

Energy Unit Plan FY05 - FY10

	A	B	C	D	E	F	G	H
1		FY04-05 Actual	FY05-06 Actual	FY06-07 Projected	FY07-08 Projected	FY08-09 Projected	FY09-10 Projected	Notes
2								
3	Utility Usage and Costs WITHOUT Additional Energy Conservation Measures							
4								
5	USAGE (MMBTU)							
6	Electricity	51,454	51,197	51,300	51,300	51,300	51,300	Energy use will increase if new facilities are added
7	Natural Gas	50,363	32,080	47,945	50,000	47,945	50,000	
8	Other Fuel	-	2,055	2,055	-	2,055	-	
9	Total Usage	101,817	85,332	101,300	101,300	101,300	101,300	
10								
11	EXPENDITURES							
12	Electricity	\$ 832,144	\$ 813,660	\$ 801,455	\$ 805,462	\$ 809,490	\$ 813,537	2% decrease through FY07. Project 1/2% increases FY08 fprward/
13	Natural Gas	\$ 394,621	\$ 612,568	\$ 457,395	\$ 527,000	\$ 541,779	\$ 625,000	
14	Other Fuel	\$ -	\$ 32,581	\$ 32,879	\$ -	\$ 34,934	\$ -	Based on the cost increases of the fossil fuel in our 20% biodiesel blend.
15	Total Utility Expenditures	\$ 1,226,766	\$ 1,458,809	\$ 1,291,729	\$ 1,332,462	\$ 1,386,202	\$ 1,438,537	
16								
17								
18	Utility Usage and Costs WITH Energy Conservation Measures							
19								
20	USAGE (MMBTU)							
21	Electricity	51,454	51,197	50,936	50,676	50,418	50,161	
22	Natural Gas	50,363	32,080	27,909	24,281	21,124	18,378	
23	Other Fuel	-	2,055	1,000	2,000	2,000	2,000	Other fuel cost calculation = 500. Used in Row 34.
24	Total Usage	101,817	85,332	79,845	76,957	73,542	70,539	
25								
26	EXPENDITURES							
27	Electricity	\$ 832,144	\$ 813,660	\$ 801,455	\$ 805,462	\$ 809,490	\$ 813,537	2% decrease through FY07. Project 1/2% increases FY08 fprward/
28	Natural Gas	\$ 394,621	\$ 612,568	\$ 266,254	\$ 255,922	\$ 238,706	\$ 229,729	
29	Other Fuel		\$ 32,581	\$ 16,000	\$ 32,500	\$ 34,000	\$ 34,500	Based on B20 fuel's influence of diesel #2 cost increases
30	Total Utility Expenditures	\$ 1,226,766	\$ 1,458,809	\$ 1,083,709	\$ 1,093,884	\$ 1,082,196	\$ 1,077,766	

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1		FY04-05 Actual	FY05-06 Actual	FY06-07 Projected	FY07-08 Projected	FY08-09 Projected	FY09-10 Projected	Notes
31								
32	Budgeted Energy Costs and Projected Energy Utility Budget Carryover							
33								
34	Utility Budget	\$ 1,367,257	\$ 1,521,250	\$ 1,298,070	\$ 1,348,863	\$ 1,395,461	\$ 1,464,297	Budget in 07, 08, 09, and 10 is calculated using formula from "Energy Management Account" memo from Marie Matsen dated 12/5/06
35	Utility Carryover	\$ 112,042	\$ -	\$ 214,362	\$ 254,979	\$ 313,265	\$ 386,531	
36								
37								
38	Energy Operating Budget							
39								
40	Operating Resources							
41	General Fund Allocation (Salary + OPE)	\$ 2,505	\$ 52,371	\$ 52,563	\$ 54,928	\$ 58,334	\$ 60,959	
42	Capital Outlay Allocation	\$ -	\$ 5,335	\$ -	\$ -	\$ -	\$ -	
43	Total Operating Resources	\$ 2,505	\$ 57,706	\$ 52,563	\$ 54,928	\$ 58,334	\$ 60,959	
44								
45	Operating Expenditures							
46	Salary + OPE	\$ (2,505)	\$ (52,371)	\$ (52,563)	\$ (54,928)	\$ (58,334)	\$ (60,959)	
47	M&S	\$ -	\$ (5,636)	\$ (3,186)	\$ (2,500)	\$ (2,500)	\$ (2,500)	
48	Travel/Training	\$ -	\$ (1,641)	\$ (1,814)	\$ (2,500)	\$ (2,500)	\$ (2,500)	
49	Capital Outlay	\$ -	\$ (5,335)	\$ -	\$ -	\$ -	\$ -	
50	Total Operating Expenditures	\$ (2,505)	\$ (64,983)	\$ (57,563)	\$ (59,928)	\$ (63,334)	\$ (65,959)	
51								
52	Operating Resources Over/Under Expenditures	\$ -	\$ (7,277)	\$ (5,000)	\$ (5,000)	\$ (5,000)	\$ (5,000)	Row 43 plus row 50.

