

**Concord Steam Corporation
Cost Of Energy (COE)**

**DG 12 -
Schedule 1**

	Projected Steam Sales Mlbs	Projected Fuel Use MMBtu	\$/Mlb	Steam Revenue Energy	Cost of Energy	Projected Over/Under Collection
Nov-11	14,729	49,555	\$ 20.90	\$ 307,798	\$ 266,514	\$ 41,284
Dec-11	20,909	58,336	20.90	\$ 436,935	\$ 317,255	\$ 119,680
Jan-12	25,078	70,041	20.90	\$ 524,059	\$ 388,183	\$ 135,876
Feb-12	22,196	53,011	20.90	\$ 463,829	\$ 307,170	\$ 156,659
Mar-12	17,025	58,618	20.90	\$ 355,776	\$ 321,942	\$ 33,834
Apr-12	10,562	43,049	20.90	\$ 220,714	\$ 234,414	\$ (13,700)
May-12	5,264	33,565	20.90	\$ 109,990	\$ 212,425	\$ (102,435)
Jun-12	1,271	15,270	20.90	\$ 26,560	\$ 83,754	\$ (57,194)
Jul-12	972	17,320	20.90	\$ 20,312	\$ 83,820	\$ (63,508)
Aug-12	1,200	21,210	20.90	\$ 25,071	\$ 101,346	\$ (76,275)
Sep-12	1,329	16,618	20.90	\$ 27,776	\$ 86,474	\$ (58,698)
Oct-12	7,503	26,851	20.90	\$ 156,781	\$ 149,129	\$ 7,652
TOTAL	128,039	463,444		2,675,601	\$ 2,552,425	123,176

Under collection from 11-12 year -123,176

Energy Charge - \$ per Mlb \$ 20.90
Total of Cost of Energy Charge 2,675,601

Energy Charge excluding production costs- \$ per Mlb 18.66

Average COE charge for last year \$ 17.47

increase over last year including transferred production costs 19.6%
 increase over last year excluding transferred production costs 6.8%

Projected MMBtu's and Cost:

	Projected MMBtu's					
	Nat. Gas	Waste	#6 Resid	Waste+ #6	Wood	Total
Nov-11	9,140	0	924	924	39,490	49,555
Dec-11	10,581	0	1,382	1,382	46,373	58,336
Jan-12	12,019	0	1,864	1,864	56,158	70,041
Feb-12	11,099	0	1,103	1,103	40,808	53,011
Mar-12	9,388	0	1,220	1,220	48,011	58,618
Apr-12	7,442	0	325	325	35,282	43,049
May-12	5,246	0	18	18	28,301	33,565
Jun-12	1,468	0	153	153	13,649	15,270
Jul-12	1,205	0	104	104	16,011	17,320
Aug-12	1,100	0	100	100	20,010	21,210
Sep-12	1,350	0	200	200	15,068	16,618
Oct-12	6,400	0	600	600	19,851	26,851
	76,438	0	7,994	7,994	379,012	463,444

bbls bbls bbls tons
 - 1,269 1,289 44,590

	Projected Costs						Other Production costs	Total
	Nat. Gas	Waste Oil	#6 Resid	Waste+ #6	Wood			
Nov-11	\$ 72,718	\$ -	\$ 14,674	\$ 14,674	\$ 161,122	18,000	\$ 266,514	
Dec-11	\$ 84,118	\$ -	\$ 21,935	\$ 21,935	\$ 189,202	22,000	\$ 317,255	
Jan-12	\$ 95,476	\$ -	\$ 29,580	\$ 29,580	\$ 229,127	34,000	\$ 388,183	
Feb-12	\$ 88,157	\$ -	\$ 17,514	\$ 17,514	\$ 166,499	35,000	\$ 307,170	
Mar-12	\$ 74,695	\$ -	\$ 19,363	\$ 19,363	\$ 195,884	32,000	\$ 321,942	
Apr-12	\$ 59,306	\$ -	\$ 5,157	\$ 5,157	\$ 143,951	26,000	\$ 234,414	
May-12	\$ 36,666	\$ -	\$ 292	\$ 292	\$ 115,467	60,000	\$ 212,425	
Jun-12	\$ 10,634	\$ -	\$ 2,433	\$ 2,433	\$ 55,687	15,000	\$ 83,754	
Jul-12	\$ 8,840	\$ -	\$ 1,654	\$ 1,654	\$ 65,326	8,000	\$ 83,820	
Aug-12	\$ 8,117	\$ -	\$ 1,587	\$ 1,587	\$ 81,642	10,000	\$ 101,346	
Sep-12	\$ 9,821	\$ -	\$ 3,175	\$ 3,175	\$ 61,478	12,000	\$ 86,474	
Oct-12	\$ 44,613	\$ -	\$ 9,524	\$ 9,524	\$ 80,992	14,000	\$ 149,129	
	\$ 593,160	\$ -	\$ 126,887	\$ 126,887	\$ 1,546,378	\$ 286,000	\$ 2,552,425	

