

	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR
1															
2															
3															
4	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
5															
6	2	1	1	1	1	1	1	1	1	1	1	1	1	0	0
7	4	4	3	3	3	3	3	3	3	3	3	3	3	1	0
8	8	7	6	5	5	5	5	5	5	5	5	5	5	5	2
9	15	29	26	23	21	19	18	18	18	18	18	18	18	18	18
10	0	27	51	46	41	37	33	32	32	32	32	32	32	32	32
11	0	0	11	22	20	18	16	14	14	14	14	14	14	14	14
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG
1															
2															
3															
4	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
5															
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	32	16	0	0	0	0	0	0	0	0	0	0	0	0	0
11	14	14	7	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV
1															
2															
3															
4	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059
5															
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP
1																				
2																				
3											Tax Depreciation Year									
4	2060	2061	2062	2063	2064	2065	2066	2067	2068	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
5																				
6	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	
7	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	
8	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	
9	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7		
10	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6		
11	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5		
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4		
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3		
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2		
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	
1																											
2																											
3																											
4	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	
5																											
6	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
7	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
9	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
10	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
11	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
12	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
13	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
14	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
15	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
17	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
18	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
19	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
20	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
21	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
22	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
23	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
24	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
25	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
26	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
27	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
28	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
29	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK
1																					
2																					
3																					
4	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
5																					
6	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
7	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
8	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
9	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
10	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
11	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
12	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
13	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
14	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
15	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
16	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
17	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
18	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
19	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
20	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
22	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
23	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
24	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
25	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
26	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
27	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
28	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
29	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
30	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
31	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
32	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
33	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
34	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
35	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
36	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
37	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
38	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
39	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
40	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
41	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
42	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
43	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
44	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
45	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
46	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
47	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
48	2054	43	0		1,214		0	0	0	0		0	0	0	0	0	0
49	2055	44	0		1,214		0	0	0	0		0	0	0	0	0	0
50	2056	45	0		1,214		0	0	0	0		0	0	0	0	0	0
51	2057	46	0		1,214		0	0	0	0		0	0	0	0	0	0
52	2058	47	0		1,214		0	0	0	0		0	0	0	0	0	0
53	2059	48	0		1,214		0	0	0	0		0	0	0	0	0	0
54	2060	49	0		1,214		0	0	0	0		0	0	0	0	0	0
55	2061	50	0		1,214		0	0	0	0		0	0	0	0	0	0
56	2062	51	0		1,214		0	0	0	0		0	0	0	0	0	0
57	2063	52	0		1,214		0	0	0	0		0	0	0	0	0	0
58	2064	53	0		1,214		0	0	0	0		0	0	0	0	0	0
59	2065	54	0		1,214		0	0	0	0		0	0	0	0	0	0
60	2066	55	0		1,214		0	0	0	0		0	0	0	0	0	0
61	2067	56	0		1,214		0	0	0	0		0	0	0	0	0	0
62	2068	57	0		1,214		0	0	0	0		0	0	0	0	0	0
63																	
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80																	

	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
48	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
63				1	3	6	18	39	49	49	49	49	49	49	49	49
64																
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	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	49	49	49	49	49	49	49	49	49	49	49	49	48	46	43	31
64																
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	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64																
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	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	10
64																
65																
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74																
75																
76																
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78																
79																
80																

TAX (MACRS) DEPRECIATION RAT
 HALF YEAR CONVENTION
 5 Year Property
 7 Year Property
 10 Year Property
 15 Year Property
 20 Year Property
 30 Year Property
 15

	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	28	67	99	100	91	82	76	72	72	72	72	72	71	69	65
64															
65															
66															
67															
68															
69															
70	ES														
71															
72		1	2	3	4	5	6	7	8	9	10	11	12	13	14
73		20.0%	32.0%	19.2%	11.5%	11.5%	5.8%								
74		14.3%	24.5%	17.5%	12.5%	8.9%	8.9%	8.9%	4.5%						
75		10.0%	18.0%	14.4%	11.5%	9.2%	7.4%	6.6%	6.6%	6.6%	6.6%	3.3%			
76		5.0%	9.5%	8.6%	7.7%	6.9%	6.2%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%
77		3.8%	7.2%	6.7%	6.2%	5.7%	5.3%	4.9%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
78		1.7%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
79		1	2	3	4	5	6	7	8	9	10	11	12	13	14
80		5.0%	9.5%	8.6%	7.7%	6.9%	6.2%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%

	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	54	29	7	0	0	0	0	0	0	0	0	0	0	0	0
64															
65															
66															
67															
68															
69															
70															
71															
72	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
73															
74															
75															
76	5.9%	3.0%													
77	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	2.2%								
78	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
79	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
80	5.9%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64															
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66															
67															
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69															
70															
71															
72	30	31													
73															
74															
75															
76															
77															
78	2.6%	2.6%													
79	30	31													
80	0.0%	0.0%													

	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP
48	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0											
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	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK
48	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
49	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
50	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13
51	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12
52	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
53	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10
54	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9
55	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Proforma Financial Projection																
2																	
3	Income statement			<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
4																	
5		Revenue			4	11	26	76	159	190	181	173	165	157	150	143	136
6																	
7		Expenses															
8		Fixed O&M			1	1	4	9	13	14	13	13	12	12	11	10	10
9		Variable O&M			-	-	-	-	-	-	-	-	-	-	-	-	-
10		Depreciation			1	3	6	18	39	49	49	49	49	49	49	49	49
11					1	4	10	27	52	63	62	61	61	60	60	59	58
12																	
13		Operating profit (EBIT)			2	7	16	49	107	127	119	112	104	97	91	84	77
14																	
15		Interest expense			0	2	4	11	24	28	27	25	23	22	20	19	17
16																	
17		EBT			2	6	12	38	83	99	93	87	81	76	70	65	60
18																	
19		Tax			1	2	5	15	33	40	37	35	32	30	28	26	24
20																	
21		Net Income (NIAC)			1	3	7	23	50	59	56	52	49	45	42	39	36
22																	
23		Deferred taxes			0	1	2	4	11	20	21	17	13	11	10	9	9
24																	
25																	
26	Balance sheet			<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
27																	
28		Assets		20	67	143	440	956	1,147	1,099	1,050	1,001	953	904	856	807	759
29																	
30		Liabilities															
31		LT Debt		10	33	71	219	475	565	530	496	463	432	402	373	344	315
32		Cum Deferred Taxes		-	0	1	2	7	18	38	59	75	89	100	109	119	128
33		Equity		10	33	71	219	475	565	530	496	463	432	402	373	344	315
34				20	67	143	440	956	1,147	1,099	1,050	1,001	953	904	856	807	759
35																	
36																	
37	Free Cash Flow to Equity			<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
38																	
39		EBT		-	2	6	12	38	83	99	93	87	81	76	70	65	60
40		Depreciation		-	1	3	6	18	39	49	49	49	49	49	49	49	49
41		Cash Taxes		-	(1)	(2)	(3)	(11)	(22)	(19)	(16)	(18)	(19)	(19)	(19)	(17)	(15)
42		Capital Expenditure		(20)	(48)	(79)	(303)	(534)	(230)	-	-	-	-	-	-	-	-
43		Residual Value		-	-	-	-	-	-	-	-	-	-	-	-	-	-
44		Debt Finance		10	24	40	152	267	115	-	-	-	-	-	-	-	-
45		Debt Repayment (loan principal)			(0)	(2)	(4)	(11)	(25)	(34)	(35)	(33)	(31)	(30)	(29)	(29)	(29)
46				(10)	(22)	(34)	(140)	(233)	(40)	94	90	85	80	75	71	68	65
47																	
48		NPV at 10.5% DR:		0.000													
49		IRR:		10.5%													

	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1																		
2																		
3	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>
4																		
5	129	122	114	107	100	94	87	82	78	74	70	66	62	56	49	34	10	0
6																		
7																		
8	9	9	8	7	7	6	6	5	4	4	3	3	2	1	1	0	0	0
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	49	49	49	49	49	49	49	49	49	49	49	49	48	46	43	31	9	-
11	58	57	57	56	55	55	54	53	53	52	52	51	50	47	43	31	9	0
12																		
13	71	64	58	51	45	39	33	29	25	22	18	15	12	9	6	3	1	0
14																		
15	16	14	13	11	10	9	7	6	6	5	4	3	3	2	1	1	0	0
16																		
17	55	50	45	40	35	30	26	22	19	17	14	12	9	7	4	2	0	0
18																		
19	22	20	18	16	14	12	10	9	8	7	6	5	4	3	2	1	0	0
20																		
21	33	30	27	24	21	18	15	13	12	10	9	7	6	4	3	1	0	0
22																		
23	9	9	9	8	7	2	(8)	(17)	(19)	(19)	(19)	(19)	(19)	(18)	(17)	(12)	(4)	-
24																		
25																		
26	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>
27																		
28	710	662	613	564	516	467	419	370	322	273	225	176	128	82	40	9	0	-
29																		
30																		
31	287	258	229	200	173	147	127	111	97	82	67	53	38	25	12	3	0	(0)
32	137	146	155	164	170	172	165	148	129	109	90	70	51	33	16	4	-	0
33	287	258	229	200	173	147	127	111	97	82	67	53	38	25	12	3	0	(0)
34	710	662	613	564	516	467	419	370	322	273	225	176	128	82	40	9	0	-
35																		
36																		
37	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>
38																		
39	55	50	45	40	35	30	26	22	19	17	14	12	9	7	4	2	0	0
40	49	49	49	49	49	49	49	49	49	49	49	49	48	46	43	31	9	-
41	(13)	(11)	(9)	(8)	(7)	(10)	(18)	(26)	(27)	(26)	(25)	(24)	(23)	(21)	(19)	(13)	(4)	(0)
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	(29)	(29)	(29)	(28)	(28)	(25)	(20)	(16)	(15)	(15)	(15)	(15)	(14)	(14)	(13)	(9)	(3)	(0)
46	62	59	56	52	49	44	36	29	26	25	23	22	20	18	15	10	3	(0)
47																		
48																		
49																		

	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB
1																			
2																			
3	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>	<u>2047</u>	<u>2048</u>	<u>2049</u>	<u>2050</u>	<u>2051</u>	<u>2052</u>	<u>2053</u>	<u>2054</u>	<u>2055</u>	<u>2056</u>	<u>2057</u>	<u>2058</u>	<u>2059</u>	<u>2060</u>	<u>2061</u>
4																			
5	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6																			
7																			
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12																			
13	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14																			
15	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16																			
17	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18																			
19	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20																			
21	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22																			
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24																			
25																			
26	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>	<u>2047</u>	<u>2048</u>	<u>2049</u>	<u>2050</u>	<u>2051</u>	<u>2052</u>	<u>2053</u>	<u>2054</u>	<u>2055</u>	<u>2056</u>	<u>2057</u>	<u>2058</u>	<u>2059</u>	<u>2060</u>	<u>2061</u>
27																			
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29																			
30																			
31	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35																			
36																			
37	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>	<u>2047</u>	<u>2048</u>	<u>2049</u>	<u>2050</u>	<u>2051</u>	<u>2052</u>	<u>2053</u>	<u>2054</u>	<u>2055</u>	<u>2056</u>	<u>2057</u>	<u>2058</u>	<u>2059</u>	<u>2060</u>	<u>2061</u>
38																			
39	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
47																			
48																			
49																			

	BC	BD	BE	BF	BG	BH	BI
1							
2							
3	<u>2062</u>	<u>2063</u>	<u>2064</u>	<u>2065</u>	<u>2066</u>	<u>2067</u>	<u>2068</u>
4							
5	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6							
7							
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-
12							
13	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14							
15	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16							
17	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18							
19	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20							
21	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22							
23	-	-	-	-	-	-	-
24							
25							
26	<u>2062</u>	<u>2063</u>	<u>2064</u>	<u>2065</u>	<u>2066</u>	<u>2067</u>	<u>2068</u>
27							
28	-	-	-	-	-	-	-
29							
30							
31	(0)	(0)	(0)	(0)	(0)	(0)	(0)
32	0	0	0	0	0	0	0
33	(0)	(0)	(0)	(0)	(0)	(0)	(0)
34	-	-	-	-	-	-	-
35							
36							
37	<u>2062</u>	<u>2063</u>	<u>2064</u>	<u>2065</u>	<u>2066</u>	<u>2067</u>	<u>2068</u>
38							
39	(0)	(0)	(0)	(0)	(0)	(0)	(0)
40	-	-	-	-	-	-	-
41	0	0	0	0	0	0	0
42	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-
46	(0)	(0)	(0)	(0)	(0)	(0)	(0)
47							
48							
49							

	A	B	C	D	E	F	G
1		Revenue Requirements Template: Inputs					
2							
3		Start year	2011				
4		Asset life	25				
5		Include deferred tax impact	Yes				
6		Tax life	15				
7							
8		Capital structure					
9		Debt	50%				
10		Equity	50%				
11							
12		Interest rate (pre-tax)	5.0%				
13		Equity return (post-tax)	10.5%				
14		Tax rate	40%				
15							
16		WACC					
17		Pre-tax	11.3%				
18		Post-tax	6.8%				
19							
20		Property tax	0.25%				
21		Insurance	1.00%				
22							
23							Choose scenario
24		Total LG&E CapEx	Scenario 1	Scenario 2	Scenario 3	Scenario 4	4
25			Air (exc SCR)	Air (inc SCR)	Air (inc SCR) + C	Air (exc SCR) + CCP	
26		2010	\$1.8	\$1.8	\$1.8	\$1.8	\$1.8
27		2011	\$52.6	\$52.6	\$52.8	\$52.8	\$52.8
28		2012	\$231.3	\$234.6	\$237.9	\$234.6	\$234.6
29		2013	\$492.7	\$527.8	\$528.5	\$493.5	\$493.5
30		2014	\$575.1	\$649.7	\$666.8	\$592.2	\$592.2
31		2015	\$346.8	\$447.7	\$533.7	\$432.7	\$432.7
32		2016	\$74.1	\$123.6	\$213.5	\$163.9	\$163.9
33							
34			\$1,774.5	\$2,037.8	\$2,234.9	\$1,971.6	

	A	B
1	Variable O&M	
2		
3	2011	\$0.00
4	2012	\$0.00
5	2013	\$0.00
6	2014	\$0.00
7	2015	\$0.00
8	2016	\$0.00
9	2017	\$0.00
10	2018	\$0.00
11	2019	\$0.00
12	2020	\$0.00
13	2021	\$0.00
14	2022	\$0.00
15	2023	\$0.00
16	2024	\$0.00
17	2025	\$0.00
18	2026	\$0.00
19	2027	\$0.00
20	2028	\$0.00
21	2029	\$0.00
22	2030	\$0.00
23	2031	\$0.00
24	2032	\$0.00
25	2033	\$0.00
26	2034	\$0.00
27	2035	\$0.00
28	2036	\$0.00
29	2037	\$0.00
30	2038	\$0.00
31	2039	\$0.00
32	2040	\$0.00
33	2041	\$0.00
34	2042	\$0.00
35	2043	\$0.00
36	2044	\$0.00
37	2045	\$0.00
38	2046	\$0.00
39	2047	\$0.00
40	2048	\$0.00
41	2049	\$0.00
42	2050	\$0.00
43	2051	\$0.00
44	2052	\$0.00
45	2053	\$0.00
46	2054	\$0.00
47	2055	\$0.00
48	2056	\$0.00
49	2057	\$0.00
50	2058	\$0.00
51	2059	\$0.00

	A	B
52	2060	\$0.00
53	2061	\$0.00
54	2062	\$0.00
55	2063	\$0.00
56	2064	\$0.00
57	2065	\$0.00
58	2066	\$0.00
59	2067	\$0.00
60	2068	\$0.00

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Capital-related Revenue Requirements																
2																	
3			CapEx		Retirements		GBV	Ann Depr	Cum Depr	NBV		Revenue Requirements					
4					(cumulative)							Depr	Interest	Dividend	Tax & Ins	Total	
5	2011	0	53		0		53			53		0	0	0			0
6	2012	1	235		0		287	2	2	285		2	1	5	2		10
7	2013	2	493		0		781	11	14	767		11	7	25	7		50
8	2014	3	592		0		1,373	31	45	1,328		31	19	67	13		130
9	2015	4	433		0		1,806	55	100	1,706		55	33	115	19		222
10	2016	5	164		0		1,970	72	172	1,798		72	42	147	22		283
11	2017	6	0		0		1,970	79	251	1,719		79	44	152	22		297
12	2018	7	0		0		1,970	79	330	1,640		79	41	143	21		283
13	2019	8	0		0		1,970	79	408	1,561		79	38	133	20		270
14	2020	9	0		0		1,970	79	487	1,483		79	36	124	19		258
15	2021	10	0		0		1,970	79	566	1,404		79	33	116	18		246
16	2022	11	0		0		1,970	79	645	1,325		79	31	108	17		234
17	2023	12	0		0		1,970	79	724	1,246		79	28	99	16		223
18	2024	13	0		0		1,970	79	802	1,167		79	26	91	15		211
19	2025	14	0		0		1,970	79	881	1,089		79	24	83	14		200
20	2026	15	0		0		1,970	79	960	1,010		79	21	75	13		188
21	2027	16	0		0		1,970	79	1,039	931		79	19	67	12		176
22	2028	17	0		0		1,970	79	1,117	852		79	17	58	11		165
23	2029	18	0		0		1,970	79	1,196	773		79	14	51	10		154
24	2030	19	0		0		1,970	79	1,275	695		79	12	43	9		144
25	2031	20	0		0		1,970	79	1,354	616		79	11	37	8		135
26	2032	21	0		0		1,970	79	1,433	537		79	9	33	7		128
27	2033	22	0		0		1,970	79	1,511	458		79	8	28	6		121
28	2034	23	0		0		1,970	79	1,590	380		79	7	24	5		115
29	2035	24	0		0		1,970	79	1,669	301		79	6	20	4		109
30	2036	25	0		53		1,970	79	1,748	222		79	5	16	3		102
31	2037	26	0		287		1,917	77	1,772	145		77	3	12	2		94
32	2038	27	0		781		1,682	67	1,604	78		67	2	8	1		78
33	2039	28	0		1,373		1,189	48	1,158	30		48	1	4	1		53
34	2040	29	0		1,806		597	24	590	7		24	0	2	0		26
35	2041	30	0		1,970		164	7	164	0		7	0	0	0		7
36	2042	31	0		1,970		0	0	0	0		0	0	0	0		0
37	2043	32	0		1,970		0	0	0	0		0	0	0	0		0
38	2044	33	0		1,970		0	0	0	0		0	0	0	0		0
39	2045	34	0		1,970		0	0	0	0		0	0	0	0		0
40	2046	35	0		1,970		0	0	0	0		0	0	0	0		0
41	2047	36	0		1,970		0	0	0	0		0	0	0	0		0
42	2048	37	0		1,970		0	0	0	0		0	0	0	0		0
43	2049	38	0		1,970		0	0	0	0		0	0	0	0		0
44	2050	39	0		1,970		0	0	0	0		0	0	0	0		0
45	2051	40	0		1,970		0	0	0	0		0	0	0	0		0
46	2052	41	0		1,970		0	0	0	0		0	0	0	0		0
47	2053	42	0		1,970		0	0	0	0		0	0	0	0		0

	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
1																
2																
3	Tax Depr	Def Tax	Book Deprecation													
4			2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
5																
6	3	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2
7	17	2	0	9	9	9	9	9	9	9	9	9	9	9	9	9
8	51	8	0	0	20	20	20	20	20	20	20	20	20	20	20	20
9	101	18	0	0	0	24	24	24	24	24	24	24	24	24	24	24
10	142	28	0	0	0	0	17	17	17	17	17	17	17	17	17	17
11	157	31	0	0	0	0	0	7	7	7	7	7	7	7	7	7
12	150	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	136	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	126	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	119	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	117	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	116	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	116	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	116	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	116	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	115	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	106	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	85	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	53	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	22	-23	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	5	-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	-32	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	-32	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	-32	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	-32	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	-31	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	-27	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
1																
2																
3																
4	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
5																
6	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0
7	9	9	9	9	9	9	9	9	9	9	9	9	9	0	0	0
8	20	20	20	20	20	20	20	20	20	20	20	20	20	20	0	0
9	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	0
10	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
11	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM
1																
2																
3																
4	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
5																
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC
1																
2																
3														Tax Depreciation		
4	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068		2012	2013	2014
5																
6	0	0	0	0	0	0	0	0	0	0	0	0		3	5	5
7	0	0	0	0	0	0	0	0	0	0	0	0		0	12	22
8	0	0	0	0	0	0	0	0	0	0	0	0		0	0	25
9	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0

	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR
1															
2															
3															
4	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
5															
6	4	4	3	3	3	3	3	3	3	3	3	3	2	0	0
7	20	18	16	15	14	14	14	14	14	14	14	14	14	7	0
8	47	42	38	34	31	29	29	29	29	29	29	29	29	29	15
9	30	56	51	46	41	37	35	35	35	35	35	35	35	35	35
10	0	22	41	37	33	30	27	26	26	26	26	26	26	26	26
11	0	0	8	16	14	13	11	10	10	10	10	10	10	10	10
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG
1															
2															
3															
4	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
5															
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	26	13	0	0	0	0	0	0	0	0	0	0	0	0	0
11	10	10	5	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV
1															
2															
3															
4	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059
5															
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP
1																				
2																				
3											Tax Depreciation Year									
4	2060	2061	2062	2063	2064	2065	2066	2067	2068		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
5																				
6	0	0	0	0	0	0	0	0	0		1	2	3	4	5	6	7	8	9	10
7	0	0	0	0	0	0	0	0	0		0	1	2	3	4	5	6	7	8	9
8	0	0	0	0	0	0	0	0	0		0	0	1	2	3	4	5	6	7	8
9	0	0	0	0	0	0	0	0	0		0	0	0	1	2	3	4	5	6	7
10	0	0	0	0	0	0	0	0	0		0	0	0	0	1	2	3	4	5	6
11	0	0	0	0	0	0	0	0	0		0	0	0	0	0	1	2	3	4	5
12	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	1	2	3	4
13	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	1	2	3
14	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	1	2
15	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	1
16	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0

	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	
1																											
2																											
3																											
4	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	
5																											
6	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
7	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
9	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
10	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
11	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
12	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
13	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
14	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
15	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
17	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
18	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
19	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
20	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
21	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
22	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
23	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
24	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
25	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
26	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
27	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
28	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
29	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	

	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK
1																					
2																					
3																					
4	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
5																					
6	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
7	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
8	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
9	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
10	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
11	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
12	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
13	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
14	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
15	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
16	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
17	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
18	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
19	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
20	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
22	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
23	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
24	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
25	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
26	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
27	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
28	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
29	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
30	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
31	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
32	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
33	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
34	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
35	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
36	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
37	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
38	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
39	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
40	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
41	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
42	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
43	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
44	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
45	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
46	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
47	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
48	2054	43	0		1,970		0	0	0	0		0	0	0	0	0	0
49	2055	44	0		1,970		0	0	0	0		0	0	0	0	0	0
50	2056	45	0		1,970		0	0	0	0		0	0	0	0	0	0
51	2057	46	0		1,970		0	0	0	0		0	0	0	0	0	0
52	2058	47	0		1,970		0	0	0	0		0	0	0	0	0	0
53	2059	48	0		1,970		0	0	0	0		0	0	0	0	0	0
54	2060	49	0		1,970		0	0	0	0		0	0	0	0	0	0
55	2061	50	0		1,970		0	0	0	0		0	0	0	0	0	0
56	2062	51	0		1,970		0	0	0	0		0	0	0	0	0	0
57	2063	52	0		1,970		0	0	0	0		0	0	0	0	0	0
58	2064	53	0		1,970		0	0	0	0		0	0	0	0	0	0
59	2065	54	0		1,970		0	0	0	0		0	0	0	0	0	0
60	2066	55	0		1,970		0	0	0	0		0	0	0	0	0	0
61	2067	56	0		1,970		0	0	0	0		0	0	0	0	0	0
62	2068	57	0		1,970		0	0	0	0		0	0	0	0	0	0
63																	
64																	
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	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
48	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
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52	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
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54	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
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62	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
63				2	11	31	55	72	79	79	79	79	79	79	79	79
64																
65																
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	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	79	79	79	79	79	79	79	79	79	79	79	79	77	67	48	24
64																
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	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0	0	0	0	0	3	17	51
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80																

TAX (MACRS) DEPRECIATION RAT
 HALF YEAR CONVENTION
 5 Year Property
 7 Year Property
 10 Year Property
 15 Year Property
 20 Year Property
 30 Year Property
 15

	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	101	142	157	150	136	126	119	117	116	116	116	116	115	106	85
64															
65															
66															
67															
68															
69															
70	ES														
71															
72		1	2	3	4	5	6	7	8	9	10	11	12	13	14
73		20.0%	32.0%	19.2%	11.5%	11.5%	5.8%								
74		14.3%	24.5%	17.5%	12.5%	8.9%	8.9%	8.9%	4.5%						
75		10.0%	18.0%	14.4%	11.5%	9.2%	7.4%	6.6%	6.6%	6.6%	6.6%	3.3%			
76		5.0%	9.5%	8.6%	7.7%	6.9%	6.2%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%
77		3.8%	7.2%	6.7%	6.2%	5.7%	5.3%	4.9%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
78		1.7%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
79		1	2	3	4	5	6	7	8	9	10	11	12	13	14
80		5.0%	9.5%	8.6%	7.7%	6.9%	6.2%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%

	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	53	22	5	0	0	0	0	0	0	0	0	0	0	0	0
64															
65															
66															
67															
68															
69															
70															
71															
72	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
73															
74															
75															
76	5.9%	3.0%													
77	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	2.2%								
78	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
79	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
80	5.9%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64															
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66															
67															
68															
69															
70															
71															
72	30	31													
73															
74															
75															
76															
77															
78	2.6%	2.6%													
79	30	31													
80	0.0%	0.0%													