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1		FY04-05 Actual	FY05-06 Actual	FY06-07 Projected	FY07-08 Projected	FY08-09 Projected	FY09-10 Projected	Notes
53								
54	Energy Projects Budget							
55	Developed projects are listed below. Additional projects to be determined.							
56	Project Resources							
57	Utility Carryover	\$ -	\$ 112,042	\$ -	\$ 214,362	\$ 254,979	\$ 313,265	
58	Energy Mngmnt Budget Carryover	\$ 51,414	\$ 49,849	\$ 195,280	\$ 199,826	\$ 338,027	\$ 523,586	Energy Mngmnt Budget Carryover = Ending Fund Balance from Previous year (see Row 224)
59	Utility Rebates	\$ 16,190	\$ -	\$ -	\$ -	\$ -	\$ -	See below for FY 2006 thru 2010 incentives by projects
60	Capital Outlay Allocation	\$ -	\$ -	\$ 20,000	\$ -	\$ -	\$ -	
61	Total Project Resources	\$ 67,604	\$ 161,891	\$ 215,280	\$ 414,187	\$ 593,006	\$ 836,852	
62								
63	Project Expenditures							
64								
65	Center Bookstore Lighting Retrofit							
66	Cost	\$ (26,688)						Rebate totals = \$12,243. Project paid for from major maintenance budget and rebates deposited to that budget with a small amount going to the foundation for there help in finding a Business Energy Tax Credit (BETC) pass through partner.
67	Offset/rebate	\$ -	\$ 6,415	\$ 5,828				
68	Net Cost after Rebate			\$ (14,445)				
69	Energy Reduction (MMBTU)	122	122	122	122	122	122	
70	Energy Savings	\$ 1,975	\$ 1,953	\$ 1,906	\$ 1,906	\$ 1,906	\$ 1,906	
71	Net Project Savings through FY10						\$ (2,894)	Project will have paid for itself and have a positive net savings as of FY 12
