

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

Denatured Ethanol Production (gal/yr) 33,850,000 Average ROI -1.9%
 Anhydrous Ethanol Production (gal/yr) 32,392,344

<u>Product Yields & Energy Consumption</u>	<u>1st year Operations</u>	<u>2nd year Operations</u>	<u>3rd Year Operations</u>	<u>4th Year Operations</u>	<u>5th Year Operations</u>	<u>6th Year Operations</u>	<u>7th Year Operations</u>	<u>8th Year Operations</u>	<u>9th Year Operations</u>	<u>10th Year Operations</u>	<u>Annual Escalation</u>
Ethanol Yield (gal/BDT)	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8	
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)	\$0.046	\$0.046	\$0.046	\$0.046	\$0.046	\$0.046	\$0.046	\$0.046	\$0.046	\$0.046	
Delivered Biomass Price (\$/BDT)	\$30.000	\$30.300	\$30.603	\$30.909	\$31.218	\$31.530	\$31.846	\$32.164	\$32.486	\$32.811	1.00%
Biomass Usage (BDT/yr)	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	
Lignin Residue Yield (lb/BDT)	813.100	813.100	813.100	813.100	813.100	813.100	813.100	813.100	813.100	813.100	
Lignin Residue Price (\$/BDT)	\$37.500	\$37.875	\$38.254	\$38.636	\$39.023	\$39.413	\$39.807	\$40.205	\$40.607	\$41.013	1.00%
Lignin Residue Transportation (\$/BDT)	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	2.00%
Lignin Sales Commission (% of sales)	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	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/BDT)	35.308	35.308	35.308	35.308	35.308	35.308	35.308	35.308	35.308	35.308	
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 (MMBTU/BDT)	3.5508	3.5508	3.5508	3.5508	3.5508	3.5508	3.5508	3.5508	3.5508	3.5508	
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/BDT)	0.5341	0.5341	0.5341	0.5341	0.5341	0.5341	0.5341	0.5341	0.5341	0.5341	
Fresh Water Price (\$/1000 gal)	\$1.0000	\$1.0100	\$1.0201	\$1.0303	\$1.0406	\$1.0510	\$1.0615	\$1.0721	\$1.0829	\$1.0937	1.00%
Wastewater Effluent (1000 gal/BDT)	0.5057	0.5057	0.5057	0.5057	0.5057	0.5057	0.5057	0.5057	0.5057	0.5057	
Wastewater Effluent 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%
Solid Waste Disposal (Ton/BDT)	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	
Solid Waste Disposal Price (\$/Ton)	\$10.0000	\$10.1000	\$10.2010	\$10.3030	\$10.4060	\$10.5101	\$10.6152	\$10.7214	\$10.8286	\$10.9369	1.00%
Denaturant Use (% of ethanol sold)	4.500%	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%
Chemical Costs (\$/gal etoh)	\$0.1771	\$0.1789	\$0.1807	\$0.1825	\$0.1843	\$0.1861	\$0.1880	\$0.1899	\$0.1918	\$0.1937	1.00%
Number of Employees	38	38	38	38	38	38	38	38	38	38	
Average Salary Including Benefits	\$44,679	\$45,796	\$46,941	\$48,114	\$49,317	\$50,550	\$51,814	\$53,109	\$54,437	\$55,798	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	\$101,297,000	
Engineering Expense	\$11,148,000	
Construction Mgt. & Procurement Fees	\$28,267,000	
Total	\$140,712,000	\$4.34 per gallon

Owner's Costs

Inventory - Biomass	\$429,000
Inventory - Chemicals & Denaturant	\$273,000
Inventory - Ethanol & Lignin Residue	\$1,141,000
Spare Parts	\$300,000
Startup Costs	\$750,000
Organizational Costs	\$300,000
Permits, Legal & Misc.	\$300,000
Rolling Stock & Shop Equipment	\$150,000
Working Capital	\$5,065,632
Capitalized Fees and Interest	\$4,784,000
Land	\$200,000
Total Estimated Project Cost	\$154,404,632

