

**Pre-Feasibility Study for a Bioethanol Industry in Maine
Production Assumptions**

Denatured Ethanol Production (gal/yr)	5,250,000										Average ROI	18.6%
Anhydrous Ethanol Production (gal/yr)	5,000,000											
Product Yields & Energy Consumption	1st year	2nd year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year	Annual	
	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Escalation	
Ethanol Yield (gal/bu)	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100		
Ethanol Selling Price (\$/gal)	\$1.250	\$1.275	\$1.301	\$1.327	\$1.353	\$1.380	\$1.408	\$1.436	\$1.465	\$1.494	2.00%	
Ethanol Sales Commission (%)	1.000%	1.015%	1.030%	1.046%	1.061%	1.077%	1.093%	1.110%	1.126%	1.143%	1.50%	
Ethanol Transportation (\$/gal)	\$0.040	\$0.041	\$0.042	\$0.042	\$0.043	\$0.044	\$0.045	\$0.046	\$0.047	\$0.048	2.00%	
State Producer Payment (\$/gal)	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000		
Federal Small Producer Payment (\$/gal)	\$0.100	\$0.100	\$0.100	\$0.100	\$0.100	\$0.100	\$0.100	\$0.100	\$0.100	\$0.100		
Delivered Grain Price (\$/bu)	\$1.400	\$1.414	\$1.428	\$1.442	\$1.457	\$1.471	\$1.486	\$1.501	\$1.516	\$1.531	1.00%	
Grain Storage & Transportation (\$/bu)	\$0.100	\$0.102	\$0.103	\$0.105	\$0.106	\$0.108	\$0.109	\$0.111	\$0.113	\$0.114	1.50%	
Grain Usage (bu/yr)	2,380,952	2,380,952	2,380,952	2,380,952	2,380,952	2,380,952	2,380,952	2,380,952	2,380,952	2,380,952		
Grain Test Weight (lb/bu)	48.000	48.000	48.000	48.000	48.000	48.000	48.000	48.000	48.000	48.000		
Distillers Grain Yield (lb/bu)	17.000	17.000	17.000	17.000	17.000	17.000	17.000	17.000	17.000	17.000		
Distillers Grain Price, FOB (\$/ton)	\$100.000	\$101.000	\$102.010	\$103.030	\$104.060	\$105.101	\$106.152	\$107.214	\$108.286	\$109.369	1.00%	
Distillers Grain Transportation (\$/ton)	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	2.00%	
DG Sales Commission (% of sales)	2.000%	2.030%	2.060%	2.091%	2.123%	2.155%	2.187%	2.220%	2.253%	2.287%	1.50%	
Carbon Dioxide (CO2) Sold (lb/gal)	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000		
CO2 Price (\$/ton)	\$12.000	\$12.120	\$12.241	\$12.364	\$12.487	\$12.612	\$12.738	\$12.866	\$12.994	\$13.124	1.00%	
Electricity Use (kWh/bu)	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806		
Electricity Price (\$/kWh)	\$0.0500	\$0.0510	\$0.0520	\$0.0531	\$0.0541	\$0.0552	\$0.0563	\$0.0574	\$0.0586	\$0.0598	2.00%	
Steam Use (BTU/bu)	0.0630	0.0630	0.0630	0.0630	0.0630	0.0630	0.0630	0.0630	0.0630	0.0630		
Steam Price (\$/MMBTU)	\$6.5000	\$6.6300	\$6.7626	\$6.8979	\$7.0358	\$7.1765	\$7.3201	\$7.4665	\$7.6158	\$7.7681	2.00%	
Fresh Water Use (1000 gal/bu)	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015		
Fresh Water Price (\$/1000 gal)	\$2.0000	\$2.0200	\$2.0402	\$2.0606	\$2.0812	\$2.1020	\$2.1230	\$2.1443	\$2.1657	\$2.1874	1.00%	
Wastewater Disposal (1000 gal/bu)	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004		
Wastewater Disposal Price (\$/1000 gal)	\$3.0000	\$3.0300	\$3.0603	\$3.0909	\$3.1218	\$3.1530	\$3.1846	\$3.2164	\$3.2486	\$3.2811	1.00%	
Denaturant Use (% of ethanol sold)	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%		
Denaturant Price (\$/gal)	\$0.6500	\$0.6630	\$0.6763	\$0.6898	\$0.7036	\$0.7177	\$0.7320	\$0.7466	\$0.7616	\$0.7768	2.00%	
Chemicals & Enzymes Cost (\$/gal etoh)	\$0.1000	\$0.1010	\$0.1020	\$0.1030	\$0.1041	\$0.1051	\$0.1062	\$0.1072	\$0.1083	\$0.1094	1.00%	
Number of Employees	16	16	16	16	16	16	16	16	16	16		
Average Salary Including Benefits	\$48,344	\$49,552	\$50,791	\$52,061	\$53,362	\$54,697	\$56,064	\$57,466	\$58,902	\$60,375	2.50%	
Maintenance Materials & Services	2.000%	2.030%	2.060%	2.091%	2.123%	2.155%	2.187%	2.220%	2.253%	2.287%	1.50%	
Property Tax & Insurance	1.500%	1.515%	1.530%	1.545%	1.561%	1.577%	1.592%	1.608%	1.624%	1.641%	1.00%	
All Other Expense Categories											2.00%	
Operating Days Per Year	350											