	Projected mmbtu costs			Average oil		
	Gas	Waste	#6	#6 + waste	Wood	
\$/MMBtu	\$ 7.76	\$ 11.11	\$ 15.87	\$ 15.87	\$ 4.08	
	Decatherm	Bbl	Bbl		Ton	
Total \$/unit	7.76	\$ 75.00	\$ 100.00	\$ 100.00	\$ 34.68	
Gas Commodity	\$ 4.75					

Other production related costs to be included in COE. See Schedule 9

Ash Disposal	22,000
Water/Sewer	200,000
Treatment Chemicals	22,000
State Emission fee	42,000
Total	286,000

Projected Mlbs	Projected	07/08 Actual	08/09 Actual	09/10 Actual	10/11 Actual	Average
	mmbtu's/mlb sold					
14,729	3.36	2.72	3.51	3.53	2.87	3.16
20,909	2.79	2.73	2.44	2.86	2.63	2.66
25,078	2.79	2.34	2.51	2.89	2.88	2.66
22,196	2.39	2.54	2.13	2.37	2.37	2.35
17,025	3.44	3.16	3.24	3.65	3.28	3.33
10,562	4.08	3.68	4.05	4.15	4.22	4.03
5,264	6.38	5.86	5.94	7.73	5.46	6.25
1,271	12.01	16.03	11.77	10.75	11.14	12.42
972	17.82	19.83	21.78	16.87	14.63	18.28
1,200	17.68	19.92	21.63	20.64	13.25	18.86
1,329	12.50	10.87	12.86	17.74	12.76	13.56
7,503	3.58	3.87	3.33	3.60	3.82	3.66
128,039						

Days/Month	Meter Chg	LDC	Commodity	Basis	Total	
72,718	30 Novembre	524.96	2.40	3.43	2.07	7.90
84,118	31 Decembe	542.46	2.40	3.43	2.07	7.90
95,476	31 January	542.46	2.40	3.43	2.07	7.90
88,157	28 February	489.96	2.40	3.43	2.07	7.90
74,695	31 March	542.46	2.40	3.43	2.07	7.90
59,306	30 April	524.96	2.40	3.43	2.07	7.90
36,666	31 May	542.46	1.38	3.43	2.07	6.89
10,634	30 June	524.96	1.38	3.43	2.07	6.89
8,840	31 July	542.46	1.38	3.43	2.07	6.89
8,117	31 August	542.46	1.38	3.43	2.07	6.89
9,821	30 Septemb	524.96	1.38	3.43	2.07	6.89
44,613	31 October	542.46	1.38	3.43	2.07	6.89
			1.89	3.43	2.07	7.39

Liberty Utilities/EnergyNorth Tariff - Delivery Rate Components as of 07/03/2012		
G-43 Rate Class	Summer	Winter
Customer charge per Meter	\$17.4987	\$17.4987 per Day
G-43 Volumetric Rate (Therm rate x 10	\$0.8540	\$1.8666 Per Dth
Local Distribution Adjustment Charge	\$0.5290	\$0.5290 Per Dth
Firm Transportation COG Charge	na	\$0.0000 Per Dth