Senior Debt

Principal	\$92,642,779	60.00%
Interest Rate	8.0%	fixed
Lender Fees	\$926,428	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	\$61,761,853	40.00%
Placement Fees	\$617,619	1.000%
Preferred Shares	\$0	0.000%
Common Shares	\$61,761,853	100.000%

Grants

Amount	\$0	0.00%
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Inventories

	Accounts Receivable	Accounts Payable	Inventories
	(#Days)	(#Days)	(#Days)
Fuel Ethanol	10		8
Lignin Residue	10		8
Denaturants		10	10
Chemicals		15	15
Biomass		10	10
Utilities		15	

Tax Incentives (\$/gal)

	Blenders Credit		State Producer
	Federal	State	Payment
Year			
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		\$3,000,000
	State incentive duration, years		10

Production Schedule

	Plant Operating
	Rate
Month	
13	0.00%
14	50.00%
15	75.00%
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%

Interest Rates

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

Pre-Feasibility Study for a Bioethanol Industry in Maine
Proforma Balance Sheet

	Construction (Year 0)	1st Year Operations	2nd Year Operations	3rd Year Operations	4th Year Operations	5th Year Operations	6th Year Operations	7th Year Operations	8th Year Operations	9th Year Operations	10th Year Operations
ASSETS											
Current Assets:											
Cash & Cash Equivalents	0	2,724,715	0	0	0	0	0	0	0	0	0
Accounts Receivable - Trade	0	1,381,269	1,406,756	1,432,499	1,458,728	1,485,452	1,512,681	1,540,425	1,568,692	1,597,494	1,626,840
Inventories											
Feedstock	0	428,571	432,857	437,186	441,557	445,973	450,433	454,937	459,487	464,081	468,722
Chemicals	0	245,858	248,316	250,800	253,308	255,841	258,399	260,983	263,593	266,229	268,891
Denaturant	0	27,071	30,680	31,294	31,920	32,558	33,209	33,873	34,551	35,242	35,947
Finished Product Inventory	0	1,104,419	1,125,404	1,145,999	1,166,982	1,188,362	1,210,145	1,232,340	1,254,954	1,277,995	1,301,472
Total Inventories	0	1,805,919	1,837,258	1,865,278	1,893,767	1,922,733	1,952,186	1,982,133	2,012,584	2,043,547	2,075,032
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	5,911,903	3,244,014	3,297,776	3,352,494	3,408,185	3,464,867	3,522,558	3,581,277	3,641,042	3,701,873
Land	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Property, Plant & Equipment											
Property, Plant & Equipment, at cost	121,167,429	141,312,000	141,362,000	141,412,000	141,462,000	141,512,000	141,562,000	141,612,000	141,662,000	141,712,000	141,762,000
Less Accumulated Depreciation & Amortiz.	0	6,272,818	12,607,358	18,944,398	25,283,938	31,625,978	37,970,518	44,317,558	50,667,098	57,019,138	63,373,678
Net Property, Plant & Equipment	121,167,429	135,039,182	128,754,642	122,467,602	116,178,062	109,886,022	103,591,482	97,294,442	90,994,902	84,692,862	78,388,322
Capitalized Fees & Interest	2,621,161	4,809,134	4,328,220	3,847,307	3,366,394	2,885,480	2,404,567	1,923,653	1,442,740	961,827	480,913
Total Assets	123,988,589	145,960,219	136,526,876	129,812,686	123,096,950	116,379,688	109,660,916	102,940,654	96,218,919	89,495,731	82,771,108
LIABILITIES & EQUITIES											
Current Liabilities:											
Accounts Payable	0	682,014	711,854	719,279	726,785	734,372	742,041	749,794	757,630	765,552	773,560
Notes Payable	0	0	1,350,313	5,168,631	8,902,036	12,536,591	16,057,274	19,447,896	22,691,029	25,767,924	28,658,422
Current Maturities of Long Term Debt	0	6,648,763	7,200,607	7,798,254	8,445,505	9,146,478	9,905,631	10,727,793	11,618,195	12,582,499	4,422,104
Current maturities of Subordinated Debt	0	0	0	0	0	0	0	0	0	0	0
Total Current Liabilities	0	7,330,777	9,262,773	13,686,164	18,074,326	22,417,441	26,704,946	30,925,483	35,066,854	39,115,976	33,854,086
Long Term Debt (excluding current maturities)	63,411,179	81,847,066	74,646,459	66,848,205	58,402,700	49,256,223	39,350,592	28,622,798	17,004,603	4,422,104	0
Subordinated Debt (excluding current maturities)	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	63,411,179	89,177,843	83,909,233	80,534,370	76,477,026	71,673,664	66,055,538	59,548,281	52,071,457	43,538,079	33,854,086
Capital Shares & Equities											
Preferred Shares	0	0	0	0	0	0	0	0	0	0	0
Common Shares	61,761,853	61,761,853	61,761,853	61,761,853	61,761,853	61,761,853	61,761,853	61,761,853	61,761,853	61,761,853	61,761,853
Grants	0	0	0	0	0	0	0	0	0	0	0
Retained Earnings	(1,184,443)	(4,979,477)	(9,144,209)	(12,483,537)	(15,141,929)	(17,055,829)	(18,156,474)	(18,369,480)	(17,614,391)	(15,804,202)	(12,844,831)
Total Capital Shares & Equities	60,577,410	56,782,376	52,617,644	49,278,316	46,619,924	44,706,024	43,605,379	43,392,373	44,147,461	45,957,651	48,917,022
Total Liabilities & Equities	123,988,589	145,960,219	136,526,876	129,812,686	123,096,950	116,379,688	109,660,916	102,940,654	96,218,919	89,495,731	82,771,108

