INCOME	0.0	0.0	-.7	2.6	1.8	2.5	3.0	3.5	7.5
INTEREST	0.0	0.0	0.0	2.8	2.7	2.6	2.4	2.3	2.1
INC. BEF. LCF/TAX	0.0	0.0	-.7	-.2	-.8	-.1	.5	1.2	5.4
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	.5	1.2	.1
TAXABLE INCOME	0.0	0.0	-.7	-.2	-.8	-.1	0.0	0.0	5.3
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME AFTER TAX	0.0	0.0	-.7	-.2	-.8	-.1	.5	1.2	5.4
DEPREC	0.0	0.0	0.0	2.6	3.7	3.6	3.5	3.5	.1
CHG IN OTH ASSETS	0.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	0.0	0.0	0.0	-.5	-.6	-.7	-.9	-1.0	-1.2
CHG IN WC	0.0	0.0	-2.0	-.1	-.1	-.1	-.1	-.1	-.1
CHG IN BANK LINE	0.0	0.0	1.0	.0	.1	.1	.1	.1	.1
ENG COST	-.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	-9.4	-4.6	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	-.9	-2.3	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	7.7	5.2	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-.6	-2.6	-4.6	1.9	2.3	2.7	3.2	3.7	4.2
CUMUL CASH FLOW	-.6	-3.2	-7.8	-5.9	-3.7	-1.0	2.2	5.8	10.0

INCOME AND CASH FLOW (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
REVENUES									
ETHANOL	16.2	17.5	18.9	20.4	22.0	23.8	25.7	27.7	29.9
DDG	5.7	6.1	6.6	7.1	7.7	8.3	9.0	9.7	10.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	22.3	24.1	26.1	28.1	30.4	32.8	35.5	38.3	41.4
VARIABLE COST									
FEEDSTOCK	8.7	9.4	10.2	11.0	11.9	12.9	13.9	15.0	16.2
WOOD	.8	.9	.9	1.0	1.1	1.2	1.3	1.4	1.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT	.6	.6	.7	.7	.8	.8	.9	1.0	1.1
OTHER	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.9
TOTAL VC	11.6	12.6	13.6	14.7	15.8	17.1	18.5	20.0	21.5
FIXED COSTS									
LABOR	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.6	2.8
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
G & A	.6	.6	.7	.8	.8	.9	1.0	1.0	1.1
OTHER	.4	.4	.5	.5	.5	.6	.6	.7	.7
TOTAL FC	2.6	2.8	3.0	3.2	3.5	3.7	4.0	4.4	4.7
STARTUP COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	14.2	15.3	16.6	17.9	19.3	20.9	22.5	24.3	26.2
OPERATING INCOME	8.1	8.8	9.5	10.3	11.1	12.0	12.9	14.0	15.1
INTEREST	1.9	1.6	1.2	.8	.3	.4	.4	.4	.4
INC. BEF. LCF/TAX	6.3	7.2	8.3	9.4	10.8	11.6	12.6	13.6	14.7
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXABLE INCOME	6.3	7.2	8.3	9.4	10.8	11.6	12.6	13.6	14.7
ITC USED	.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	2.5	3.6	4.1	4.7	5.4	5.8	6.3	6.8	7.3
INCOME AFTER TAX	3.8	3.6	4.1	4.7	5.4	5.8	6.3	6.8	7.3
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
CHG IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	-1.5	-1.8	-2.1	-2.6	0.0	0.0	0.0	0.0	0.0
CHG IN WC	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.3	-.3
CHG IN BANK LINE	.1	.1	.1	.1	.1	.1	.1	.1	.1
ENG COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	2.3	1.8	2.0	2.1	5.4	5.8	6.2	6.7	7.3
CUMUL CASH FLOW	12.3	14.1	16.1	18.3	23.6	29.4	35.6	42.4	49.6

FINANCIAL ANALYSIS OF SUN BELT ENERGY CORPORATION PROJECT

DATE OF ANALYSIS: 31/03/82

CORN -TO-ETHANOL PLANT

4.8 MIL GPY RATED CAPACITY

FUEL: WOOD

*90% capacity
in years 1 & 2*

ASSUMPTIONS (1982 \$)

14285 GPD RATED CAP 100 % ACT CAP 333 DAYS PER YEAR 2.5 GAL ETH/BU 18 LBS DDG/BU

CAPITAL COSTS	\$ 12.4 MIL	PERCENT LT DEBT	75 %	INFLATION RATE	8.0 %
CONSTR INT. RATE	16.0 %	LT DEBT INT RATE	16.0 %	CAP COST REAL ESC	5.0 %
		LT DEBT REPAY	10 YRS		
		BANK LINE INT RT	16.0 %		