**Concord Steam Corporation
Cost Of Energy (COE)**

**DG 12 -
Schedule-3**

	Actual Sales Mlbs 2010/11	Steam sold non heating	Steam sold heating	Change in customers	Actual Deg Days 2010/11	Deg Days 30 yr ave	Adjusted Base rate Sales 2011/12
Nov-11	11,885	1,200	10,685	(127)	615	786	14,729
Dec-11	18,141	1,200	16,941	(163)	1000	1173	20,909
Jan-12	23,465	1,200	22,265	(117)	1248	1345	25,078
Feb-12	21,020	1,200	19,820	(120)	1086	1157	22,196
Mar-12	12,341	1,200	11,141	(43)	674	960	17,025
Apr-12	9,503	1,200	8,303	(11)	520	587	10,562
May-12	3,357	1,200	2,157	-	155	292	5,264
Jun-12	1,271	1,271	-	-	83	83	1,271
Jul-12	972	972	-	-	0	15	972
Aug-11	1,200	1,200	-	-	7	35	1,200
Sep-11	1,329	1,329	-	-	100	177	1,329
Oct-11	7,770	1,200	6,570	(43)	528	510	7,503
TOTAL	112,254			(624)	6,016	7,120	128,039

**Concord Steam Corporation
Cost Of Energy (COE)**

**DG 12 -
Schedule-4**

Summary of 11-12 Energy expenses/Revenue

	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	(projected) Aug-12	(projected) Sep-12	(projected) Oct-12	Total
Actual Mlbs. Sold	11,885	18,141	23,465	21,020	12,341	9,503	3,357	1,271	972	1,200	1,626	9,509	114,290
Actual Rate Per Mlb.	\$ 15.63	\$ 17.80	\$ 16.90	\$ 16.90	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50	\$ 18.50
Revenue:	\$ 185,770	\$ 322,910	\$ 396,559	\$ 355,238	\$ 228,309	\$ 175,806	\$ 62,105	\$ 23,514	\$ 17,982	\$ 22,196	\$ 30,081	\$ 175,915	\$ 1,996,382
Cost of Energy:	\$ 238,195	\$ 288,701	\$ 325,553	\$ 286,654	\$ 240,177	\$ 188,309	\$ 127,899	\$ 89,674	\$ 90,657	\$ 79,165	\$ 82,326	\$ 149,359	\$ 2,186,669
Over/(Under) Collection:													
Beginning Balance	\$ 53,911	\$ 1,486	\$ 35,695	\$ 106,701	\$ 175,285	\$ 163,416	\$ 150,912	\$ 85,118	\$ 18,957	\$ (53,718)	\$ (110,687)	\$ (162,932)	
Current Month	\$ (52,425)	\$ 34,209	\$ 71,006	\$ 68,584	\$ (11,869)	\$ (12,504)	\$ (65,794)	\$ (66,161)	\$ (72,675)	\$ (56,970)	\$ (52,245)	\$ 26,556	
Ending Balance	\$ 1,486	\$ 35,695	\$ 106,701	\$ 175,285	\$ 163,416	\$ 150,912	\$ 85,118	\$ 18,957	\$ (53,718)	\$ (110,687)	\$ (162,932)	\$ (136,376)	
Purchased fuel costs:	\$ 2,186,669												
Over/(Under) Collection 09/10:	\$ 53,911	See Sched 7 - COE reconciliation for 2010-2011											
Revenue requirement:	\$ 2,132,758												
Adjusted Revenue stream:	\$ 1,996,382												
Woodyard rental revenue	\$ 13,200												
Projected 2011-12 Over/(under) Collection:	\$ (123,176)												