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	33,729,376	41,537,406	42,361,420	43,201,676	44,058,491	44,932,188	45,823,095	46,731,547	47,657,885	48,602,457
Lignin Residue	0	6,293,357	7,699,039	7,776,030	7,853,790	7,932,328	8,011,651	8,091,768	8,172,685	8,254,412	8,336,956
Carbon Dioxide	0	830,054	981,488	991,303	1,001,216	1,011,228	1,021,340	1,031,554	1,041,869	1,052,288	1,062,811
State Producer Payment	0	0	0	0	0	0	0	0	0	0	0
Federal Small Producer Payment	0	1,304,313	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Total Sales	0	42,157,099	51,717,933	52,628,752	53,556,682	54,502,047	55,465,179	56,446,416	57,446,101	58,464,585	59,502,224
Production & Operating Expenses											
Feedstocks	0	13,241,069	15,149,997	15,301,497	15,454,512	15,609,057	15,765,148	15,922,800	16,082,028	16,242,848	16,405,276
Chemicals	0	4,900,084	5,794,051	5,851,992	5,910,511	5,969,617	6,029,313	6,089,606	6,150,502	6,212,007	6,274,127
Utilities - Steam	0	9,857,304	11,771,064	12,006,485	12,246,615	12,491,547	12,741,378	12,996,206	13,256,130	13,521,252	13,791,677
Electricity	0	753,966	900,345	918,352	936,719	955,454	974,563	994,054	1,013,935	1,034,214	1,054,898
Denaturants	0	809,302	1,073,806	1,095,282	1,117,188	1,139,532	1,162,322	1,185,569	1,209,280	1,233,466	1,258,135
Makeup Water	0	228,105	269,720	272,418	275,142	277,893	280,672	283,479	286,314	289,177	292,069
Wastewater Effluent	0	647,928	766,135	773,797	781,535	789,350	797,244	805,216	813,268	821,401	829,615
Solid Waste Disposal	0	124,842	147,619	149,095	150,586	152,092	153,613	155,149	156,700	158,267	159,850
Direct Labor & Benefits	85,258	1,023,100	1,048,678	1,074,894	1,101,767	1,129,311	1,157,544	1,186,482	1,216,144	1,246,548	1,277,712
Total Production Costs	85,258	31,585,702	36,921,416	37,443,812	37,974,575	38,513,852	39,061,796	39,618,560	40,184,301	40,759,179	41,343,359
Gross Profit	(85,258)	10,571,397	14,796,518	15,184,940	15,582,107	15,988,195	16,403,384	16,827,857	17,261,801	17,705,406	18,158,866
Administrative & Overhead Expenses											
Maintenance Materials & Services	0	1,730,490	2,056,329	2,087,174	2,118,482	2,150,259	2,182,513	2,215,250	2,248,479	2,282,206	2,316,439
Maintenance - Wages & Benefits	24,158	289,900	297,148	304,576	312,191	319,995	327,995	336,195	344,600	353,215	362,045
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	364,102	1,820,511	2,048,874	1,973,199	1,895,768	1,816,552	1,735,523	1,652,651	1,567,909	1,481,265	1,392,691
Admin. Salaries, Wages & Benefits	207,567	384,800	394,420	404,281	414,388	424,747	435,366	446,250	457,406	468,841	480,562
Organizational Costs/Community Affairs	281,143	36,000	36,720	37,454	38,203	38,968	39,747	40,542	41,353	42,180	43,023
Office/Lab Supplies & Expenses	72,000	72,000	73,440	74,909	76,407	77,935	79,494	81,084	82,705	84,359	86,047
Travel, Training & Miscellaneous	66,214	30,200	30,804	31,420	32,048	32,689	33,343	34,010	34,690	35,384	36,092
EBITD	(1,184,443)	6,183,495	9,834,303	10,246,957	10,669,151	11,101,071	11,542,905	11,994,846	12,457,090	12,929,835	13,413,283
Less:											
Interest - Operating Line of Credit	0	0	0	108,025	413,491	712,163	1,002,927	1,284,582	1,555,832	1,815,282	2,061,434
Interest - Senior Debt	0	3,705,711	7,183,582	6,660,306	6,093,599	5,479,855	4,815,170	4,095,317	3,315,716	2,471,409	1,557,025
Interest - Subordinated Debt	0	0	0	0	0	0	0	0	0	0	0
Depreciation & Amortization	0	6,272,818	6,815,453	6,817,953	6,820,453	6,822,953	6,825,453	6,827,953	6,830,453	6,832,953	6,835,453
Pre-Tax Income	(1,184,443)	(3,795,034)	(4,164,732)	(3,339,328)	(2,658,392)	(1,913,900)	(1,100,646)	(213,006)	755,089	1,810,190	2,959,371
Current Income Taxes	0	0	0	0	0	0	0	0	0	0	0
Net Earnings (Loss) for the Year	(1,184,443)	(3,795,034)	(4,164,732)	(3,339,328)	(2,658,392)	(1,913,900)	(1,100,646)	(213,006)	755,089	1,810,190	2,959,371