**Pre-Feasibility Study for a Bioethanol Industry in Maine
Financial Assumptions**

Ethanol Plant Engineering & Construction Costs

Capital Equipment Cost & Installation	\$9,650,000	
Engineering Expense	\$1,000,000	
Construction Mgt. & Procurement Fees	\$1,850,000	
Total	\$12,500,000	\$2.50 per gallon

Inventories

	<u>Accounts Receivable</u> (#Days)	<u>Accounts Payable</u> (#Days)	<u>Inventories</u> (#Days)
Fuel Ethanol	10		8
Distillers Grain	10		8
Denaturants		10	10
Chemicals & Enzymes		15	15
Grain		10	10
Utilities		15	

Owner's Costs

Inventory - Grain	\$102,000
Inventory - Chemicals/Yeast/Denaturant	\$26,000
Inventory - Ethanol & DDGS	\$196,000
Spare Parts	\$150,000
Startup Costs	\$400,000
Organizational Costs	\$300,000
Permits, Legal, Management & Misc.	\$300,000
Rolling Stock & Shop Equipment	\$150,000
Working Capital	\$250,000
Capitalized Fees and Interest	\$338,000
Land	\$100,000
Total Estimated Project Cost	\$14,812,000

Tax Incentives (\$/gal)

Year	Blenders Credit		State
	<u>Federal</u>	<u>State</u>	<u>Producer Payment</u>
1	\$0.052	\$0.000	\$0.000
2	\$0.052	\$0.000	\$0.000
3	\$0.051	\$0.000	\$0.000
4	\$0.051	\$0.000	\$0.000
5	\$0.051	\$0.000	\$0.000
6	\$0.051	\$0.000	\$0.000
7	\$0.051	\$0.000	\$0.000
8	\$0.051	\$0.000	\$0.000
9	\$0.051	\$0.000	\$0.000
10	\$0.051	\$0.000	\$0.000
	State producer payment, ¢/gal		\$0.000
	Annual payment cap		\$0
	State incentive duration, years		0

Production Schedule

<u>Month</u>	<u>Plant Operating Rate</u>
13	50.00%
14	100.00%
15	100.00%
16	100.00%
17	100.00%
18	100.00%
19	100.00%
20	100.00%
21	100.00%
22	100.00%
23	100.00%
24	100.00%
25	0.00%

Senior Debt

Principal	\$8,887,200	60.00%
Interest Rate	8.0%	fixed
Lender Fees	\$88,872	1.000%
Placement Fees	\$0	0.000%
Amortization Period	10	years
Cash Sweep	0.000%	

Subordinated Debt

Principal	\$0	0.00%
Interest Rate	0.00%	
Lender Fees	\$0	0.000%
Placement Fees	\$0.00	0.000%
Amortization Period	0	years

Common Equity Investment

Total Equity Amount	\$5,924,800	40.00%
Placement Fees	\$59,248	1.000%
Preferred Shares	\$0	0.000%
Common Shares	\$5,924,800	100.000%

Interest Rates

Income Tax Rate	0.00%
Investment Interest	3.00%
Operating Line Interest	8.00%

Grants

Amount	\$0	0.00%
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Pre-Feasibility Study for a Bioethanol Industry in Maine
Proforma Balance Sheet