	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP
48	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0											
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	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK
48	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
49	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
50	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13
51	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12
52	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
53	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10
54	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9
55	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
63																					
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Proforma Financial Projection																
2																	
3	Income statement			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
4																	
5		Revenue			10	50	130	222	283	297	283	270	258	246	234	223	211
6																	
7		Expenses															
8		Fixed O&M			2	7	13	19	22	22	21	20	19	18	17	16	15
9		Variable O&M			-	-	-	-	-	-	-	-	-	-	-	-	-
10		Depreciation			2	11	31	55	72	79	79	79	79	79	79	79	79
11					4	18	44	74	94	101	100	99	98	97	96	95	94
12																	
13		Operating profit (EBIT)			6	32	86	148	189	196	183	171	160	149	138	128	117
14																	
15		Interest expense			1	7	19	33	42	44	41	38	36	33	31	28	26
16																	
17		EBT			5	25	67	115	147	152	143	133	124	116	108	99	91
18																	
19		Tax			2	10	27	46	59	61	57	53	50	46	43	40	36
20																	
21		Net Income (NIAC)			3	15	40	69	88	91	86	80	75	70	65	60	55
22																	
23		Deferred taxes			0	2	8	18	28	31	29	23	19	16	15	15	15
24																	
25																	
26	Balance sheet			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
27																	
28		Assets			53	285	767	1,328	1,706	1,798	1,719	1,640	1,561	1,483	1,404	1,325	1,246
29																	
30		Liabilities															
31		LT Debt			26	143	382	659	839	871	815	762	711	662	615	568	521
32		Cum Deferred Taxes			-	0	2	10	29	57	88	117	139	158	174	190	205
33		Equity			26	143	382	659	839	871	815	762	711	662	615	568	521
34					53	285	767	1,328	1,706	1,798	1,719	1,640	1,561	1,483	1,404	1,325	1,246
35																	
36																	
37	Free Cash Flow to Equity			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
38																	
39		EBT			-	5	25	67	115	147	143	133	124	116	108	99	91
40		Depreciation			-	2	11	31	55	72	79	79	79	79	79	79	79
41		Cash Taxes			-	(2)	(8)	(19)	(28)	(31)	(29)	(30)	(31)	(30)	(28)	(25)	(21)
42		Capital Expenditure			(53)	(235)	(493)	(592)	(433)	(164)	-	-	-	-	-	-	-
43		Residual Value			-	-	-	-	-	-	-	-	-	-	-	-	-
44		Debt Finance			26	117	247	296	216	82	-	-	-	-	-	-	-
45		Debt Repayment (loan principal)			(1)	(7)	(20)	(37)	(50)	(55)	(54)	(51)	(49)	(48)	(47)	(47)	(47)
46					(26)	(113)	(225)	(236)	(111)	56	147	139	131	123	117	112	107
47																	
48		NPV at 10.5% DR:			0.000												
49		IRR:			10.5%												

	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1																		
2																		
3	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>
4																		
5	200	188	176	165	154	144	135	128	121	115	109	102	94	78	53	26	7	0
6																		
7																		
8	14	13	12	11	10	9	8	7	6	5	4	3	2	1	1	0	0	0
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	79	79	79	79	79	79	79	79	79	79	79	79	77	67	48	24	7	-
11	93	92	91	90	89	88	87	86	85	84	83	82	79	69	48	24	7	0
12																		
13	107	96	86	75	65	56	48	42	36	31	26	20	15	10	5	2	0	0
14																		
15	24	21	19	17	14	12	11	9	8	7	6	5	3	2	1	0	0	0
16																		
17	83	75	67	58	51	43	37	33	28	24	20	16	12	8	4	2	0	0
18																		
19	33	30	27	23	20	17	15	13	11	10	8	6	5	3	2	1	0	0
20																		
21	50	45	40	35	30	26	22	20	17	14	12	9	7	5	2	1	0	0
22																		
23	15	15	14	11	2	(10)	(23)	(30)	(32)	(32)	(32)	(32)	(31)	(27)	(19)	(10)	(3)	-
24																		
25																		
26	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>
27																		
28	1,089	1,010	931	852	773	695	616	537	458	380	301	222	145	78	30	7	0	-
29																		
30																		
31	427	380	334	289	248	214	186	161	137	114	90	67	44	23	9	2	0	(0)
32	235	250	264	275	277	267	244	215	183	152	120	89	58	31	12	3	0	0
33	427	380	334	289	248	214	186	161	137	114	90	67	44	23	9	2	0	(0)
34	1,089	1,010	931	852	773	695	616	537	458	380	301	222	145	78	30	7	0	-
35																		
36																		
37	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>
38																		
39	83	75	67	58	51	43	37	33	28	24	20	16	12	8	4	2	0	0
40	79	79	79	79	79	79	79	79	79	79	79	79	77	67	48	24	7	-
41	(18)	(15)	(12)	(12)	(18)	(28)	(38)	(43)	(43)	(41)	(39)	(38)	(35)	(30)	(21)	(10)	(3)	(0)
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	(47)	(47)	(47)	(45)	(41)	(34)	(28)	(25)	(24)	(24)	(24)	(24)	(23)	(20)	(14)	(7)	(2)	(0)
46	97	92	87	80	71	60	51	44	41	38	36	33	30	25	17	8	2	(0)
47																		
48																		
49																		

	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB
1																			
2																			
3	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>	<u>2047</u>	<u>2048</u>	<u>2049</u>	<u>2050</u>	<u>2051</u>	<u>2052</u>	<u>2053</u>	<u>2054</u>	<u>2055</u>	<u>2056</u>	<u>2057</u>	<u>2058</u>	<u>2059</u>	<u>2060</u>	<u>2061</u>
4																			
5	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6																			
7																			
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12																			
13	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14																			
15	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16																			
17	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18																			
19	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20																			
21	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22																			
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24																			
25																			
26	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>	<u>2047</u>	<u>2048</u>	<u>2049</u>	<u>2050</u>	<u>2051</u>	<u>2052</u>	<u>2053</u>	<u>2054</u>	<u>2055</u>	<u>2056</u>	<u>2057</u>	<u>2058</u>	<u>2059</u>	<u>2060</u>	<u>2061</u>
27																			
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29																			
30																			
31	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35																			
36																			
37	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>	<u>2047</u>	<u>2048</u>	<u>2049</u>	<u>2050</u>	<u>2051</u>	<u>2052</u>	<u>2053</u>	<u>2054</u>	<u>2055</u>	<u>2056</u>	<u>2057</u>	<u>2058</u>	<u>2059</u>	<u>2060</u>	<u>2061</u>
38																			
39	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
47																			
48																			
49																			

	BC	BD	BE	BF	BG	BH	BI
1							
2							
3	<u>2062</u>	<u>2063</u>	<u>2064</u>	<u>2065</u>	<u>2066</u>	<u>2067</u>	<u>2068</u>
4							
5	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6							
7							
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-
12							
13	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14							
15	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16							
17	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18							
19	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20							
21	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22							
23	-	-	-	-	-	-	-
24							
25							
26	<u>2062</u>	<u>2063</u>	<u>2064</u>	<u>2065</u>	<u>2066</u>	<u>2067</u>	<u>2068</u>
27							
28	-	-	-	-	-	-	-
29							
30							
31	(0)	(0)	(0)	(0)	(0)	(0)	(0)
32	0	0	0	0	0	0	0
33	(0)	(0)	(0)	(0)	(0)	(0)	(0)
34	-	-	-	-	-	-	-
35							
36							
37	<u>2062</u>	<u>2063</u>	<u>2064</u>	<u>2065</u>	<u>2066</u>	<u>2067</u>	<u>2068</u>
38							
39	(0)	(0)	(0)	(0)	(0)	(0)	(0)
40	-	-	-	-	-	-	-
41	0	0	0	0	0	0	0
42	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-
46	(0)	(0)	(0)	(0)	(0)	(0)	(0)
47							
48							
49							

From: Thomson, Robert
To: Conroy, Robert; Foxworthy, Carol
CC: Schram, Chuck
Sent: 11/3/2010 9:41:27 AM
Subject: Potential rate impacts of EPA proposals
Attachments: EPA Emissions - Draft 15 2010_1_10.pptx; Rate impact of EPA proposals 10_22_10.xlsx

Robert & Carol,

Chuck asked me to forward this 'EPA rate impact' file to you, where we have taken one further step from the previous 'combined company' view by allocating the \$542 million incremental revenue requirement (in 2019) between the two utilities.

In the tab "Company allocation" you'll see that we looked at two sets of cost estimates upon which to base the company allocation. At the top of the sheet we took the cost estimates from Slide 11 of a PowerPoint presentation on the potential EPA impact (also attached below), allocating Brown, Ghent and Green River costs to KU and Cane Run, Mill Creek and Trimble 1 costs to LG&E (i.e. assuming that Cane Run is upgraded rather than replaced). This yielded a 38% KU / 62% LG&E split. In the lower half of the sheet we took revised (B&V estimate) costs for Brown, Ghent, Mill Creek and Trimble and assumed that Cane Run would be replaced by a CCCT (allocated 100% to LG&E). This allocation produced a similar result - 34% KU / 66% LG&E. For purposes of illustration we applied the latter $\frac{1}{3}$ / $\frac{2}{3}$ split to the \$542 million (incremental) revenue requirement in 2019 - \$185 million to KU and \$357 million to LG&E - and then proceeded to allocate between customer classes (residential, industrial, commercial) as before, on a revenue share basis (using the revenue projections for 2019 provided by Carol) (see pages 3 & 4 of tab "Rate Impact"). I assume these 2019 revenue projections (by class) represent base rate revenue (only), since the total projected 2019 revenue is lower than 2009 actual (all-inclusive) revenue.

As before, after allocating the \$542 million by company and then by class, we divide the class increments by projected (2019) class sales to derive the \$/kWh 'impact', which is then compared to all-in average \$/kWh revenue in July 2010.

Clearly there are other methodologies that we could apply to justify other allocations; however this simple approach highlights potential (escalating) challenges ahead in squaring joint planning and dispatch with individual asset ownership.

Bob



**Proposed EPA Regulations Will
Increase the Cost of Coal-fired
Electricity**

October 1, 2010

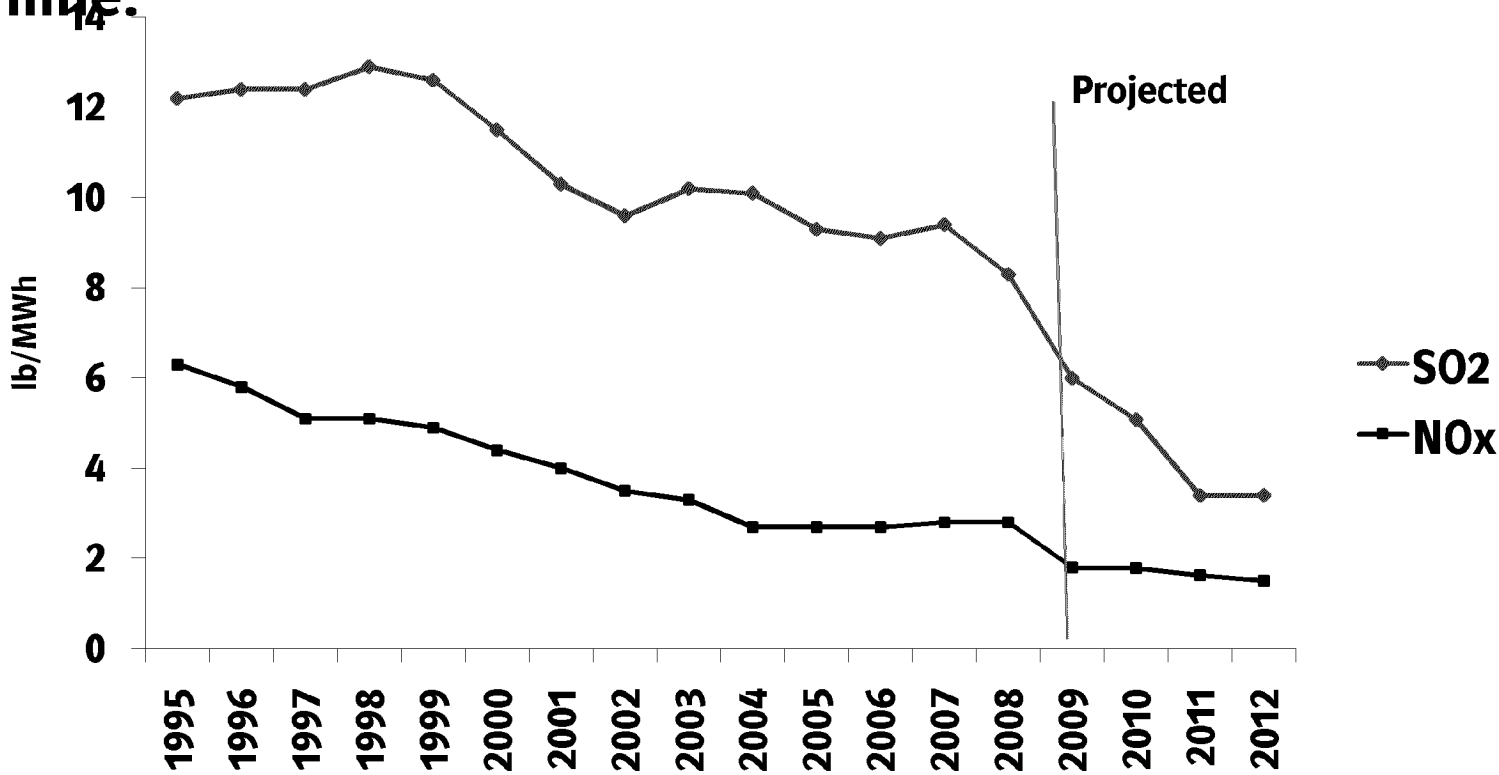


Environmental compliance is a high priority for E.ON U.S.

- **In the 1970's, we pioneered flue gas desulfurization (FGD) or "scrubber" technology used to control SO₂.**
- **LG&E and KU and their customers have spent \$2.6 billion on emission controls since the 1970's.**
- **Our new Trimble County 2 generating unit will be among the cleanest coal-fired power plants in the U.S., as evidenced by the receipt of the advance coal technology tax incentive for efficiency and environmental controls. Control Technology installed on TC2 includes the following:**
 - **Selective Catalytic Reduction (SCR)**
 - **Dry Electrostatic Precipitator (ESP)**
 - **Powdered Activated Carbon Injection**
 - **Fabric Filter Baghouse**
 - **Wet Flue Gas Desulfurization (WFGD)**
 - **Wet Electrostatic Precipitator (WESP)**



Since 1995, LG&E/KU coal SO₂ emission rates have been reduced by 50%; NO_x emission rates by 70%. Further reductions are expected as TC2 and Brown FGD are online.





Unprecedented number of proposed regulations

EPA is proposing an unprecedented number of regulations that will have a major impact on coal-fired utilities and their customers. The significant risks are as follows –

- **Absence of a comprehensive and coordinated federal strategy compels implementation on a piecemeal basis.**
- **Reversal of prior regulatory determinations will generate large economic impacts.**
- **Inconsistent deadlines will cause unnecessary compliance costs.**
- **Short deadlines are compromising state and utility efforts to prepare proper implementation plans.**
- **Practical implication: We will be proposing construction projects without benefit of final regulations in order to meet federal deadlines for compliance because of long lead time in fabrication and construction.**



New air regulations

National Ambient Air Quality Standards (NAAQS) - lowers the SO₂, NO_x, ozone, and Particulate Matter (PM) standards which will make Louisville a "nonattainment" area subject to federal sanctions.

Clean Air Transport Rule (CATR) - aimed at reducing air quality problems (SO₂, NO_x, ozone and PM) in the eastern U.S.

Maximum Achievable Control Technology (MACT) for Hazardous Air Pollutants (HAP) - new federal focus on plant by plant controls (as opposed to a system basis) will dramatically increase the cost of reducing mercury and HAP other emissions.

Carbon Dioxide (CO₂) Best Available Control Technology (BACT) - EPA will require implementation of BACT despite the consensus that no commercial scale control technology is currently available.



New coal combustion products and water regulations

Coal Combustion Residuals (CCR) - (Ash ponds and landfills) - Despite past EPA determinations that CCPs do not pose any significant human health or environmental risks, EPA is considering designation of CCPs as a "hazardous waste" subject to extensive requirements or modifying current "non-hazardous" rules with more stringent requirements. Both approaches will increase costs.

Water quality - EPA is revising cooling water withdrawal and water discharge guidelines and standards.



The new EPA regulations will significantly impact Kentucky's electric customers

The new regulations are focused on coal-fired power plants.

95% of Kentucky's electricity is provided by coal.

LG&E/KU will comply with any new EPA regulations in the most cost effective manner possible, but the cost increase will be significant.



Short compliance timelines likely once final rules are issued

National Ambient Air Quality Standards (NAAQS) for NO₂ and SO₂ – Issued: February - June 2010; Compliance: 2016, 2017 respectively

Clean Air Transport Rule (CATR) – Projected Final Rule: June 2011; Compliance: January 2012 & January 2014

Maximum Achievable Control Technology (MACT) for Hazardous Air Pollutants (HAP) – Projected Final Rule: November 2011; Compliance: January 2015

Carbon Dioxide (CO₂) Best Available Control Technology (BACT) – Issued: May 2010; Compliance: January 2011

Coal Combustion Residuals (CCR) – Alternatives Proposed: May 2010; Projected Final Rule: uncertain; Compliance: within 5 years of final rule

Water quality – Water withdrawal Projected Issue date: December 2010; Water Discharge Projected Issue date: 2012; Compliance: Uncertain



LG&E/KU's coal fleet already has a high level of control technologies, but some additions or enhancements will be required

	Commercial Dates	Net Summer Capacity (MW)	Cooling Towers	SO ₂			NO _x		
				FGD Install	Emission Rate (lb/MMBtu)	Emission Control Efficiency	SCR Install	Emission Rate (lb/MMBtu)	Emission Control Efficiency
Brown	1957 - 1971	684	Yes	2010 (3 units)	0.12	98%	2012 (1 Unit)	0.38	90%
Ghent	1974 - 1984	1,918	Yes	2000 - 2009 (4 units)	0.17	94 - 98%	2003 - 2004 (3 Units)	0.12	80 - 90%
Green River	1954 - 1959	163	No	None	2.99	None	None	0.40	None
Tyrone	1953	71	No	None	1.33	None	None	0.50	None
Cane Run	1962 - 1969	563	No	1976 - 1978 (3 units)	0.59	90 %	None	0.34	None
Mill Creek	1972 - 1982	1,472	Yes	1978 - 1982 (4 Units)	0.49	90 - 92%	2003 (2 Units)	0.16	85 - 87%
Trimble County 1	1990	383	Yes	1990	0.12	98 %	2002	0.06	80 - 85%
Trimble County 2	2010	549	Yes	2010	0.10	98 %	2010	0.04	90%

- All units have precipitators
- Mill Creek 1 does not have a cooling tower.
- Trimble 1 and 2 capacities reflects 75% ownership



Technology options for addressing air emissions are known - except for CO₂

Technology	Targeted Pollutant	Regulation Addressed	Removal Rate	LG&E/KU Estimated Cost (\$/kW)	LG&E/KU Estimated Cost (\$/quantity captured)
Flue Gas Desulfurization (FGD)	SO ₂	CATR, NAAQS	98%	450 - 900	5,000 - 11,000 /ton
Selective Catalytic Reduction (SCR)	NO _x	CATR, NAAQS	90%	300 - 500	4,000 - 8,000 /ton
FGD + SCR (Hg Co-Benefit)	Hg	MACT for HAP	60-70%	Co-benefit	Co-benefit
Fabric Filter & PAC* Injection (with FGD and SCR)	Hg	MACT for HAP	25-35%	200 - 500	150,000 - 450,000 /lb
Sorbent Injection	SO ₃ , Hg	MACT for HAP	TBD	15 - 30	TBD
<i>Replace Coal Plant with Gas Plant</i>					
Combined Cycle Combustion Turbine	All	All	NA	950 - 1,250	NA

* Powdered Activated Carbon



Despite low emission levels at most stations, sizable investments will be required to meet new air regulations

Station	Capacity (Net MW)	Options to Address Regulations	Cost (\$M)
Brown	684	SCR, Fabric Filter Baghouse, PAC Injection, Lime Injection	350 - 450
Ghent	1,918	SCR, Fabric Filter Baghouse, PAC Injection	950 - 1,150
Green River	163	SCR, Fabric Filter Baghouse, PAC Injection	150 - 250
Cane Run	563	FGD, SCR, Fabric Filter Baghouse, PAC Injection, Lime Injection	850 - 950
Mill Creek	1,472	FGD, SCR, Fabric Filter Baghouse, Electrostatic Precipitator (ESP), PAC Injection, Lime Injection, Ammonia	1,250 - 1,900
Trimble County	932	Fabric Filter Baghouse, PAC Injection	150 - 200
<i>Replace Coal Plant with Gas Plant</i>			
Potential CCCT Replacement	640	600 MW 2x1 Combined Cycle Combustion Turbine	600 - 800

Note: does not include any investment to control for CO₂



Proposed EPA CCR regulations would require dry storage and closing of existing ash ponds

Retrofit or close 21 ponds, including 10 ash ponds and 11 process/runoff ponds across the fleet (8 stations)

Build landfills for future storage (Brown, Cane Run, Ghent, Mill Creek, Trimble County)

Construct new process water ponds for each operating site

Closing ponds and moving to dry storage will cost an estimated \$700 million over the next ten years under the proposed CCR rules for non-hazardous waste. Additional closure costs will be incurred upon plant retirements.



Increased water withdrawal and discharge requirements

Potential federal EPA water regulations would impose more stringent requirements on water withdrawal and discharges

Potential addition of cooling towers or discharge water treatment systems

- **Stations without cooling towers: Cane Run, Green River, Mill Creek 1, Tyrone**

New treatment technologies are being developed for water discharges but are not widely deployed in utility operations

- **Physical-chemical treatment and/or biological treatment systems may be required**
- **Cost of \$40 - \$300 million for each site pending final regulations, specific standards, and treatment volumes**



Estimate at least \$4 billion in capital costs needed over next ten years

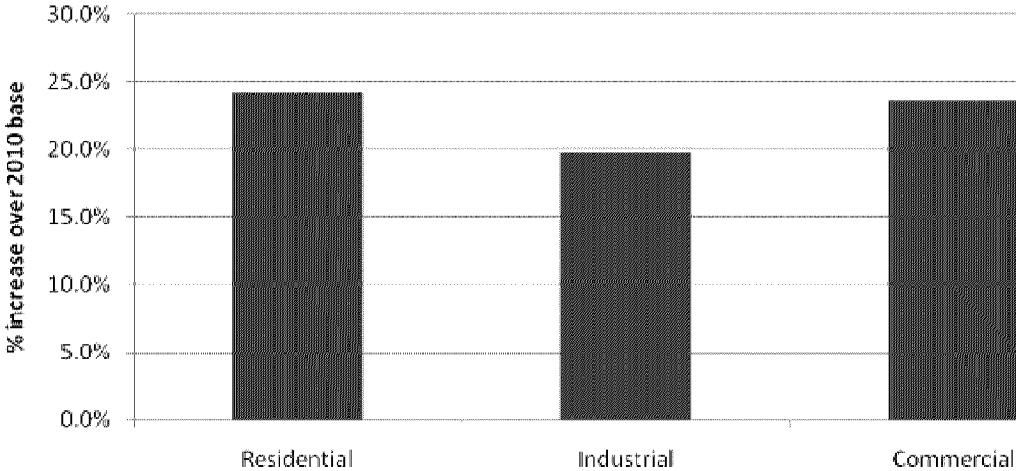
Regulation	Capital (\$M)	Annual Operating Expense (\$M)
Air	3,300 - 5,000	150 - 300
CCP	700	<i>To be determined</i>
Water	<i>To be determined</i>	



Cumulative impact of proposed EPA regulations will significantly increase electricity rates

Due to these regulations, by 2019 rates could increase by over 20% and almost \$550 million annually.

Rate Impact of proposed EPA regulations



Note: This calculation does not include potential compliance costs for water regulations, Renewal Portfolio Standards (RPS) or carbon dioxide (CO2) reductions.



Challenges and risks related to proposed regulations

Short time horizon – some air regulations would require compliance as early as 2012 with the most costly regulations beginning in 2014 and 2015. This allows insufficient time to design facilities, obtain necessary federal and state regulatory approvals, contract with vendors and install equipment.

Potential impacts on system reliability and transmission system – one consequence of the proposed regulations will be the retirement of significant amounts of coal-fired generation across the region.

Rapid cost escalation – industry rush to achieve compliance will drive up labor and material costs (repeat of 2008) and make it difficult to obtain labor and equipment at any price.

CO₂ policy could change – uncertainty associated with future CO₂ legislation could result in less than optimal long-term investment decisions.



What should the KPSC expect?

Requests for approval of environmental compliance projects perhaps before the federal regulations are finalized

Compressed construction timelines due to compliance timing

Additional compliance costs to meet implementation dates of federal rules

More frequent requests for rate increases due to substantial upward cost pressures caused by compliance with the federal regulations



What is the Company doing?