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)	(1,184,443)	(3,795,034)	(4,164,732)	(3,339,328)	(2,658,392)	(1,913,900)	(1,100,646)	(213,006)	755,089	1,810,190	2,959,371
Non cash charges to operations											
Depreciation & Amortization	0	6,272,818	6,815,453	6,817,953	6,820,453	6,822,953	6,825,453	6,827,953	6,830,453	6,832,953	6,835,453
	(1,184,443)	2,477,784	2,650,721	3,478,626	4,162,062	4,909,053	5,724,808	6,614,948	7,585,542	8,643,143	9,794,824
Changes in non-cash working capital balances											
Accounts Receivable	0	1,381,269	25,487	25,743	26,229	26,724	27,229	27,744	28,268	28,802	29,346
Inventories	0	1,805,919	31,339	28,020	28,489	28,967	29,453	29,947	30,451	30,963	31,485
Prepaid Expenses	0	0	0	0	0	0	0	0	0	0	0
Accounts Payable	0	(682,014)	(29,840)	(7,425)	(7,506)	(7,587)	(7,669)	(7,753)	(7,837)	(7,922)	(8,008)
Income Taxes Payable	0	0	0	0	0	0	0	0	0	0	0
	0	2,505,175	26,986	46,337	47,212	48,104	49,012	49,938	50,882	51,843	52,823
Investing Activities											
Land Purchase	200,000	0	0	0	0	0	0	0	0	0	0
Fixed Asset Purchases	121,167,429	20,144,571	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Capitalized Fees & Interest	2,621,161	2,187,973	0	0	0	0	0	0	0	0	0
	123,988,589	22,332,545	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Financing Activities											
Long Term Debt Advances	63,411,179	29,231,600	0	0	0	0	0	0	0	0	0
Repayment of Long Term Debt	0	(4,146,950)	(6,648,763)	(7,200,607)	(7,798,254)	(8,445,505)	(9,146,478)	(9,905,631)	(10,727,793)	(11,618,195)	(12,582,499)
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	61,761,853	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	2,724,715	(4,075,028)	(3,818,319)	(3,733,404)	(3,634,556)	(3,520,682)	(3,390,622)	(3,243,133)	(3,076,895)	(2,890,498)
Cash (Indebtedness), Beginning of Year	0	0	2,724,715	(1,350,313)	(5,168,631)	(8,902,036)	(12,536,591)	(16,057,274)	(19,447,896)	(22,691,029)	(25,767,924)
Cash (Bank Indebtedness), End of Year	0	2,724,715	(1,350,313)	(5,168,631)	(8,902,036)	(12,536,591)	(16,057,274)	(19,447,896)	(22,691,029)	(25,767,924)	(28,658,422)