	Construction (Year 0)	1st Year <u>Operations</u>	2nd Year <u>Operations</u>	3rd Year <u>Operations</u>	4th Year <u>Operations</u>	5th Year <u>Operations</u>	6th Year <u>Operations</u>	7th Year <u>Operations</u>	8th Year <u>Operations</u>	9th Year <u>Operations</u>	10th Year <u>Operations</u>
ASSETS											
Current Assets:											
Cash & Cash Equivalents	0	1,019,096	1,790,322	2,599,103	3,462,468	4,381,375	5,356,776	6,389,617	7,480,837	8,631,363	9,842,109
Accounts Receivable - Trade	0	244,311	240,405	244,593	248,858	253,201	257,624	262,128	266,714	271,385	276,141
Inventories											
Feedstock	0	102,041	103,095	104,161	105,237	106,325	107,425	108,536	109,658	110,792	111,939
Chemicals, Enzymes & Yeast	0	21,429	21,643	21,859	22,078	22,299	22,522	22,747	22,974	23,204	23,436
Denaturant	0	4,643	4,736	4,830	4,927	5,026	5,126	5,229	5,333	5,440	5,549
Finished Product Inventory	0	193,524	192,324	195,674	199,086	202,561	206,099	209,702	213,371	217,108	220,913
Total Inventories	0	321,636	321,798	326,525	331,329	336,210	341,171	346,213	351,337	356,544	361,836
Prepaid Expenses	0	0	0	0	0	0	0	0	0	0	0
Other Current Assets	0	0	0	0	0	0	0	0	0	0	0
Total Current Assets	0	1,585,043	2,352,524	3,170,221	4,042,655	4,970,786	5,955,571	6,997,958	8,098,888	9,259,293	10,480,087
Land	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Property, Plant & Equipment											
Property, Plant & Equipment, at cost	11,965,385	12,950,000	13,000,000	13,050,000	13,100,000	13,150,000	13,200,000	13,250,000	13,300,000	13,350,000	13,400,000
Less Accumulated Depreciation & Amortiz.	0	525,488	1,090,488	1,657,988	2,227,988	2,800,488	3,375,488	3,952,988	4,532,988	5,115,488	5,700,488
Net Property, Plant & Equipment	11,965,385	12,424,512	11,909,512	11,392,012	10,872,012	10,349,512	9,824,512	9,297,012	8,767,012	8,234,512	7,699,512
Capitalized Fees & Interest	284,374	339,932	305,939	271,945	237,952	203,959	169,966	135,973	101,980	67,986	33,993
Total Assets	12,349,759	14,449,487	14,667,974	14,934,178	15,252,619	15,624,257	16,050,049	16,530,943	17,067,880	17,661,791	18,313,592
LIABILITIES & EQUITIES											
Current Liabilities:											
Accounts Payable	0	124,554	129,474	130,850	132,242	133,650	135,072	136,511	137,966	139,436	140,923
Notes Payable	0	0	0	0	0	0	0	0	0	0	0
Current Maturities of Long Term Debt	0	650,656	704,660	763,146	826,487	895,085	969,377	1,049,835	1,136,970	1,231,338	107,112
Current maturities of Subordinated Debt	0	0	0	0	0	0	0	0	0	0	0
Total Current Liabilities	0	775,209	834,134	893,997	958,729	1,028,735	1,104,449	1,186,346	1,274,936	1,370,775	248,036
Long Term Debt (excluding current maturities)	7,165,196	7,684,010	6,979,350	6,216,204	5,389,717	4,494,632	3,525,255	2,475,421	1,338,450	107,112	0
Subordinated Debt (excluding current maturiti	0	0	0	0	0	0	0	0	0	0	0
Deferred Income Taxes	0	0	0	0	0	0	0	0	0	0	0
Total Liabilities	7,165,196	8,459,220	7,813,484	7,110,201	6,348,446	5,523,367	4,629,704	3,661,766	2,613,386	1,477,887	248,036
Capital Shares & Equities											
Preferred Shares	0	0	0	0	0	0	0	0	0	0	0
Common Shares	5,924,800	5,924,800	5,924,800	5,924,800	5,924,800	5,924,800	5,924,800	5,924,800	5,924,800	5,924,800	5,924,800
Grants	0	0	0	0	0	0	0	0	0	0	0
Retained Earnings	(740,237)	65,467	929,690	1,899,177	2,979,373	4,176,091	5,495,544	6,944,376	8,529,694	10,259,104	12,140,757
Total Capital Shares & Equities	5,184,563	5,990,267	6,854,490	7,823,977	8,904,173	10,100,891	11,420,344	12,869,176	14,454,494	16,183,904	18,065,557
Total Liabilities & Equities	12,349,759	14,449,487	14,667,974	14,934,178	15,252,619	15,624,257	16,050,049	16,530,943	17,067,880	17,661,791	18,313,592

Pre-Feasibility Study for a Bioethanol Industry in Maine
Proforma Income Statements