Evaluating multiple compliance alternatives

Participating in industry efforts to advocate more reasonable regulations and timelines

Communicating our concerns directly with EPA on proposed regulations

Educating elected officials, regulators and customers on the effect of the federal regulations will have on their electric bill

	A	B	C
1		SO2	NOx
2	1995	12.2	6.3
3	1996	12.4	5.8
4	1997	12.4	5.1
5	1998	12.9	5.1
6	1999	12.6	4.9
7	2000	11.5	4.4
8	2001	10.3	4
9	2002	9.6	3.5
10	2003	10.2	3.3
11	2004	10.1	2.7
12	2005	9.3	2.7
13	2006	9.1	2.7
14	2007	9.4	2.8
15	2008	8.3	2.8
16	2009	6	1.8
17	2010	5.1	1.8
18	2011	3.4	1.6
19	2012	3.4	1.5

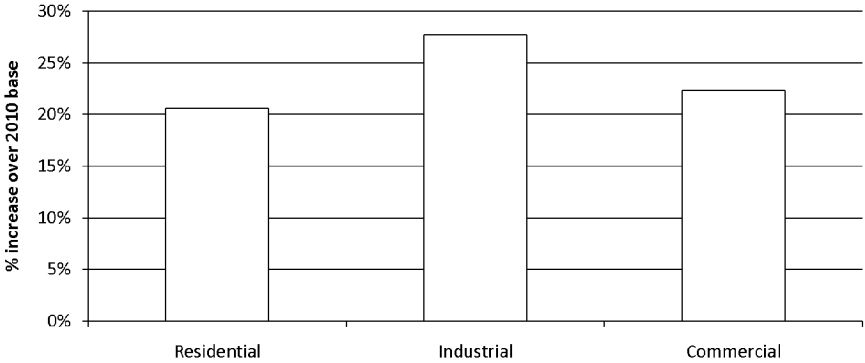
	A	B	C	D	E	F	G	H	I	J	K	L
1	Sales, Revenue and Average Unit Rates (per Utility Financial Reports)											
2												
3			2008				2009				July 2010	
4												
5	LG&E		kWh	\$	\$/kWh		kWh	\$	\$/kWh		kWh	\$
6	Residential Sales		4,206,410,526	301,021,844	0.072		4,095,806,460	310,340,508	0.076		593,573,594	44,858,233
7	Small Commercial and Industrial Sales		1,392,051,319	111,125,344	0.080		1,344,247,037	110,666,000	0.082		154,077,990	12,849,498
8	Large Commercial Sales		2,331,119,751	137,250,087	0.059		2,272,699,738	141,774,569	0.062		232,055,516	14,896,275
9	Large Industrial Sales		2,850,830,033	138,314,832	0.049		2,412,418,682	124,099,537	0.051		252,296,232	13,405,650
10	Public Street and Highway Lighting		61,974,931	6,896,924	0.111		59,012,932	6,806,105	0.115		3,705,924	534,560
11	Other Sales to Public Authorities		1,240,681,990	68,992,558	0.056		1,220,972,154	71,502,523	0.059		126,045,463	7,458,653
12	Total - Ultimate Consumers		12,083,068,550	763,601,589	0.063		11,405,157,003	765,189,241	0.067		1,361,754,719	94,002,869
13												
14												
15	KU (including ODP)		kWh	\$	\$/kWh		kWh	\$	\$/kWh		kWh	\$
16	Residential Sales		6,802,830,237	462,085,548	0.068		6,594,160,339	480,270,452	0.073		679,264,592	51,758,876
17	Commercial Sales		4,713,879,375	316,402,846	0.067		4,518,585,415	320,837,831	0.071		445,622,461	32,224,752
18	Industrial Sales		5,125,141,555	268,939,540	0.052		4,867,629,386	267,669,673	0.055		506,098,071	28,765,346
19	Mine Power		870,237,299	50,316,630	0.058		784,985,635	48,322,690	0.062		49,166,234	3,444,565
20	Public Street and Highway Lighting		57,575,377	10,014,050	0.174		53,938,858	10,185,756	0.189		4,245,108	942,854
21	Other Sales to Public Authorities		1,572,082,501	93,273,848	0.059		1,524,112,658	95,587,730	0.063		150,438,149	9,267,928
22	Municipal Pumping		76,854,641	4,760,365	0.062		69,094,357	4,532,294	0.066		5,711,572	379,950
23	Refunds							(469,231)				
24	Total - Ultimate Consumers		19,218,600,985	1,205,792,827	0.063		18,412,506,648	1,226,937,195	0.067		1,840,546,187	126,784,273
25												
26												
27	Combined Company		kWh	\$	\$/kWh		kWh	\$	\$/kWh		kWh	\$
28	Residential		11,009,240,763	763,107,392	0.069		10,689,966,799	790,610,959	0.074		1,272,838,186	96,617,110
29	Industrial		8,846,208,887	457,571,002	0.052		8,065,033,703	440,091,901	0.055		807,560,537	45,615,561
30	Commercial / Other		11,446,219,885	748,716,021	0.065		11,062,663,149	761,892,807	0.069		1,121,902,183	78,554,472
31	Total - Ultimate Consumers		31,301,669,535	1,969,394,416	0.063		29,817,663,651	1,992,126,436	0.067		3,202,300,906	220,787,142
32												
33												
34	KU											
35	Residential										679,264,592	51,758,876
36	Industrial										555,264,305	32,209,911
37	Commercial / Other										606,017,290	42,815,485
38												
39	LGE											
40	Residential										593,573,594	44,858,233
41	Industrial										252,296,232	13,405,650
42	Commercial / Other										515,884,893	35,738,986

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5	\$/kWh
6	0.076
7	0.083
8	0.064
9	0.053
10	0.144
11	0.059
12	0.069
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15	\$/kWh
16	0.076
17	0.072
18	0.057
19	0.070
20	0.222
21	0.062
22	0.067
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24	0.069
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27	\$/kWh
28	0.076
29	0.056
30	0.070
31	0.069
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35	0.076
36	0.058
37	0.071
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40	0.076
41	0.053
42	0.069

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1	2011 MTP Sales Forecast						
2							
3	2019 Forecasted Billed Sales by Revenue Class (GWh)						
4							
5		Residential	Industrial	Commercial	- Ultimate Consumers	Municipals	Total sales
6	KU	6,841	6,473	7,056	20,370	2,176	22,546
7	LG&E	4,435	2,868	5,978	13,281		13,281
8	Total KY	11,276	9,341	13,034	33,651	2,176	35,827
9							
10	ODP	419	224	332	975		975
11	Total	11,695	9,565	13,366	34,626	2,176	36,802
12							
13	Commercial includes Public Authority, Street Lighting, and Municipal Pumping						
14	Industrial includes Mine Power						
15	Source: 20100621_LF Results_0304D03.docx						

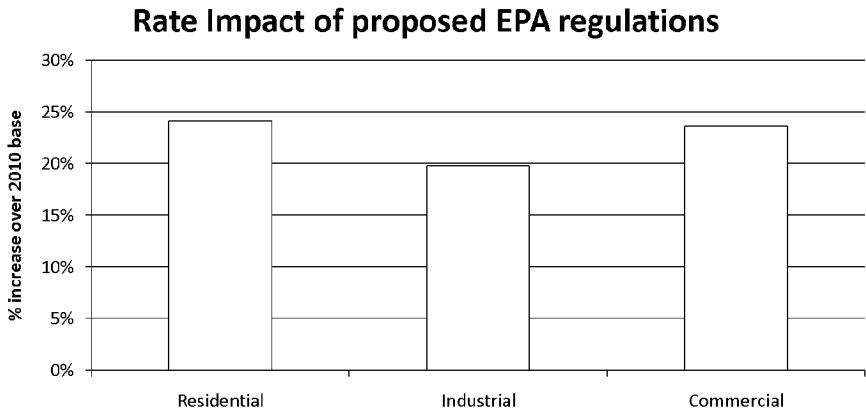
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Rate impact of environmental compliance costs												
2													
3	1. Cost allocation on Sales Share Basis (Combined Company, Total Retail Sales)												
4													
5	Incremental revenue requirement in 2019			\$542 million									
6													
7	July 2010 Sales, Revenue and Average Rates					Forecasted sales in 2019			Cost allocation (\$M)		Rate adder (\$/kWh)		
8													
9		Sales (GWh)		Revenue	Rates (\$/kWh)		GWh	Share					
10	Residential	1,273	40%	\$96,617,110	0.076		11,695	34%	\$183	0.016			
11	Industrial	808	25%	\$45,615,561	0.056		9,565	28%	\$150	0.016			
12	Commercial	1,122	35%	\$78,554,472	0.070		13,366	39%	\$209	0.016			
13		3,202		220,787,142	0.069		34,626	100%	\$542				
14													
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Rate Impact of proposed EPA regulations



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7	Rate increase over 2010 base	
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10	21%	
11	28%	
12	22%	
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33													
34	2. Cost allocation on Revenue Share Basis (Combined Company, Total Retail Sales)												
35													
36	Incremental revenue requirement in 2019			\$542 million									
37													
38	<i>Cost allocation</i>		2019 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
39	Residential		\$485 million		40%		\$214 million						
40	Industrial		\$242 million		20%		\$107 million						
41	Commercial/Other		\$501 million		41%		\$221 million						
42			\$1,228				\$542						
43													
44	<i>Rate impact</i>		2019 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010			Percent Change			
45	Residential		11,695		\$0.018		\$0.076			24%			
46	Industrial		9,565		\$0.011		\$0.056			20%			
47	Commercial/Other		13,366		\$0.017		\$0.070			24%			
48													
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145	Rate Impact by Company												
146													
147	Cost allocation on revenue share basis, retail sales only												
148													
149	(i) LG&E												
150													
151	Incremental revenue requirement in 2019		\$357 million										
152													
153	<i>Cost allocation</i>		2019 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
154	Residential		\$235 million		40%		\$143 million						
155	Industrial		\$94 million		16%		\$57 million						
156	Commercial/Other		\$260 million		44%		\$158 million						
157			\$588				\$357						
158													
159	<i>Rate impact</i>		2019 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010				Percent Change		
160	Residential		4,435		\$0.032		\$0.076					43%	
161	Industrial		2,868		\$0.020		\$0.053					37%	
162	Commercial/Other		5,978		\$0.026		\$0.069					38%	
163			13,281										
164													
165													
166	(ii) KU												
167													
168	Incremental revenue requirement in 2019		\$185 million										
169													
170	<i>Cost allocation</i>		2019 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
171	Residential		\$250 million		39%		\$72 million						
172	Industrial		\$148 million		23%		\$43 million						
173	Commercial/Other		\$242 million		38%		\$70 million						
174			\$640				\$185						
175													
176	<i>Rate impact</i>		2019 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010				Percent Change		
177	Residential		7,260		\$0.010		\$0.076					13%	
178	Industrial		6,697		\$0.006		\$0.058					11%	
179	Commercial/Other		7,388		\$0.009		\$0.071					13%	
180			21,345										
181													
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	A	B	C	D	E	F	G	H	I	J	K	L	M																
183	Rate Impacts Summary																												
184		LG&E	KU	Combined																									
185	Residential	43%	13%	24%																									
186	Industrial	37%	11%	20%																									
187	Commercial	38%	13%	24%																									
188																													
189																													
190	Rate Impact of Proposed EPA Regulations																												
191	<table border="1"> <caption>Rate Impact of Proposed EPA Regulations Data</caption> <thead> <tr> <th>Sector</th> <th>LG&E</th> <th>KU</th> <th>Combined</th> </tr> </thead> <tbody> <tr> <td>Residential</td> <td>43%</td> <td>13%</td> <td>24%</td> </tr> <tr> <td>Industrial</td> <td>37%</td> <td>11%</td> <td>20%</td> </tr> <tr> <td>Commercial</td> <td>38%</td> <td>13%</td> <td>24%</td> </tr> </tbody> </table>				Sector	LG&E	KU	Combined	Residential	43%	13%	24%	Industrial	37%	11%	20%	Commercial	38%	13%	24%									
Sector					LG&E	KU	Combined																						
Residential					43%	13%	24%																						
Industrial					37%	11%	20%																						
Commercial					38%	13%	24%																						
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1	Total Company ECR Revenue Requirements, 2019 (FW Model BV.xls; ECRRevenues)								Questions					
2		Total		Jurisdictional					What is the source of 2019 revenues in Rate Impact tab? Represents					
3	LGE	\$541	million	\$481	million				Why is total 2019 EPA-related revenue requirement \$760 million (vs					
4	KU	\$329	million	\$286	million				Why are "jurisdictional" costs used to calculate impacts based on re					
5									Check - allocation shares, cells d31:d33 (correction)					
6	Capital Expenditure for New EPA Regulations, total (CapEx Rollforward BV.xls; Capex B&V, rows 6-20)													
7	LGE	\$2,815	million	66%										
8	KU	\$1,456	million	34%										
9														
10	Total Capital Expenditures for ECR Recovery, per LTP (FW Model BV.xls; ECRRevenues)													
11	LGE	\$2,995	million											
12	KU	\$1,901	million											
13														
14	Percent of total ECR expenditures related to new regulations:													
15	LGE	94.0%												
16	KU	76.6%												
17														
18	ECR Revenue Requirement related to new EPA regulations:													
19		Total		Jurisdictional										
20	LGE	\$508.57	million	\$452.17				67%						
21	KU	\$252.02	million	\$219.16				33%						
22														
23	Rate Impact of ECR revenue requirement, based on percent of revenue estimates													
24	LGE	July 2010 Revenues			Forecast 2019	Rate Impact								
25	Residential	\$ 44,858,233	47.7%	\$215.78	4,435.00	0.0486528								
26	Industrial	\$ 13,405,650	14.3%	\$64.48	2,868.00	0.0224837								
27	Commercial/Other	\$ 35,738,986	38.0%	\$171.91	5,978.00	0.0287571								
28		\$ 94,002,869												
29														
30	KU	July 2010 Revenues			Forecast 2019	Rate Impact								
31	Residential	\$ 51,758,876	40.8%	\$89.47	6,841.00	0.0130783								
32	Industrial	\$ 32,209,911	25.4%	\$55.68	6,473.00	0.0086014								
33	Commercial/Other	\$ 42,815,485	33.8%	\$74.01	7,056.00	0.0104889								
34		\$ 126,784,273												
35														
36														

	O	P	Q	R	S	T	U	V
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2	base rate revenue only?							
3	\$542 million shown in Rate Impact tab)							
4	venue shares, and "total" costs used to calculate impacts based on demand shares							
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37														
38	Rate Impact of ECR revenue requirement, based on demand allocation													
39	LGE total ECR revenue requirement for new regulation:				\$508.57	million								
40	Demands, per 2008 rate case cost of service study													
41		Peak		Intermediate		Base								
42	Residential	1,314,970	49.8%	692,749	39.0%	197,877	21.6%							
43	Industrial	417,687	15.8%	680,875	38.3%	413,717	45.2%							
44	Commercial/Other	908,226	34.4%	403,280	22.7%	302,899	33.1%							
45														
46	Demand Allocator	0.5078		0.1532		0.3389								
47														
48	ECR costs by demand	\$258.25		\$77.91		\$172.35								
49														
50	ECR costs to classes										Total			
51	Residential	\$128.59		\$30.38		\$37.29	\$196.26							
52	Industrial	\$40.85		\$29.85		\$77.97	\$148.67							
53	Commercial/Other	\$88.82		\$17.68		\$57.09	\$163.59							
54							\$508.52							
55														
56														
57	Estimated Peak Dem	2008 COS load factor	2019 sales	2019 NCP, MW	Rate Impact									
58	Residential		4,435		\$0.044	per kWh								
59	Industrial	69.8%	2,868	469	\$2.64	per kw-month								
60	Commercial/Other	54.3%	5,978	1,256	\$1.09	per kw-month								
61														
62														
63	Rate Impact of ECR revenue requirement, based on demand allocation													
64	KU total ECR revenue requirement for new regulation:				\$252.02	million								
65	Demands, per 2008 rate case cost of service study													
66		Peak		Intermediate		Base								
67	Residential	1,565,459	36.0%	1,896,227	44.5%	258,530	17.7%							
68	Industrial	901,997	20.8%	776,586	18.2%	475,925	32.6%							
69	Commercial/Other	1,463,426	33.7%	1,250,642	29.3%	583,314	40.0%							
70	Wholesale	413,276	9.5%	340,623	8.0%	140,494	9.6%							
71														
72	Demand Allocator	0.5078		0.1532		0.3389								
73														
74	ECR costs by demand	\$127.97		\$38.61		\$85.41								
75														
76	ECR costs to classes										Total			
77	Residential	\$46.12		\$17.17		\$15.14	\$78.43							
78	Industrial	\$26.57		\$7.03		\$27.87	\$61.48							
79	Commercial/Other	\$43.11		\$11.32		\$34.16	\$88.60							
80	Wholesale	\$12.17		\$3.08		\$8.23	\$23.49							

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81								\$251.99						
82														
83	Estimated Peak Demand	08 COS load factor	2019 sales	2019 NCP, MW	Rate Impact									
84	Residential		6,841		\$0.011	per kWh								
85	Industrial	0.42979	6,473	1,719.27	\$0.30	per kw-month								
86	Commercial/Other	0.62918	7,056	1,280.21	\$0.58	per kw-month								
87	Wholesale	0.55226	2,176	449.79	\$0.44	per kw-month								

	A	B	C	D	E	F	G	H	I
1	Capital Expenditures for EPA Compliance								
2									
3	Station		MW		Capital expenditure required (\$ million)				
4					Min	Max	Expected		\$/kW
5	Brown	KU	684	SCR, Fabric Filter Baghouse, PAC Injection, Lime Injection	350	450	400		585
6	Ghent	KU	1,918	SCR, Fabric Filter Baghouse, PAC Injection	950	1,150	1,050		547
7	Green River	KU	163	SCR, Fabric Filter Baghouse, PAC Injection	150	250	200		1,227
8	Cane Run	LG&E	563	FGD, SCR, Fabric Filter Baghouse, PAC Injection, Lime Injec	850	950	900		1,599
9	Mill Creek	LG&E	1,472	FGD, SCR, Fabric Filter Baghouse, Electrostatic Precipitator	1,250	1,900	1,575		1,070
10	Trimble 1	LG&E	932	Fabric Filter Baghouse, PAC Injection	150	200	175		188
11			5,732		3,700	4,900	4,300		750
12									
13	KU assets		2,765		1,450	1,850	1,650		38%
14	LG&E assets		2,967		2,250	3,050	2,650		62%
15									
16	CCCT replacement		640	600 MW 2x1 Combined Cycle Combustion Turbine	600	800	700		1,094
17					4,300	5,700	5,000		
18									
19									
20									
21	Alternative CapEx Allocation								
22				Expected CapEx (\$ million)					
23	Brown	KU		389					
24	Ghent	KU		909					
25	Mill Creek	LG&E		1645					
26	Trimble	LG&E		166					
27									
28	CCCT replacement	LG&E		700					
29									
30	KU share			1298	34%				
31	LG&E share			2511	66%				
32				3809	100%				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Projection of Muni revenues (from LTP model - 2011-20)														
2															
3	2011-2020 LTP (Final)		2011	2012	2013	2014	2015	2016	2017	2018	2019				
4	Non-Fuel Base Rates		61.6	62.2	62.8	63.4	64.0	64.6	65.2	65.8	66.5				
5	Fuel (Base + FAC)		51.3	53.5	54.6	58.8	59.8	66.3	67.5	72.3	78.0				
6	Base Rate Increases		2.1	8.9	15.6	18.9	23.1	29.6	37.9	44.4	47.2				
7															
8	FERC Revenues (\$MMs-excl Misc Charges)		115.0	124.6	132.9	141.1	146.8	160.5	170.6	182.6	191.7			32.6	Increase from
9											0.0		CO2		
10															
11	2011-2020 LTP (Preliminary Draft used in EPA regulations presentation)	2011	2011	2012	2013	2014	2015	2016	2017	2018	2019				
12	Non-Fuel Base Rates	46.2	47.3	49.5	50.4	50.9	51.8	52.2	52.5	52.9	53.3				
13	Fuel (Base + FAC)	47.7	49.4	55.3	58.2	58.0	55.9	60.3	62.4	66.1	70.7				
14	Base Rate Increases	4.3	10.5	15.8	21.3	28.2	37.4	47.6	58.5	68.9	75.7				
15															
16	FERC Revenues (\$MMs-excl Misc Charges)		107.2	120.6	129.9	137.1	145.0	160.1	173.3	187.8	199.8			40.7	
17											0.0		CO2		
18															
19	2010-2019 LTP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019				
20	Non-Fuel Base Rates	46.2	47.3	49.5	50.4	50.9	51.8	52.2	52.5	52.9	53.3				
21	Fuel (Base + FAC)	47.7	49.4	55.3	58.4	58.9	57.3	59.6	61.7	64.7	68.2				
22	Base Rate Increases	5.1	13.2	19.6	24.6	30.2	37.3	44.2	49.4	52.3	54.0				
23															
24	FERC Revenues (\$MMs-excl Misc Charges)	99.0	110.0	124.3	133.4	140.0	146.4	156.0	163.6	169.8	175.5				
25											(16.5)		CO2		
26															
27															
28	Projected 2019 Muni sales (GWh)	2,176													
29	EPA-related increase (\$/kWh) in 2019	\$0.0150													
30															
31		2008	2009	2010	Jul-10										
32	Revenue from sales to Munis (\$ million)	91.9	91.2	62.2	12.6										
33	Muni sales (GWh)	1,971	1,848	1,177	199										
34	Unit revenue from sales to Munis (\$/kWh)	\$0.0466	\$0.0493	\$0.0529	\$0.0633										
35															
36	EPA-related impact in 2019 as % of 2010 unit revenue			28%											
37															
38															
39	KU MUNICIPALS - 2010 RATES														
40	AVERAGE COST PER MWH FOR POWER USED DURING THE MONTH LISTED - BILL DUE DATE TWO MONTHS LATER														
41															
42		Jan	Feb	Mar	Apr	May	Jun	Jul	YTD						
43															
44	Barbourville	\$50.72	\$49.84	\$51.27	\$49.66	\$54.56	\$57.25	\$59.93	\$53.32						

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8	prior plan (i.e. new EPA regulations)		
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45	Bardstown	\$51.04	\$49.62	\$48.69	\$49.54	\$53.11	\$55.30	\$58.60	\$52.27						
46	Bardwell	\$52.35	\$50.39	\$49.73	\$52.65	\$58.43	\$58.96	\$61.83	\$54.91						
47	Benham	\$57.26	\$54.45	\$60.03	\$58.96	\$57.57	\$59.68	\$63.20	\$58.74						
48	Berea	\$52.22	\$51.43	\$52.74	\$48.46	\$53.33	\$56.42	\$59.17	\$53.40						
49	Corbin	\$51.07	\$49.75	\$50.50	\$51.16	\$55.84	\$58.37	\$60.80	\$53.93						
50	Falmouth	\$51.83	\$52.09	\$51.85	\$52.38	\$61.19	\$63.03	\$65.48	\$56.84						
51	Frankfort	\$50.38	\$49.81	\$49.35	\$49.48	\$53.95	\$56.05	\$59.06	\$52.58						
52	Madisonville	\$50.30	\$48.39	\$47.28	\$50.33	\$53.84	\$55.82	\$58.90	\$52.12						
53	Nicholasville	\$50.42	\$49.17	\$49.16	\$47.90	\$52.04	\$54.88	\$58.94	\$51.79						
54	Paris	\$39.04	\$36.78	\$36.32	\$30.93	\$35.76	\$45.98	\$45.99	\$38.69						
55	Providence	\$50.94	\$49.62	\$49.90	\$51.47	\$58.47	\$58.27	\$60.87	\$54.22						
56															
57	Average All Muni's	\$50.63	\$49.28	\$49.73	\$49.41	\$54.01	\$56.67	\$59.40	\$52.73						
58	Average All Muni's except Paris	\$51.68	\$50.41	\$50.95	\$51.09	\$55.67	\$57.64	\$60.62	\$54.01						
59	Avg All Muni's except Benham & Paris	\$51.13	\$50.01	\$50.05	\$50.31	\$55.47	\$57.44	\$60.36	\$53.54						

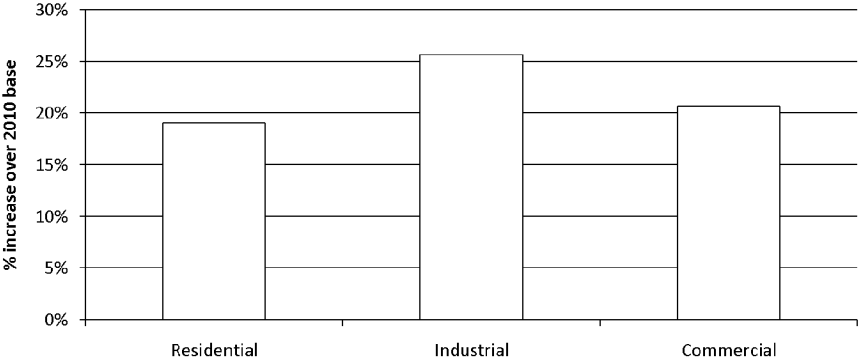
	A	B	C	D	E	F	G	H	I	J	K	L
1	Sales, Revenue and Average Unit Rates (per Utility Financial Reports)											
2												
3			2008				2009				July 2010	
4												
5	LG&E		kWh	\$	\$/kWh		kWh	\$	\$/kWh		kWh	\$
6	Residential Sales		4,206,410,526	301,021,844	0.072		4,095,806,460	310,340,508	0.076		593,573,594	44,858,233
7	Small Commercial and Industrial Sales		1,392,051,319	111,125,344	0.080		1,344,247,037	110,666,000	0.082		154,077,990	12,849,498
8	Large Commercial Sales		2,331,119,751	137,250,087	0.059		2,272,699,738	141,774,569	0.062		232,055,516	14,896,275
9	Large Industrial Sales		2,850,830,033	138,314,832	0.049		2,412,418,682	124,099,537	0.051		252,296,232	13,405,650
10	Public Street and Highway Lighting		61,974,931	6,896,924	0.111		59,012,932	6,806,105	0.115		3,705,924	534,560
11	Other Sales to Public Authorities		1,240,681,990	68,992,558	0.056		1,220,972,154	71,502,523	0.059		126,045,463	7,458,653
12	Total - Ultimate Consumers		12,083,068,550	763,601,589	0.063		11,405,157,003	765,189,241	0.067		1,361,754,719	94,002,869
13												
14												
15	KU (including ODP)		kWh	\$	\$/kWh		kWh	\$	\$/kWh		kWh	\$
16	Residential Sales		6,802,830,237	462,085,548	0.068		6,594,160,339	480,270,452	0.073		679,264,592	51,758,876
17	Commercial Sales		4,713,879,375	316,402,846	0.067		4,518,585,415	320,837,831	0.071		445,622,461	32,224,752
18	Industrial Sales		5,125,141,555	268,939,540	0.052		4,867,629,386	267,669,673	0.055		506,098,071	28,765,346
19	Mine Power		870,237,299	50,316,630	0.058		784,985,635	48,322,690	0.062		49,166,234	3,444,565
20	Public Street and Highway Lighting		57,575,377	10,014,050	0.174		53,938,858	10,185,756	0.189		4,245,108	942,854
21	Other Sales to Public Authorities		1,572,082,501	93,273,848	0.059		1,524,112,658	95,587,730	0.063		150,438,149	9,267,928
22	Municipal Pumping		76,854,641	4,760,365	0.062		69,094,357	4,532,294	0.066		5,711,572	379,950
23	Refunds							(469,231)				
24	Total - Ultimate Consumers		19,218,600,985	1,205,792,827	0.063		18,412,506,648	1,226,937,195	0.067		1,840,546,187	126,784,273
25												
26												
27	Combined Company		kWh	\$	\$/kWh		kWh	\$	\$/kWh		kWh	\$
28	Residential		11,009,240,763	763,107,392	0.069		10,689,966,799	790,610,959	0.074		1,272,838,186	96,617,110
29	Industrial		8,846,208,887	457,571,002	0.052		8,065,033,703	440,091,901	0.055		807,560,537	45,615,561
30	Commercial / Other		11,446,219,885	748,716,021	0.065		11,062,663,149	761,892,807	0.069		1,121,902,183	78,554,472
31	Total - Ultimate Consumers		31,301,669,535	1,969,394,416	0.063		29,817,663,651	1,992,126,436	0.067		3,202,300,906	220,787,142
32												
33												
34	KU											
35	Residential										679,264,592	51,758,876
36	Industrial										555,264,305	32,209,911
37	Commercial / Other										606,017,290	42,815,485
38												
39	LGE											
40	Residential										593,573,594	44,858,233
41	Industrial										252,296,232	13,405,650
42	Commercial / Other										515,884,893	35,738,986

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5	\$/kWh
6	0.076
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12	0.069
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15	\$/kWh
16	0.076
17	0.072
18	0.057
19	0.070
20	0.222
21	0.062
22	0.067
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24	0.069
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27	\$/kWh
28	0.076
29	0.056
30	0.070
31	0.069
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35	0.076
36	0.058
37	0.071
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40	0.076
41	0.053
42	0.069