	Projected Mlbs.	Rate per Mlb.	Projected Revenue \$	Actual/Projected Mlbs.	Rate per Mlb.	Revenue \$
Nov-11	15,221	\$ 16.64	\$ 253,269	Nov-11	11,885	\$ 15.63 \$ 185,770
Dec-11	24,500	\$ 16.64	\$ 407,677	Dec-11	18,141	\$ 17.80 \$ 322,910
Jan-12	27,561	\$ 16.64	\$ 458,619	Jan-12	23,465	\$ 16.90 \$ 396,559
Feb-12	26,303	\$ 16.64	\$ 437,685	Feb-12	21,020	\$ 16.90 \$ 355,238
Mar-12	19,795	\$ 16.64	\$ 329,382	Mar-12	12,341	\$ 18.50 \$ 228,309
Apr-12	10,140	\$ 16.64	\$ 168,732	Apr-12	9,503	\$ 18.50 \$ 175,806
May-12	4,216	\$ 16.64	\$ 70,150	May-12	3,357	\$ 18.50 \$ 62,105
Jun-12	1,709	\$ 16.64	\$ 28,438	Jun-12	1,271	\$ 18.50 \$ 23,514
Jul-12	931	\$ 16.64	\$ 15,492	Jul-12	972	\$ 18.50 \$ 17,982
Aug-12	889	\$ 16.64	\$ 14,793	Aug-12	1,200	\$ 18.50 \$ 22,196
Sep-12	1,626	\$ 16.64	\$ 27,057	Sep-12	1,626	\$ 18.50 \$ 30,081
Oct-12	9,509	\$ 16.64	\$ 158,229	Oct-12	9,509	\$ 18.50 \$ 175,915
Total	142,399	\$ 16.64	\$ 2,369,522	Total	114,290	\$ 17.47 \$ 1,996,382

Concord Steam Company
 Cost of Energy (COE)
 2010-11
 Revenue Summary

DG 12 -
 Schedule 5

	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11
Cost of Energy	\$238,195	\$288,701	\$325,553	\$286,654	\$240,177	\$188,309	\$127,899	\$89,674	\$90,657	\$-	\$-	\$-

Actual MMBtu's and Cost:

	Actual MMBtu's						Actual Costs				Projected/Actual Costs			
	Nat. Gas	bbls	Waste + #6	Wood	Tons	Total	Nat. Gas	Waste + #6	Wood	Total	Nat. Gas	Waste + #6	Wood	Total
Nov-11	12,140	151	924	29,997	3529	43,061	\$103,964	\$14,444	\$119,787	\$238,195	\$103,964	\$14,444	\$119,787	\$238,195
Dec-11	10,581	225	1,382	47,286	5563	59,248	\$95,462	\$22,988	\$170,251	\$288,701	\$95,462	\$22,988	\$170,251	\$288,701
Jan-12	9,219	304	1,864	55,718	6555	66,800	\$87,932	\$31,045	\$206,575	\$325,553	\$87,932	\$31,045	\$206,575	\$325,553
Feb-12	11,099	180	1,103	43,435	5110	55,637	\$101,546	\$18,301	\$166,807	\$286,654	\$101,546	\$18,301	\$166,807	\$286,654
Mar-12	9,388	199	1,220	34,646	4076	45,253	\$87,393	\$20,403	\$132,381	\$240,177	\$87,393	\$20,403	\$132,381	\$240,177
Apr-12	7,442	53	325	29,495	3470	37,262	\$60,245	\$5,559	\$122,505	\$188,309	\$60,245	\$5,559	\$122,505	\$188,309
May-12	5,246	3	18	20,698	2435	25,962	\$40,056	\$339	\$87,504	\$127,899	\$40,056	\$339	\$87,504	\$127,899
Jun-12	1,468	25	153	16,686	1963	18,307	\$12,927	\$2,542	\$74,205	\$89,674	\$12,927	\$2,542	\$74,205	\$89,674
Jul-12	1,205	17	104	16,193	1905	17,502	\$11,057	\$1,728	\$77,872	\$90,657	\$11,057	\$1,728	\$77,872	\$90,657
Aug-12	-	-	-	-	-	-	-	-	-	-	\$9,377	\$2,698	\$67,090	\$79,165
Sep-12	-	-	-	-	-	-	-	-	-	-	\$11,367	\$2,698	\$68,260	\$82,326
Oct-12	-	-	-	-	-	-	-	-	-	-	\$51,941	\$8,095	\$89,323	\$149,359
Total	67,787	1,157	7,094	294,151	34,606	369,032	\$600,583	\$117,350	\$1,157,886	\$1,875,819				\$2,186,669
			6.13	8.5										
			8,251											
					347,992									
					40,940									

Actual mmbtu costs		Wood	#6/waste
\$/MMBtu	\$	3.94	\$16.54
\$/ton, \$/bbl	\$	33.46	\$101.40

Projected MMBtu's and Cost:

	Projected MMBtu's						Projected Costs					
	Nat. Gas	Waste	#6 Resid	Waste+ #6	Wood	Total	Nat. Gas	Waste Oil	#6 Resid	Waste+ #6	Wood	Total
Nov-11	10,513	0	400	400	34,090	45,003	\$94,153	\$-	\$5,397	\$5,397	\$132,973	\$232,523
Dec-11	10,087	200	1,300	1,500	48,454	60,041	\$92,596	\$1,889	\$17,540	\$19,429	\$188,998	\$301,023
Jan-12	10,523	500	1,900	2,400	46,765	59,688	\$96,575	\$4,722	\$25,635	\$30,357	\$190,212	\$317,144
Feb-12	11,067	100	1,100	1,200	44,710	56,977	\$101,487	\$944	\$14,841	\$15,786	\$178,296	\$295,569
Mar-12	9,453	100	1,500	1,600	46,140	57,193	\$86,811	\$944	\$20,238	\$21,183	\$179,973	\$287,966
Apr-12	5,385	100	300	400	30,302	36,087	\$49,345	\$944	\$4,048	\$4,992	\$118,194	\$172,531
May-12	5,216	0	300	300	19,495	25,011	\$42,651	\$-	\$4,048	\$4,048	\$76,042	\$122,741
Jun-12	1,719	0	100	100	15,327	17,146	\$14,471	\$-	\$1,349	\$1,349	\$59,784	\$75,605
Jul-12	1,500	0	100	100	15,895	17,495	\$12,589	\$-	\$1,349	\$1,349	\$62,000	\$75,938
Aug-12	1,100	0	200	200	15,895	17,195	\$9,377	\$-	\$2,698	\$2,698	\$67,090	\$79,165
Sep-12	1,350	0	200	200	17,046	18,596	\$11,367	\$-	\$2,698	\$2,698	\$68,260	\$82,326
Oct-12	6,400	0	600	600	20,900	27,900	\$51,941	\$-	\$8,095	\$8,095	\$89,323	\$149,359
Total	74,313	1,000	8,000	9,000	355,018	438,330	\$663,364	\$9,444	\$107,937	\$117,381	\$1,411,146	\$2,191,890
		167	1,305	1,472	41,767							
				bbls	tons							

Actual 2011 production related costs not in COE, but are in 2012/13

Ash disposal	20,523
State Air Permit fees	40,814
Water/sewer	185,738
Boiler chemicals	21,213
Total	268,288

Projected mmbtu costs					
	Gas	Waste	#6	#6/waste	Wood
\$/MMBtu	\$8.93	\$9.44	\$13.49	\$13.04	\$3.97
\$/Unit	\$8.93	\$60.44	\$86.35	\$79.95	\$33.79
	Decatherm	Bbl	Bbl		Ton

**Concord Steam Corporation
Cost Of Energy (COE)**

**DG 12 -
Schedule-6**

Customer Size	Annual usage M/lbs	Energy Charge at new rate 20.90	Energy Charge w.o production expenses 18.66	Energy Charge at 11/12 average 17.47	Meter Charge	Usage Rate	Total amount of bill w.o. transferred production costs	Last year cost based on average energy cost over 10/11	% increase over last year
Small	295	\$ 6,165	\$ 5,506	\$ 5,153	\$ 60	\$ 5,469	\$ 11,035	\$ 10,682	3.30%
Transferred production costs		\$ 659							
Medium	1201	\$ 25,097	\$ 22,414	\$ 20,979	\$ 225	\$ 20,237	\$ 42,876	\$ 41,441	3.46%
Transferred production costs		\$ 2,683							
Large	4797	\$ 100,242	\$ 89,527	\$ 83,792	\$ 480	\$ 76,992	\$ 166,999	\$ 161,264	3.56%
Transferred production costs		\$ 10,715							

The Small user will always use less than 500 Mlbs/month and their usage rate will always be highest tier.
 The Medium user may in some months use more than 500 Mlbs, but most of their usage will also be at the highest tier.
 The Large user almost always uses above 500 Mlbs/month but still never uses more than 2,000 Mlbs/month.
 They end up with a blended rate due to buying steam from the two tiers

The estimate of usage rate for each user is based on a sample customers actual annual usage divided by the total usage which establishes the average usage rate that that customer paid.