	Construction (Year 0)	1st Year <u>Operations</u>	2nd Year <u>Operations</u>	3rd Year <u>Operations</u>	4th Year <u>Operations</u>	5th Year <u>Operations</u>	6th Year <u>Operations</u>	7th Year <u>Operations</u>	8th Year <u>Operations</u>	9th Year <u>Operations</u>	10th Year <u>Operations</u>
Sales											
Ethanol	0	5,881,222	6,411,608	6,538,801	6,668,501	6,800,757	6,935,618	7,073,136	7,213,363	7,356,350	7,502,152
Distillers Grain	0	1,844,028	2,002,553	2,021,950	2,041,525	2,061,280	2,081,216	2,101,333	2,121,635	2,142,122	2,162,795
Carbon Dioxide	0	143,750	151,500	153,015	154,545	156,091	157,652	159,228	160,820	162,429	164,053
State Producer Payment	0	0	0	0	0	0	0	0	0	0	0
Federal Small Producer Payment	0	491,125	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
Total Sales	0	8,360,125	9,065,662	9,213,766	9,364,571	9,518,127	9,674,485	9,833,698	9,995,818	10,160,900	10,328,999
Production & Operating Expenses											
Feedstocks	0	3,524,660	3,608,333	3,645,625	3,683,308	3,721,386	3,759,863	3,798,744	3,838,033	3,877,735	3,917,853
Chemicals, Enzymes & Yeast	0	479,167	505,000	510,050	515,151	520,302	525,505	530,760	536,068	541,428	546,843
Utilities - Steam	0	934,375	994,500	1,014,390	1,034,678	1,055,371	1,076,479	1,098,008	1,119,969	1,142,368	1,165,215
Electricity	0	206,042	219,300	223,686	228,160	232,723	237,377	242,125	246,967	251,907	256,945
Denaturants	0	155,729	165,750	169,065	172,446	175,895	179,413	183,001	186,661	190,395	194,203
Makeup Water	0	68,452	72,143	72,864	73,593	74,329	75,072	75,823	76,581	77,347	78,120
Wastewater Disposal	0	27,381	28,857	29,146	29,437	29,732	30,029	30,329	30,632	30,939	31,248
Direct Labor & Benefits	30,983	371,800	381,095	390,622	400,388	410,398	420,658	431,174	441,953	453,002	464,327
Total Production Costs	30,983	5,767,606	5,974,978	6,055,448	6,137,160	6,220,135	6,304,396	6,389,965	6,476,865	6,565,120	6,654,754
Gross Profit	(30,983)	2,592,519	3,090,684	3,158,318	3,227,411	3,297,992	3,370,089	3,443,733	3,518,953	3,595,780	3,674,245
Administrative & Overhead Expenses											
Maintenance Materials & Services	0	184,958	195,895	198,833	201,816	204,843	207,916	211,035	214,200	217,413	220,674
Maintenance - Wages & Benefits	11,592	139,100	142,578	146,142	149,795	153,540	157,379	161,313	165,346	169,480	173,717
Consulting Services	84,000	24,000	24,480	24,970	25,469	25,978	26,498	27,028	27,568	28,120	28,682
Property Taxes & Insurance	36,196	180,981	189,746	183,764	177,603	171,263	164,738	158,026	151,123	144,026	136,730
Admin. Salaries, Wages & Benefits	173,550	262,600	269,165	275,894	282,791	289,861	297,108	304,535	312,149	319,953	327,951
Organizational Costs/Community Affairs	288,923	36,000	36,720	37,454	38,203	38,968	39,747	40,542	41,353	42,180	43,023
Office/Lab Supplies & Expenses	48,000	48,000	48,960	49,939	50,938	51,957	52,996	54,056	55,137	56,240	57,364
Travel, Training & Miscellaneous	66,992	30,200	30,804	31,420	32,048	32,689	33,343	34,010	34,690	35,384	36,092
EBITD	(740,237)	1,686,680	2,152,336	2,209,902	2,268,746	2,328,892	2,390,365	2,453,188	2,517,386	2,582,985	2,650,011
Less:											
Interest - Operating Line of Credit	0	0	0	0	0	0	0	0	0	0	0
Interest - Senior Debt	0	355,488	689,119	638,922	584,557	525,681	461,918	392,863	318,076	237,082	149,365
Interest - Subordinated Debt	0	0	0	0	0	0	0	0	0	0	0
Depreciation & Amortization	0	525,488	598,993	601,493	603,993	606,493	608,993	611,493	613,993	616,493	618,993
Pre-Tax Income	(740,237)	805,704	864,223	969,487	1,080,195	1,196,718	1,319,454	1,448,832	1,585,317	1,729,410	1,881,652
Current Income Taxes	0	0	0	0	0	0	0	0	0	0	0
Net Earnings (Loss) for the Year	(740,237)	805,704	864,223	969,487	1,080,195	1,196,718	1,319,454	1,448,832	1,585,317	1,729,410	1,881,652

Pre-Feasibility Study for a Bioethanol Industry in Maine
Proforma Statements of Cash Flows