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1	2011 MTP Sales Forecast						
2							
3	2016 Forecasted Billed Sales by Revenue Class (GWh)						
4							
5		Residential	Industrial	Commercial	- Ultimate Consumers	Municipals	Total sales
6	KU	6,560	6,607	6,768	19,935	2,116	22,051
7	LG&E	4,277	2,821	5,692	12,790		12,790
8	Total KY	10,837	9,428	12,460	32,725	2,116	34,841
9							
10	ODP	414	217	321	952		952
11	Total	11,251	9,645	12,781	33,677	2,116	35,793
12							
13	Commercial includes Public Authority, Street Lighting, and Municipal Pumping						
14	Industrial includes Mine Power						
15	Source: 20100621_LF Results_0304D03.docx						

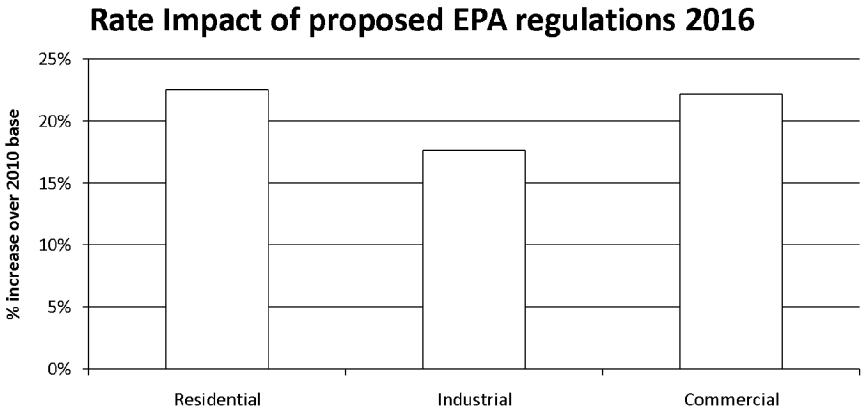
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Rate impact of environmental compliance costs												
2													
3	Choose scenario		4										
4													
5	2016 Revenue Requirements (\$ million)						Scenarios						
6		1	2	3	4		1 Air compliance (exc SCR)						
7	LG&E	\$265	\$306	\$338	\$297		2 Air compliance (inc SCR)						
8	KU	\$134	\$197	\$252	\$190		3 Air compliance (inc SCR) + CCP compliance						
9	Combined Co	\$399	\$503	\$590	\$487		4 Air compliance (exc SCR) + CCP compliance						
10													
11	1. Cost allocation on Sales Share Basis (Combined Company, Total Retail Sales)												
12													
13	Incremental revenue requirement in 2016			\$487 million									
14													
15	July 2010 Sales, Revenue and Average Rates						Forecasted sales in 2016			Cost allocation (\$M)		Rate adder (\$/kWh)	
16													
17		Sales (GWh)		Revenue	Rates (\$/kWh)		GWh	Share					
18	Residential	1,273	40%	\$96,617,110	0.076	11,251	33%	\$163	0.014				
19	Industrial	808	25%	\$45,615,561	0.056	9,645	29%	\$139	0.014				
20	Commercial	1,122	35%	\$78,554,472	0.070	12,781	38%	\$185	0.014				
21		3,202		220,787,142	0.069	33,677	100%	\$487					
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Rate Impact of proposed EPA regulations - 2016



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15	Rate increase over 2010 base	
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18	19%	
19	26%	
20	21%	
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41													
42	2. Cost allocation on Revenue Share Basis (Combined Company, Total Retail Sales)												
43													
44	Incremental revenue requirement in 2016			\$487 million									
45													
46	<i>Cost allocation</i>		2019 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
47	Residential		\$485 million		40%		\$192 million						
48	Industrial		\$242 million		20%		\$96 million						
49	Commercial/Other		\$501 million		41%		\$199 million						
50			\$1,228				\$487						
51													
52	<i>Rate impact</i>		2016 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010			Percent Change			
53	Residential		11,251		\$0.017		\$0.076			23%			
54	Industrial		9,645		\$0.010		\$0.056			18%			
55	Commercial/Other		12,781		\$0.016		\$0.070			22%			
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153	Rate Impact by Company												
154													
155	Cost allocation on revenue share basis, retail sales only												
156													
157	(i) LG&E												
158													
159	Incremental revenue requirement in 2016			\$297	million								
160													
161	<i>Cost allocation</i>		2019 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
162	Residential		\$235	million	40%		\$119	million					
163	Industrial		\$94	million	16%		\$47	million					
164	Commercial/Other		\$260	million	44%		\$131	million					
165			\$588				\$297						
166													
167	<i>Rate impact</i>		2016 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010			Percent Change			
168	Residential		4,277		\$0.028		\$0.076				37%		
169	Industrial		2,821		\$0.017		\$0.053				32%		
170	Commercial/Other		5,692		\$0.023		\$0.069				33%		
171			12,790										
172													
173													
174	(ii) KU												
175													
176	Incremental revenue requirement in 2016			\$190	million								
177													
178	<i>Cost allocation</i>		2019 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
179	Residential		\$250	million	39%		\$74	million					
180	Industrial		\$148	million	23%		\$44	million					
181	Commercial/Other		\$242	million	38%		\$72	million					
182			\$640				\$190						
183													
184	<i>Rate impact</i>		2016 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010			Percent Change			
185	Residential		6,974		\$0.011		\$0.076				14%		
186	Industrial		6,824		\$0.006		\$0.058				11%		
187	Commercial/Other		7,089		\$0.010		\$0.071				14%		
188			20,887										
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191	Rate Impacts Summary												
192		LG&E	KU	Combined									
193	Residential	37%	14%	23%									
194	Industrial	32%	11%	18%									
195	Commercial	33%	14%	22%									
196													
197	Rate Impact of Proposed EPA Regulations - 2016												
198	<p>The chart displays the percentage increase over the 2010 base for three sectors: Residential, Industrial, and Commercial. For each sector, three bars represent the impact of LG&E (white), KU (light gray), and Combined (dark gray) regulations. The y-axis ranges from 0% to 40% in 5% increments. The data points are: Residential (LG&E: 37%, KU: 14%, Combined: 23%), Industrial (LG&E: 32%, KU: 11%, Combined: 18%), and Commercial (LG&E: 33%, KU: 14%, Combined: 22%).</p>												
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From: Conroy, Robert
To: Voyles, John
Sent: 1/27/2011 10:27:53 AM
Subject: Re: ECR

We have a 2 hour meeting tomorrow to discuss details with Scott, Chuck, Wink and legal and begin developing testimony. I did not have Andrea include you and Lonnie but if you want to attend you are welcome.

Sent from my iPhone

On Jan 27, 2011, at 9:51 AM, "Voyles, John" <John.Voyles@lge-ku.com> wrote:

Robert,

Any idea on the next meeting dates?

JV

Please note that my e-mail address has changed from john.voyles@eon-us.com to john.voyles@lge-ku.com. Please take this opportunity to update my address in your address book and delete the old e-mail address immediately. The old e-mail address will soon expire, and I will no longer be able to receive e-mails at that address.

From: Williams, John
To: Saunders, Eileen; Schroeder, Andrea
Sent: 2/4/2011 10:54:27 AM
Subject: RE: BR Landfill - Conceptual Drawings, Evaluation Paper, Engineering Design Scope
Attachments: BR Landfill Justification (08-Sep-10).pdf

Andrea,

See attached.

Thanks,

John

From: Saunders, Eileen
Sent: Friday, February 04, 2011 8:49 AM
To: Schroeder, Andrea
Cc: Williams, John
Subject: Re: BR Landfill - Conceptual Drawings, Evaluation Paper, Engineering Design Scope

Andrea,

I am out of town on business today. Hopefully John can provide you what you need.

Thanks,

Eileen

From: Schroeder, Andrea
Sent: Friday, February 04, 2011 08:14 AM
To: Saunders, Eileen
Cc: Williams, John
Subject: RE: BR Landfill - Conceptual Drawings, Evaluation Paper, Engineering Design Scope

Could you provide the non-redacted (not blacked-out) version of the Landfill Justification document?

If we use any redacted documents as part of the filing and the information needs to remain confidential, we will file a redacted version in the public record and a confidential (non-redacted) version under seal.

From: Saunders, Eileen
Sent: Thursday, February 03, 2011 9:04 PM
To: Schroeder, Andrea
Cc: Williams, John
Subject: Fw: BR Landfill - Conceptual Drawings, Evaluation Paper, Engineering Design Scope

Andrea,

Here is the information from John.

Thanks,

Eileen

From: Williams, John
Sent: Thursday, February 03, 2011 11:44 AM

To: Saunders, Eileen

Subject: BR Landfill - Conceptual Drawings, Evaluation Paper, Engineering Design Scope

Eileen,

I believe the attachments will meet the intent of the presentation:

Conceptual Drawings:

<<Initial Design Concepts Memo 2-3-11.pdf>> <<Fig1.1_Jan_20_2011.pdf>> <<Fig2.1_Jan_20_2011.pdf>>
<<Fig1.2_Jan_20_2011.pdf>> <<Fig2.2_Jan_20_2011.pdf>>

Evaluation Paper:

<<BR Landfill Justification (\$ blacked out) (08-Sep-10).pdf>>

Engineering Design Scope:

<<BR CCR Engineering Scope (13-Oct-10).pdf>>

Regards,

John S. Williams

LG&E and KU Energy

Project Engineering

Civil Engineer

(859) 367-1275 (E. W. Brown Office)

(502) 627-3793 (Louisville Office)

(502) 645-4330 (Cellular)

John.Williams@lge-ku.com

**E.W. Brown CCR Storage Evaluation
Continue Main Pond Project vs. Conversion to Landfill
September 08, 2010**

Executive Summary

On June 21, 2010 the EPA issued a proposed Coal Combustion Residual (CCR) ruling that establishes federal guidelines for CCR storage. In light of the EPA's proposed CCR ruling, Project Engineering (PE) reviewed the CCR storage project (i.e., Main Ash Pond Project) at E.W. Brown (BR) that is under construction to evaluate what effects the EPA's proposed CCR rules potentially imposed on long-term wet storage of CCR at BR.

Significant work has been completed on the BR CCR Project, including detailed engineering and permitting for all phases of the project, as well as the physical work of relocating the transmission lines that cross the ash pond, ash handling upgrades and construction of the Auxiliary (Aux) Pond to elevation 880'. In addition to the completed tasks, construction of the Main Pond Starter Dike (elevation 902') is in progress but has been suspended by PE pending direction on the path forward for long-term CCR storage at BR.

As of June 2010, Phase I spend is \$53.3M of the approved \$73.1M sanction. Construction of Aux Pond elevation 900' (Phase II of II) is currently in progress and will proceed per the original plan or on an accelerated schedule to support CCR storage requirements based on the path forward.

Project Engineering and the BR Station recommend the implementation of Case A to convert the Main Pond into a Landfill to meet the EPA's proposed CCP Ruling. This option has the lowest NPV and NPVRR of the Cases reviewed while maximizing the landfill footprint. Maximizing the landfill footprint also maximizes future vertical expansion opportunities and eliminates future cost and issues associated with Station operations while dewatering and closing the pond post-EPA CCR Ruling. It is important to note that both options proposed by the EPA for CCR storage are for long-term dry storage (i.e., landfill). Therefore, not converting the Main Pond Project to a dry landfill project now will not eliminate the requirement to convert all CCR storage to a dry landfill should either of the EPA proposed regulations become final.

Project Background

In 2005, PE was tasked with evaluating storage options to meet the future CCR storage requirements at BR to 2030. The evaluation process consisted of an Initial Siting study, Conceptual Design phase, and Detailed Design of the Main Pond and Aux Pond. The Initial Siting study evaluated potential storage options for BR Station and recommended an on-site storage facility as the least cost option.

The Conceptual Design was built upon the Initial Siting Study and focused on potential storage options available on-site. Options evaluated included ponds, landfills, and a combination of

PROJECT ENGINEERING

ponds and landfills; with the final evaluation considering three ponds and two landfill options. Pond Option #1 was a vertical upstream expansion of the existing Main Ash Pond, Pond Option #2 was a vertical upstream expansion of the existing Main Ash Pond and a new Gypsum Stack, and Pond Option #3 was a vertical upstream expansion of the existing Ash Pond and a new Bottom Ash Pond. The two landfill options were based on a common footprint; however Landfill Option #1 was based on conventional dry CCR handling and mechanical placement while Landfill Option #2 was based on wet CCR handling and dense slurry placement. Based on Net Present Value (NPV) evaluations of the (5) five options in 2005, the least-cost alternative was Pond Option #3 consisting of a new Aux Pond for bottom ash storage and the vertical upstream expansion of the existing Ash Pond for flyash and non-marketed gypsum storage. Option #3 capital costs (Phase I and II of five Phases) of \$98M were approved for Environment Cost Recovery by the Kentucky Public Service Commission (KYPS) in 2005 and again in 2009.

Upon completion of the Conceptual Design, Detailed Design of the new Aux Pond and vertical upstream expansion of the Main Pond was initiated. Detailed Design included engineering for the ponds, transmission line relocations, station mechanical upgrades, development & submittal of the Dam Safety and 404/401 permits, and several environmental studies to support the permitting process. Detailed Design for the Aux Pond was completed in 2006 followed by the Main Pond in 2007. The original design basis in 2006 was to provide 20-years (until year 2030) of CCR storage based on the following production rates:

CCR	Annual Production (yd³)	20-Year Production (yd³)
Gypsum	500,000	10,000,000
Fly Ash	221,000	4,420,000
Bottom Ash	55,000	1,100,000
Totals	776,000	15,520,000

Current Project Status

Phase I of Pond Option #3 CCR expansion began in 2006 with Detailed Design. The design consists of an expanded Main Ash Pond embankment, construction of an Aux Ash Pond, transmission line relocations, and ash handling upgrades. The Aux Pond is currently in operation at its initial height of elevation 880'. It provides an alternate location to treat bottom ash and fly ash in the area south of the existing Main Pond while the Main Pond Starter Dike (Starter Dike) is under construction. If the Pond Option #3 design progresses to final completion, the Main Pond will have been constructed to elevation 962' and the Aux Pond to elevation 900'.

Aux Pond

The construction sequence of the Aux Pond was designed with a two phase approach, separated by the construction duration of the Main Pond Starter Dike. Construction of the first phase, designated at Aux Pond elevation 880', commenced in October of 2006 and was

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placed into operation in June 2008. The second phase of construction, designated Aux Pond elevation 900', will expand the pond to the final design elevation. The second phase commenced in June 2010 and is currently planned to reach completion in mid-2013.

During the construction of Aux Pond elevation 880', the FGD facility was under construction and gypsum was not in production; therefore, the first phase of the Aux Pond was constructed of clay and rock sourced from on-site borrow. The 47-acre site was stripped and grubbed, karst features were investigated and treated, and a riser outfall structure was constructed to provide outlet control, and the facility's liner system was installed incorporating 60-mil reinforced polypropylene flexible membrane liner (FML). The FGD facility was placed into operation in June 2010, thereby adding gypsum to the by-product stream. The Aux Pond elevation 900' phase incorporates gypsum as the primary constructible fill material.

Main Pond

In June 2008, the Aux Pond was placed into operation at elevation 880'. Shortly thereafter, the Main Ash Pond was taken out of service. To date, excavation and pumping operations of the Main Pond have been performed to drain the low-lying areas allowing the existing ash surface to be stabilized and re-graded. A bi-axial geo-grid reinforced working platform and a starter dike were constructed utilizing shot rock that comprises the foundation for future phased elevation expansions. Also completed is the new riser structure, a storm water runoff system, clay borrow and bottom ash stockpiling, and liner system procurement.

In light of impending EPA regulations that were published in June of 2010, PE suspended most of the work on the Starter Dike contract in an effort to minimize construction of embankments that may not be required should the recommendation to convert the pond project to a landfill is approved. Only shared construction activities between the Starter Dike design and the projected design of a future landfill within the same footprint continue. In suspending the Starter Dike project, the liner system and embankment material can be utilized in the design of the landfill and also utilized to accelerate the construction of the Aux Pond elevation 900' Phase II, thus minimizing approximately \$6.5 million of spend on construction that would be stranded.

Transmission Relocation

Early site construction included the relocation of approximately 13,000 linear feet of overhead electric transmission lines and associated poles and towers to accommodate the expansion of the Main Ash Pond and the construction of the Auxiliary Ash Pond. This phase of the construction effort was initiated in mid-2006 and was completed in 2007.

Ash Handling Upgrades

Multiple plant upgrades to the wet ash handling system resulted from the Main Pond expansion and Aux Pond construction. New higher capacity fly ash and bottom ash sluice

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pumps, servicing all three units, were required to overcome the added height of the Main Ash Pond embankment and the distance to the Aux Pond.

Phase I Financials

The following table depicts the Phase I expenditures to date verses the Phase I sanction amount.

Cost Through June '10 (\$000)	
Engineering	\$4,728
Transmission Line Relocation	\$18,017
Ash Handling Upgrades	\$5,947
Aux Pond 900'	\$8,442
Main Pond Starter Dike	\$13,202
E.ON U.S./Other	\$2,947
Sub-Total	\$53,283
ECR/Sanction Approved	\$73,100
Remaining Budget	\$19,817

EPA's Proposed CCR Ruling

As a result of the December 2008 ash pond failure at TVA's Kingston's Generating Station, the EPA issued a proposed CCR ruling on June 21, 2010 that would establish federal guidelines for CCR storage. The proposal had three options to govern the storage of CCR, Subtitle "C" – Hazardous, Subtitle "D" – Non-Hazardous, and Subtitle "D" Prime – Non-Hazardous.

Subtitle "C" – Hazardous

The Aux Pond and Main Pond at BR would not comply with the proposed ruling due to strict siting requirements and not having a composite liner. As a result the ponds would have to be closed per one of the two options below:

1. Prior to the ruling becoming effective, BR could cease operation of the ponds and close them under current KY Division of Waste Management regulations. Existing ponds would not be grandfathered in.
2. Once the ruling becomes effective, the ponds would have to stop receiving CCR within 5-years and close within 2-years thereafter. New Subtitle "C" permits would be required in addition to run-on & run-off controls, groundwater monitoring, corrective action plans, closure/post-closure care plan, and financial assurance per the ruling.

PROJECT ENGINEERING***Subtitle “D” – Non-Hazardous***

The Aux Pond could potentially comply with Subtitle “D” requirements but is highly unlikely as the liner consists of 18” of clay overtopped by an FML while the regulations calls for 24” of clay overtopped by an FML. Without changing our current design plans, the Main Pond at BR would not comply with the proposed ruling due to not having a composite liner and meeting strict siting requirements. As a result, the ponds would have to be closed per one of the two options below:

1. Prior to the ruling becoming effective, BR could cease operation of the ponds and close them under current KY Division of Waste Management regulations. Existing ponds would not be grandfathered in.
2. Once the ruling becomes effective, the ponds would have to stop receiving CCR within 5-years and close within 2-years thereafter. New Subtitle “D” permits would be required in addition to run-on & run-off controls, groundwater monitoring, corrective action plans, and closure/post-closure care plan per the ruling.

Subtitle “D” Prime – Non-Hazardous

Under Subtitle “D” Prime the current elevation of the Aux Pond and Main Pond at the effective date of the ruling would be grandfathered in and allowed to operate for their remaining useful life. However, any future vertical or horizontal expansion would fall under the new regulations and require a new permit, strict siting requirements, composite liner, run-on & run-off controls, groundwater monitoring, corrective action plan, and closure/post-closure care plan per the ruling. These requirements would preclude moving forward because the Main Pond (1) will not provide the required storage volume for CCR due to not being constructed to its final design elevation prior to the rules becoming effective because of both lack of gypsum or rock to construct the berm and insufficient time; and (2) the Main Pond, once placed into operation and filled with water, cannot be retrofitted with the required composite liner to comply with the strict siting requirements.

Under Subtitle “C” the EPA would effectively force the closure of all existing impoundments and eliminate impoundments for future CCR storage as a result of siting restriction, tighter water treatment standards, and cost to implement all technical requirements as set forth. Under Subtitle “D” existing impoundments that do not meet the proposed requirements would be forced to close. However, under Subtitle “D” new impoundments that are designed and constructed with a composite liner, groundwater monitoring, and in compliance with all performance standards would be allowed.

The EPA’s proposed ruling will be considered in determining the path forward for the BR CCR project and its effects on the project will be discussed in later sections.

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Design Basis Moving Forward

As a result of the EPA's proposed CCR Ruling, PE has reevaluated long-term CCR storage at BR as the current Main Pond design will no longer meet the 2030 storage requirement. The analyses are based on an assumption that the proposed ruling becomes effective on January 2012. The January 2012 effective date was based on the proposed ruling being approved in 2010, and accounted for one year of litigation before the ruling became effective. The 3 options available are summarized below:

- **Base Case** – Continue with construction of the Aux Pond to elevation 900' and the Main Pond to 962' per the original design.
- **Case A** – Stop construction of the Main Pond Starter Dike immediately and convert the Main Pond into a landfill prior to the effective date of the CCR Ruling and prior to placing wet CCR in the Main Pond. Complete construction of the Aux Pond 900' project utilizing rock in lieu of gypsum to accelerate construction completion prior to the rules becoming effective. The Aux Pond will eventually be closed per the new regulations once the landfill is placed into service.
- **Case B** – Continue construction of the Main Pond Starter Dike and Aux Pond 900' per the original design. Once the CCR Ruling becomes effective, take the Main Pond out of service, close and cap it per the new regulations, and then construct a landfill similar to Case A on top of the newly constructed Main Pond Starter Dike. As with Case A, once the landfill is placed into service the Aux Pond will be closed per the regulations.
- **Case C** – Modify the design of the Main Pond and install a composite liner per Subtitle "D" requirements. Complete the Aux Pond 900' project as originally designed.

Each case was evaluated based on the most recent forecast of CCR production rates as provided by Generation Planning. In the third quarter of 2009, Generation Planning issued updated CCR production rates based on the projected 2010 MTP generation plan. The CCR production rates for BR modeled in 2009 were significantly lower than the original production rates utilized in 2005. This is attributed to a significant reduction in the station's capacity factor from 77 percent to 54 percent due to shifting generation to other stations. Comparison of the average annual CCR production rates are provided below:

CCP	Average Annual Production Rates (yd ³)			
	2005 Design Basis	2010 MTP	Δ	% Reduction
Bottom Ash	55,000	35,879	(19,121)	35%
Fly Ash	221,000	143,516	(77,484)	35%
Gypsum	500,000	290,000	(210,000)	42%
Totals	776,000	469,395	(306,605)	47%

The required CCR storage capacity till 2030 using the 2010 MTP production rates is now 7M yd³ based on an in-service date of January 2014. If utilizing the original 2005 design volume of

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15.5M yd³ the storage, the facility would have a design life of approximately 38-years (2048), well beyond BR's needs.

Moving forward, the CCR storage facility at BR for both viable Cases A and B will provide a minimum storage capacity of 7M yd³ and will allow for future expansion if necessary. As described below, the Base Case of continuing to construct the Main Pond and utilize it until 2030 will not be allowed under either scenario in the proposed regulations. In other words, the CCR landfill for both Cases will be designed and permitted with the maximum footprint available and the height of the facility will be adjusted to meet potential changing capacity requirements.

Base Case

The Base Case is the plan currently being implemented and is in-line with the approved ECR & 2006-2010 MTP/LTP plans. Phase I included the design & permitting of the Aux Pond and Main Pond, relocation of the transmission lines, wet ash handling upgrades, Aux Pond 880' construction, and Main Pond Starter Dike construction. All items except the Main Pond Starter Dike construction (in suspension) have been completed. Phase II includes Aux Pond 900' (its final elevation) and Main Pond 912' construction utilizing gypsum. Under the EPA's proposed CCR Ruling, neither pond will meet either of the proposed requirements and will be required to close per the timeframe outlined in the ruling. As a result, moving forward with the Base Case based on the current plan and liner design will not provide BR the required storage through 2030, even at the lower 2009 model production rates.

Base Case Design Issues

The EPA has proposed three options to manage CCR. If the EPA moves forward with Subtitle "C", this option will effectively eliminate all wet CCR storage and would require all existing ponds to retroactively meet the design criteria or cease operation and close per the requirements set forth under Subtitle "C". The Main Pond at BR would not comply with the proposed ruling due to siting requirements, land disposal restrictions (waste treatment), and not having a composite liner & leachate collection system along with other minor issues. A composite liner and leachate collection system could be installed; however the siting requirements and land disposal restriction would remain an issue.

Under Subtitle "D", the EPA is more open to wet storage of CCR. However, several issues remain such as siting requirements (karst, seismic, proximity to wetland & adjacent property owners, etc), composite liner & leachate collection system, and requiring ponds to retroactively meet the design criteria or cease operation and close per the requirements set forth under Subtitle "D". Prior to the effective date of the EPA's ruling, the Main Pond could be constructed to its ultimate elevation of 928' using rock (if a source of sufficient rock quantity can be found) in-lieu of gypsum and include a composite liner with leachate collection. However, the Main Pond would still be subject to the siting requirements under Subtitle "D". By using rock in-lieu of gypsum, the design life of the pond will be reduced by 8 years as the gypsum eventually produced that would have been used to construct the dike would instead be stored in the pond. To complete construction prior to the effective date, embankment must be placed at 12,000 yd³ per day when normal average construction is

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3,000-5,000 yd³ per day. In addition, close proximity land would have to be purchased to supply the quantity of clay required to construct the composite liner and to supply the rock necessary to construct the embankments. Compliant rock and clay currently sourced from the Houpp Property is becoming limited. Based on production rates from the existing quarry, an additional 200 acres would be required to supply the 2.2M yd³ of rock needed to complete the Aux Pond to an elevation of 900' and the Main Pond to an elevation of 928'. The purchase of 200 acres for additional borrow sources would add \$2.0M (2010 dollars) to the project based on cost data gathered on the Ghent Landfill Project. Assuming the new quarry is located less than 5 miles from the plant and utilizing 40-ton articulated trucks, the additional hauling cost would be approximately \$10.25M (2010 dollars) based on 2010 RS Means estimating manuals. These additional costs have not been included in the NPV or PVRR analysis.

Construction of the Main Pond could continue by modifying its design to comply with the proposed technical requirements at a significant cost increase and risk to the company. The technical requirements as proposed could change prior to the final ruling and the pond would no longer be in compliance. The EPA is trying to eliminate ponds and move towards dry landfills; therefore, constructing a new pond for long term CCR storage carries significant risk.