ETH SALE PRICE	1.70 \$/GAL	ELECTR SALES PRICE	5.0 C/KWH	ETH REAL ESC	0.0 %
NET ETH PRICE	.90 \$/GAL	ELECTR PURCH COST	5.0 C/KWH	CORN & DDG REAL ESC	0.0 %
DDG PRICE	170.00 \$/TON			ELECTR REAL ESC	0.0 %
CORN COST	2.30 \$/BU			WOOD REAL ESC	0.0 %
WOOD COST	10.70 \$/TON				

DAYS REC ETH/DRY AG	30	DAYS PAY CORN	0	LIFO INVENTORY POLICY
DAYS REC DDG	30	DAYS PAY WOOD	0	15 DAYS ETH STORAGE
DAYS REC ELECTR	30			15 DAYS CORN STORAGE
				15 DAYS DDG STORAGE
				15 DAYS WOOD STORAGE

FED INC TAX	46.0 %	EQUIP DEPR LIFE	5 YRS
STATE INC TAX	4.0 %	EQUIP ITC	20 %
STATE SALES TAX EXEMPT	0.0 C/GAL	BLDG ITC	0 %
STATE GASOLINE EXCISE TAX EXEMPT	4.0 C/GAL		
FED GASOLINE EXCISE TAX EXEMPT	4.0 C/GAL		

RESULTS

ROE 31.7 % NPV (25 % DISC RATE) 1.9 MIL PAYBACK 1988

DEBT COV: 1.7 IN OPER YR 1 2.7 IN OPER YR 6

ENG COSTS \$.6 MIL INITIAL DEBT \$ 12.4 MIL MAXIMUM CASH EQUITY \$ 7.5 MIL

ANNUAL SALES: 4.8 MIL GALS ETH 16649 TONS DDG 0.0 MW ELECT

ANNUAL PLANT REQS 1.9 MIL BU CORN 29273 ACRES CORN 16649 HEAD CATTLE
AT FULL CAPACITY 6 MIL KWH 166 MIL LB STEAM

INCOME AND CASH FLOW (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
REVENUES									
ETHANOL	0.0	0.0	0.0	9.2	9.9	11.9	12.8	13.9	15.0
DDG	0.0	0.0	0.0	3.2	3.5	4.2	4.5	4.9	5.2
DRY AGENT	0.0	0.0	0.0	.3	.3	.4	.4	.4	.5
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	0.0	0.0	0.0	12.7	13.7	16.4	17.7	19.2	20.7
VARIABLE COST									
FEEDSTOCK	0.0	0.0	0.0	5.0	5.4	6.4	6.9	7.5	8.1
WOOD	0.0	0.0	0.0	.5	.5	.6	.6	.7	.7
DRY AGENT	0.0	0.0	0.0	.3	.3	.4	.4	.4	.5
ELECT	0.0	0.0	0.0	.3	.3	.4	.5	.5	.5
OTHER	0.0	0.0	0.0	.6	.6	.7	.8	.9	.9
TOTAL VC	0.0	0.0	0.0	6.6	7.1	8.6	9.2	10.0	10.8
FIXED COSTS									
LABOR	0.0	0.0	0.0	.9	1.0	1.1	1.2	1.3	1.4
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
G & A	0.0	0.0	0.0	.4	.4	.4	.5	.5	.6
OTHER	0.0	0.0	0.0	.3	.3	.3	.3	.3	.4
TOTAL FC	0.0	0.0	0.0	4.1	5.3	5.3	5.4	5.5	2.4
STARTUP COSTS	0.0	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	0.0	0.0	.7	10.7	12.4	13.8	14.6	15.5	13.2
OPERATING INCOME	0.0	0.0	-.7	2.0	1.3	2.6	3.1	3.6	7.5
INTEREST	0.0	0.0	0.0	2.1	2.0	1.9	1.8	1.7	1.5
INC. BEF. LCF/TAX	0.0	0.0	-.7	-.2	-.8	.7	1.3	1.9	6.0
LCF USED	0.0	0.0	0.0	0.0	0.0	.7	1.0	0.0	0.0
TAXABLE INCOME	0.0	0.0	-.7	-.2	-.8	0.0	.3	1.9	6.0
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	.1	1.0	2.0
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.9
INCOME AFTER TAX	0.0	0.0	-.7	-.2	-.8	.7	1.3	1.9	5.0
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
CHG IN OTH ASSETS	0.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	0.0	0.0	0.0	-.6	-.7	-.8	-.9	-1.1	-1.2
CHG IN WC	0.0	0.0	-1.8	-.1	-.1	-.3	-.1	-.1	-.1
CHG IN BANK LINE	0.0	0.0	.9	.0	.0	.2	.1	.1	.1
ENG COST	-.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	-9.4	-4.6	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	-.7	-1.9	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	7.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-.6	-2.5	-4.4	1.7	2.1	3.2	3.7	4.2	3.8
CUMUL CASH FLOW	-.6	-3.1	-7.5	-5.8	-3.7	-.5	3.2	7.4	11.2