	Construction (Year 0)	1st Year <u>Operations</u>	2nd Year <u>Operations</u>	3rd Year <u>Operations</u>	4th Year <u>Operations</u>	5th Year <u>Operations</u>	6th Year <u>Operations</u>	7th Year <u>Operations</u>	8th Year <u>Operations</u>	9th Year <u>Operations</u>	10th Year <u>Operations</u>
Cash provided by (used in)											
Operating Activities											
Net Earnings (loss)	(740,237)	805,704	864,223	969,487	1,080,195	1,196,718	1,319,454	1,448,832	1,585,317	1,729,410	1,881,652
Non cash charges to operations											
Depreciation & Amortization	0	525,488	598,993	601,493	603,993	606,493	608,993	611,493	613,993	616,493	618,993
	(740,237)	1,331,192	1,463,216	1,570,980	1,684,189	1,803,211	1,928,447	2,060,325	2,199,310	2,345,904	2,500,646
Changes in non-cash working capital balances											
Accounts Receivable	0	244,311	(3,907)	4,188	4,265	4,343	4,423	4,504	4,587	4,671	4,756
Inventories	0	321,636	161	4,727	4,804	4,882	4,961	5,042	5,124	5,207	5,292
Prepaid Expenses	0	0	0	0	0	0	0	0	0	0	0
Accounts Payable	0	(124,554)	(4,920)	(1,377)	(1,392)	(1,407)	(1,423)	(1,439)	(1,455)	(1,471)	(1,487)
Income Taxes Payable	0	0	0	0	0	0	0	0	0	0	0
	0	441,394	(8,665)	7,539	7,677	7,818	7,961	8,107	8,256	8,407	8,562
Investing Activities											
Land Purchase	100,000	0	0	0	0	0	0	0	0	0	0
Fixed Asset Purchases	11,965,385	984,615	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Capitalized Fees & Interest	284,374	55,557	0	0	0	0	0	0	0	0	0
	12,349,759	1,040,173	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Financing Activities											
Long Term Debt Advances	7,165,196	1,722,004	0	0	0	0	0	0	0	0	0
Repayment of Long Term Debt	0	(552,534)	(650,656)	(704,660)	(763,146)	(826,487)	(895,085)	(969,377)	(1,049,835)	(1,136,970)	(1,231,338)
Subordinated Debt Advances	0	0	0	0	0	0	0	0	0	0	0
Repayment of Subordinated Debt	0	0	0	0	0	0	0	0	0	0	0
Equity Investment	5,924,800	0	0	0	0	0	0	0	0	0	0
Grants	0	0	0	0	0	0	0	0	0	0	0
Cash Sweep for Debt Service	0	0	0	0	0	0	0	0	0	0	0
Distributions to Shareholders	0	0	0	0	0	0	0	0	0	0	0
Net Increase (Decrease) in Cash	0	1,019,096	771,226	808,781	863,365	918,907	975,401	1,032,841	1,091,220	1,150,526	1,210,746
Cash (Indebtedness), Beginning of Year	0	0	1,019,096	1,790,322	2,599,103	3,462,468	4,381,375	5,356,776	6,389,617	7,480,837	8,631,363
Cash (Bank Indebtedness), End of Year	0	1,019,096	1,790,322	2,599,103	3,462,468	4,381,375	5,356,776	6,389,617	7,480,837	8,631,363	9,842,109

**Interim Funding Schedule
Months 1-24**

Month	Project Development	Fees & Other Expenses	Cash		Equity/Grant Investment	Subordinated Debt	Interest Payment (Earnings)	Loan (Equity) Balance
			Required By Operations	Current Month Disbursements				
1	1,084,615	183,405	9,750	1,277,770	(5,924,800)	0	(11,618)	(4,658,648)
2	984,615	35,285	9,750	1,029,650	0	0	(9,072)	(3,638,070)
3	984,615	35,285	9,750	1,029,650	0	0	(6,521)	(2,614,941)
4	984,615	35,285	9,750	1,029,650	0	0	(3,963)	(1,589,254)
5	984,615	35,285	9,750	1,029,650	0	0	(1,399)	(561,003)
6	984,615	35,285	9,750	1,029,650	0	0	1,172	469,818
7	984,615	35,285	18,633	1,038,533	0	0	10,056	1,518,407
8	984,615	35,285	18,633	1,038,533	0	0	17,046	2,573,987
9	984,615	35,285	18,633	1,038,533	0	0	24,083	3,636,604
10	984,615	40,785	18,633	1,044,033	0	0	31,204	4,711,841
11	984,615	40,785	18,633	1,044,033	0	0	38,372	5,794,247
12	1,134,615	40,785	64,458	1,239,858	0	0	46,894	7,080,999
13	984,615	12,100	255,895	1,252,610	0	0	55,557	8,389,167
14	0	12,100	0	12,100	0	0	56,008	8,457,276
15	0	6,600	0	6,600	0	0	56,426	8,520,302
16	0	6,600	0	6,600	0	0	56,846	8,583,748
17	0	6,600	0	6,600	0	0	57,269	8,647,617
18	0	6,600	0	6,600	0	0	57,695	8,711,911
19	0	6,600	0	6,600	0	0	58,123	8,776,635
20	0	6,600	0	6,600	0	0	58,555	8,841,790
21	0	6,600	0	6,600	0	0	58,989	8,907,379
22	0	6,600	0	6,600	0	0	59,427	8,973,405
23	0	6,600	0	6,600	0	0	59,867	9,039,872
24	0	6,600	0	6,600	0	0	60,310	9,106,782
Total	13,050,000	678,235	442,770	14,200,255	(5,924,800)	0	831,327	9,106,782