Under Subtitle "D" Prime the current elevation of the Main Pond, at the effective date of the ruling, would be grandfathered in and allowed to operate for the remainder of its useful life. However, any future vertical or horizontal expansion would fall under the new regulations and require a new permit, compliance with strict siting requirements, composite liner, run-on & run-off controls, groundwater monitoring, corrective action plan, and closure/post-closure care plan per the ruling. Prior to the effective date of the EPA's ruling the Main Pond could be constructed to its ultimate elevation of 928' as described above. However, there is significant risk as Subtitle "D" Prime is the least likely alternative to be approved as the EPA is trying to eliminate ponds and move towards dry landfills.

Based on the revised 2010 MTP CCR production rates requiring the reduced storage of 7M yd³, the Main Pond's maximum elevation has been lowered from 962' to 928'. Moving forward, cost data provided for the Base Case will be based on a final elevation of 928'. The following table reflects the NPV, PVRR, and capital cost cash flows for the Base Case option as currently included in the 2011 MTP/LTP draft of July, 2010.

Base Case Capital Cost (\$000) for 7M yd ³											
2010	2011	2012	2013	2014	2015	2016	2017	2018	NPV	PVRR	Total Project
\$19,300	\$6,700	\$4,153	\$6,365	\$3,424	\$8,951	\$2,637	\$2,699	\$3,813	\$103,720	\$127,799	\$121,687

Case A

Case A consists of immediately terminating construction of the Main Pond Starter Dike (excluding site close out activities such as dust control and reclamation), accelerating the construction of the Aux Pond utilizing rock already blasted that has been recently placed in the Main Pond Starter Dike (thus reducing stranded investments), continued ash grading, Main Pond

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cap/closure, Landfill engineering and permitting, converting all station ash handling systems from wet to dry, and constructing the initial phase of a Landfill. Based on recent projects, the anticipated duration to perform these activities is 3.5 years with an in-service date of January 2014.

Design and construction of the Landfill would begin prior to final approval of the EPA's proposed CCR Ruling; however the Landfill liner requirements for both Subtitle "D" Non-Hazardous and "C" Hazardous options are the same and will become the basis of design. By terminating construction of the Main Pond Starter Dike, material already purchased and/or stockpiled, such as FML, Filter Fabric, Clay, Rock, and Bottom Ash, will be utilized in the construction of the Landfill thereby minimizing the cost impacts from the approximately \$6.5 million stranded cost for the materials purchased or quarried. Additionally, by utilizing rock already blasted and placed in the Main Pond Starter Dike, the footprint of the landfill will be optimized to approximately 100 acres thereby reducing the final height of the landfill and maximizing the future vertical expansion opportunities up to approximately 18M yd³.

All Plant effluents and CCR will continue to be directed to the Aux Pond during the design, permitting, and construction of the landfill for approximately 3.5 years in order to keep BR in operation. Based on a recent bathymetric survey conducted by MACTEC, and utilizing the 2010 CCR Production Rates, the Aux Pond has enough remaining capacity to store all the CCR generated through January 2015. This is a conservative estimate and provides one year of project float. The following table reflects the NPV, PVRR, and capital cost cash flows for Case A as reflected in the notes to the 2011 MTP/LTP as Landfill Option #1.

Case A Capital Cost (\$000)											
2010	2011	2012	2013	2014	2015	2016	2017	2018	NPV	PVRR	Total Project
\$9,051	\$14,262	\$26,722	\$24,064	\$0	\$0	\$0	\$0	\$9,321	\$126,322	\$181,791	\$154,939

Case B

Case B consists of completing the Main Pond Starter Dike and Aux Pond 900' projects as designed and permitted prior to final approval of the EPA's proposed CCR Ruling. Upon approval of the EPA's proposed CCR Ruling, the Main Pond would be taken out of service; the Main Pond would then be dewatered, followed by ash grading, Main Pond cap/closure, Landfill engineering, permitting, wet to dry ash handling conversion, and the initial phase of construction of the Landfill. Based on recent projects, the anticipated duration to perform these activities is 5.5 years with an in-service date of January 2016.

If the construction of the Main Pond Starter Dike were to continue to completion and the EPA's proposed ruling was approved, material already purchased and/or stockpiled such as FML, Filter Fabric, Clay, Rock, and Bottom Ash *cannot* be salvaged or otherwise made available for the construction of the Landfill resulting in the need to purchase additional land for approximately \$2M to develop new borrow sources and liner material at future market values. Design and construction of a landfill would begin after final approval of the EPA's proposed CCR Ruling which would be the basis of design. By continuing with the construction of the Main Pond Starter Dike, the footprint of the landfill would be approximately 80 acres, some 20 acres less

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than Case A, thus reducing the potential for future vertical expansion, approximate maximum capacity 13.25M yd³. Case B also would involve having to develop an operation plan for the Brown Station that would enable it to remain in operation while the recently constructed Main Pond was taken back out of service and dewatered to allow construction of the Landfill. **These operational costs are not included in the total project cost shown in the table below as they are difficult to estimate at the time of preparing this paper; however, they are expected to be significant.**

During the design and permitting of the landfill, both the Aux Pond and Main Pond will be used to store CCR material. During construction, a duration of approximately 2 years, all CCR generated will be stored in the existing Aux Pond. Based on a recent bathymetric survey conducted by MACTEC, and utilizing the 2010 CCR Production Rates, the Aux Pond has enough remaining capacity to store all the CCR generated for 2 years starting January 2014. The following table reflects the NPV, PVRR, and capital cost cash flows for Case A as reflected in the notes to the 2011 MTP/LTP as Landfill Option #2.

Case B Capital Cost (\$000)											
2010	2011	2012	2013	2014	2015	2016	2017	2018	NPV	PVRR	Total Project
\$19,350	\$2,907	\$3,605	\$10,786	\$31,135	\$31,387	\$0	\$0	\$0	\$143,980	\$204,633	\$193,567

NOTE: Case B values do not include the estimated \$2.0M for land purchase for additional clay borrow source.

Case C

Case C consisted of completing the Aux Pond 900' project as designed and modifies the Main Pond Starter Dike to include a composite liner system. With the addition of 24" of clay the Main Pond could comply with Subtitle "D"; however, the Main Pond would not comply with Subtitle "C" and does not comply with the EPA intent to eliminate ponds for storage. Case C was eliminated because (1) it is not possible to source clay and rock from the existing station property in the quantities required; (2) it is not economically feasible to source clay from the surrounding area and the time required to locate and acquire a farm with sufficient quantities within the timeframe required is deemed marginal at best; and (3) to design and construct the composite liner will only allow compliance with subtitle "D" and not "C". Based on this no further consideration was given to Case C.

Schedule Impacts

If the decision is made to convert the Main Pond into a Landfill there are several items that will impact the schedule. They include engineering/design, permitting, a new or updated ECR/CPCN filing, and initial landfill construction. Based on experience from previous projects the engineering/design will take approximately 3-4-months and will include development of the landfill drawings, specifications, stability analysis, groundwater monitoring plan, and permit application.

Permitting will take approximately 18-months and should only include the KY Division of Waste Management permit as the remaining permits were obtained during the original Main

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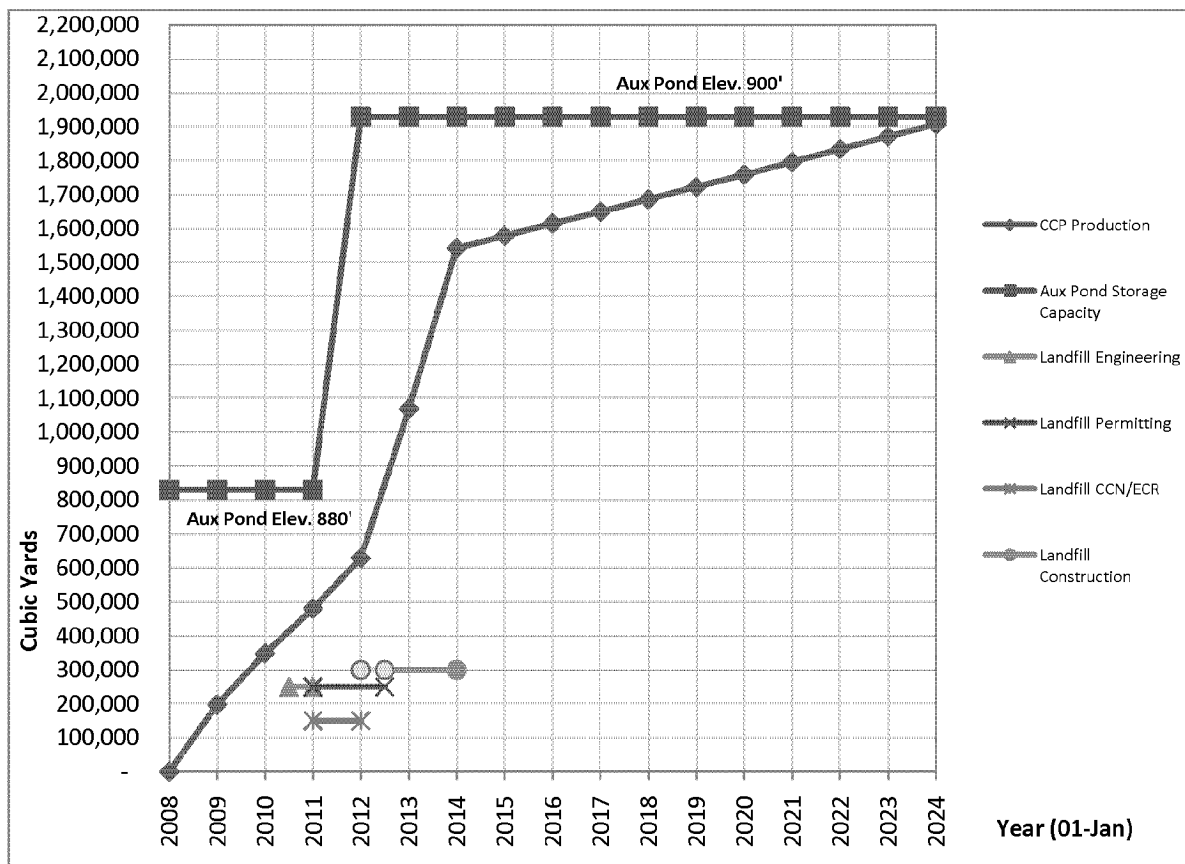
Pond project permitting. The updated or new ECR/CPCN filing will take approximately 6-months and would be submitted in parallel with the engineering/design and permitting process.

The initial landfill construction timeline will be dependent on the chosen option, but will take between 18-24 months to complete. Based on the above, PE performed an analysis to ensure the Aux Pond had enough storage capacity remaining to support the conversion of the Main Pond into a Landfill. Results of the storage analysis are provided below and indicate that the Aux Pond has enough capacity to support either Case A or Case B.

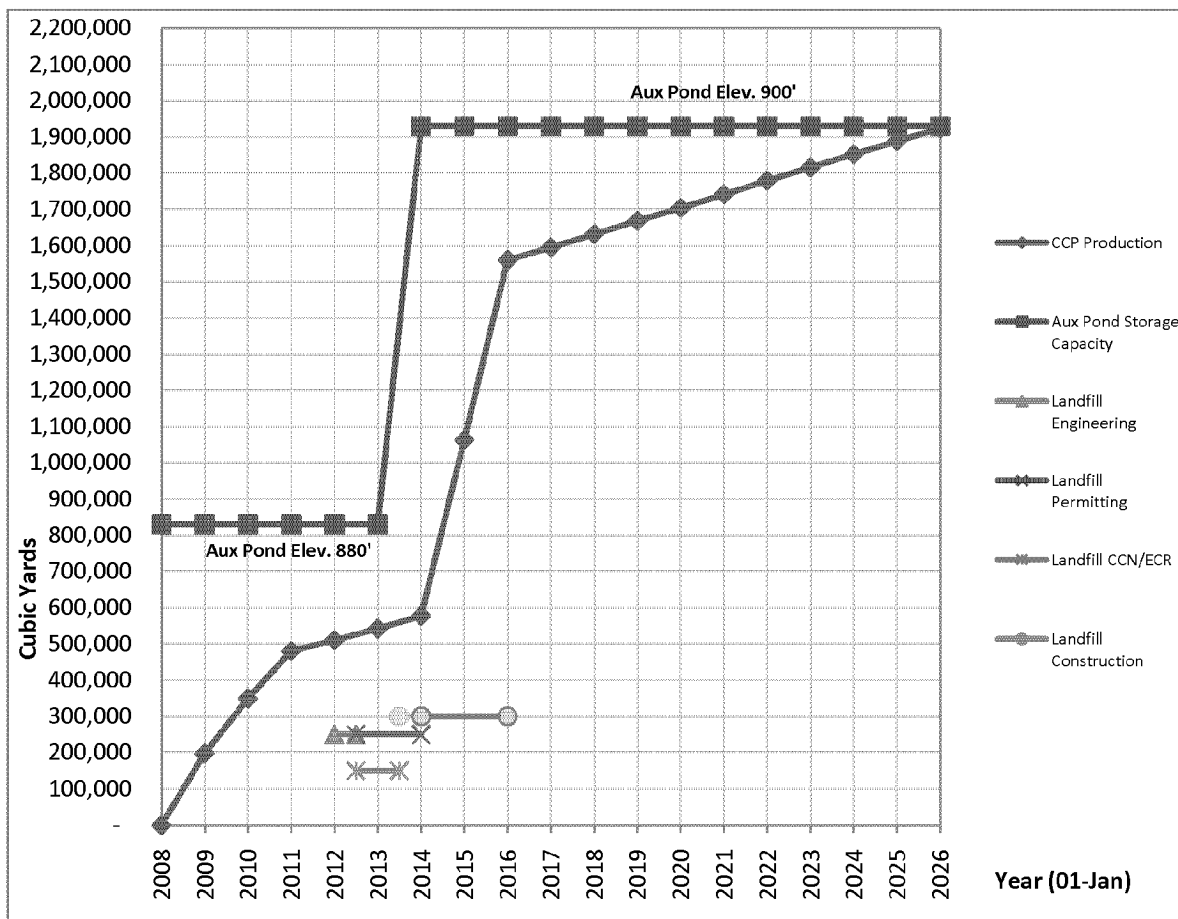
A summary of the schedule is shown below.

Project Timeline		
Task	Date	Duration
Informal Meeting w/the PSC	October 2010	1 Day
Engineering	September 2010	3-4 Months
File Permits	December 2010	18 Months
CPCN/ECR Filing	December 2010	6 Months
Construction	May 2012	18 Months

Aux Pond Stage Storage Graph (Case A) – Stop Main Pond Starter Dike & Accelerate Aux Pond 900’ Construction



Aux Pond Stage Storage Graph (Case B) – Complete Main Pond Starter Dike & Aux Pond 900’ per Original Schedule



Financials

Considering the factors referenced above, PE with the assistance of MACTEC, developed capital cost estimates for Case A and B which were based on a horizontal expansion of the landfill. Additional engineering is required to determine if a horizontal or vertical expansion approach is the best alternative. Timing of cash flows would be affected if a vertical expansion approach is chosen. The ECR approved cost estimate is the basis for the 2011 MTP/LTP and is provided for reference only. The Base Case is a modification of the ECR approved option which provides 7M yd³ of storage and is no longer a viable long term solution for CCR storage as the current design of the Main Pond will not comply with the EPA’s proposed CCR Ruling. *Case A or B are the only long term storage solutions.*

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Cost Estimate Comparison											
Option	Life	Capacity	2010	2011	2012	2013	2014	2015	NPV	PVRR	Total Project
ECR Approved	2054	15.5M yd ³	\$25,233	\$10,220	\$8,777	\$4,865	\$5,463	\$6,945	\$143,394	\$158,684	\$200,132
Base Case	2030	7M yd ³	\$19,300	\$6,700	\$4,153	\$6,365	\$3,424	\$8,951	\$103,720	\$127,799	\$121,687
Case A	2030	7M yd ³	\$9,051	\$14,262	\$26,722	\$24,064	\$0	\$0	\$126,322	\$181,791	\$154,939
Case B	2030	7M yd ³	\$19,350	\$2,907	\$3,605	\$10,786	\$31,135	\$31,387	\$143,980	\$204,633	\$193,567

NOTE: Case B values do not include the estimated \$2.0M for land purchase for additional clay borrow source.

Recommendation

Project Engineering and the Brown Station recommend the immediate implementation of Case A to convert the Main Pond into a Landfill to meet the EPA's proposed CCP Ruling. This option has the lowest NPV & PVRR, is the least cost, maximizes the landfill footprint, maximizes future vertical expansion opportunities to accommodate changes in production, and eliminates the difficult and costly issues associated with maintaining station operations while dewatering and closing the pond post EPA CCR Ruling while the landfill is being constructed.

From: Saunders, Eileen
To: Schroeder, Andrea
CC: Williams, John
Sent: 2/3/2011 9:04:20 PM
Subject: Fw: BR Landfill - Conceptual Drawings, Evaluation Paper, Engineering Design Scope
Attachments: BR CCR Engineering Scope (13-Oct-10).pdf; BR Landfill Justification (\$ blacked out) (08-Sep-10).pdf; Fig1.1_Jan_20_2011.pdf; Fig1.2_Jan_20_2011.pdf; Fig2.1_Jan_20_2011.pdf; Fig2.2_Jan_20_2011.pdf; Initial Design Concepts Memo 2-3-11.pdf

Andrea,

Here is the information from John.

Thanks,

Eileen

From: Williams, John
Sent: Thursday, February 03, 2011 11:44 AM
To: Saunders, Eileen
Subject: BR Landfill - Conceptual Drawings, Evaluation Paper, Engineering Design Scope

Eileen,

I believe the attachments will meet the intent of the presentation:

Conceptual Drawings:

<<Initial Design Concepts Memo 2-3-11.pdf>> <<Fig1.1_Jan_20_2011.pdf>> <<Fig2.1_Jan_20_2011.pdf>>
<<Fig1.2_Jan_20_2011.pdf>> <<Fig2.2_Jan_20_2011.pdf>>

Evaluation Paper:

<<BR Landfill Justification (\$ blacked out) (08-Sep-10).pdf>>

Engineering Design Scope:

<<BR CCR Engineering Scope (13-Oct-10).pdf>>

Regards,

John S. Williams
LG&E and KU Energy
Project Engineering
Civil Engineer
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(502) 627-3793 (Louisville Office)
(502) 645-4330 (Cellular)
John.Williams@lge-ku.com

BR CCR Project – Engineering Design Scope of Work

- 1.0 Safety is of utmost importance to E.ON U.S. and Kentucky Utilities. The contractor is expected to comply with all Federal, State, local, and E.ON U.S. Safety Regulations, including the E.ON U.S. Passport Program.
- 2.0 The Landfill Design shall be based upon the storage of full production of CCR's for all three units for a period of 20 years. No consideration will be made for off-site disposal of any CCR's.
- 3.0 The Landfill Design shall be based on the "Field Performance Test," completed by Stantec (formally FMSM).
 - 3.1 The size of the storage facilities shall be based upon all CCP's generated at the site. Bottom Ash reclaimed from the existing Ash Treatment Basin (ATB), approximately 175,000 yd³ shall be incorporated into the design for use as a draining layer, road base, cover material, etc.
 - 3.2 Bottom Ash, Fly Ash, and Gypsum Total, 20-year volume: 7M yd³
 - 3.3 The 20-year CCP volumes listed above are the design criteria for this project and will not be revised by the engineer, without approval of E.ON U.S. Project Engineering. For design, no consideration is to be given to current or future storage of CCP off-site.
 - 3.4 Scope of the Landfill Design shall include all engineering, design, and permitting services required for the storage of CCP's at the landfill site. Significant items of the WORK include, but are not limited to:
 - 3.4.1 Design of landfill and related haul roads, drainage facilities and other appurtenances
 - 3.4.2 Documentation and applications for all permits or approvals required to construct and operate Special Waste Landfills at the selected sites as summarized below:
 - 3.4.2.1 Coordination meetings with the Kentucky Division of Waste Management
 - 3.5 The WORK required under this RFQ shall include:
 - 3.5.1 Laboratory testing of CCR's, soil and rock
 - 3.5.2 Detailed design of CCR storage facilities, including geotechnical engineering (slope stability and settlement), surface water management, liner and leachate collection systems, final cap systems, hydraulic structures, haul roads and maintenance roads
 - 3.5.3 Erosion and sediment control plans
 - 3.5.4 Surface and ground water monitoring plans
 - 3.5.5 Monitoring well installation
 - 3.5.6 Surface and ground water sampling analysis for 8 sampling periods
 - 3.5.7 Construction drawings, project specifications, and project QA/QC plan
 - 3.5.8 Construction cost estimates ($\pm 10\%$) at 50%, and 100% design activities
 - 3.5.9 Construction schedule

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- 3.5.10 Coordination meetings with E.ON, equipment vendors, other consultants, as needed
- 3.5.11 Meetings with regulatory agencies at the completion of 30%, 60% and 90% design
- 3.6 Applicable permit applications, including but not limited to:
 - 3.6.1 Special Waste Landfill Permit
 - 3.6.2 KPDES Permit Amendment
 - 3.6.3 Review of Air Permits for Revision
- 4.0 Consideration shall be given to various materials of construction including CCR materials. The CCR materials will include bottom ash, fly ash, and gypsum. Consideration shall also be given to on-site soil fill materials including prior project spoil pile materials.
- 5.0 Cost estimates shall be based on a phased construction approach, with 3 phases depending on engineering and construction considerations.
 - 5.1 Itemized cost estimates of new infrastructure required for treatment of CCP materials, including buildings, dewatering facilities, conveyors, etc., and landfill or embankment closure costs shall be submitted.
 - 5.2 The cost calculations shall include a separate section addressing Operating and Maintenance costs during the above period, including any monitoring costs associated with a landfill or embankment, and the final costs associated with closure of a landfill or embankment.
- 6.0 Provide a monthly progress report containing an update of the previous month's activities, remaining task to complete, project schedule, cost tracking, etc.
- 7.0 Participate in a weekly progress meeting or conference call and attend a minimum of three site presentations at approximately 50% and 90% completion, in addition to the Final Report presentation.
- 8.0 Assist at public meetings with local officials and residents if held.
- 9.0 Develop a Final Report at the conclusion of the Final Design and present the findings to the owner. The Final Report should include, but not be limited to:
 - 9.1 Cost information, including NPV calculations @ $\pm 10\%$
 - 9.2 Construction schedules
 - 9.3 Drawings, figures, and tables to support the report.
 - 9.4 Scope of work and bidding documents for the Construction Phase
 - 9.5 Signed and sealed construction drawings

**E.W. Brown CCR Storage Evaluation
Continue Main Pond Project vs. Conversion to Landfill
September 08, 2010**

Executive Summary

On June 21, 2010 the EPA issued a proposed Coal Combustion Residual (CCR) ruling that establishes federal guidelines for CCR storage. In light of the EPA's proposed CCR ruling, Project Engineering (PE) reviewed the CCR storage project (i.e., Main Ash Pond Project) at E.W. Brown (BR) that is under construction to evaluate what effects the EPA's proposed CCR rules potentially imposed on long-term wet storage of CCR at BR.

Significant work has been completed on the BR CCR Project, including detailed engineering and permitting for all phases of the project, as well as the physical work of relocating the transmission lines that cross the ash pond, ash handling upgrades and construction of the Auxiliary (Aux) Pond to elevation 880'. In addition to the completed tasks, construction of the Main Pond Starter Dike (elevation 902') is in progress but has been suspended by PE pending direction on the path forward for long-term CCR storage at BR.

As of June 2010, Phase I spend [REDACTED] sanction. Construction of Aux Pond elevation 900' (Phase II of II) is currently in progress and will proceed per the original plan or on an accelerated schedule to support CCR storage requirements based on the path forward.

Project Engineering and the BR Station recommend the implementation of Case A to convert the Main Pond into a Landfill to meet the EPA's proposed CCP Ruling. This option has the lowest NPV and NPVRR of the Cases reviewed while maximizing the landfill footprint. Maximizing the landfill footprint also maximizes future vertical expansion opportunities and eliminates future cost and issues associated with Station operations while dewatering and closing the pond post-EPA CCR Ruling. It is important to note that both options proposed by the EPA for CCR storage are for long-term dry storage (i.e., landfill). Therefore, not converting the Main Pond Project to a dry landfill project now will not eliminate the requirement to convert all CCR storage to a dry landfill should either of the EPA proposed regulations become final.

Project Background

In 2005, PE was tasked with evaluating storage options to meet the future CCR storage requirements at BR to 2030. The evaluation process consisted of an Initial Siting study, Conceptual Design phase, and Detailed Design of the Main Pond and Aux Pond. The Initial Siting study evaluated potential storage options for BR Station and recommended an on-site storage facility as the least cost option.

The Conceptual Design was built upon the Initial Siting Study and focused on potential storage options available on-site. Options evaluated included ponds, landfills, and a combination of

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ponds and landfills; with the final evaluation considering three ponds and two landfill options. Pond Option #1 was a vertical upstream expansion of the existing Main Ash Pond, Pond Option #2 was a vertical upstream expansion of the existing Main Ash Pond and a new Gypsum Stack, and Pond Option #3 was a vertical upstream expansion of the existing Ash Pond and a new Bottom Ash Pond. The two landfill options were based on a common footprint; however Landfill Option #1 was based on conventional dry CCR handling and mechanical placement while Landfill Option #2 was based on wet CCR handling and dense slurry placement. Based on Net Present Value (NPV) evaluations of the (5) five options in 2005, the least-cost alternative was Pond Option #3 consisting of a new Aux Pond for bottom ash storage and the vertical upstream expansion of the existing Ash Pond for flyash and non-marketed gypsum storage. Option #3 capital costs (Phase I and II of five Phases) [REDACTED] were approved for Environment Cost Recovery by the Kentucky Public Service Commission (KYPSC) in 2005 and again in 2009.

Upon completion of the Conceptual Design, Detailed Design of the new Aux Pond and vertical upstream expansion of the Main Pond was initiated. Detailed Design included engineering for the ponds, transmission line relocations, station mechanical upgrades, development & submittal of the Dam Safety and 404/401 permits, and several environmental studies to support the permitting process. Detailed Design for the Aux Pond was completed in 2006 followed by the Main Pond in 2007. The original design basis in 2006 was to provide 20-years (until year 2030) of CCR storage based on the following production rates:

CCR	Annual Production (yd³)	20-Year Production (yd³)
Gypsum	500,000	10,000,000
Fly Ash	221,000	4,420,000
Bottom Ash	55,000	1,100,000
Totals	776,000	15,520,000

Current Project Status

Phase I of Pond Option #3 CCR expansion began in 2006 with Detailed Design. The design consists of an expanded Main Ash Pond embankment, construction of an Aux Ash Pond, transmission line relocations, and ash handling upgrades. The Aux Pond is currently in operation at its initial height of elevation 880'. It provides an alternate location to treat bottom ash and fly ash in the area south of the existing Main Pond while the Main Pond Starter Dike (Starter Dike) is under construction. If the Pond Option #3 design progresses to final completion, the Main Pond will have been constructed to elevation 962' and the Aux Pond to elevation 900'.