INCOME AND CASH FLOW (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
REVENUES									
ETHANOL	16.2	17.5	18.9	20.4	22.0	23.8	25.7	27.7	29.9
DDG	5.7	6.1	6.6	7.1	7.7	8.3	9.0	9.7	10.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	22.3	24.1	26.1	28.1	30.4	32.8	35.5	38.3	41.4
VARIABLE COST									
FEEDSTOCK	8.7	9.4	10.2	11.0	11.9	12.9	13.9	15.0	16.2
WOOD	.8	.9	.9	1.0	1.1	1.2	1.3	1.4	1.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT	.6	.6	.7	.7	.8	.8	.9	1.0	1.1
OTHER	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.9
TOTAL VC	11.6	12.6	13.6	14.7	15.8	17.1	18.5	20.0	21.5
FIXED COSTS									
LABOR	1.5	1.5	1.7	1.9	2.0	2.2	2.4	2.6	2.8
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
G & A	.6	.5	.7	.8	.8	.9	1.0	1.0	1.1
OTHER	.4	.4	.5	.5	.5	.6	.6	.7	.7
TOTAL FC	2.6	2.5	3.0	3.2	3.5	3.7	4.0	4.4	4.7
STARTUP COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	14.2	15.3	16.6	17.9	19.3	20.8	22.5	24.3	26.2
OPERATING INCOME	8.1	8.8	9.5	10.3	11.1	12.0	12.9	14.0	15.1
INTEREST	1.4	1.1	.9	.6	.3	.3	.3	.3	.3
INC. BEF. LCF/TAX	6.8	7.6	8.6	9.7	10.8	11.7	12.6	13.7	14.8
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXABLE INCOME	6.8	7.6	8.6	9.7	10.8	11.7	12.6	13.7	14.8
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	3.4	3.8	4.3	4.8	5.4	5.9	6.3	6.8	7.4
INCOME AFTER TAX	3.4	3.8	4.3	4.8	5.4	5.9	6.3	6.8	7.4
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
CHG IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	-1.4	-1.6	-1.9	-2.2	0.0	0.0	0.0	0.0	0.0
CHG IN WC	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.3	-.3
CHG IN BANK LINE	.1	.1	.1	.1	.1	.1	.1	.1	.1
ENG COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	2.0	2.2	2.4	2.6	5.4	5.8	6.3	6.8	7.3
CUMUL CASH FLOW	13.2	15.4	17.7	20.3	25.7	31.5	37.8	44.6	51.9

FINANCIAL ANALYSIS OF SUN BELT ENERGY CORPORATION PROJECT

DATE OF ANALYSIS: 29/03/82

CORN -TO-ETHANOL PLANT

4.8 MIL GPY RATED CAPACITY

FUEL: WOOD

ASSUMPTIONS (1982 \$)

14285 GPD RATED CAP

100 % ACT CAP

333 DAYS PER YEAR

2.5 GAL ETH/BU

18 LBS DDG/BU

CAPITAL COSTS \$ 12.4 MIL
CONSTR INT. RATE 16.0 %PERCENT LT DEBT 75 %
LT DEBT INT RATE 16.0 %
LT DEBT REPAY 10 YRS
BANK LINE INT RT 16.0 %INFLATION RATE 8.0 %
CAP COST REAL ESC 5.0 %ETH SALE PRICE 1.30 \$/GAL
NET ETH PRICE .90 \$/GAL
DDG PRICE 170.00 \$/TON
CORN COST 2.30 \$/BU
WOOD COST 10.70 \$/TONELECTR SALES PRICE 5.0 C/KWH
ELECTR PURCH COST 5.0 C/KWHETH REAL ESC 0.0 %
CORN & DDG REAL ESC 0.0 %
ELECTR REAL ESC 0.0 %
WOOD REAL ESC 0.0 %DAYS REC ETH/DRY AG 30
DAYS REC DDG 30
DAYS REC ELECTR 30DAYS PAY CORN 0
DAYS PAY WOOD 0LIFO INVENTORY POLICY
15 DAYS ETH STORAGE
15 DAYS CORN STORAGE
15 DAYS DDG STORAGE
15 DAYS WOOD STORAGEFED INC TAX 46.0 %
STATE INC TAX 4.0 %
STATE SALES TAX EXEMPT 0.0 C/GAL
STATE GASOLINE EXCISE TAX EXEMPT 4.0 C/GAL
FED GASOLINE EXCISE TAX EXEMPT 0.0 C/GALEQUIP DEPR LIFE 5 YRS
EQUIP ITC 10 %
BLDG ITC 0 %