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	10,272,286	1,578,618	9,750	11,860,653	(61,761,853)	0	(124,753)	(50,025,952)
2	10,072,286	34,571	9,750	10,116,607	0	0	(99,773)	(40,009,119)
3	10,072,286	34,571	9,750	10,116,607	0	0	(74,731)	(29,967,243)
4	10,072,286	34,571	9,750	10,116,607	0	0	(49,627)	(19,900,262)
5	10,072,286	34,571	9,750	10,116,607	0	0	(24,459)	(9,808,114)
6	10,072,286	34,571	9,750	10,116,607	0	0	771	309,264
7	10,072,286	34,571	23,400	10,130,257	0	0	69,597	10,509,118
8	10,072,286	34,571	23,400	10,130,257	0	0	137,596	20,776,971
9	10,072,286	34,571	23,400	10,130,257	0	0	206,048	31,113,277
10	10,072,286	40,071	23,400	10,135,757	0	0	274,994	41,524,027
11	10,072,286	40,071	23,400	10,135,757	0	0	344,399	52,004,183
12	10,372,286	40,071	141,483	10,553,840	0	0	417,053	62,975,077
13	10,072,286	12,100	147,483	10,231,869	0	0	488,046	73,694,992
14	10,072,286	12,100	646,258	10,730,643	0	0	562,838	84,988,473
15	0	6,600	0	6,600	0	0	566,634	85,561,707
16	0	6,600	0	6,600	0	0	570,455	86,138,762
17	0	6,600	0	6,600	0	0	574,302	86,719,665
18	0	6,600	0	6,600	0	0	578,175	87,304,440
19	0	6,600	0	6,600	0	0	582,074	87,893,113
20	0	6,600	0	6,600	0	0	585,998	88,485,711
21	0	6,600	0	6,600	0	0	589,949	89,082,260
22	0	6,600	0	6,600	0	0	593,926	89,682,786
23	0	6,600	0	6,600	0	0	597,929	90,287,315
24	0	6,600	0	6,600	0	0	601,959	90,895,875
Total	141,512,000	2,065,603	1,081,474	144,688,328	(61,761,853)	0	7,969,400	90,895,875