Aux Pond

The construction sequence of the Aux Pond was designed with a two phase approach, separated by the construction duration of the Main Pond Starter Dike. Construction of the first phase, designated at Aux Pond elevation 880', commenced in October of 2006 and was

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placed into operation in June 2008. The second phase of construction, designated Aux Pond elevation 900', will expand the pond to the final design elevation. The second phase commenced in June 2010 and is currently planned to reach completion in mid-2013.

During the construction of Aux Pond elevation 880', the FGD facility was under construction and gypsum was not in production; therefore, the first phase of the Aux Pond was constructed of clay and rock sourced from on-site borrow. The 47-acre site was stripped and grubbed, karst features were investigated and treated, and a riser outfall structure was constructed to provide outlet control, and the facility's liner system was installed incorporating 60-mil reinforced polypropylene flexible membrane liner (FML). The FGD facility was placed into operation in June 2010, thereby adding gypsum to the by-product stream. The Aux Pond elevation 900' phase incorporates gypsum as the primary constructible fill material.

Main Pond

In June 2008, the Aux Pond was placed into operation at elevation 880'. Shortly thereafter, the Main Ash Pond was taken out of service. To date, excavation and pumping operations of the Main Pond have been performed to drain the low-lying areas allowing the existing ash surface to be stabilized and re-graded. A bi-axial geo-grid reinforced working platform and a starter dike were constructed utilizing shot rock that comprises the foundation for future phased elevation expansions. Also completed is the new riser structure, a storm water runoff system, clay borrow and bottom ash stockpiling, and liner system procurement.

In light of impending EPA regulations that were published in June of 2010, PE suspended most of the work on the Starter Dike contract in an effort to minimize construction of embankments that may not be required should the recommendation to convert the pond project to a landfill is approved. Only shared construction activities between the Starter Dike design and the projected design of a future landfill within the same footprint continue. In suspending the Starter Dike project, the liner system and embankment material can be utilized in the design of the landfill and also utilized to accelerate the construction of the Aux Pond elevation 900' Phase II, thus minimizing approximately [REDACTED] of spend on construction that would be stranded.

Transmission Relocation

Early site construction included the relocation of approximately 13,000 linear feet of overhead electric transmission lines and associated poles and towers to accommodate the expansion of the Main Ash Pond and the construction of the Auxiliary Ash Pond. This phase of the construction effort was initiated in mid-2006 and was completed in 2007.

Ash Handling Upgrades

Multiple plant upgrades to the wet ash handling system resulted from the Main Pond expansion and Aux Pond construction. New higher capacity fly ash and bottom ash sluice

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pumps, servicing all three units, were required to overcome the added height of the Main Ash Pond embankment and the distance to the Aux Pond.

Phase I Financials

The following table depicts the Phase I expenditures to date verses the Phase I sanction amount.

Cost Through June '10		
Engineering		
Transmission Line Relocation		
Ash Handling Upgrades		
Aux Pond 900'		
Main Pond Starter Dike		
E.ON U.S./Other		
Sub-Total		
ECR/Sanction Approved		
Remaining Budget		

EPA's Proposed CCR Ruling

As a result of the December 2008 ash pond failure at TVA's Kingston's Generating Station, the EPA issued a proposed CCR ruling on June 21, 2010 that would establish federal guidelines for CCR storage. The proposal had three options to govern the storage of CCR, Subtitle "C" – Hazardous, Subtitle "D" – Non-Hazardous, and Subtitle "D" Prime – Non-Hazardous.

Subtitle "C" – Hazardous

The Aux Pond and Main Pond at BR would not comply with the proposed ruling due to strict siting requirements and not having a composite liner. As a result the ponds would have to be closed per one of the two options below:

1. Prior to the ruling becoming effective, BR could cease operation of the ponds and close them under current KY Division of Waste Management regulations. Existing ponds would not be grandfathered in.
2. Once the ruling becomes effective, the ponds would have to stop receiving CCR within 5-years and close within 2-years thereafter. New Subtitle "C" permits would be required in addition to run-on & run-off controls, groundwater monitoring, corrective action plans, closure/post-closure care plan, and financial assurance per the ruling.

PROJECT ENGINEERING***Subtitle “D” – Non-Hazardous***

The Aux Pond could potentially comply with Subtitle “D” requirements but is highly unlikely as the liner consists of 18” of clay overtopped by an FML while the regulations calls for 24” of clay overtopped by an FML. Without changing our current design plans, the Main Pond at BR would not comply with the proposed ruling due to not having a composite liner and meeting strict siting requirements. As a result, the ponds would have to be closed per one of the two options below:

1. Prior to the ruling becoming effective, BR could cease operation of the ponds and close them under current KY Division of Waste Management regulations. Existing ponds would not be grandfathered in.
2. Once the ruling becomes effective, the ponds would have to stop receiving CCR within 5-years and close within 2-years thereafter. New Subtitle “D” permits would be required in addition to run-on & run-off controls, groundwater monitoring, corrective action plans, and closure/post-closure care plan per the ruling.

Subtitle “D” Prime – Non-Hazardous

Under Subtitle “D” Prime the current elevation of the Aux Pond and Main Pond at the effective date of the ruling would be grandfathered in and allowed to operate for their remaining useful life. However, any future vertical or horizontal expansion would fall under the new regulations and require a new permit, strict siting requirements, composite liner, run-on & run-off controls, groundwater monitoring, corrective action plan, and closure/post-closure care plan per the ruling. These requirements would preclude moving forward because the Main Pond (1) will not provide the required storage volume for CCR due to not being constructed to its final design elevation prior to the rules becoming effective because of both lack of gypsum or rock to construct the berm and insufficient time; and (2) the Main Pond, once placed into operation and filled with water, cannot be retrofitted with the required composite liner to comply with the strict siting requirements.

Under Subtitle “C” the EPA would effectively force the closure of all existing impoundments and eliminate impoundments for future CCR storage as a result of siting restriction, tighter water treatment standards, and cost to implement all technical requirements as set forth. Under Subtitle “D” existing impoundments that do not meet the proposed requirements would be forced to close. However, under Subtitle “D” new impoundments that are designed and constructed with a composite liner, groundwater monitoring, and in compliance with all performance standards would be allowed.

The EPA’s proposed ruling will be considered in determining the path forward for the BR CCR project and its effects on the project will be discussed in later sections.

PROJECT ENGINEERING**Design Basis Moving Forward**

As a result of the EPA's proposed CCR Ruling, PE has reevaluated long-term CCR storage at BR as the current Main Pond design will no longer meet the 2030 storage requirement. The analyses are based on an assumption that the proposed ruling becomes effective on January 2012. The January 2012 effective date was based on the proposed ruling being approved in 2010, and accounted for one year of litigation before the ruling became effective. The 3 options available are summarized below:

- **Base Case** – Continue with construction of the Aux Pond to elevation 900' and the Main Pond to 962' per the original design.
- **Case A** – Stop construction of the Main Pond Starter Dike immediately and convert the Main Pond into a landfill prior to the effective date of the CCR Ruling and prior to placing wet CCR in the Main Pond. Complete construction of the Aux Pond 900' project utilizing rock in lieu of gypsum to accelerate construction completion prior to the rules becoming effective. The Aux Pond will eventually be closed per the new regulations once the landfill is placed into service.
- **Case B** – Continue construction of the Main Pond Starter Dike and Aux Pond 900' per the original design. Once the CCR Ruling becomes effective, take the Main Pond out of service, close and cap it per the new regulations, and then construct a landfill similar to Case A on top of the newly constructed Main Pond Starter Dike. As with Case A, once the landfill is placed into service the Aux Pond will be closed per the regulations.
- **Case C** – Modify the design of the Main Pond and install a composite liner per Subtitle "D" requirements. Complete the Aux Pond 900' project as originally designed.

Each case was evaluated based on the most recent forecast of CCR production rates as provided by Generation Planning. In the third quarter of 2009, Generation Planning issued updated CCR production rates based on the projected 2010 MTP generation plan. The CCR production rates for BR modeled in 2009 were significantly lower than the original production rates utilized in 2005. This is attributed to a significant reduction in the station's capacity factor from 77 percent to 54 percent due to shifting generation to other stations. Comparison of the average annual CCR production rates are provided below:

CCP	Average Annual Production Rates (yd ³)			
	2005 Design Basis	2010 MTP	Δ	% Reduction
Bottom Ash	55,000	35,879	(19,121)	35%
Fly Ash	221,000	143,516	(77,484)	35%
Gypsum	500,000	290,000	(210,000)	42%
Totals	776,000	469,395	(306,605)	47%

The required CCR storage capacity till 2030 using the 2010 MTP production rates is now 7M yd³ based on an in-service date of January 2014. If utilizing the original 2005 design volume of

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15.5M yd³ the storage, the facility would have a design life of approximately 38-years (2048), well beyond BR's needs.

Moving forward, the CCR storage facility at BR for both viable Cases A and B will provide a minimum storage capacity of 7M yd³ and will allow for future expansion if necessary. As described below, the Base Case of continuing to construct the Main Pond and utilize it until 2030 will not be allowed under either scenario in the proposed regulations. In other words, the CCR landfill for both Cases will be designed and permitted with the maximum footprint available and the height of the facility will be adjusted to meet potential changing capacity requirements.

Base Case

The Base Case is the plan currently being implemented and is in-line with the approved ECR & 2006-2010 MTP/LTP plans. Phase I included the design & permitting of the Aux Pond and Main Pond, relocation of the transmission lines, wet ash handling upgrades, Aux Pond 880' construction, and Main Pond Starter Dike construction. All items except the Main Pond Starter Dike construction (in suspension) have been completed. Phase II includes Aux Pond 900' (its final elevation) and Main Pond 912' construction utilizing gypsum. Under the EPA's proposed CCR Ruling, neither pond will meet either of the proposed requirements and will be required to close per the timeframe outlined in the ruling. As a result, moving forward with the Base Case based on the current plan and liner design will not provide BR the required storage through 2030, even at the lower 2009 model production rates.

Base Case Design Issues

The EPA has proposed three options to manage CCR. If the EPA moves forward with Subtitle "C", this option will effectively eliminate all wet CCR storage and would require all existing ponds to retroactively meet the design criteria or cease operation and close per the requirements set forth under Subtitle "C". The Main Pond at BR would not comply with the proposed ruling due to siting requirements, land disposal restrictions (waste treatment), and not having a composite liner & leachate collection system along with other minor issues. A composite liner and leachate collection system could be installed; however the siting requirements and land disposal restriction would remain an issue.

Under Subtitle "D", the EPA is more open to wet storage of CCR. However, several issues remain such as siting requirements (karst, seismic, proximity to wetland & adjacent property owners, etc), composite liner & leachate collection system, and requiring ponds to retroactively meet the design criteria or cease operation and close per the requirements set forth under Subtitle "D". Prior to the effective date of the EPA's ruling, the Main Pond could be constructed to its ultimate elevation of 928' using rock (if a source of sufficient rock quantity can be found) in-lieu of gypsum and include a composite liner with leachate collection. However, the Main Pond would still be subject to the siting requirements under Subtitle "D". By using rock in-lieu of gypsum, the design life of the pond will be reduced by 8 years as the gypsum eventually produced that would have been used to construct the dike would instead be stored in the pond. To complete construction prior to the effective date, embankment must be placed at 12,000 yd³ per day when normal average construction is

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3,000-5,000 yd³ per day. In addition, close proximity land would have to be purchased to supply the quantity of clay required to construct the composite liner and to supply the rock necessary to construct the embankments. Compliant rock and clay currently sourced from the Houpp Property is becoming limited. Based on production rates from the existing quarry, an additional 200 acres would be required to supply the 2.2M yd³ of rock needed to complete the Aux Pond to an elevation of 900' and the Main Pond to an elevation of 928'. The purchase of 200 acres for additional borrow sources would add █████ (2010 dollars) to the project based on cost data gathered on the Ghent Landfill Project. Assuming the new quarry is located less than 5 miles from the plant and utilizing 40-ton articulated trucks, the additional hauling cost would be approximately █████ (2010 dollars) based on 2010 RS Means estimating manuals. These additional costs have not been included in the NPV or PVRR analysis.

Construction of the Main Pond could continue by modifying its design to comply with the proposed technical requirements at a significant cost increase and risk to the company. The technical requirements as proposed could change prior to the final ruling and the pond would no longer be in compliance. The EPA is trying to eliminate ponds and move towards dry landfills; therefore, constructing a new pond for long term CCR storage carries significant risk.

Under Subtitle "D" Prime the current elevation of the Main Pond, at the effective date of the ruling, would be grandfathered in and allowed to operate for the remainder of its useful life. However, any future vertical or horizontal expansion would fall under the new regulations and require a new permit, compliance with strict siting requirements, composite liner, run-on & run-off controls, groundwater monitoring, corrective action plan, and closure/post-closure care plan per the ruling. Prior to the effective date of the EPA's ruling the Main Pond could be constructed to its ultimate elevation of 928' as described above. However, there is significant risk as Subtitle "D" Prime is the least likely alternative to be approved as the EPA is trying to eliminate ponds and move towards dry landfills.

Based on the revised 2010 MTP CCR production rates requiring the reduced storage of 7M yd³, the Main Pond's maximum elevation has been lowered from 962' to 928'. Moving forward, cost data provided for the Base Case will be based on a final elevation of 928'. The following table reflects the NPV, PVRR, and capital cost cash flows for the Base Case option as currently included in the 2011 MTP/LTP draft of July, 2010.

Base Case Capital Cost										for 7M yd ³	
2010	2011	2012	2013	2014	2015	2016	2017	2018	NPV	PVRR	Total Project
████	████	████	████	████	████	████	████	████	████	████	████

Case A

Case A consists of immediately terminating construction of the Main Pond Starter Dike (excluding site close out activities such as dust control and reclamation), accelerating the construction of the Aux Pond utilizing rock already blasted that has been recently placed in the Main Pond Starter Dike (thus reducing stranded investments), continued ash grading, Main Pond

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cap/closure, Landfill engineering and permitting, converting all station ash handling systems from wet to dry, and constructing the initial phase of a Landfill. Based on recent projects, the anticipated duration to perform these activities is 3.5 years with an in-service date of January 2014.

Design and construction of the Landfill would begin prior to final approval of the EPA's proposed CCR Ruling; however the Landfill liner requirements for both Subtitle "D" Non-Hazardous and "C" Hazardous options are the same and will become the basis of design. By terminating construction of the Main Pond Starter Dike, material already purchased and/or stockpiled, such as FML, Filter Fabric, Clay, Rock, and Bottom Ash, will be utilized in the construction of the Landfill thereby minimizing the cost impacts from the approximately [REDACTED] [REDACTED] stranded cost for the materials purchased or quarried. Additionally, by utilizing rock already blasted and placed in the Main Pond Starter Dike, the footprint of the landfill will be optimized to approximately 100 acres thereby reducing the final height of the landfill and maximizing the future vertical expansion opportunities up to approximately 18M yd³.

All Plant effluents and CCR will continue to be directed to the Aux Pond during the design, permitting, and construction of the landfill for approximately 3.5 years in order to keep BR in operation. Based on a recent bathymetric survey conducted by MACTEC, and utilizing the 2010 CCR Production Rates, the Aux Pond has enough remaining capacity to store all the CCR generated through January 2015. This is a conservative estimate and provides one year of project float. The following table reflects the NPV, PVRR, and capital cost cash flows for Case A as reflected in the notes to the 2011 MTP/LTP as Landfill Option #1.

Case A Capital Cost												
2010	2011	2012	2013	2014	2015	2016	2017	2018	NPV	PVRR	Total Project	

Case B

Case B consists of completing the Main Pond Starter Dike and Aux Pond 900' projects as designed and permitted prior to final approval of the EPA's proposed CCR Ruling. Upon approval of the EPA's proposed CCR Ruling, the Main Pond would be taken out of service; the Main Pond would then be dewatered, followed by ash grading, Main Pond cap/closure, Landfill engineering, permitting, wet to dry ash handling conversion, and the initial phase of construction of the Landfill. Based on recent projects, the anticipated duration to perform these activities is 5.5 years with an in-service date of January 2016.

If the construction of the Main Pond Starter Dike were to continue to completion and the EPA's proposed ruling was approved, material already purchased and/or stockpiled such as FML, Filter Fabric, Clay, Rock, and Bottom Ash *cannot* be salvaged or otherwise made available for the construction of the Landfill resulting in the need to purchase additional land for approximately [REDACTED] to develop new borrow sources and liner material at future market values. Design and construction of a landfill would begin after final approval of the EPA's proposed CCR Ruling which would be the basis of design. By continuing with the construction of the Main Pond Starter Dike, the footprint of the landfill would be approximately 80 acres, some 20 acres less

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than Case A, thus reducing the potential for future vertical expansion, approximate maximum capacity 13.25M yd³. Case B also would involve having to develop an operation plan for the Brown Station that would enable it to remain in operation while the recently constructed Main Pond was taken back out of service and dewatered to allow construction of the Landfill. **These operational costs are not included in the total project cost shown in the table below as they are difficult to estimate at the time of preparing this paper; however, they are expected to be significant.**

During the design and permitting of the landfill, both the Aux Pond and Main Pond will be used to store CCR material. During construction, a duration of approximately 2 years, all CCR generated will be stored in the existing Aux Pond. Based on a recent bathymetric survey conducted by MACTEC, and utilizing the 2010 CCR Production Rates, the Aux Pond has enough remaining capacity to store all the CCR generated for 2 years starting January 2014. The following table reflects the NPV, PVRR, and capital cost cash flows for Case A as reflected in the notes to the 2011 MTP/LTP as Landfill Option #2.

Case B Capital Cost													
2010	2011	2012	2013	2014	2015	2016	2017	2018	NPV	PVRR	Total Project		

Case C

Case C consisted of completing the Aux Pond 900' project as designed and modifies the Main Pond Starter Dike to include a composite liner system. With the addition of 24" of clay the Main Pond could comply with Subtitle "D"; however, the Main Pond would not comply with Subtitle "C" and does not comply with the EPA intent to eliminate ponds for storage. Case C was eliminated because (1) it is not possible to source clay and rock from the existing station property in the quantities required; (2) it is not economically feasible to source clay from the surrounding area and the time required to locate and acquire a farm with sufficient quantities within the timeframe required is deemed marginal at best; and (3) to design and construct the composite liner will only allow compliance with subtitle "D" and not "C". Based on this no further consideration was given to Case C.

Schedule Impacts

If the decision is made to convert the Main Pond into a Landfill there are several items that will impact the schedule. They include engineering/design, permitting, a new or updated ECR/CPCN filing, and initial landfill construction. Based on experience from previous projects the engineering/design will take approximately 3-4-months and will include development of the landfill drawings, specifications, stability analysis, groundwater monitoring plan, and permit application.

Permitting will take approximately 18-months and should only include the KY Division of Waste Management permit as the remaining permits were obtained during the original Main

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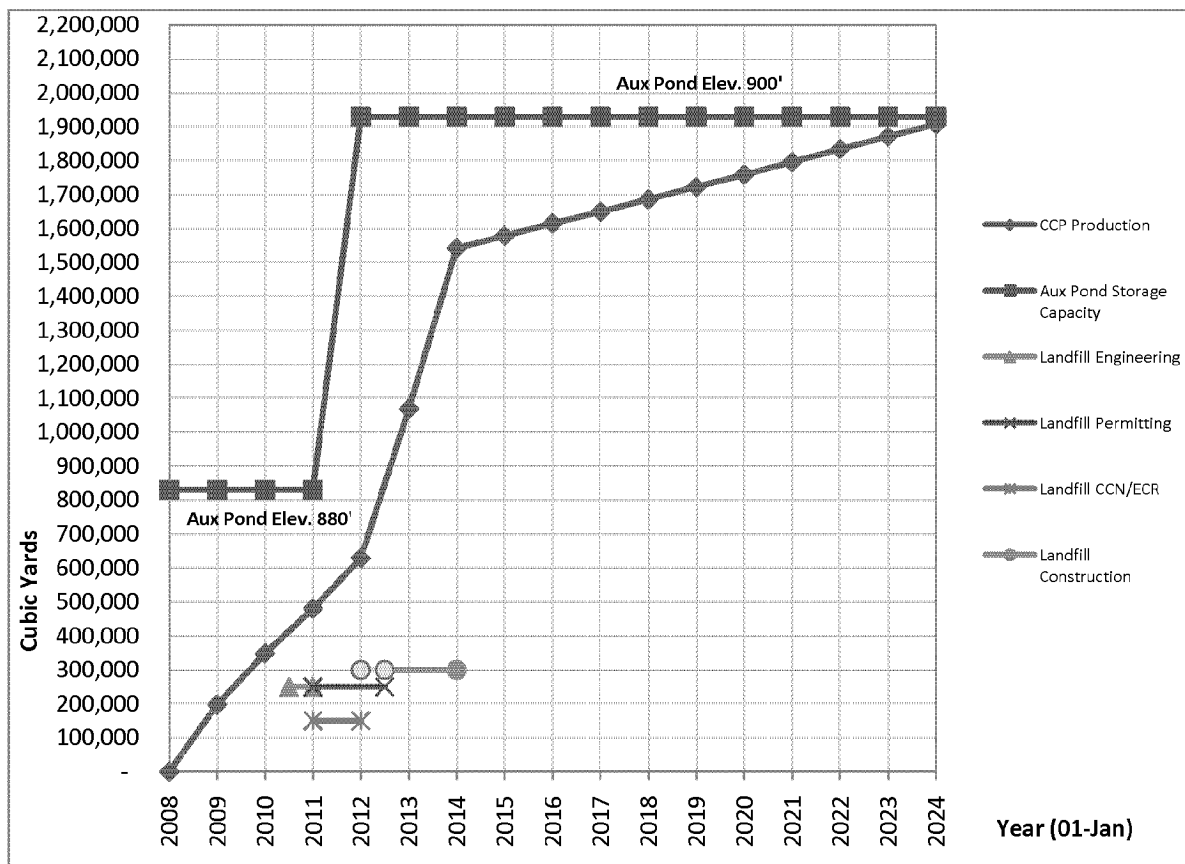
Pond project permitting. The updated or new ECR/CPCN filing will take approximately 6-months and would be submitted in parallel with the engineering/design and permitting process.

The initial landfill construction timeline will be dependent on the chosen option, but will take between 18-24 months to complete. Based on the above, PE performed an analysis to ensure the Aux Pond had enough storage capacity remaining to support the conversion of the Main Pond into a Landfill. Results of the storage analysis are provided below and indicate that the Aux Pond has enough capacity to support either Case A or Case B.

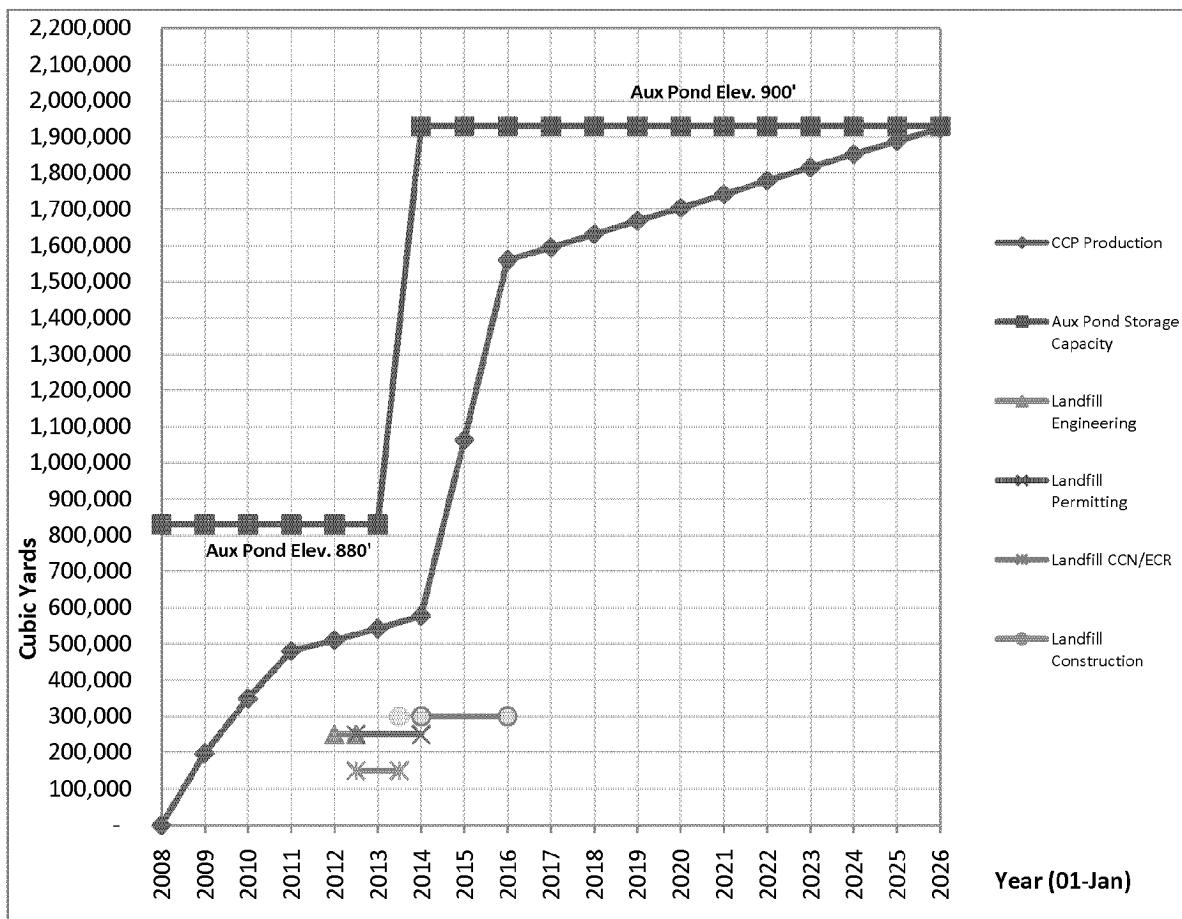
A summary of the schedule is shown below.