RESULTS

ROE 12.8 % NPV (25 % DISC RATE) -3.3 MIL PAYBACK 1993

DEBT COV: 1.0 IN OPER YR 1 1.5 IN OPER YR 6

END COSTS \$.6 MIL

INITIAL DEBT \$ 12.4 MIL

MAXIMUM CASH EQUITY \$ 7.5 MIL

ANNUAL SALES: 4.8 MIL GALS ETH 16649 TONS DDG 0.0 MW ELECT

ANNUAL PLANT REQS 1.9 MIL BU CORN 29273 ACRES CORN 16649 HEAD CATTLE
AT FULL CAPACITY 6 MIL KWH 166 MIL LB STEAM*No federal
excise tax
exemption
or
ETC*

INCOME AND CASH FLOW (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
REVENUES									
ETHANOL	0.0	0.0	0.0	7.8	8.4	9.1	9.8	10.6	11.4
DDG	0.0	0.0	0.0	3.4	3.9	4.2	4.5	4.9	5.2
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	0.0	0.0	0.0	11.7	12.6	13.6	14.7	15.9	17.2
VARIABLE COST									
FEEDSTOCK	0.0	0.0	0.0	5.5	6.0	6.4	6.9	7.5	8.1
WOOD	0.0	0.0	0.0	.5	.5	.6	.6	.7	.7
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT	0.0	0.0	0.0	.4	.4	.4	.5	.5	.5
OTHER	0.0	0.0	0.0	.6	.7	.7	.8	.9	.9
TOTAL VC	0.0	0.0	0.0	7.3	7.9	8.6	9.2	10.0	10.8
FIXED COSTS									
LABOR	0.0	0.0	0.0	.9	1.0	1.1	1.2	1.3	1.4
DEPREC	0.0	0.0	0.0	3.3	3.3	3.3	3.3	3.2	.1
G & A	0.0	0.0	0.0	.4	.4	.4	.5	.5	.6
OTHER	0.0	0.0	0.0	.3	.3	.3	.3	.3	.4
TOTAL FC	0.0	0.0	0.0	4.9	5.0	5.1	5.2	5.4	2.4
STARTUP COSTS	0.0	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	0.0	0.0	.7	12.2	12.9	13.7	14.5	15.4	13.2
OPERATING INCOME	0.0	0.0	-.7	-.5	-.3	-.0	.2	.5	4.0
INTEREST	0.0	0.0	0.0	2.1	2.0	1.9	1.8	1.7	1.5
INC. REF. LCF/TAX	0.0	0.0	-.7	-2.7	-2.3	-2.0	-1.6	-1.1	2.5
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
TAXABLE INCOME	0.0	0.0	-.7	-2.7	-2.3	-2.0	-1.6	-1.1	0.0
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME AFTER TAX	0.0	0.0	-.7	-2.7	-2.3	-2.0	-1.6	-1.1	2.5
DEPREC	0.0	0.0	0.0	3.3	3.3	3.3	3.3	3.2	.1
CHG IN OTH ASSETS	0.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	0.0	0.0	0.0	-.4	-.7	-.8	-.9	-1.1	-1.2
CHG IN WC	0.0	0.0	-1.7	-.1	-.1	-.1	-.1	-.1	-.1
CHG IN BANK LINE	0.0	0.0	.8	.0	.0	.0	.1	.1	.1
ENG COST	-.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	-9.4	-4.6	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	-.7	-1.9	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	7.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-.6	-2.5	-4.3	.0	.2	.5	.7	1.0	1.3
CUMUL CASH FLOW	-.6	-3.1	-7.5	-7.4	-7.2	-6.7	-6.0	-5.0	-3.7