**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	200,000	0	7,235,500	796,286	2,019,071	21,429	10,272,286
2	0	0	7,235,500	796,286	2,019,071	21,429	10,072,286
3	0	0	7,235,500	796,286	2,019,071	21,429	10,072,286
4	0	0	7,235,500	796,286	2,019,071	21,429	10,072,286
5	0	0	7,235,500	796,286	2,019,071	21,429	10,072,286
6	0	0	7,235,500	796,286	2,019,071	21,429	10,072,286
7	0	0	7,235,500	796,286	2,019,071	21,429	10,072,286
8	0	0	7,235,500	796,286	2,019,071	21,429	10,072,286
9	0	0	7,235,500	796,286	2,019,071	21,429	10,072,286
10	0	0	7,235,500	796,286	2,019,071	21,429	10,072,286
11	0	0	7,235,500	796,286	2,019,071	21,429	10,072,286
12	0	300,000	7,235,500	796,286	2,019,071	21,429	10,372,286
13	0	0	7,235,500	796,286	2,019,071	21,429	10,072,286
14	0	0	7,235,500	796,286	2,019,071	21,429	10,072,286
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>200,000</u>	<u>300,000</u>	<u>101,297,000</u>	<u>11,148,000</u>	<u>28,267,000</u>	<u>300,000</u>	<u>141,512,000</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	0	1,349,681	2,024,522	2,699,362	2,699,362	2,699,362	2,699,362	2,699,362	2,699,362	2,699,362	2,699,362
Gallons Sent to Inventory	0	370,198	370,198	0	0	0	0	0	0	0	0
Denaturant Added	0	60,736	91,103	121,471	121,471	121,471	121,471	121,471	121,471	121,471	121,471
Net Gallons Sold (Denatured)	0	1,028,457	1,737,039	2,834,330	2,820,833	2,820,833	2,820,833	2,820,833	2,820,833	2,820,833	2,820,833
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	\$0.046	\$0.046	\$0.046	\$0.046	\$0.046	\$0.046	\$0.046	\$0.046	\$0.046	\$0.046	\$0.046
Total Revenue - Fuel Ethanol	0	1,279,202	2,160,542	3,525,360	3,508,573	3,508,573	3,508,573	3,508,573	3,508,573	3,508,573	3,508,573
Lignin Residue											
Dry Tons Produced	0	8,470	12,705	16,940	16,940	16,940	16,940	16,940	16,940	16,940	16,940
Tons Sent to Inventory	0	2,904	2,904	0	0	0	0	0	0	0	0
Net Tons Sold	0	5,566	9,801	16,940	16,940	16,940	16,940	16,940	16,940	16,940	16,940
Selling Price/Dry Ton	\$37.50	\$37.50	\$37.50	\$37.50	\$37.50	\$37.50	\$37.50	\$37.50	\$37.50	\$37.50	\$37.50
Total Revenue - Lignin Residue	0	208,720	367,528	635,234	635,234	635,234	635,234	635,234	635,234	635,234	635,234
CO₂											
Tons Produced	0	3,374	5,061	6,748	6,748	6,748	6,748	6,748	6,748	6,748	6,748
Tons Sent to Inventory	0	0	0	0	0	0	0	0	0	0	0
Net Tons Sold	0	3,374	5,061	6,748	6,748	6,748	6,748	6,748	6,748	6,748	6,748
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 - CO ₂	0	40,490	60,736	80,981	80,981	80,981	80,981	80,981	80,981	80,981	80,981
Total Revenue - All Products	0	1,528,412	2,588,806	4,241,575	4,224,788	4,224,788	4,224,788	4,224,788	4,224,788	4,224,788	4,224,788