Project Timeline		
Task	Date	Duration
Informal Meeting w/the PSC	October 2010	1 Day
Engineering	September 2010	3-4 Months
File Permits	December 2010	18 Months
CPCN/ECR Filing	December 2010	6 Months
Construction	May 2012	18 Months

Aux Pond Stage Storage Graph (Case A) – Stop Main Pond Starter Dike & Accelerate Aux Pond 900’ Construction



Aux Pond Stage Storage Graph (Case B) – Complete Main Pond Starter Dike & Aux Pond 900’ per Original Schedule



Financials

Considering the factors referenced above, PE with the assistance of MACTEC, developed capital cost estimates for Case A and B which were based on a horizontal expansion of the landfill. Additional engineering is required to determine if a horizontal or vertical expansion approach is the best alternative. Timing of cash flows would be affected if a vertical expansion approach is chosen. The ECR approved cost estimate is the basis for the 2011 MTP/LTP and is provided for reference only. The Base Case is a modification of the ECR approved option which provides 7M yd³ of storage and is no longer a viable long term solution for CCR storage as the current design of the Main Pond will not comply with the EPA’s proposed CCR Ruling. *Case A or B are the only long term storage solutions.*

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Cost Estimate Comparison											
Option	Life	Capacity	2010	2011	2012	2013	2014	2015	NPV	PVRR	Total Project
ECR Approved	2054	██████	██████	██████	██████	██████	██████	██████	██████	██████	██████
Base Case	2030	██████	██████	██████	██████	██████	██████	██████	██████	██████	██████
Case A	2030	██████	██████	██████	██████	██████	█	█	██████	██████	██████
Case B	2030	██████	██████	██████	██████	██████	██████	██████	██████	██████	██████

NOTE: Case B values do not include the estimated \$2.0M for land purchase for additional clay borrow source.

Recommendation

Project Engineering and the Brown Station recommend the immediate implementation of Case A to convert the Main Pond into a Landfill to meet the EPA's proposed CCP Ruling. This option has the lowest NPV & PVRR, is the least cost, maximizes the landfill footprint, maximizes future vertical expansion opportunities to accommodate changes in production, and eliminates the difficult and costly issues associated with maintaining station operations while dewatering and closing the pond post EPA CCR Ruling while the landfill is being constructed.



AREA RESERVED FOR STORMWATER COLLECTION/DETENTION BASIN AND LEACHATE COLLECTION POND

0 50 100 200
SCALE IN FEET

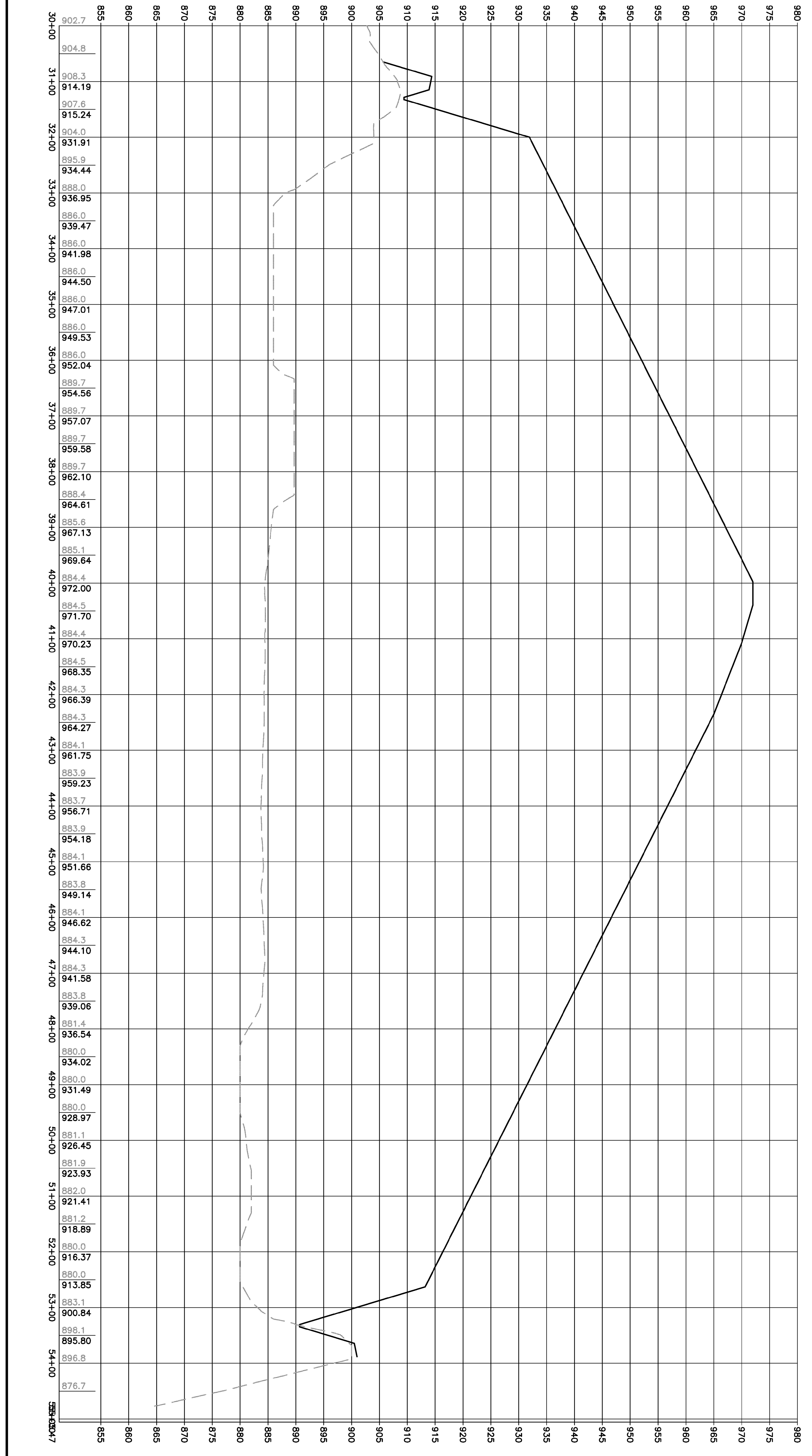
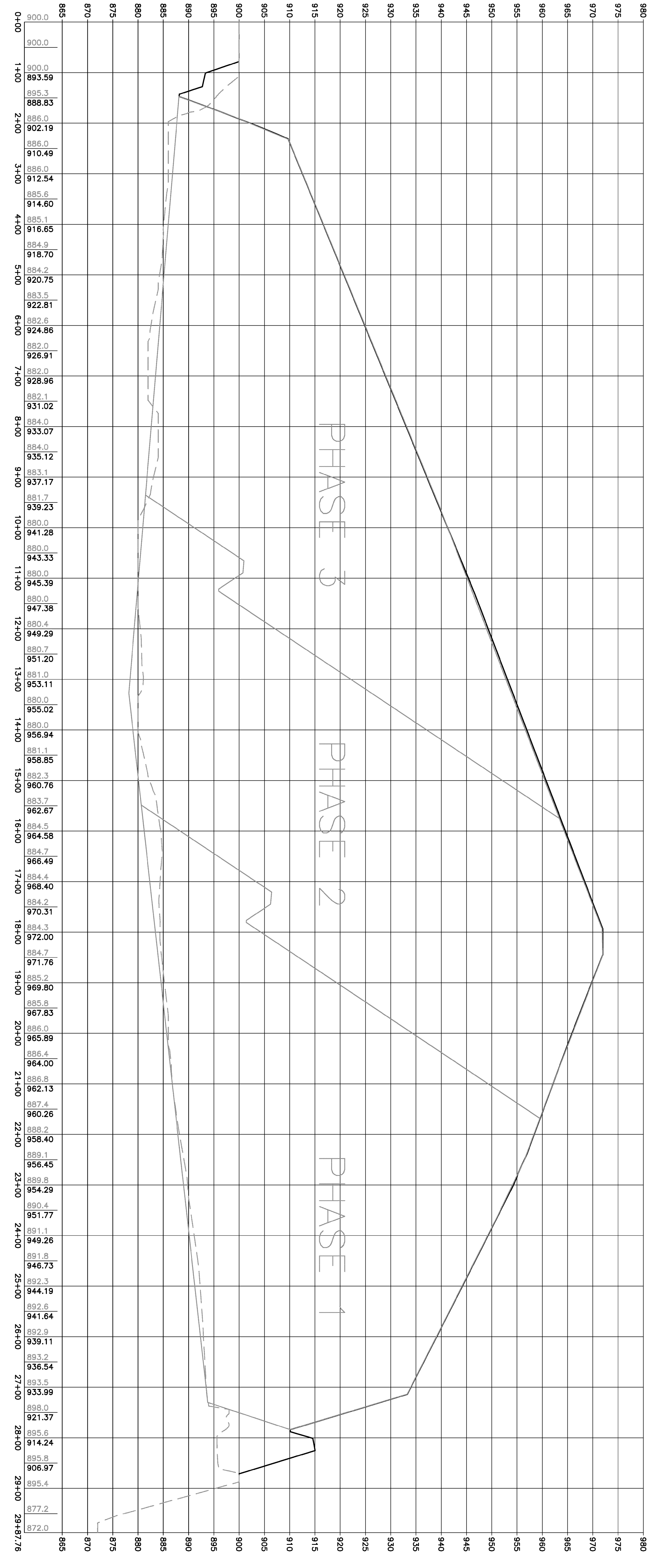
Prepared Date: JWM 12/01/11
Checked Date: MAP 12/01/11

E.W. BROWN LANDFILL
KENTUCKY



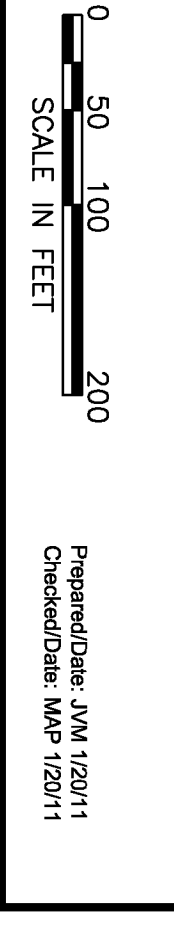
CONCEPT 1
CONCEPTUAL FINAL GRADING PLAN
Project 3143-10-1364
Figure 1.1

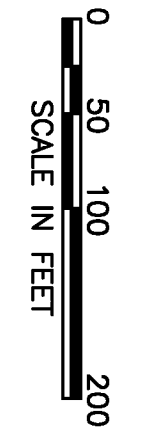
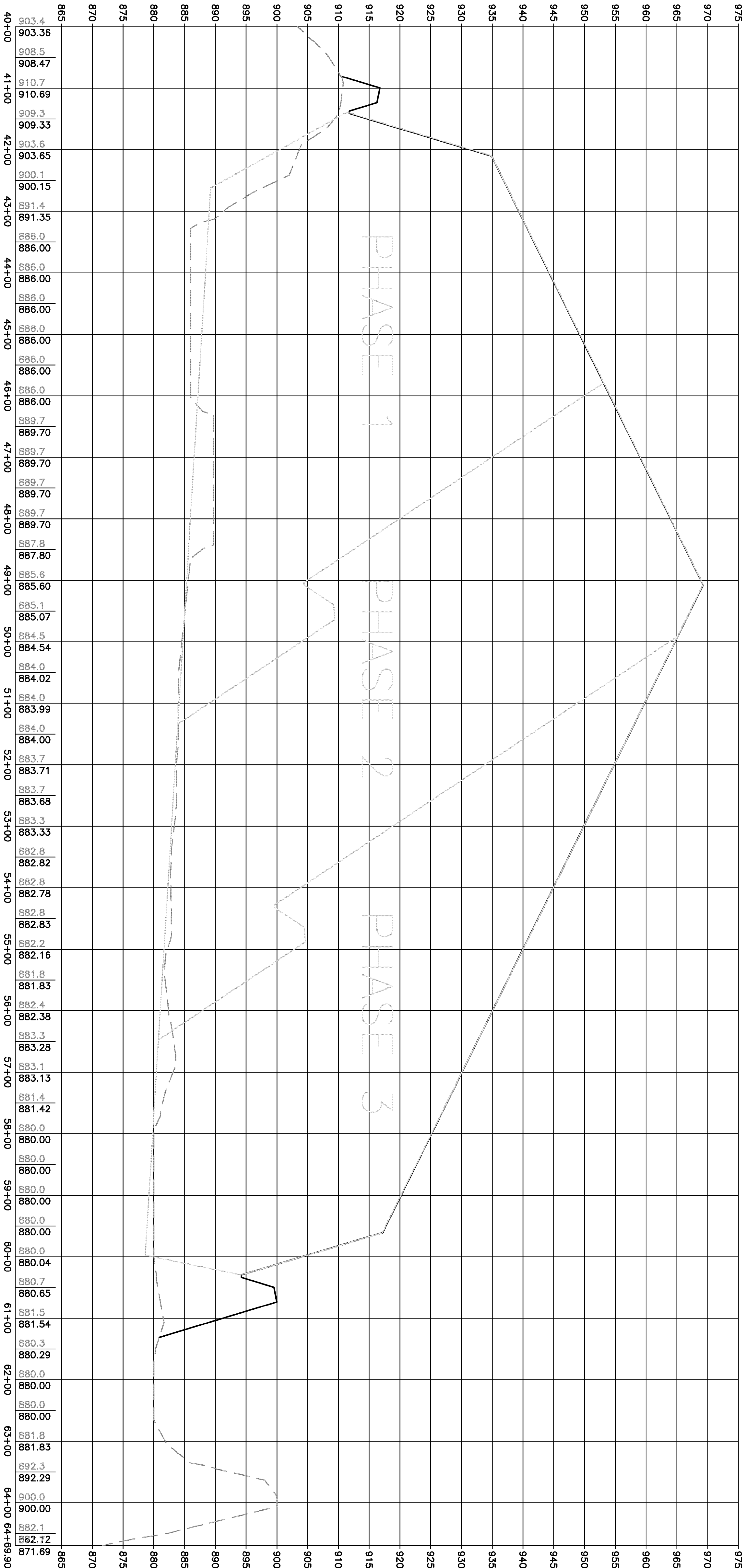
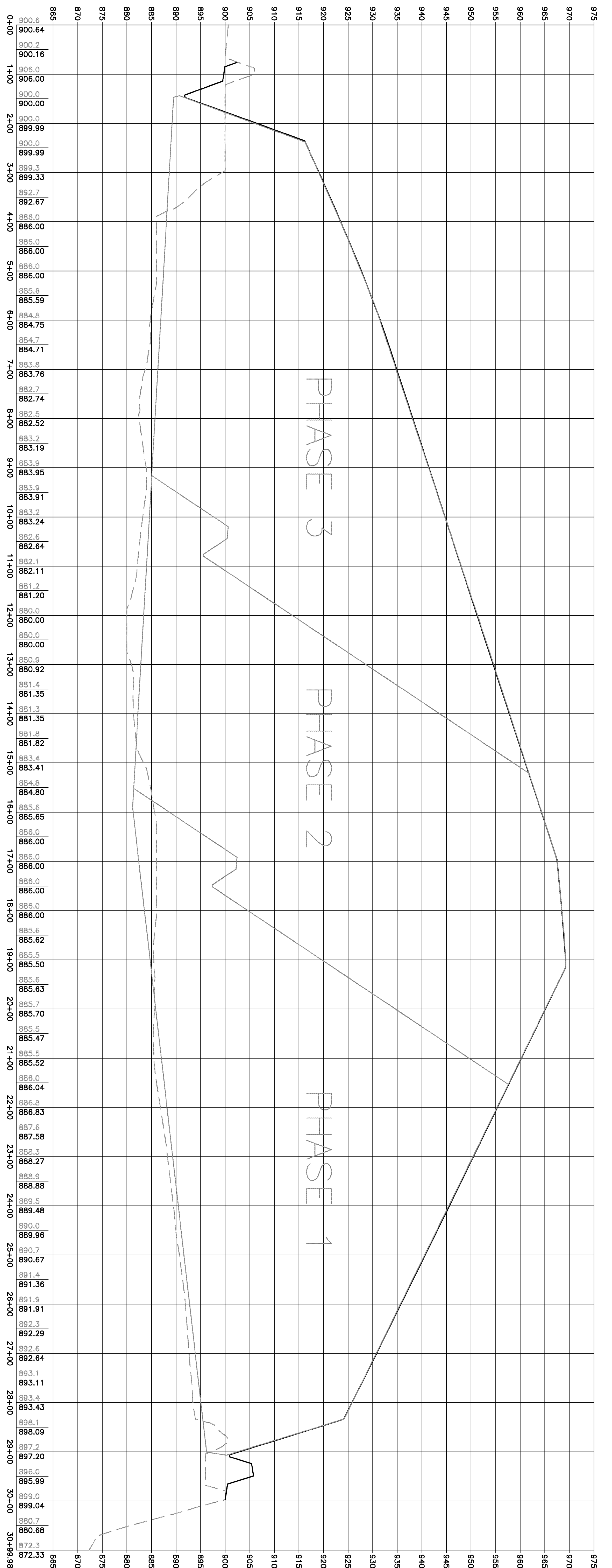
3/11/2011 10:42:11 AM C:\Users\jwm\Documents\3143-10-1364\3143-10-1364.dwg



E.W. BROWN LANDFILL
KENTUCKY

CONCEPT 1
Project 3143-10-1384
Figure 1.2





E/W BROWN LANDFILL
KENTUCKY



CONCEPT 2
PROFILES
Project 3143-10-1364
Figure 2.2

Prepared Date: 01/11/2011
Checked Date: 01/11/2011



MEMORANDUM

TO: John Williams, PE – LG&E-KU Project Engineering

FROM: Nick Schmitt, PE
Brian Cole, PE

DATE: February 3, 2011

SUBJECT: **Initial Design Concepts**
CCR Landfill Design
E. W. Brown Generating Station
MACTEC Project 3143-10-1364

MACTEC has developed two conceptual grading plans for initial consideration and internal review. These initial concept drawings are attached for LG&E-KU consideration. The basic criteria used was a 24-wide perimeter road with a perimeter ditch; 3:1 maximum slopes and 5% minimum slopes. Both concepts provide about 7.9 million cy of volume from the existing grade to the conceptual final grading shown - we provided additional volume to account for subgrade development and drainage layer for the liner as well as a cover system. Cross sections in two directions for each Concept have also been developed – approximate Phasing lines are shown on the cross sections.

- Concept 1 has the leachate/stormwater ponds located at the south end of the Main Pond (lowest end). Due to the existing elevations and the need to provide drainage to the south, Phasing for this Concept makes more sense to start from the North and go towards the South. If you start from the south, then it is difficult to drain the northern portions of the Main Pond which will be cut off by the Phase(s) to the south.
- Concept 2 has the leachate/stormwater ponds located at the east end of the Main Pond. This keeps fill heights lower at the deepest area of the Main Pond. The Phasing for this Concept could be developed from North to South or West to East relatively easy. South to North could also be done but due to drainage issues, East to West Phasing would be difficult.

We hope these initial design concepts are consistent with your expectations. Please note that under concept 2 we should still be able to provide space for the ash handling or drying system near the intersection of the east and north dikes.

From: Sturgeon, Allyson </O=LGE/OU=LOUISVILLE/CN=RECIPIENTS/CN=N093308>
Sent: 2/22/2011 8:58:37 AM
To: Conroy, Robert <Robert.Conroy@lge-ku.com>; Riggs, Kendrick R. <kendrick.riggs@skofirm.com>;
Charnas, Shannon <Shannon.Charnas@lge-ku.com>
Subject: Copy: ECR Testimony Discussion
Location: Conference Call
Start: Tue 2/22/2011 9:30:00 AM
End: Tue 2/22/2011 10:00:00 AM
Show Time As: Tentative

Recurrence: (none)
Meeting Status: Not yet responded

Required Attendees: Conroy, Robert; Riggs, Kendrick R.; Charnas, Shannon

Conferee code: 5729 Moderator Code: 4862
Conference Phone Numbers: 2526, LG&E Internal
7-627-2526, KU On-net 7+seven
627-2526, Louisville area local call
502-627-2526, North America Long Distance
866-877-4571, North America Toll Free

From: Sturgeon, Allyson
To: Riggs, Kendrick R.; Charnas, Shannon; Conroy, Robert
Sent: 2/22/2011 8:58:37 AM
Subject: ECR Testimony Discussion

When: Tuesday, February 22, 2011 9:30 AM-10:00 AM
(GMT-05:00) Eastern Time (US & Canada).
Where: Conference Call

Note: The GMT offset above does not reflect daylight saving
time adjustments. 5729 Moderator Code: 4862

~~*~*~*~*~*~*~*~*

Conferee code:

Conference Phone Numbers: 2526, LG&E Internal
7-627-2526, KU On-net
7+seven
627-2526, Louisville area
local call
502-627-2526, North
America Long Distance
866-877-4571, North
America Toll Free

From: Conroy, Robert
To: Schroeder, Andrea
Sent: 3/16/2011 9:40:41 AM
Subject: RE: Bellar Testimony

Are these total investment or investment since 12/31/08? The testimony states since the late test year which would be 12/31/08; however, the numbers seem too high for Ghent and Brown.

Robert M. Conroy

Director, Rates

LG&E and KU Services Company

(502) 627-3324 (phone)

(502) 627-3213 (fax)

(502) 741-4322 (mobile)

robert.conroy@lge-ku.com

From: Schroeder, Andrea
Sent: Wednesday, March 16, 2011 9:01 AM
To: Conroy, Robert
Subject: RE: Bellar Testimony

Please see attached for support for the numbers in Lonnie's testimony. The Brown SCR is the CWIP spend as of 1/31/2011. It should be revised to \$26.8M to reflect the 2/28/2011 CWIP balance. The source of the support is the KU ECR database.

<< File: Bellar testimony support - ECR capital spend.xls >>

From: Conroy, Robert
Sent: Tuesday, March 15, 2011 7:48 PM
To: Schroeder, Andrea
Subject: Bellar Testimony

Andrea,

Do you have the support for the FGDs investment number you put in Lonnie's testimony? You have \$167M for Ghent FGDs, \$423M for Brown FGDs, \$24M for Brown SCR, etc. since 12/31/08.

Thanks

Robert M. Conroy

Director, Rates

LG&E and KU Services Company

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(502) 627-3213 (fax)

(502) 741-4322 (mobile)

robert.conroy@lge-ku.com

From: Conroy, Robert
To: Schroeder, Andrea
Sent: 3/16/2011 10:04:02 AM
Subject: RE: Bellar Testimony

See me when you get a chance.

Robert M. Conroy
Director, Rates
LG&E and KU Services Company
(502) 627-3324 (phone)
(502) 627-3213 (fax)
(502) 741-4322 (mobile)
robert.conroy@lge-ku.com

From: Schroeder, Andrea
Sent: Wednesday, March 16, 2011 9:51 AM
To: Conroy, Robert
Subject: RE: Bellar Testimony

I neglected to include an offset for the Ghent and Brown CWIP balance at 12/31/08. The investment since 12/31/08 should be:

Ghent \$191M (\$423M - \$232M CWIP at 12/31/08 = \$191M)
Brown \$18M (\$167M - \$150M CWIP at 12/31/08 = \$17.7M)

Revised support is attached.

<< File: Bellar testimony support - ECR capital spend.xls >>

From: Conroy, Robert
Sent: Wednesday, March 16, 2011 9:41 AM
To: Schroeder, Andrea
Subject: RE: Bellar Testimony

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(502) 627-3213 (fax)
(502) 741-4322 (mobile)
robert.conroy@lge-ku.com

From: Schroeder, Andrea
Sent: Wednesday, March 16, 2011 9:01 AM
To: Conroy, Robert
Subject: RE: Bellar Testimony

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<< File: Bellar testimony support - ECR capital spend.xls >>

From: Conroy, Robert
Sent: Tuesday, March 15, 2011 7:48 PM
To: Schroeder, Andrea
Subject: Bellar Testimony

Andrea,

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Thanks

Robert M. Conroy
Director, Rates
LG&E and KU Services Company
(502) 627-3324 (phone)
(502) 627-3213 (fax)
(502) 741-4322 (mobile)
robert.conroy@lge-ku.com

From: Straight, Scott
To: Straight, Scott; Thompson, Paul; Voyles, John; Bowling, Ralph; Hudson, Rusty; Hincker, Loren; Sinclair, David; Schetzel, Doug; Yussman, Eric; Jackson, Fred
CC: Waterman, Bob; Imber, Philip; Lively, Noel; Saunders, Eileen; Gregory, Ronald; Heun, Jeff; Hance, Chuck; Clements, Joe; Cooper, David (Legal); Jones, Greg; Keeling, Chip; Hendricks, Claudia; Ray, Barry; O'Brien, Dorothy (Dot); Bellar, Lonnie; Blake, Kent; Sturgeon, Allyson; Conroy, Robert; Cornett, Greg
Sent: 3/21/2011 11:10:28 AM
Subject: Project Engineering's ES Bi-Weekly Report - March 18, 2011
Attachments: PE's Bi-Weekly Update of 3-18-11.docx

Scott Straight, P.E.
Director, Project Engineering
LG&E and KU Energy, LLC
(502) 627-2701
scott.straight@lge-ku.com

Energy Services - Bi-Weekly Update
PROJECT ENGINEERING
March 18, 2011

- **KU SOx**
 - Safety – Nothing To Report (NTR)
 - Schedule/Execution:
 - Ghent Elevators – Still in progress.
 - Brown FGD – Third party FGD Performance Testing on high sulfur coal is scheduled to begin 3/21/11.
 - Brown Coal Pile Modification – Complete enough to enable storage of the high sulfur coal for FGD Performance Testing.
 - Brown Elevators – Installation of the permanent cars is scheduled for May 2011.

- **TC2**
 - Safety – NTR
 - Schedule/Execution:
 - Bechtel EPC – The Group 3 Fuel test burns were completed 03/07/11 and the unit is schedule to be taken out of service for the burner inspection March 18-20, 2011. Indications are the burners have no significant damage from the Group 3 fuel burns; however there were some burner temperature excursions. Bechtel submitted their notice of Combustion System Completion. Data from both Group 2 and Group 3 tests burns will be reviewed by the station and PE before we review it together with Bechtel on 03/22/11. New ammonia forwarding pumps have been installed and commissioned by Bechtel and are operating satisfactorily. Bechtel continues work on the punchlist and April outage planning. The major outage activities are replacement of the AH baskets, installation of a baffle in the economizer to eliminate the vibration and completion of the furnace tube wall coating.
 - Contract Disputes/Resolution:
 - Bechtel LD's – Bechtel sent a letter reaffirming their LD position. Preparation with outside counsel in progress to prepare for a LD settlement meeting with Bechtel in April.
 - Bechtel Labor Claim – PE sent a letter requesting Bechtel resubmit a change order for remaining labor claim that terminates at Mechanical Completion of July 2010 instead of through October 2010 when the MC Certificate was issued. Bechtel has responded with a letter reaffirming their position.
 - Issues/Risk:
 - Design of the DBEL burners for our coal specification
 - Completion of punchlist

- **Brown 3 SCR**
 - Safety – NTR
 - Engineering – proceeding as planned to support the Spring 2012 in-service.