Concord Steam Company
 Cost of Energy (COE)

DG 12 -
 Schedule -7

Reconciliation of 2010-2011 cost of energy

	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11
Revenue:	\$ 233,708	\$ 374,086	\$ 424,428	\$ 427,973	\$ 297,998	\$ 162,462	\$ 74,554	\$ 25,405	\$ 17,322	\$ 19,964	\$ 22,118	\$ 129,291
Cost of Energy:	\$ 214,313	\$ 274,649	\$ 347,145	\$ 297,010	\$ 262,973	\$ 165,122	\$ 99,288	\$ 87,740	\$ 74,611	\$ 85,980	\$ 83,940	\$ 164,174
Over/(Under) Collection:												
Beginning Balance	\$ 1,546	\$ 20,941	\$ 120,379	\$ 197,661	\$ 328,625	\$ 363,650	\$ 360,991	\$ 336,257	\$ 273,921	\$ 216,633	\$ 150,616	\$ 88,794
Current Month	\$ 19,395	\$ 99,437	\$ 77,283	\$ 130,963	\$ 35,025	\$ (2,659)	\$ (24,734)	\$ (62,335)	\$ (57,289)	\$ (66,016)	\$ (61,822)	\$ (34,883)
Ending Balance	\$ 20,941	\$ 120,379	\$ 197,661	\$ 328,625	\$ 363,650	\$ 360,991	\$ 336,257	\$ 273,921	\$ 216,633	\$ 150,616	\$ 88,794	\$ 53,911
Monthly Projection of Year-End												
Over/(under) Collection:	\$ (2,483)	\$ (3,907)	\$ (42,358)	\$ (12,352)	\$ 12,755	\$ 49,960	\$ 83,873	\$ 80,817	\$ 96,747	\$ 100,992	\$ 103,635	\$ 53,911

Purchased fuel costs:	\$ 2,156,946
REVISED 2010 Over/(Under) Collection:	\$ 1,546 (COE final 2009-10 reconciliation report as amended by Staff audit 10/7/2010)
Revenue requirement:	\$ 2,155,400
Revenue stream:	\$ 2,209,311

**Concord Steam Corporation
Cost Of Energy (COE)**

**DG 12 -
Schedule-8**

Estimated cost of Wood Yard Operations

Tons of wood per year	44,590				
Delivered cost of material	\$ 28.00	\$ 1,248,511			
			Actual	Actual	
		COE 12	8/11-7/12	8/10-7/11	09
Yard Lease	\$	141,792	\$ 141,792	\$ 141,792	\$ 141,792
Diesel Fuel Yard/trucking	\$	18,000	\$ 17,343	\$ 14,624	\$ 18,000
Electricity	\$	3,500	\$ 2,937	\$ 3,522	\$ 5,500
Mechanical repairs	\$	500	\$ 903	\$ 481	\$ 500
Small tools	\$	500	\$ 540	\$ 598	\$ 180
Loader rental	\$	51,597	\$ 51,597	\$ 51,597	\$ 51,600
Tractor rental	\$	15,228	2,539		
Truck/Loader/scale maintenance	\$	10,000	\$ 9,498	\$ 8,656	\$ 13,305
Contract Grinding/Hauling	\$	-	\$ -	\$ 29,150	\$ 18,000
Misc Prepaid Yard expenses	\$	-	\$ -	\$ -	\$ 500
Propane heat	\$	5,000	\$ 4,854	\$ 4,564	\$ 3,500
Veh Registration	\$	2,200	\$ 2,073	\$ 1,580	\$ 1,535
Fees	\$	500	\$ 364	\$ -	\$ 180
Cleaning supplies	\$	-		\$ -	\$ 160
Software consultant	\$	-		\$ -	\$ 900
Highway use tax	\$	750	\$ 725	\$ -	\$ 550
Property tax	\$	26,500	\$ 25,245	\$ 23,047	\$ 26,600
Wood Broker	\$	35,000	\$ 35,000	\$ 35,000	\$ 35,000
Subtotal	\$	311,067	\$ 295,409	\$ 314,611	\$ 317,802
Ash Disposal		20,523			
Water/Sewer		185,738			
Treatment Chemicals		21,213			
State Emission fee		40,814			
Rental revenue	Capital Paving	\$ (13,200)			
Total net cost		\$ 297,867			
Cost of Yard operations per ton		\$ 6.68			
Delivered cost of material		\$ 28.00			
Total Cost of wood fuel per ton		\$ 34.68			