**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	0.00%	50.00%	75.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
BDT Biomass for Processing	0	20,833	31,250	41,667	41,667	41,667	41,667	41,667	41,667	41,667	41,667
BDT Biomass to Inventory	0	14,286	0	0	0	0	0	0	0	0	0
\$/BDT Biomass (Delivered)	\$30.000	\$30.000	\$30.000	\$30.000	\$30.000	\$30.000	\$30.000	\$30.000	\$30.000	\$30.000	\$30.000
Biomass Expense	0	1,053,571	937,500	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Total Feedstock Expense	0	1,053,571	937,500	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Electricity (KWH)	0	735,576	1,103,364	1,471,152	1,471,152	1,471,152	1,471,152	1,471,152	1,471,152	1,471,152	1,471,152
\$/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	0	36,779	55,168	73,558	73,558	73,558	73,558	73,558	73,558	73,558	73,558
Steam (MMBTU)	0	73,976	110,964	147,952	147,952	147,952	147,952	147,952	147,952	147,952	147,952
\$/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	0	480,844	721,266	961,688	961,688	961,688	961,688	961,688	961,688	961,688	961,688
Fresh Water (1000 Gal.)	0	11,127	16,691	22,254	22,254	22,254	22,254	22,254	22,254	22,254	22,254
\$/1000 Gal.	\$1.0000	\$1.0000	\$1.0000	\$1.0000	\$1.0000	\$1.0000	\$1.0000	\$1.0000	\$1.0000	\$1.0000	\$1.0000
Fresh Water Expense	0	11,127	16,691	22,254	22,254	22,254	22,254	22,254	22,254	22,254	22,254
Wastewater Effluent (1000 Gal.)	0	10,535	15,803	21,071	21,071	21,071	21,071	21,071	21,071	21,071	21,071
\$/1000 Gal.	\$3.0000	\$3.0000	\$3.0000	\$3.0000	\$3.0000	\$3.0000	\$3.0000	\$3.0000	\$3.0000	\$3.0000	\$3.0000
Wastewater Effluent Expense	0	31,606	47,409	63,212	63,212	63,212	63,212	63,212	63,212	63,212	63,212
Solid Waste Disposal (Tons)	0	609	913	1,218	1,218	1,218	1,218	1,218	1,218	1,218	1,218
\$/Ton	\$10.0000	\$10.0000	\$10.0000	\$10.0000	\$10.0000	\$10.0000	\$10.0000	\$10.0000	\$10.0000	\$10.0000	\$10.0000
Solid Waste Disposal Expense	0	6,090	9,135	12,180	12,180	12,180	12,180	12,180	12,180	12,180	12,180
Labor & Benefits	141,483	141,483	141,483	141,483	141,483	141,483	141,483	141,483	141,483	141,483	141,483
Maintenance Materials & Services	0	84,414	126,621	168,828	168,828	168,828	168,828	168,828	168,828	168,828	168,828
Taxes & Insurance	0	75,855	113,782	151,709	151,709	151,709	151,709	151,709	151,709	151,709	151,709
Denaturants	0	39,478	59,217	78,956	78,956	78,956	78,956	78,956	78,956	78,956	78,956
Chemicals	0	239,029	358,543	478,057	478,057	478,057	478,057	478,057	478,057	478,057	478,057
Office/Lab Supplies & Expenses	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Total Monthly Expense (non-feedstock)	147,483	1,121,099	1,607,906	2,094,714	2,094,714	2,094,714	2,094,714	2,094,714	2,094,714	2,094,714	2,094,714
Total Monthly Profit (Loss)	(147,483)	(646,258)	43,400	896,862	880,074	880,074	880,074	880,074	880,074	880,074	880,074

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	1,544,046	21,429	2,000	2,000	5,000	0	1,000	3,143	1,578,618
2	0	21,429	2,000	2,000	5,000	0	1,000	3,143	34,571
3	0	21,429	2,000	2,000	5,000	0	1,000	3,143	34,571
4	0	21,429	2,000	2,000	5,000	0	1,000	3,143	34,571
5	0	21,429	2,000	2,000	5,000	0	1,000	3,143	34,571
6	0	21,429	2,000	2,000	5,000	0	1,000	3,143	34,571
7	0	21,429	2,000	2,000	5,000	0	1,000	3,143	34,571
8	0	21,429	2,000	2,000	5,000	0	1,000	3,143	34,571
9	0	21,429	2,000	2,000	5,000	0	1,000	3,143	34,571
10	0	21,429	2,000	2,000	5,000	5,000	1,000	3,643	40,071
11	0	21,429	2,000	2,000	5,000	5,000	1,000	3,643	40,071
12	0	21,429	2,000	2,000	5,000	5,000	1,000	3,643	40,071
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	1,544,046	281,143	36,000	48,000	60,000	25,000	24,000	47,414	2,065,603