72								
73	Center Kitchen Lighting Retrofit							
74	Cost		\$ (8,194)					Project paid for from major maintenance budget and rebates deposited to that budget.
75	Offset/rebate		\$ 1,260					
76	Net Cost after Rebate		\$ (6,934)					
77	Energy Reduction (MMBTU)		20	20	20	20	20	
78	Energy Savings		\$ 317	\$ 309	\$ 309	\$ 309	\$ 309	
79	Net Project Savings through FY10						\$ (5,381)	
80								
81	Scheduling HVAC and Lighting Equipment							
82	Cost		\$ -	\$ -	\$ -	\$ -	\$ -	
83	Offset/rebate		\$ -	\$ -	\$ -	\$ -	\$ -	
84	Net Cost after Rebate		\$ -	\$ -	\$ -	\$ -	\$ -	
85	Energy Reduction MMBTU		14,938	13,232	13,232	13,232	13,232	13653.78
86	Energy Savings		\$ 238,863	\$ 206,412	\$ 206,412	\$ 206,412	\$ 206,412	
87	Net Project Savings through FY10						\$ 1,064,513	
88								
89	Computer Monitor and Compact Flourscent Lamp Replacements							
90	Cost		\$ (5)	\$ (10)				FY06 - 310 computer monitors replaced. Paid for by departments.
91	Offset/rebate							Costs for Compact flourscent lamp replacements.
92	Net Cost after Rebate		\$ (5)	\$ (10)				Rebates directly credited to departments.
93	Energy Reduction MMBTU		79	81	81	81	81	
94	Energy Savings		\$ 1,266	\$ 1,264	\$ 1,264	\$ 1,264	\$ 1,264	
95	Net Project Savings through FY10						\$ 6,305	

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1		FY04-05 Actual	FY05-06 Actual	FY06-07 Projected	FY07-08 Projected	FY08-09 Projected	FY09-10 Projected	Notes
96								
97	DDC Commissioning							
98	Cost		\$ -	\$ (50,000)				
99	Offset/rebate		\$ 42,074	\$ 12,000				
100	Net Cost after Rebate		\$ 37,908	\$ (92)				A rebate of \$4,166 also went to the bond budget
101	Energy Reduction MMBTU			464	464	464	464	
102	Energy Savings			\$ 3,000	\$ 7,239	\$ 7,239	\$ 7,239	
103	Net Project Savings through FY10						\$ 24,625	
104								
105	BLD 16 1KW PV Array -Connect Existing							
106	Cost		\$ (6,075)					
107	Offset/rebate		\$ -					
108	Net Cost after Rebate		\$ (6,075)					
109	Energy Reduction MMBTU		5	5	5	5	5	Energy reduction based on 1990 National Renewable Energy Laboratory Solar Data.
110	Energy Savings		\$ 82	\$ 80	\$ 80	\$ 80	\$ 80	
111	Net Project Savings through FY10						\$ (5,675)	Science Department initiated project.
112								
113	Plug Load Controls							
114	Cost		\$ (1,795)	\$ (1,980)				Timers for printers and occupancy sensor plug strips
115	Offset/rebate		\$ 1,475	\$ 1,200				\$5 rebate deposited to another department account
116	Net Cost after Rebate		\$ (320)	\$ (780)				
117	Energy Reduction MMBTU		47	66	66	66	66	
118	Energy Savings		\$ 756	\$ 1,034	\$ 1,034	\$ 1,034	\$ 1,034	
119	Net Project Savings through FY10						\$ 3,791	
120								
121	BLD 16 2-KW PV Array - New							
122	Cost			\$ (15,500)				
123	Offset/rebate			\$ 4,728				Assumes Business Energy Tax Credit (BETC) pass thru rate of 30.5% (under \$20K)
124	Net Cost after Rebate			\$ (10,773)	\$ -	\$ -	\$ -	
125	Energy Reduction MMBTU			10	10	10	10	Energy reduction based on 1990 National Renewable Energy Laboratory Solar Data.
126	Energy Savings			\$ 159	\$ 159	\$ 159	\$ 159	
127	Net Project Savings through FY10						\$ (10,135)	The economies of scale and utility cost decreases would reduce the costs of PV projects.
128								
129	BLD 7 Laundry Efficiency Tune Up and Hot Water Heat Recovery/Solar Hot Water							
130	Cost			\$ (15,000)	\$ -	\$ (15,000)	\$ -	Project funded by capital outlay allocation
131	Offset/rebate			\$ 19,000	\$ 4,575		\$ 5,250	Estimated Energy Trust incentives. Assumes BETC pass thru rate of 30.5% (under \$20K). Capital outlay request added to 0 out cost.
132	Net Cost after Rebate			\$ 4,000	\$ 4,575	\$ (15,000)	\$ 5,250	
133	Energy Reduction MMBTU			385	449	545	641	Estimated. Project is being analyzed by the Energy Trust.
134	Energy Savings			\$ 6,000	\$ 7,000	\$ 8,500	\$ 10,000	
135	Net Project Savings through FY10						\$ 30,325	
136								
137	Space Heater Replacement Program							
138	Cost			\$ -	\$ -	\$ -	\$ -	12 units replaced per year. FY07 20 units purchased with employee accommodations budget.
139	Offset/rebate			\$ -	\$ -	\$ -	\$ -	Rebates credited to departments purchasing heaters.
140	Net Cost after Rebate			\$ -	\$ -	\$ -	\$ -	
141	Energy Reduction MMBTU			35	129	165	200	
142	Energy Savings			\$ 552	\$ 2,018	\$ 2,570	\$ 3,122	
143	Net Project Savings through FY10						\$ 8,263	

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1		FY04-05 Actual	FY05-06 Actual	FY06-07 Projected	FY07-08 Projected	FY08-09 Projected	FY09-10 Projected	Notes