**Concord Steam Corporation
Cost Of Energy (COE)**

**DG 12 -
Schedule-9**

Other production costs to be included in COE

	Ash Disposal	Water/Sewer	Treatment Chemicals	State Emission fee	Total 2011/12 Actual	Projected 2012/13
Nov 11	1,834	13,496	2,217		17,547	18,000
Dec 11	2,455	20,099	(2,257)		20,297	22,000
Jan 12	3,650	25,368	2,217		31,236	34,000
Feb 12	2,993	27,090	2,984		33,067	35,000
Mar 12	1,427	25,132	2,984		29,544	32,000
Apr 12	1,427	20,034	2,984		24,446	26,000
May 12	1,881	13,852	2,257	40,814	58,804	60,000
Jun 12	1,427	10,677	2,257		14,362	15,000
Jul 12	0	8,234	0		8,234	8,000
Aug 11	668	5,762	2,220		8,651	10,000
Sep 11	1,380	7,705	1,859		10,944	12,000
Oct 11	1,380	8,287	1,490		11,157	14,000
Totals	20,523	185,738	21,213	40,814	268,288	286,000

**Cogen Turbines - Benefit - Cost Analysis
Including Savings from Cogeneration of Electricity**

*Estimated cost to purchase all electricity from Unitil
(If there was no self generation)* \$ 183,122

Cost of electricity with self generation

Purchased power from Unitil \$ 65,140

Cost to generate electricity \$ 130,772

Subtotal all costs \$ 195,912

Revenue from sale of power \$ 52,009

Net cost of electricity for CSC \$ 143,903

Benefits:

Sale of Electricity to ISO \$ 52,009

Savings from generating own electricity in lieu of purchasing from Unitil \$ 117,982

Total Benefits from continuing Cogen \$ 169,991

Costs:

Operating Expenses, Return and Fuel Costs for Self Generation \$ 130,772

\$ 130,772

Benefits in Excess of Costs \$ 39,219

Benefit/Cost Ratio 1.30

Benefits

Sale of Power to ISO-New England:

<i>Volume of kWh's sold from 8/09 - 7/10</i>		1,576,000
Revenues received	\$	52,009
Rate per kWh	\$	0.033

Estimated Cost if there was no Self Generation: \$ 183,122

Savings from self-generation of Electricity:

<i>Power purchased from Unitil</i>	\$	65,140
Value of avoided power purchase from Unitil	\$	117,982

Self generated Electricity Consumed (Excl. kWh purchased from Unitil)		1,309,200
Average Unitil cost \$/kWh	\$	0.09

Total Benefits from Sales to ISO and Self-Generation

Turbine Generator
 Operating/Maintenance Costs
 8/11-7/12

Cost of Sales:

5-7051 Consumables/Mech.	\$ 99
5-7052 Pipe fittings	\$ -
5-7053 Valves	\$ 866
5-7055 Misc. small tools	\$ 3
5-7060 Consumables/Elec.	\$ 183
5-7065 Consumables/Structural Repairs	\$ 53
5-7085 Rental Fees/Generator Maint.	\$ -
5-7095 Repair Parts/Mech.	\$ 26
5-7100 Repair Parts/Elec.	\$ 196
5-7110 Contract Maintenance & Repair	<u>\$ 5,010</u>
Total Cost of Sales	\$ 6,436

Expenses:

Payroll Maintenance - 80 hrs @ \$25/hr	\$ 2,000
Depreciation	\$ 10,485
Amortization	\$ 436
Property Tax	\$ 1,016
Employer FICA	\$ 153
Telephone	\$ 600
Insurance/Plant	\$ 6,281
Employees Ins. Med.,etc.	\$ 400
Misc. Expense	
Total	<u>\$ 21,371</u>

Total Revenue Deductions	\$ 27,807
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Summary of Revenue Requirements:

Rate Base	\$ 114,044
Rate of Return	<u>7.24%</u>
Allowed Return	\$ 8,257

Revenue Requirements Deficiency/(Surplus)	<u>\$ 8,257</u>
Gross-up for Taxes (x 1.68)	<u>\$ 13,880</u>

Costs

	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Total
Fuel:													
Total kWh's Generated	465,600	424,800	410,400	362,400	242,400	74,400	60,000	2,400	9,600	165,600	424,800	242,800	2,885,200
Total kWh's Sold	237,265	215,989	206,335	230,022	98,373	-	-	55	5	100,618	288,114	199,224	1,576,000
\$ received from sales	\$ 9,530	\$ 6,448	\$ 5,470	\$ 5,781	\$ 2,463	\$ 2,802	\$ 3,438	\$ 2,597	\$ 2,585	\$ 6,586	\$ -	\$ 4,309	\$ 52,009
Btu's/kWh	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Btu/Lb Steam @ 125 psig. 430 F	1,150	1,150	1,150	1,150	1,150	1,150	1,150	1,150	1,150	1,150	1,150	1,150	1,150
Total M Lbs of Steam	1,619	1,478	1,427	1,261	843	259	209	8	33	576	1,478	845	10,035
Fuel cost \$/MMBtu	4.87	5.15	5.31	5.05	4.93	4.90	5.18	5.41	4.95	5.54	5.53	4.87	
Fuel Cost per MLb	\$ 9.34	\$ 9.87	\$ 10.17	\$ 9.69	\$ 9.44	\$ 9.39	\$ 9.93	\$ 10.37	\$ 9.49	\$ 10.62	\$ 10.60	\$ 9.33	
Total Fuel Cost of Steam	\$ 15,128	\$ 14,590	\$ 14,522	\$ 12,209	\$ 7,960	\$ 2,430	\$ 2,072	\$ 87	\$ 317	\$ 6,116	\$ 15,661	\$ 7,883	\$ 98,973
Total Fuel Cost of Steam	\$ 15,128	\$ 14,590	\$ 14,522	\$ 12,209	\$ 7,960	\$ 2,430	\$ 2,072	\$ 87	\$ 317	\$ 6,116	\$ 15,661	\$ 7,883	\$ 98,973
Overhead:	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 27,807
Total Overhead	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 2,317	\$ 27,807
Return on Investment													
Rate Base													\$ 114,044
Rate of Return													3.50%
Total Return on Investment	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 3,992
Grand Total Costs	\$ 17,778	\$ 17,240	\$ 17,172	\$ 14,859	\$ 10,610	\$ 5,080	\$ 4,721	\$ 2,736	\$ 2,967	\$ 8,766	\$ 18,311	\$ 10,533	\$ 130,772
Total Volume kWh's													<u>2,885,200</u>
Rate per kWh													<u>\$ 0.04533</u>

Purchased Power Costs
 Cost Benefit Analysis
 09/15/2008

DG 12 -
 Concord Steam
Purchased Power Costs

Schedule CB-5

	Purchased Power kWh	Demand Charge	Energy Charge	Delivery Charge	Energy Total	Energy Cost \$/kWh
Aug-11	109,402	1,923	7,272	2,428	\$ 11,623	0.09
Sep-11	107,242	1,831	7,880	2,134	\$ 11,845	0.09
Oct-11	100,330	1,821	7,025	1,973	\$ 10,819	0.09
Nov-11	75,446	1,821	5,375	1,477	\$ 8,673	0.09
Dec-11	12,384	1,976	1,003	210	\$ 3,189	0.10
Jan-12	26,160	2,220	2,148	470	\$ 4,838	0.10
Feb-12	346	1,776	28	87	\$ 1,891	0.33
Mar-12	86	1,776	6	87	\$ 1,869	1.08
Apr-12	15,408	1,776	1,032	278	\$ 3,086	0.09
May-12	768	1,776	52	87	\$ 1,915	0.18
Jun-12	3,139	1,815	156	89	\$ 2,060	0.08
Jul-12	24,269	1,825	1,033	474	\$ 3,332	0.06
Total	474,980	22,336	33,010	9,794	\$ 65,140	0.09

Average Cost/kwh \$ 0.09