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

Position	General Manager	Plant Manager	Bookkeeper	Commodity Manager	Administrative Assistant	Microbiologist	Lab Technician	Shift Team Leader	Shift Operator	Yard Labor
Number Employed	(1)	(1)	(1)	(1)	(3)	(1)	(2)	(4)	(12)	(6)
Annual Salary	90,000	60,000	30,000	50,000	22,000	45,000	28,000	44,000	30,000	25,000
<u>Month</u>										
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	5,500	0	0	0	0	0
8	7,500	5,000	0	0	5,500	0	0	0	0	0
9	7,500	5,000	0	0	5,500	0	0	0	0	0
10	7,500	5,000	0	0	5,500	0	0	0	0	0
11	7,500	5,000	0	0	5,500	0	0	0	0	0
12	7,500	5,000	2,500	4,167	5,500	3,750	4,667	14,667	30,000	12,500
13	7,500	5,000	2,500	4,167	5,500	3,750	4,667	14,667	30,000	12,500
14	7,500	5,000	2,500	4,167	5,500	3,750	4,667	14,667	30,000	12,500
15	7,500	5,000	2,500	4,167	5,500	3,750	4,667	14,667	30,000	12,500
16	7,500	5,000	2,500	4,167	5,500	3,750	4,667	14,667	30,000	12,500
17	7,500	5,000	2,500	4,167	5,500	3,750	4,667	14,667	30,000	12,500
18	7,500	5,000	2,500	4,167	5,500	3,750	4,667	14,667	30,000	12,500
19	7,500	5,000	2,500	4,167	5,500	3,750	4,667	14,667	30,000	12,500
20	7,500	5,000	2,500	4,167	5,500	3,750	4,667	14,667	30,000	12,500
21	7,500	5,000	2,500	4,167	5,500	3,750	4,667	14,667	30,000	12,500
22	7,500	5,000	2,500	4,167	5,500	3,750	4,667	14,667	30,000	12,500
23	7,500	5,000	2,500	4,167	5,500	3,750	4,667	14,667	30,000	12,500
24	7,500	5,000	2,500	4,167	5,500	3,750	4,667	14,667	30,000	12,500

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

Position Number Employed Annual Salary	Maintenance Manager (1) 50,000	Boiler Operator (0) 40,000	Maintenance Worker (2) 33,000	Welder (1) 35,000	Electrician (1) 35,000	Instrument Technician (1) 37,000	Monthly Total (38)	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	18,000	5,400	23,400
8	0	0	0	0	0	0	18,000	5,400	23,400
9	0	0	0	0	0	0	18,000	5,400	23,400
10	0	0	0	0	0	0	18,000	5,400	23,400
11	0	0	0	0	0	0	18,000	5,400	23,400
12	4,167	0	5,500	2,917	2,917	3,083	108,833	32,650	141,483
13	4,167	0	5,500	2,917	2,917	3,083	108,833	32,650	141,483
14	4,167	0	5,500	2,917	2,917	3,083	108,833	32,650	141,483
15	4,167	0	5,500	2,917	2,917	3,083	108,833	32,650	141,483
16	4,167	0	5,500	2,917	2,917	3,083	108,833	32,650	141,483
17	4,167	0	5,500	2,917	2,917	3,083	108,833	32,650	141,483
18	4,167	0	5,500	2,917	2,917	3,083	108,833	32,650	141,483
19	4,167	0	5,500	2,917	2,917	3,083	108,833	32,650	141,483
20	4,167	0	5,500	2,917	2,917	3,083	108,833	32,650	141,483
21	4,167	0	5,500	2,917	2,917	3,083	108,833	32,650	141,483
22	4,167	0	5,500	2,917	2,917	3,083	108,833	32,650	141,483
23	4,167	0	5,500	2,917	2,917	3,083	108,833	32,650	141,483
24	4,167	0	5,500	2,917	2,917	3,083	108,833	32,650	141,483