**Pre-Feasibility Study for a Bioethanol Industry in Maine
Engineering & Construction Cost Summary**

<u>Month</u>	<u>Land</u>	<u>Spare Parts</u>	<u>Equipment & Installation</u>	<u>Engineering Fees</u>	<u>Construction & Procurement Fees</u>	<u>Permits Legal Misc.</u>	<u>Monthly Total</u>
1	100,000	0	742,308	76,923	142,308	23,077	1,084,615
2	0	0	742,308	76,923	142,308	23,077	984,615
3	0	0	742,308	76,923	142,308	23,077	984,615
4	0	0	742,308	76,923	142,308	23,077	984,615
5	0	0	742,308	76,923	142,308	23,077	984,615
6	0	0	742,308	76,923	142,308	23,077	984,615
7	0	0	742,308	76,923	142,308	23,077	984,615
8	0	0	742,308	76,923	142,308	23,077	984,615
9	0	0	742,308	76,923	142,308	23,077	984,615
10	0	0	742,308	76,923	142,308	23,077	984,615
11	0	0	742,308	76,923	142,308	23,077	984,615
12	0	\$150,000	742,308	76,923	142,308	23,077	1,134,615
13	0	0	742,308	76,923	142,308	23,077	984,615
14	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0
TOTAL	<u>100,000</u>	<u>150,000</u>	<u>9,650,000</u>	<u>1,000,000</u>	<u>1,850,000</u>	<u>300,000</u>	<u>13,050,000</u>

**Pre-Feasibility Study for a Bioethanol Industry in Maine
Production & Sales, Months 13-23**

	<u>Month 13</u>	<u>Month 14</u>	<u>Month 15</u>	<u>Month 16</u>	<u>Month 17</u>	<u>Month 18</u>	<u>Month 19</u>	<u>Month 20</u>	<u>Month 21</u>	<u>Month 22</u>	<u>Month 23</u>
Fuel Ethanol											
Gallons Produced	208,333	416,667	416,667	416,667	416,667	416,667	416,667	416,667	416,667	416,667	416,667
Gallons Sent to Inventory	114,286	0	0	0	0	0	0	0	0	0	0
Denaturant Added	10,417	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833
Net Gallons Sold (Denatured)	98,750	437,500	437,500	437,500	437,500	437,500	437,500	437,500	437,500	437,500	437,500
Selling Price/Gallon (FOB Plant)	\$1.1975	\$1.1975	\$1.1975	\$1.1975	\$1.1975	\$1.1975	\$1.1975	\$1.1975	\$1.1975	\$1.1975	\$1.1975
State Producer Payment	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000
Federal Small Producer Payment	\$0.100	\$0.100	\$0.100	\$0.100	\$0.100	\$0.100	\$0.100	\$0.100	\$0.100	\$0.100	\$0.100
Total Revenue - Fuel Ethanol	128,128	567,656	567,656	567,656	567,656	567,656	567,656	567,656	567,656	567,656	567,656
Distillers Grain											
Tons Produced	843	1,687	1,687	1,687	1,687	1,687	1,687	1,687	1,687	1,687	1,687
Tons Sent to Inventory	578	0	0	0	0	0	0	0	0	0	0
Net Tons Sold	265	1,687	1,687	1,687	1,687	1,687	1,687	1,687	1,687	1,687	1,687
Selling Price/Ton (FOB Plant)	\$98.00	\$98.00	\$98.00	\$98.00	\$98.00	\$98.00	\$98.00	\$98.00	\$98.00	\$98.00	\$98.00
Total Revenue - Distillers Grain	25,972	165,278	165,278	165,278	165,278	165,278	165,278	165,278	165,278	165,278	165,278
CO₂											
Tons Produced	521	1,042	1,042	1,042	1,042	1,042	1,042	1,042	1,042	1,042	1,042
Tons Sent to Inventory	0	0	0	0	0	0	0	0	0	0	0
Net Tons Sold	521	1,042	1,042	1,042	1,042	1,042	1,042	1,042	1,042	1,042	1,042
Selling Price/Ton	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00
Total Revenue - CO₂	6,250	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500
Total Revenue - All Products	160,350	745,434	745,434	745,434	745,434	745,434	745,434	745,434	745,434	745,434	745,434