144								
145	Exterior Lighting Controls Upgrade							Parking Lots A,B,F-K,M,N: Buildings CTR, 3,5,211,15,17.
146	Cost			\$ (5,000)	\$ -			Capital outlay allocation
147	Offset/rebate			\$ 2,200	\$ -			
148	Net Cost after Rebate			\$ (2,800)	\$ -	\$ -	\$ -	
149	Energy Reduction MMBTU			90	90	90	90	
150	Energy Savings			\$ 1,397	\$ 1,397	\$ 1,397	\$ 1,397	
151	Net Project Savings through FY10						\$ 2,788	
152								
153	30th Ave.Elect. Submetering - Add 10 submeters							
154	Cost				\$ (20,000)			
155	Offset/rebate				\$ -	\$ -	\$ -	
156	Net Cost after Rebate				\$ (20,000)	\$ -	\$ -	
157	Energy Reduction MMBTU				-	-	-	
158	Energy Savings				\$ -	\$ -	\$ -	
159	Net Project Savings through FY10						\$ (20,000)	Helps to monitor and report energy usage.
160								
161	KLCC 132 W. 8th Ave - Energy Efficiency Measures							
162	Cost				\$ (12,000)	\$ -	\$ -	
163	Offset/rebate				\$ 500	\$ 3,660	\$ -	Assumes BETC pass thru rate of 30.5% (under \$20K)
164	Net Cost after Rebate				\$ (11,500)	\$ 3,660	\$ -	
165	Energy Reduction MMBTU				67	67	67	Estimated at 10%. Project details under going redesign.
166	Energy Savings				\$ 1,045	\$ 1,045	\$ 1,045	
167	Net Project Savings through FY10						\$ (4,705)	Actual energy usage of building unknown. Other energy savings may be possible.
168								
169	Native Am. Longhouse - Energy Efficiency Measures							
170	Cost				\$ (22,000)	\$ -	\$ -	
171	Offset/rebate				\$ 860	\$ 5,610	\$ -	Assumes BETC pass thru rate of 25.5% (over \$20K)
172	Net Cost after Rebate				\$ (21,140)	\$ 5,610	\$ -	
173	Energy Reduction MMBTU				89	89	89	Estimated based on cost per sq. ft. for similar sized building.
174	Energy Savings				\$ 1,383	\$ 1,383	\$ 1,383	Additional measures being researched.
175	Net Project Savings through FY10						\$ (11,382)	Actual energy usage of building unknown. Other energy savings may be possible.
176								
177	4 KW PV Array - New							
178	Cost				\$ (31,000)			
179	Offset/rebate				\$ 7,905			Assumes BETC pass thru rate of 25.5% (over \$20K)
180	Net Cost after Rebate				\$ (23,095)	\$ -	\$ -	
181	Energy Reduction MMBTU				20	20	20	Energy reduction based on 1990 National Renewable Energy Laboratory Solar Data.
182	Energy Savings				\$ 319	\$ 319	\$ 319	
183	Net Project Savings through FY10						\$ (22,139)	The economies of scale and utility cost decreases would reduce the costs of PV projects.
184								
185	Florence Center lighting Retrofit							
186	Cost					\$ (10,000)	\$ (10,000)	Phased over two years.
187	Offset/rebate						\$ 6,100	Assumes BETC pass thru rate of 30.5% (under \$20K)
188	Net Cost after Rebate					\$ (10,000)	\$ (3,900)	
189	Energy Reduction MMBTU					75	75	
190	Energy Savings					\$ 1,304	\$ 1,304	Estimated based on energy costs per sq. ft.
191	Net Project Savings through FY10						\$ (11,293)	Project pays for itself in eight years.

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1		FY04-05 Actual	FY05-06 Actual	FY06-07 Projected	FY07-08 Projected	FY08-09 Projected	FY09-10 Projected	Notes