INCOME AND CASH FLOW (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
REVENUES									
ETHANOL	12.4	13.4	14.4	15.6	16.8	18.2	19.6	21.2	22.9
DDG	5.7	6.1	6.6	7.1	7.7	8.3	9.0	9.7	10.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	18.5	20.0	21.6	23.4	25.2	27.2	29.4	31.8	34.3
VARIABLE COST									
FEEDSTOCK	8.7	9.4	10.2	11.0	11.9	12.9	13.9	15.0	16.2
WOOD	.8	.9	.9	1.0	1.1	1.2	1.3	1.4	1.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT	.6	.6	.7	.7	.8	.8	.9	1.0	1.1
OTHER	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.9
TOTAL VC	11.6	12.6	13.6	14.7	15.8	17.1	18.5	20.0	21.5
FIXED COSTS									
LABOR	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.6	2.8
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
G & A	.6	.6	.7	.8	.8	.9	1.0	1.0	1.1
OTHER	.4	.4	.5	.5	.5	.6	.6	.7	.7
TOTAL FC	2.6	2.8	3.0	3.2	3.5	3.7	4.0	4.4	4.7
STARTUP COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	14.2	15.3	16.6	17.9	19.3	20.8	22.5	24.3	26.2
OPERATING INCOME	4.3	4.7	5.1	5.5	5.9	6.4	6.9	7.5	8.1
INTEREST	1.3	1.1	.9	.6	.2	.2	.3	.3	.3
INC. BEF. LCF/TAX	3.0	3.6	4.2	4.9	5.7	6.2	6.7	7.2	7.8
LCF USED	3.0	3.6	1.3	0.0	0.0	0.0	0.0	0.0	0.0
TAXABLE INCOME	0.0	0.0	2.9	4.9	5.7	6.2	6.7	7.2	7.8
ITC USED	0.0	0.0	1.4	.1	0.0	0.0	0.0	0.0	0.0
TAXES PAID	0.0	0.0	0.0	2.3	2.8	3.1	3.3	3.6	3.9
INCOME AFTER TAX	3.0	3.6	4.2	2.6	2.8	3.1	3.3	3.6	3.9
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
CHG IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	-1.4	-1.6	-1.9	-2.2	0.0	0.0	0.0	0.0	0.0
CHG IN WC	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2
CHG IN BANK LINE	.1	.1	.1	.1	.1	.1	.1	.1	.1
ENG COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	1.6	1.9	2.3	.4	2.8	3.1	3.3	3.6	3.8
CUMUL CASH FLOW	-2.1	-.2	2.1	2.5	5.3	8.4	11.7	15.2	19.1

FINANCIAL ANALYSIS OF SUN BELT ENERGY CORPORATION PROJECT

DATE OF ANALYSIS: 24/03/82

CORN -TO-ETHANOL PLANT

4.8 MIL GPY RATED CAPACITY

FUEL: WOOD

3.40 corn
20% interest

(B)

ASSUMPTIONS (1982 \$)

14285 GPD RATED CAP

100 % ACT CAP

333 DAYS PER YEAR

2.5 GAL ETH/BU

18 LBS DDG/BU

CAPITAL COSTS
CONSTR INT. RATE\$ 12.4 MIL
20.0 %PERCENT LT DEBT 75 %
LT DEBT INT RATE 20.0 %
LT DEBT REPAY 10 YRS
BANK LINE INT RT 20.0 %INFLATION RATE 8.0 %
CAP COST REAL ESC 5.0 %ETH SALE PRICE 1.70 \$/GAL
NET ETH PRICE .90 \$/GAL
DDG PRICE 170.00 \$/TON
CORN COST 3.40 \$/BU
WOOD COST 10.70 \$/TONELECTR SALES PRICE 5.0 C/KWH
ELECTR PURCH COST 5.0 C/KWHETH REAL ESC 0.0 %
CORN & DDG REAL ESC 0.0 %
ELECTR REAL ESC 0.0 %
WOOD REAL ESC 0.0 %DAYS REC ETH/DNY AG 30
DAYS REC DDG 30
DAYS REC ELECTR 30DAYS PAY CORN 0
DAYS PAY WOOD 0LIFO INVENTORY POLICY
15 DAYS ETH STORAGE
15 DAYS CORN STORAGE
15 DAYS DDG STORAGE
15 DAYS WOOD STORAGEFED INC TAX 46.0 %
STATE INC TAX 4.0 %
STATE SALES TAX EXEMPT 0.0 C/GAL
STATE GASOLINE EXCISE TAX EXEMPT 4.0 C/GAL
FED GASOLINE EXCISE TAX EXEMPT 4.0 C/GALEQUIP DEPR LIFE 5 YRS
EQUIP ITC 20 %
BLDG ITC 0 %