**Pre-Feasibility Study for a Bioethanol Industry in Maine
Operating Expense, Months 13-23**

	<u>Month 13</u>	<u>Month 14</u>	<u>Month 15</u>	<u>Month 16</u>	<u>Month 17</u>	<u>Month 18</u>	<u>Month 19</u>	<u>Month 20</u>	<u>Month 21</u>	<u>Month 22</u>	<u>Month 23</u>
Plant Operating Rate	50.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Bushels Grain for Processing	99,206	198,413	198,413	198,413	198,413	198,413	198,413	198,413	198,413	198,413	198,413
Bushels Grain to Inventory	68,027	0	0	0	0	0	0	0	0	0	0
\$/Bushel Grain (Delivered)	\$1.500	\$1.500	\$1.500	\$1.500	\$1.500	\$1.500	\$1.500	\$1.500	\$1.500	\$1.500	\$1.500
Grain Expense	250,850	297,619	297,619	297,619	297,619	297,619	297,619	297,619	297,619	297,619	297,619
Total Feedstock Expense	250,850	297,619	297,619	297,619	297,619	297,619	297,619	297,619	297,619	297,619	297,619
Electricity (KWH)	179,167	358,333	358,333	358,333	358,333	358,333	358,333	358,333	358,333	358,333	358,333
\$/KWH	\$0.0500	\$0.0500	\$0.0500	\$0.0500	\$0.0500	\$0.0500	\$0.0500	\$0.0500	\$0.0500	\$0.0500	\$0.0500
Electricity Expense	8,958	17,917	17,917	17,917	17,917	17,917	17,917	17,917	17,917	17,917	17,917
Steam (MMBTU)	6,250	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500
\$/MMBTU	\$6.5000	\$6.5000	\$6.5000	\$6.5000	\$6.5000	\$6.5000	\$6.5000	\$6.5000	\$6.5000	\$6.5000	\$6.5000
Steam Expense	40,625	81,250	81,250	81,250	81,250	81,250	81,250	81,250	81,250	81,250	81,250
Fresh Water ('000 Gal.)	1,488	2,976	2,976	2,976	2,976	2,976	2,976	2,976	2,976	2,976	2,976
\$/1000 Gal.	\$2.0000	\$2.0000	\$2.0000	\$2.0000	\$2.0000	\$2.0000	\$2.0000	\$2.0000	\$2.0000	\$2.0000	\$2.0000
Fresh Water Expense	2,976	5,952	5,952	5,952	5,952	5,952	5,952	5,952	5,952	5,952	5,952
Effluent Disposal ('000 Gal)	397	794	794	794	794	794	794	794	794	794	794
\$/1000 Gal.	\$3.0000	\$3.0000	\$3.0000	\$3.0000	\$3.0000	\$3.0000	\$3.0000	\$3.0000	\$3.0000	\$3.0000	\$3.0000
Effluent Disposal Expense	1,190	2,381	2,381	2,381	2,381	2,381	2,381	2,381	2,381	2,381	2,381
Labor & Benefits	64,458	64,458	64,458	64,458	64,458	64,458	64,458	64,458	64,458	64,458	64,458
Maintenance Materials & Services	8,042	16,083	16,083	16,083	16,083	16,083	16,083	16,083	16,083	16,083	16,083
Taxes & Insurance	7,541	15,082	15,082	15,082	15,082	15,082	15,082	15,082	15,082	15,082	15,082
Denaturants	6,771	13,542	13,542	13,542	13,542	13,542	13,542	13,542	13,542	13,542	13,542
Chemicals, Enzymes & Yeast	20,833	41,667	41,667	41,667	41,667	41,667	41,667	41,667	41,667	41,667	41,667
Office/Lab Supplies & Expenses	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Total Monthly Expense (non-feedstock)	165,395	262,332	262,332	262,332	262,332	262,332	262,332	262,332	262,332	262,332	262,332
Total Monthly Profit (Loss)	(255,895)	185,483	185,483	185,483	185,483	185,483	185,483	185,483	185,483	185,483	185,483

**Pre-Feasibility Study for a Bioethanol Industry in Maine
Interim Period Fees & Expenses
Months 1-24**

<u>Month</u>	<u>Lender/ Placement Fees</u>	<u>Organization Costs</u>	<u>Political/ Community Relations</u>	<u>Financial Consultants</u>	<u>Construction Consultants</u>	<u>Hiring & Training</u>	<u>Travel</u>	<u>Contingency @ 10%</u>	<u>Monthly Total</u>
1	148,120	23,077	1,000	2,000	5,000	0	1,000	3,208	183,405
2	0	23,077	1,000	2,000	5,000	0	1,000	3,208	35,285
3	0	23,077	1,000	2,000	5,000	0	1,000	3,208	35,285
4	0	23,077	1,000	2,000	5,000	0	1,000	3,208	35,285
5	0	23,077	1,000	2,000	5,000	0	1,000	3,208	35,285
6	0	23,077	1,000	2,000	5,000	0	1,000	3,208	35,285
7	0	23,077	1,000	2,000	5,000	0	1,000	3,208	35,285
8	0	23,077	1,000	2,000	5,000	0	1,000	3,208	35,285
9	0	23,077	1,000	2,000	5,000	0	1,000	3,208	35,285
10	0	23,077	1,000	2,000	5,000	5,000	1,000	3,708	40,785
11	0	23,077	1,000	2,000	5,000	5,000	1,000	3,708	40,785
12	0	23,077	1,000	2,000	5,000	5,000	1,000	3,708	40,785
13	0	2,000	1,000	2,000	0	5,000	1,000	1,100	12,100
14	0	2,000	1,000	2,000	0	5,000	1,000	1,100	12,100
15	0	2,000	1,000	2,000	0	0	1,000	600	6,600
16	0	2,000	1,000	2,000	0	0	1,000	600	6,600
17	0	2,000	1,000	2,000	0	0	1,000	600	6,600
18	0	2,000	1,000	2,000	0	0	1,000	600	6,600
19	0	2,000	1,000	2,000	0	0	1,000	600	6,600
20	0	2,000	1,000	2,000	0	0	1,000	600	6,600
21	0	2,000	1,000	2,000	0	0	1,000	600	6,600
22	0	2,000	1,000	2,000	0	0	1,000	600	6,600
23	0	2,000	1,000	2,000	0	0	1,000	600	6,600
24	0	2,000	1,000	2,000	0	0	1,000	600	6,600
TOTAL	148,120	300,923	24,000	48,000	60,000	25,000	24,000	48,192	678,235