192								
193	BLD 24, Plot C&D Lighting Controls Upgrade							
194	Cost					\$ (2,500)	\$ -	
195	Offset/rebate					\$ -	\$ -	
196	Net Cost after Rebate					\$ (2,500)	\$ -	
197	Energy Reduction MMBTU					15	15	
198	Energy Savings					\$ 260	\$ 260	
199	Net Project Savings through FY10						\$ (1,979)	Project pays for itself in nine years.
200								
201	8 KW PV Array - New							
202	Cost					\$ (62,000)		
203	Offset/rebate					\$ 15,810		Assumes BETC pass thru rate of 25.5% (over \$20K)
204	Net Cost after Rebate					\$ (46,190)	\$ -	
205	Energy Reduction MMBTU					41	41	Energy reduction based on 1990 National Renewable Energy Laboratory Solar Data.
206	Energy Savings					\$ 637	\$ 637	
207	Net Project Savings through FY10						\$ (44,916)	The economies of scale and utility cost decreases would reduce the costs of PV projects.
208								
209	Air Testing and Balancing for BLD 11							
210	Cost						\$ (10,000)	T&B not performed when 2nd floor remodeled.
211	Offset/rebate							
212	Net Cost after Rebate						\$ (10,000)	
213	Energy Reduction MMBTU							Estimated basis not available.
214	Energy Savings							
215	Net Project Savings through FY10						TBD	
216								
217	Commissioning BLD's 1, 16, 19							
218	Cost						\$ (30,000)	
219	Offset/rebate						\$ 5,000	Possible incentives from EWEB.
220	Net Cost after Rebate						\$ (25,000)	
221	Energy Reduction MMBTU						400	Estimated basis from FY06 DDC commissioning.
222	Energy Savings						\$ 6,240	
223	Net Project Savings through FY10						\$ (18,760)	Project just started. Project pays for itself in four years.
224								
225	20 KW PV Array - New							
226	Cost						\$ (155,000)	
227	Offset/rebate						\$ 39,525	Assumes BETC pass thru rate of 30.5% (under \$20K)
228	Net Cost after Rebate						\$ (115,475)	
229	Energy Reduction MMBTU						102	Energy reduction based on 1990 National Renewable Energy Laboratory Solar Data.
230	Energy Savings						\$ 1,593	
231	Net Project Savings through FY10						\$ (113,882)	The economies of scale and utility cost decreases would reduce the costs of PV projects.

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1		FY04-05 Actual	FY05-06 Actual	FY06-07 Projected	FY07-08 Projected	FY08-09 Projected	FY09-10 Projected	Notes
232								
233	Net Project Costs	\$ -	\$ 31,508	\$ (10,455)	\$ (71,160)	\$ (64,420)	\$ (149,125)	Sum of net costs of projects less department payments.
234	Total Energy Reduction MMBTU	122	15,212	16,812	20,601	22,610	23,244	Sum of energy reduction MMBTU for each project
235	Total Energy Savings	\$ 1,975	\$ 243,236	\$ 222,112	\$ 231,564	\$ 235,817	\$ 245,702	Sum of energy savings for each project
236								
237	Project Resources Over/Under Net Costs	\$ 67,604	\$ 193,399	\$ 204,826	\$ 343,027	\$ 528,586	\$ 687,727	Row 61 plus Row 241
238								
239	Ending Fund Balance	\$ 67,604	\$ 186,122	\$ 199,826	\$ 338,027	\$ 523,586	\$ 682,727	Row 52 plus Row 245. Ending Fund Balance = Energy Mngmnt Budget Carryover for following year
240								
241								
242	Governor's 2010 Initiative and "Campus Climate Challenge" Projects							In FY07 it would cost approximately \$140,000 more a year to purchase 100% windpower.
243								
244	Computer Power Management							
245	Cost			\$ -	\$ -	\$ -	\$ -	Costs and rebates from/to other departments
246	Offset/rebate			\$ -	\$ -	\$ -	\$ -	
247	Net Cost after Rebate			\$ -	\$ -	\$ -	\$ -	
248	Energy Reduction MMBTU			2,303	5,757	7,504	7,504	Assumes college total of 3529 monitors and computer boxes. FY07 implementation is 1000 monitors. FY08 year 1500. Balance FY09. FY10 total implementation.
249	Energy Savings			\$ 35,924	\$ 89,806	\$ 117,059	\$ 117,062	Basis from Energy Star.
250	Net Project Savings through FY10						\$ 359,851	Savings used to purchase wind power.