RESULTS

ROE 0.0 % NPV (25 % DISC RATE) -7.9 MIL PAYBACK 0

DEBT COV: .8 IN OPER YR 1 .5 IN OPER YR 6

ENG COSTS \$.6 MIL

INITIAL DEBT \$ 12.9 MIL

MAXIMUM CASH EQUITY \$ 7.8 MIL

ANNUAL SALES: 4.8 MIL GALS ETH 16649 TONS DDG 0.0 MW ELECT

ANNUAL PLANT REQS 1.9 MIL BU CORN
AT FULL CAPACITY 6 MIL KWH29273 ACRES CORN
166 MIL LB STEAM

16649 HEAD CATTLE

INCOME AND CASH FLOW (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
REVENUES									
ETHANOL	0.0	0.0	0.0	10.2	11.0	10.0	10.9	12.0	13.1
DDG	0.0	0.0	0.0	3.6	3.9	4.2	4.5	4.9	5.2
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	0.0	0.0	0.0	14.1	15.2	14.5	15.8	17.3	18.8
VARIABLE COST									
FEEDSTOCK	0.0	0.0	0.0	8.1	8.8	9.5	10.3	11.1	12.0
WOOD	0.0	0.0	0.0	.5	.5	.6	.6	.7	.7
DRY AGENT	0.0	0.0	0.0	.3	.4	.4	.4	.4	.5
ELECT	0.0	0.0	0.0	.4	.4	.4	.5	.5	.5
OTHER	0.0	0.0	0.0	.6	.7	.7	.8	.9	.9
TOTAL VC	0.0	0.0	0.0	10.0	10.8	11.6	12.6	13.6	14.7
FIXED COSTS									
LABOR	0.0	0.0	0.0	.9	1.0	1.1	1.2	1.3	1.4
DEPREC	0.0	0.0	0.0	3.4	3.4	3.4	3.4	3.4	.1
G & A	0.0	0.0	0.0	.4	.4	.4	.5	.5	.6
OTHER	0.0	0.0	0.0	.3	.3	.3	.3	.3	.4
TOTAL FC	0.0	0.0	0.0	5.0	5.1	5.2	5.4	5.5	2.4
STARTUP COSTS	0.0	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	0.0	0.0	.7	15.0	15.9	16.9	17.9	19.1	17.1
OPERATING INCOME	0.0	0.0	-.7	-.9	-.7	-2.3	-2.1	-1.8	1.7
INTEREST	0.0	0.0	0.0	2.8	2.7	2.6	2.5	2.3	2.1
INC. BEF. LCF/TAX	0.0	0.0	-.7	-3.7	-3.4	-4.9	-4.5	-4.1	-.4
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXABLE INCOME	0.0	0.0	-.7	-3.7	-3.4	-4.9	-4.5	-4.1	-.4
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME AFTER TAX	0.0	0.0	-.7	-3.7	-3.4	-4.9	-4.5	-4.1	-.4
DEPREC	0.0	0.0	0.0	3.4	3.4	3.4	3.4	3.4	.1
CHG IN OTH ASSETS	0.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REFAY	0.0	0.0	0.0	-.5	-.6	-.7	-.9	-1.0	-1.2
CHG IN WC	0.0	0.0	-2.1	-.1	-.1	-.1	-.1	-.1	-.1
CHG IN BANK LINE	0.0	0.0	1.0	.0	.1	.1	.1	.1	.1
ENG COST	-.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	-2.4	-4.6	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	-.9	-2.3	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	7.7	5.2	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-.6	-2.6	-4.6	-.8	-.6	-2.3	-2.1	-1.8	-1.6
CUMUL CASH FLOW	-.6	-3.2	-7.8	-8.6	-9.2	-11.5	-13.6	-15.4	-17.0

INCOME AND CASH FLOW (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
REVENUES									
ETHANOL	14.3	15.6	17.0	18.5	20.1	21.8	23.7	25.8	28.0
DDG	5.7	6.1	6.6	7.1	7.7	8.3	9.0	9.7	10.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	20.4	22.2	24.2	26.2	28.5	30.9	33.6	36.4	39.5
VARIABLE COST									
FEEDSTOCK	12.9	14.0	15.1	16.3	17.6	19.0	20.5	22.2	23.9
WOOD	.8	.9	.9	1.0	1.1	1.2	1.3	1.4	1.5
DRY AGENT	.5	.6	.6	.7	.7	.8	.8	.9	1.0
ELECT	.6	.6	.7	.7	.8	.8	.9	1.0	1.1
OTHER	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.9
TOTAL VC	15.8	17.1	18.5	19.9	21.5	23.3	25.1	27.1	29.3
FIXED COSTS									
LABOR	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.6	2.8
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
G & A	.6	.6	.7	.8	.8	.9	1.0	1.0	1.1
OTHER	.4	.4	.5	.5	.5	.6	.6	.7	.7
TOTAL FC	2.6	2.8	3.0	3.2	3.5	3.7	4.0	4.4	4.7
STARTUP COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	18.4	19.9	21.4	23.2	25.0	27.0	29.2	31.5	34.0
OPERATING INCOME	2.0	2.4	2.7	3.1	3.5	3.9	4.4	4.9	5.5
INTEREST	1.9	1.6	1.2	.8	.3	.4	.4	.4	.4
INC. BEF. LCF/TAX	.2	.8	1.5	2.3	3.1	3.6	4.0	4.5	5.0
LCF USED	.2	.8	1.5	2.3	3.1	3.6	4.0	4.5	1.8
TAXABLE INCOME	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME AFTER TAX	.2	.8	1.5	2.3	3.1	3.6	4.0	4.5	5.0
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
CHG IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	-1.5	-1.8	-2.1	-2.6	0.0	0.0	0.0	0.0	0.0
CHG IN WC	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.3	-2.3
CHG IN BANK LINE	.1	.1	.1	.1	.1	.1	.1	.1	.1
ENG COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-1.3	-1.0	-.7	-.3	3.1	3.5	4.0	4.5	5.0
CUMUL CASH FLOW	-18.3	-19.3	-20.0	-20.3	-17.2	-13.7	-9.7	-5.3	-.3