**Pre-Feasibility Study for a Bioethanol Industry in Maine
Interim Period Labor Summary
Months 1-24**

Position	General Manager (1)	Plant Manager (1)	Bookkeeper (1)	Commodity Manager (0)	Administrative Assistant (1)	Microbiologist (0)	Lab Technician (1)	Shift Team Leader (2)	Shift Operator (4)	Yard Labor (2)
Number Employed	90,000	60,000	30,000	50,000	22,000	45,000	28,000	44,000	30,000	25,000
Annual Salary										
Month										
1	7,500	0	0	0	0	0	0	0	0	0
2	7,500	0	0	0	0	0	0	0	0	0
3	7,500	0	0	0	0	0	0	0	0	0
4	7,500	0	0	0	0	0	0	0	0	0
5	7,500	0	0	0	0	0	0	0	0	0
6	7,500	0	0	0	0	0	0	0	0	0
7	7,500	5,000	0	0	1,833	0	0	0	0	0
8	7,500	5,000	0	0	1,833	0	0	0	0	0
9	7,500	5,000	0	0	1,833	0	0	0	0	0
10	7,500	5,000	0	0	1,833	0	0	0	0	0
11	7,500	5,000	0	0	1,833	0	0	0	0	0
12	7,500	5,000	2,500	0	1,833	0	2,333	7,333	10,000	4,167
13	7,500	5,000	2,500	0	1,833	0	2,333	7,333	10,000	4,167
14	7,500	5,000	2,500	0	1,833	0	2,333	7,333	10,000	4,167
15	7,500	5,000	2,500	0	1,833	0	2,333	7,333	10,000	4,167
16	7,500	5,000	2,500	0	1,833	0	2,333	7,333	10,000	4,167
17	7,500	5,000	2,500	0	1,833	0	2,333	7,333	10,000	4,167
18	7,500	5,000	2,500	0	1,833	0	2,333	7,333	10,000	4,167
19	7,500	5,000	2,500	0	1,833	0	2,333	7,333	10,000	4,167
20	7,500	5,000	2,500	0	1,833	0	2,333	7,333	10,000	4,167
21	7,500	5,000	2,500	0	1,833	0	2,333	7,333	10,000	4,167
22	7,500	5,000	2,500	0	1,833	0	2,333	7,333	10,000	4,167
23	7,500	5,000	2,500	0	1,833	0	2,333	7,333	10,000	4,167
24	7,500	5,000	2,500	0	1,833	0	2,333	7,333	10,000	4,167

Pre-Feasibility Study for a Bioethanol Indu
Interim Period Labor Summary
Months 1-24

Position	Maintenance Manager (0) 50,000	Boiler Operator (0) 40,000	Maintenance Worker (0) 33,000	Welder (1) 35,000	Electrician (1) 35,000	Instrument Technician (1) 37,000	Monthly Total (16)	Benefits at 30.00%	TOTAL
<u>Month</u>									
1	0	0	0	0	0	0	7,500	2,250	9,750
2	0	0	0	0	0	0	7,500	2,250	9,750
3	0	0	0	0	0	0	7,500	2,250	9,750
4	0	0	0	0	0	0	7,500	2,250	9,750
5	0	0	0	0	0	0	7,500	2,250	9,750
6	0	0	0	0	0	0	7,500	2,250	9,750
7	0	0	0	0	0	0	14,333	4,300	18,633
8	0	0	0	0	0	0	14,333	4,300	18,633
9	0	0	0	0	0	0	14,333	4,300	18,633
10	0	0	0	0	0	0	14,333	4,300	18,633
11	0	0	0	0	0	0	14,333	4,300	18,633
12	0	0	0	2,917	2,917	3,083	49,583	14,875	64,458
13	0	0	0	2,917	2,917	3,083	49,583	14,875	64,458
14	0	0	0	2,917	2,917	3,083	49,583	14,875	64,458
15	0	0	0	2,917	2,917	3,083	49,583	14,875	64,458
16	0	0	0	2,917	2,917	3,083	49,583	14,875	64,458
17	0	0	0	2,917	2,917	3,083	49,583	14,875	64,458
18	0	0	0	2,917	2,917	3,083	49,583	14,875	64,458
19	0	0	0	2,917	2,917	3,083	49,583	14,875	64,458
20	0	0	0	2,917	2,917	3,083	49,583	14,875	64,458
21	0	0	0	2,917	2,917	3,083	49,583	14,875	64,458
22	0	0	0	2,917	2,917	3,083	49,583	14,875	64,458
23	0	0	0	2,917	2,917	3,083	49,583	14,875	64,458
24	0	0	0	2,917	2,917	3,083	49,583	14,875	64,458