FINANCIAL ANALYSIS OF SUN BELT ENERGY CORPORATION PROJECT

DATE OF ANALYSIS: 31/03/82

CORN -TO-ETHANOL PLANT

4.8 MIL GPY RATED CAPACITY

FUEL: WOOD

ASSUMPTIONS (1982 \$)

14285 GPD RATED CAP

100 % ACT CAP

333 DAYS PER YEAR

2.5 GAL ETH/BU

18 LBS DDG/BU

CAPITAL COSTS \$ 12.4 MIL
CONSTR INT. RATE 20.0 %

PERCENT LT DEBT 75 %
LT DEBT INT RATE 20.0 %
LT DEBT REPAY 8 YRS
BANK LINE INT RT 20.0 %

INFLATION RATE 5.0 %
CAP COST REAL ESC 5.0 %

ETH SALE PRICE 1.70 \$/GAL
NET ETH PRICE .90 \$/GAL
DDG PRICE 170.00 \$/TON
CORN COST 3.20 \$/BU
WOOD COST 10.70 \$/TON

ELECTR SALES PRICE 5.0 C/KWH
ELECTR PURCH COST 5.0 C/KWH

ETH REAL ESC 0.0 %
CORN & DDG REAL ESC 3.0 %
ELECTR REAL ESC 0.0 %
WOOD REAL ESC 3.0 %

DAYS REC ETH/DRY AG 30
DAYS REC DDG 30
DAYS REC ELECTR 30

DAYS PAY CORN 0
DAYS PAY WOOD 0

LIFO INVENTORY POLICY
15 DAYS ETH STORAGE
15 DAYS CORN STORAGE
15 DAYS DDG STORAGE
15 DAYS WOOD STORAGE

FED INC TAX 46.0 %
STATE INC TAX 4.0 %
STATE SALES TAX EXEMPT 0.0 C/GAL
STATE GASOLINE EXCISE TAX EXEMPT 4.0 C/GAL
FED GASOLINE EXCISE TAX EXEMPT 4.0 C/GAL

EQUIP DEPR LIFE 5 YRS
EQUIP ITC 20 %
BLDG ITC 0 %

RESULTS

ROE 0.0 % NPV (25 % DISC RATE) -7.5 MIL PAYBACK 0

DEBT COV: .7 IN OPER YR 1 .6 IN OPER YR 6

ENG COSTS \$.6 MIL

INITIAL DEBT \$ 12.4 MIL

MAXIMUM CASH EQUITY \$ 7.6 MIL

ANNUAL SALES: 4.8 MIL GALS ETH 16649 TONS DDG 0.0 MW ELECT

ANNUAL PLANT REQS
AT FULL CAPACITY

1.9 MIL BU CORN
6 MIL KWH

29273 ACRES CORN
166 MIL LB STEAM

16649 HEAD CATTLE

3.20 CORN
20% interest
ETH 5%
CORN/DDG/WOOD 8%

INCOME AND CASH FLOW (\$ MIL)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
REVENUES									
ETHANOL	0.0	0.0	0.0	9.4	9.8	10.3	10.8	11.4	11.9
DDG	0.0	0.0	0.0	3.6	3.9	4.2	4.5	4.9	5.3
DRY AGENT	0.0	0.0	0.0	.3	.3	.3	.4	.4	.4
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	0.0	0.0	0.0	13.2	14.0	14.8	15.7	16.6	17.6
VARIABLE COST									
FEEDSTOCK	0.0	0.0	0.0	7.7	8.3	9.0	9.7	10.5	11.4
WOOD	0.0	0.0	0.0	.5	.5	.5	.5	.6	.6
DRY AGENT	0.0	0.0	0.0	.3	.3	.3	.4	.4	.4
ELECT	0.0	0.0	0.0	.3	.3	.4	.4	.4	.4
OTHER	0.0	0.0	0.0	.6	.6	.6	.7	.7	.7
TOTAL VC	0.0	0.0	0.0	9.4	10.1	10.9	11.7	12.6	13.5
FIXED COSTS									
LABOR	0.0	0.0	0.0	.9	.9	1.0	1.0	1.1	1.1
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
G & A	0.0	0.0	0.0	.3	.4	.4	.4	.4	.4
OTHER	0.0	0.0	0.0	.2	.2	.3	.3	.3	.3
TOTAL FC	0.0	0.0	0.0	4.0	5.1	5.0	5.1	5.2	1.9
STARTUP COSTS	0.0	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	0.0	0.0	.7	13.4	15.2	15.9	16.8	17.7	15.5
OPERATING INCOME	0.0	0.0	-.7	-.1	-1.2	-1.0	-1.1	-1.1	2.2
INTEREST	0.0	0.0	0.0	2.7	2.5	2.4	2.2	1.9	1.6
INC. BEF. LCF/TAX	0.0	0.0	-.7	-2.8	-3.7	-3.4	-3.2	-3.0	.6
LCF USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.6
TAXABLE INCOME	0.0	0.0	-.7	-2.8	-3.7	-3.4	-3.2	-3.0	0.0
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME AFTER TAX	0.0	0.0	-.7	-2.8	-3.7	-3.4	-3.2	-3.0	.6
DEPREC	0.0	0.0	0.0	2.5	3.6	3.4	3.4	3.4	.1
CHG IN DTH ASSETS	0.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	0.0	0.0	0.0	-.8	-.9	-1.1	-1.3	-1.6	-1.9
CHG IN WC	0.0	0.0	-2.0	-.1	-.1	-.1	-.1	-.1	-.1
CHG IN BANK LINE	0.0	0.0	1.0	.0	.0	.0	.0	.0	.0
ENG COST	-.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	-9.1	-4.3	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	-.9	-2.3	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	7.5	4.9	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-.6	-2.5	-4.5	-1.0	-1.1	-1.1	-1.1	-1.2	-1.3
CUMUL CASH FLOW	-.6	-3.1	-7.6	-8.6	-9.7	-10.8	-11.9	-13.1	-14.4

INCOME AND CASH FLOW (\$ MIL)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
REVENUES									
ETHANOL	12.5	13.2	13.8	14.5	15.2	16.0	16.8	17.7	18.5
DDG	5.7	6.2	6.7	7.2	7.8	8.5	9.2	9.9	10.7
DRY AGENT	.4	.4	.4	.5	.5	.5	.5	.6	.6
ELECT PWR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL REVS	18.7	19.8	21.0	22.2	23.6	25.0	26.5	28.1	29.9
VARIABLE COST									
FEEDSTOCK	12.3	13.3	14.4	15.6	16.9	18.2	19.7	21.3	23.1
WOOD	.6	.7	.7	.7	.8	.8	.8	.9	.9
DRY AGENT	.4	.4	.4	.5	.5	.5	.5	.6	.6
ELECT	.4	.5	.5	.5	.5	.6	.6	.6	.7
OTHER	.8	.8	.9	.9	.9	1.0	1.0	1.1	1.1
TOTAL VC	14.6	15.7	16.9	18.2	19.6	21.1	22.7	24.5	26.4
FIXED COSTS									
LABOR	1.2	1.2	1.3	1.3	1.4	1.5	1.6	1.6	1.7
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
G & A	.5	.5	.5	.5	.6	.6	.6	.7	.7
OTHER	.3	.3	.3	.4	.4	.4	.4	.4	.5
TOTAL FC	2.0	2.1	2.2	2.3	2.4	2.5	2.7	2.8	2.9
STARTUP COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPER COSTS	16.6	17.8	19.1	20.5	22.0	23.6	25.4	27.3	29.3
OPERATING INCOME	2.1	2.0	1.9	1.7	1.6	1.4	1.1	.8	.5
INTEREST	1.2	.8	.3	.3	.3	.3	.3	.3	.3
INC. BEF. LCF/TAX	.9	1.2	1.6	1.5	1.3	1.1	.8	.5	.2
LCF USED	.9	1.2	1.6	1.5	1.3	1.1	.8	.5	.2
TAXABLE INCOME	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ITC USED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES PAID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME AFTER TAX	.9	1.2	1.6	1.5	1.3	1.1	.8	.5	.2
DEPREC	.1	.1	.1	.1	.1	.1	.1	.1	.1
CHG IN OTH ASSETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINC REPAY	-2.2	-2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHG IN WC	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.2
CHG IN BANK LINE	.0	.0	.1	.1	.1	.1	.1	.1	.1
ENG COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR COST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTR INT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT FIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL CASH FLOW	-1.4	-1.5	1.6	1.5	1.3	1.1	.8	.5	.2
CUMUL CASH FLOW	-15.7	-17.2	-15.6	-14.1	-12.8	-11.7	-10.9	-10.4	-10.2