- Schedule/Execution – SCR ductwork and equipment deliveries continue well ahead of Zachry’s needs. Zachry has completed demolition work in the Aux. Boiler area and has begun piling installation.
- Issues/Risk – NTR
- **Ohio Falls Rehabilitation**
 - Safety – NTR
 - Engineering
 - Voith Hydro proceeding with equipment orders and pre-mobilization issues for a restart of rehabilitation on Unit 5 in June 2011.
 - Bids due 3/16/11 on head gate modifications.
 - SOW for station auxiliary upgrade in internal review.
 - SOW developed for concrete façade and window repairs as part of the Historic Preservation Maintenance Plan.
 - SOW for parking and laydown expansion in process, ready for Commercial week of 03/21/11.
 - Dewatering pumps shipping off site on 3/16/11 for precautionary overhaul.
 - Spare set of wicket gates returned to Voith shop for overhaul.
 - Unit auxiliary transformers have been ordered.
 - Readiness Review meeting with Voith set for 04/13/11.
 - PE assisting plant on initial inquiry for new office building on site.
- **Mill Creek Limestone Project**
 - Safety - NTR
 - Schedule/Execution
 - Detailed Engineering - HDR is working with PE and the plant to develop specifications in support of bidding the General Contracting portion of the project.
 - The Limestone Conveyor Bid was issued on 03/15/11. A pre-bid meeting is scheduled at the site on 03/22/11.
 - HDR has issued the draft General Contracting specification to PE and the plant. A 50% review was held at the site with PE, Plant representatives and HDR on 03/10/11. Reviews are ongoing and the specification is scheduled to be issued the first week of April 2011.
- **Cane Run CCP Project**
 - Permitting
 - All permitting proceeding well. 401 and Flood Plain permits received in 2010.
 - Working on NOD #2 response which includes a door to door well survey of residents within 1-mile of the facility. Draft copy of NOD #2 response is currently under review.
 - Engineering
 - The review of constructing the smaller landfill versus modifying the existing landfill, trucking balance of CCR to Mill Creek, and MSE Wall is nearing completion.
 - Finalization of construction drawings and specifications for the 5-year landfill will be completed by the end of March.

- **Trimble Co. Barge Loading/Holcim**
 - Finalized order with UCC to purchase pneumatic Fly Ash handling system.
 - The 404 permit has been issued by the USACE and received the 401 Stream Crossing permit in December 2010.
 - Working to issue BOP engineering contract. Looking to award this work to B&V as part of the CCR Transport design.

- **TC CCP Project – BAP/GSP**
 - Safety – NTR
 - Schedule/Execution:
 - Setting of the GSP Raft began the week of 02/14/11.
 - All fill and mechanically stabilized earth wall work on the BAP is completed except for a small section of the South Dike. Work continues on erection of the new Pipe Rack, electrical duct banks to GSP Electrical Building and to Ash Pond Raft. Work is now being concentrated on raising the South Dike due to the high water level inside of the BAP.
 - Contract Disputes/Resolution
 - Minor issues to resolve with Riverside.
 - Issues/Risk
 - Weather remains the biggest risk to timing of completion and cost.

TC CCP Project – Landfill

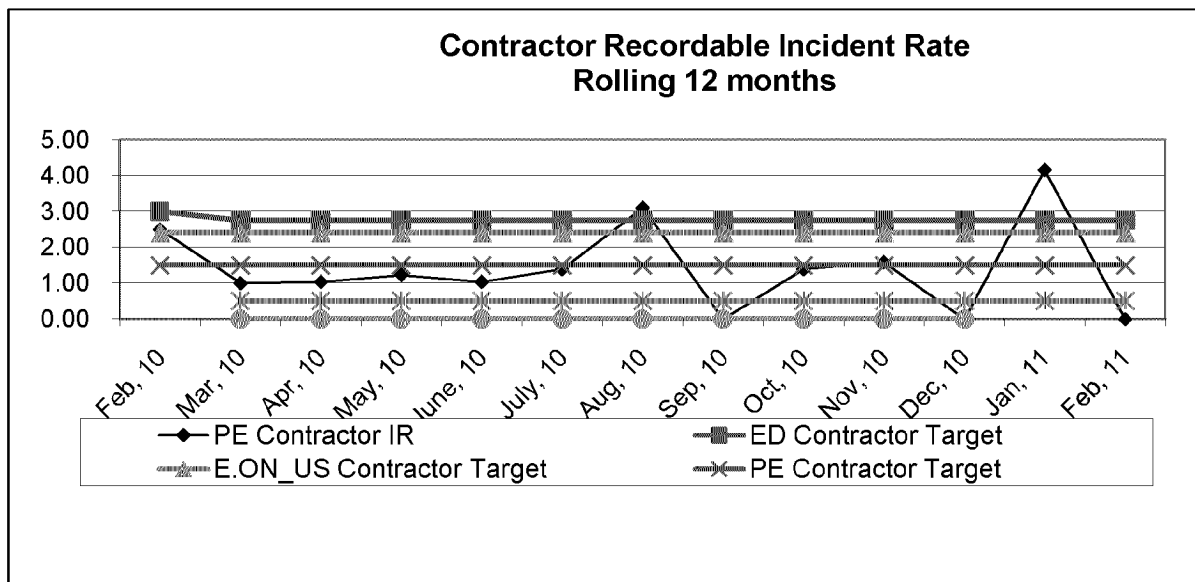
- Engineering
 - Detailed Engineering in progress with GAI.
- Permitting:
 - The 401 Permit application was submitted to KYDOW in December 2010.
 - The 404 Permit application was submitted to the US Army Corps of Engineers in December, 2010. Additional requested field studies are being completed.
 - Development of the documents for the Division of Waste Management (DWM) Permit application continues. The application should occur in April 2011. A Private Water Well and Spring Survey continues by GAI Consultants for all residents within one-mile radius of the footprint of the landfill. This is required for the DWM permit.
 - GAI has completed the documents for the KTC Permit Application for the bridge crossing at State Road 1838. The permit application was delivered to the KTC on Thursday 03/03/11.

- **Ghent CCP Projects - Landfill**
 - Safety – NTR
 - Engineering:
 - Detailed Engineering of gypsum fines nearing completion with B&V.
 - Tank foundations are under construction.
 - Issued RFQ for Civil/Mechanical Construction.
 - Bid for the new Security Fence around the Landfill Area have been received.
 - Major equipment packages for the Transport will be issued in March and April.
 - Reviewing Gypsum Dewatering, Fly Ash system, and Bottom Ash SFC's draft specifications.
 - Permitting:

- All permit applications have been submitted. Moving forward as expected.
 - Working on response to NOD #2.
 - Issues/Risk:
 - Land Acquisition – Negotiations nearing completion with Deaton family in regards to pricing and terms of sale. The parties are close to a final settlement after resolution of terms and conditions of the sale. Work continues, however, on condemnation proceedings with the preparation of the drawings to delineate the actual “takings.”
- **E.W. Brown Ash Pond Project**
 - Safety – NTR
 - Continue to work with Summit on contract settlement payout/resolution to avoid litigation.
 - Engineering – Detailed Engineering in progress by MACTEC.
 - Schedule/Execution:
 - All work in the field is currently related to the Aux. Pond Scope of Work.
 - Gypsum was placed in the South embankment. Gypsum placed and compacted is migrating through the filter fabric. A path forward is under development.
 - Continue to provide BR Landfill design information to MACTEC.
 - Currently developing RFQ for conceptual design engineering of Wet-to-Dry Ash Handling conversion as part of the BR Landfill project.
 - Issues/Risk:
 - Summit/Cook/PPMI pulled the North Wet Well Pumps for repair (possible gypsum erosion of the impellers).
 - Final settlement reached with Summit on all outstanding claims by Summit.
- **SO3 Mitigation (Mill Creek 3, Mill Creek 4, Brown 3, Ghent)**
 - Safety – NTR
 - Schedule/Execution:–
 - Bids received for milling at Ghent from Nol-Tec, BCSI/Nalco, and UCC. Assessment is ongoing, review meeting with the plant scheduled for 3/21/11. On schedule for April Investment Committee meeting.
 - Permanent operation with mills at Ghent may be possible by November 2011. The bidding process will verify this assumption.
 - EW Brown SAM and FGD Performance Testing utilizing high sulfur coal in progress. Unit 1 and Unit 2 SAM testing complete.
 - Considering the purchase of a new SAM CEMS at Ghent. Held technical discussion with SICK, the equipment manufacturer. The technology has open questions regarding performance.
- **Cane Run CCGT**
 - Budget – NTR
 - Gas Pipe Line Routing – Bids received 3/16/11 from EMS, EN Engineering, and PAI for further NG Pipeline Engineering. This contract may also assess the new line for feed to Paddy’s Run and for Gas Distribution system upgrades in the area.
 - Owner’s Engineer –
 - Contract Award Document in routing for full release of OE
 - Cost Estimates updated and released to Generation Planning.

- Air Permitting – Trinity continuing netting analysis.
- Environmental Assessment – MacTec is on hold for until engineering deliverables are finalized for review. .
- **Other Generation Development**
 - Biomass – NTR
 - CCS 100 MW Project –
 - 3H reviewed NDA.
 - Division of Responsibility sent to 3H; working to get agreement they will support the Phase I activities pro-bono.
 - FutureGen –NTR
- **General**
 - Environmental Scenario Planning:
 - All stations (MC, Ghent and Brown) are under review. The Mill Creek draft report was received on 03/14/11 as planned. The documents are under review.
 - Various meetings being held with Gen Planning, Rates & Regulatory to continue honing the plan and various compliance scenarios.
 - Babcock Power has been engaged to upgrade the MC Unit 4 SCR. Critical plant information as well as the design basis was transmitted to Balcke-Durr in Germany so preparations for dust model testing could proceed.
 - SCRs not in plan for Hg co-benefit. This will lead towards several (if not all but Ghent 2) SCRs not being needed, pending final allowance allocation by EPA.
 - 2011 MTP ECR/CCN Filings – working closely with Rates on PSC submittals and presentations/updates. **The filing date has been unofficially postponed with Rates for 06/01/11.**
 - Continue to work with Legal and EA on Ghent SAM compliance.
 - Continue to work with Legal on asbestos litigation regarding construction of TC1.

Metrics



Upcoming PWT Approval Needs:

Project Manager	Description	Contract, Project, SSA	Amount \$000s	Month of I/C Meeting	MAR11	APR11	MAY11	JUN11	JUL11	Aug11	Sep11	Oct11	Nov11	Dec11	Jan12	Feb12
Heun	CR CCR - Landfill Phase I - Construction	C	15,000	Aug												
Heun	GH CCR - Landfill Phase I - Construction	C		Dec												
Heun	GH CCR - Fines Mechanical - Construction	C		May												
Heun	GH CCR - Gypsum Dewatering Bells	C		May												
Heun	GH CCR - Dry Fly Ash System	C		May												
Heun	GH CCR - Bottom Ash Scraper Conveyor	C		May												
Heun	GH CCR - Pipe Conveyor	C		May												
Heun	GH CCR - Transport EPC Contract	C		Aug												
Heun	CCR Storage Compliance	P		Pending												
mber	BR 3 SAM Mitigation	C	8,000	May												
mber	GH 1 - 4 SAM Mitigation	P	8,000	Mar												
mber	MC 3 and MC4 SAM Mitigation - On Hold	P														
Lively	CCGT 2016 - Cane Run 7	P	589,200	Sep												
Saunders	MC Limestone Mill Construction Contract	C	12,000	Jun												
Saunders	Environmental Air Compliance - BR 1 Fabric Filter	P	41,117	Pending												
Saunders	Environmental Air Compliance - BR 2 SCR	P	104,971	Pending												
Saunders	Environmental Air Compliance - GH 2 SCR	P	282,878	Pending												
Saunders	Environmental Air Compliance - MC 2 Fabric Filter	P	97,229	Pending												
Saunders	Environmental Air Compliance - MC 2 FGD Upgrade	P	47,659	Pending												
Saunders	Environmental Air Compliance - MC 2 Electrostatic Precip	P	37,690	Pending												
Saunders	Environmental Air Compliance - MC4 FGD	P	271,994	Pending												
Saunders	Environmental Air Compliance - MC4 SCR	P	5,696	Pending												
Saunders	Environmental Air Compliance - MC4 Fabric Filter	P	159,453	Pending												
Waterman	TC CCR - Landfill Phase I - Construction	C														
Waterman	TC CCR - Transport and Treatment - Engineering	C		Jun												
Waterman	TC CCR - Transport and Treatment - Equipment/Construction	C		Aug												
Waterman	TC CCR - BAP/GSP Sanction	P		Jun												
Williams	BR CCR - Landfill Phase I - Construction	C		Jun												
Williams	BR CCR - Ash Handling Dry Conversion	C		Jun												

- **Staffing**

- Headcount planning is in process to evaluate staffing needs to manage the 2011MTP projects.
- Posting in progress for electrical engineer to replace Jason Finn.
- PE Re-Organization implemented the week of 3/7/11.
- Posting for Contract Administrator expected to be made the week of 3/21/11.
- Posting for Business Analyst expected to be made the week of 3/21/11.

From: Conroy, Robert
To: Schroeder, Andrea
Sent: 4/1/2011 10:42:14 AM
Subject: FW: EPA Regs Timeline
Attachments: EPA Regs Schedule 20110312.docx

Robert M. Conroy

Director, Rates

LG&E and KU Services Company

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(502) 627-3213 (fax)

(502) 741-4322 (mobile)

robert.conroy@lge-ku.com

From: Voyles, John
Sent: Tuesday, March 22, 2011 5:21 PM
To: Bellar, Lonnie; Conroy, Robert
Subject: EPA Regs Timeline

Here's the current draft of the timeline I had at the meeting.

JV

Please note that my e-mail address has changed from john.voyles@eon-us.com to john.voyles@lge-ku.com. Please take this opportunity to update my address in your address book and delete the old e-mail address immediately. The old e-mail address will soon expire, and I will no longer be able to receive e-mails at that address.

March 14, 2011

Key 2011 Dates for EPA Regulations Actions

Date	Item	Input/Review
Jan 14, 2011	Complete review of EPA's two alternate CATR allowance allocation methods	Env, Gen Planning
Jan 28, 2011	RFP responses for CR replacement capacity due	ES
Jan 31, 2011	Finalize content and timing of ECR filing	ES, RR
Mar 11, 2011	Review ECR filing draft	ES, RR
Mar 14-18, 2011	EPA releases EGU MACT and 316(b) draft of proposed rules	Env, ES
Mar 18, 2011	Evaluation of capacity RFP responses complete	Gen Plan
Mar 31, 2011	Complete initial engineering assessments for fleet ESPs and MC FGD options	PE
Apr 8, 2011	ECR project engineering studies and 3 rd party cost estimates for all plants submitted for review to ES and RR	PE
Apr 15, 2011	ECR project least cost analysis for ES review	Gen Plan
Apr 18, 2011	Finalize CATR control plan based on potential NOx/ SO ₂ allocations	PE, Gen Plan, Env
April 18, 2011	RR submits draft testimony questions for Gen. Plan, PE and Env review.	RR
Apr 22, 2011	Final ECR PVRR and Bill Impact analyses	RR
May 1, 2011	File NOI for ECR filing for MC FGDs, BR Landfill, GH SAM Mitigation; (bag houses and GH2 SCR TBD)	PE, Gen Plan, RR
May 15, 2011	Final draft ECR application and testimony	ES, RR
May 31, 2011	Inv Committee/internal approvals before public mtgs for NGCC construction project	ES

Input/Review: Env = Environmental; ES= Energy Services; RR = Rates and Regulatory; PE+ Project Engineering

March 14, 2011

Jun 1, 2011	ECR and CCN filing for MC FGDs, BR landfill, GH SAM mitigation and EGU MACT response	ES, RR
Jun 1, 2011	Public ROW meetings – gas pipeline (conclude by Jul 18)	ES, RR
Jun 3, 2011	Decision on selection of final RFP offer(s)	ES
Jun 27, 2011	Final CATR issued for evaluation and impact confirmation	Env, ES
July 1, 2010	Air permit application for NGCC project	ES, Env
July 15, 2011	Draft CCN filing for CR Replacement	ES
Jul 26, 2011	EPA releases proposed GHG regs	Env, ES
Jul 29, 2011	Finalize agreements with RFP finalist(s)	ES
Sep 1, 2011	File CCN for CR replacement	ES, RR
Oct-Dec, 2011	Prepare Transmission CCN for CR replacement	Trans, RR
Nov 19, 2011	Potential ECR filing for MACT/HAPS controls (if not included in June 1 filing), SCRs (if any result from revised CATR allowance allocation)	PE, Gen Plan, RR
Nov 28, 2011	ECR Order due from KPSC	RR
Nov 30, 2011	Receive final MACT/HAPS rule	Env, ES
Dec 30, 2011	Review MACT/HAPS control plan based on final rule	PE

Input/Review: Env = Environmental; ES= Energy Services; RR = Rates and Regulatory; PE+ Project Engineering

From: Straight, Scott
To: Schroeder, Andrea; Saunders, Eileen; Conroy, Robert
CC: Wilson, Stuart; Karavayev, Louanne; Cosby, David; Mooney, Mike (BOC 3); Ritchey, Stacy
Sent: 4/18/2011 10:05:38 AM
Subject: Re: 168908.14.4100 110413 Mill Creek - Unit 4C Paperdoll

Did we do that on the SCR or FGD filings? I don't remember doing so.

From: Schroeder, Andrea
Sent: Monday, April 18, 2011 10:04 AM
To: Straight, Scott; Saunders, Eileen; Conroy, Robert
Cc: Wilson, Stuart; Karavayev, Louanne; Cosby, David; Mooney, Mike (BOC 3); Ritchey, Stacy
Subject: RE: 168908.14.4100 110413 Mill Creek - Unit 4C Paperdoll

For the CPCN requirement, we have to provide a drawing of the site that shows the footprint of the new facilities.

From: Straight, Scott
Sent: Monday, April 18, 2011 10:03 AM
To: Saunders, Eileen; Schroeder, Andrea; Conroy, Robert
Cc: Wilson, Stuart; Karavayev, Louanne; Cosby, David; Mooney, Mike (BOC 3); Ritchey, Stacy
Subject: Re: 168908.14.4100 110413 Mill Creek - Unit 4C Paperdoll

We have never included drawings in the filing that I can remember. Has this changed?

From: Saunders, Eileen
Sent: Monday, April 18, 2011 09:36 AM
To: Schroeder, Andrea
Cc: Straight, Scott; Wilson, Stuart; Karavayev, Louanne; Cosby, David; Mooney, Mike (BOC 3); Ritchey, Stacy
Subject: FW: 168908.14.4100 110413 Mill Creek - Unit 4C Paperdoll

Andrea,

Please add these two proposed drawings to the list of diagrams for the ECR Filing. They are the latest arrangements for the Unit 4 FGD and the combined Units 1 and 2 FGDs.

Also, over the past few weeks, we have sent the following items to you and Gen Planning:

- Links to the Mill Creek Study (diagrams are included)
- Links to the Ghent Study (diagrams are included)
- Financial Data including O&M
- Scott's Contracting Summary
- Potential Asset Retirement to Property Accounting

Is there anything else related to the **May 2, 2011** public notification that Project Engineering needs to send at this point? I am traveling to work with Black and Veatch in Kansas City, MO tomorrow and will not be back in the office until Thursday. Please let me know if there is something else I need to send before I leave.

Thank you,

Eileen

From: Saunders, Eileen
Sent: Thursday, April 14, 2011 1:33 PM

To: Straight, Scott; Kirkland, Mike; Buckner, Mike; Didelot, Joe; Bennett, Mike; Betz, Alex
Cc: Moehrke, William; Craigmyle, Kenny
Subject: FW: 168908.14.4100 110413 Mill Creek - Unit 4C Paperdoll

All,

Please see the attached sketch of the Mill Creek proposed plan C and the sketch for Mill Creek Units 1&2 Combined layout. Let me know if you have any comments. For those of us traveling next week, I am sure we will discuss these layouts in more detail during our meeting with B&V.

Thanks,

Eileen

From: Lucas, Kyle J. [mailto:LucasKJ@bv.com]
Sent: Wednesday, April 13, 2011 9:02 PM
To: Saunders, Eileen
Cc: 168908 E.ON-AQC; Hillman, Timothy M.; Wehrly, M. R.; Crabtree, Jonathan D.; Fields, Ron L.; Hintz, Monty E.; Goodlet, Roger F.; Mahabaleshwarkar, Anand
Subject: 168908.14.4100 110413 Mill Creek - Unit 4C Paperdoll

Eileen,

As requested we have developed a draft paperdoll for the Unit 4C scenario based on comments received during Anand's site visit on March 30th. Please review and let us know if you have any comments. Also, if you need to provide costs for this scenario for the budgeting process, I would offer you utilize the apportioned cost information provided on 4/4/11 for Unit 4B (i.e., total project costs of \$188,833,524, and other applicable costs).

Regards,
Kyle

Kyle Lucas | Environmental Permitting Manager, Energy
Black & Veatch Corporation | 11401 Lamar Avenue, Overland Park, KS 66211
+ 1 913-458-9062 P | +1 913-458-9062 F
LucasKJ@BV.com
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From: Straight, Scott
To: Conroy, Robert; Schroeder, Andrea; Saunders, Eileen
CC: Wilson, Stuart; Karavayev, Louanne; Cosby, David; Mooney, Mike (BOC 3); Ritchey, Stacy
Sent: 4/18/2011 10:08:19 AM
Subject: Re: 168908.14.4100 110413 Mill Creek - Unit 4C Paperdoll

Robert

Maybe a diagram, but including the entire reports is something we need to discuss. Maybe a meeting to discuss filing info instead of emails would be good. I'm put of town until Wed on business. W morning us fairly wide open.

Scott

From: Conroy, Robert
Sent: Monday, April 18, 2011 10:05 AM
To: Schroeder, Andrea; Straight, Scott; Saunders, Eileen
Cc: Wilson, Stuart; Karavayev, Louanne; Cosby, David; Mooney, Mike (BOC 3); Ritchey, Stacy
Subject: RE: 168908.14.4100 110413 Mill Creek - Unit 4C Paperdoll

Scott,

There have been no changes to what has been provided. We have always provided diagrams when a CPCN is required.

Robert M. Conroy
Director, Rates
LG&E and KU Services Company
(502) 627-3324 (phone)
(502) 627-3213 (fax)
(502) 741-4322 (mobile)
robert.conroy@lge-ku.com

From: Schroeder, Andrea
Sent: Monday, April 18, 2011 10:04 AM
To: Straight, Scott; Saunders, Eileen; Conroy, Robert
Cc: Wilson, Stuart; Karavayev, Louanne; Cosby, David; Mooney, Mike (BOC 3); Ritchey, Stacy
Subject: RE: 168908.14.4100 110413 Mill Creek - Unit 4C Paperdoll

For the CPCN requirement, we have to provide a drawing of the site that shows the footprint of the new facilities.

From: Straight, Scott
Sent: Monday, April 18, 2011 10:03 AM
To: Saunders, Eileen; Schroeder, Andrea; Conroy, Robert
Cc: Wilson, Stuart; Karavayev, Louanne; Cosby, David; Mooney, Mike (BOC 3); Ritchey, Stacy
Subject: Re: 168908.14.4100 110413 Mill Creek - Unit 4C Paperdoll

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Subject: 168908.14.4100 110413 Mill Creek - Unit 4C Paperdoll

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Regards,
Kyle

Kyle Lucas | Environmental Permitting Manager, Energy

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From: Sturgeon, Allyson </O=LGE/OU=LOUISVILLE/CN=RECIPIENTS/CN=N093308>
Sent: 4/19/2011 2:53:46 PM
To: Straight, Scott <Scott.Straight@lge-ku.com>; Voyles, John <John.Voyles@lge-ku.com>; Wilson, Stuart <Stuart.Wilson@lge-ku.com>; Schroeder, Andrea <Andrea.Schroeder@lge-ku.com>; Saunders, Eileen <Eileen.Saunders@lge-ku.com>; Winkler, Michael <Michael.Winkler@lge-ku.com>; Conroy, Robert <Robert.Conroy@lge-ku.com>; Bellar, Lonnie <Lonnie.Bellar@lge-ku.com>; Charnas, Shannon <Shannon.Charnas@lge-ku.com>; Kendrick Riggs <kendrick.riggs@skofirm.com>; Ehrler, Bob <Bob.Ehrler@lge-ku.com>; Schram, Chuck <Chuck.Schram@lge-ku.com>; Revlett, Gary <Gary.Revlett@lge-ku.com>
Subject: Copy: General Comments/Discussion on First Draft of ECR Applications and Testimony
Location: LGEC12 North 2 (Cap 15)
Start: Tue 4/26/2011 9:00:00 AM
End: Tue 4/26/2011 10:00:00 AM
Recurrence: (none)
Meeting Status: Not yet responded

Required Attendees: Straight, Scott; Voyles, John; Wilson, Stuart; Schroeder, Andrea; Saunders, Eileen; Winkler, Michael; Conroy, Robert; Bellar, Lonnie; Charnas, Shannon; Kendrick Riggs; Ehrler, Bob; Schram, Chuck; Revlett, Gary

I realize that not everyone is available, but if you can make it, please try to do so. Thanks.

From: Conroy, Robert
To: Sturgeon, Allyson
Sent: 4/19/2011 4:02:36 PM
Subject: Accepted: General Comments/Discussion on First Draft of ECR Applications and Testimony

From: Schroeder, Andrea
To: Conroy, Robert; Foxworthy, Carol
Sent: 4/19/2011 4:39:16 PM
Subject: 2011 ECR Plan Bill Impact
Attachments: ECR Bill Impact-DRAFT v2.xlsx

Attached is the DRAFT 2011 ECR Plan Bill Impact calculations. Please review the file and provide any comments, questions or feedback by Thursday (4/21) afternoon. The bill impact includes incremental O&M, retirements and the current capital estimates. The capital, O&M and retirements used in this file are consistent with the data used by Gen Planning in their analysis. The file is also saved in the case directory in the Bill Impact folder.

If you have any questions, please let me know.

Thanks,
Andrea
X3651

Andrea Schroeder
LG&E and KU
State Regulation and Rates
502-627-3651
502-627-3213 (fax)

	A	B	C	D	E	F	G
1							
2		Louisville Gas and Electric Company					
3		Environmental Cost Recovery Surcharge Summary					
4							
5							
6			2011	2012	2013	2014	2015
7							
8		Total E(m) - (\$000)	\$25,567	\$79,194	\$131,565	\$229,745	\$252,327
9							
10		12 Month Average Jurisdictional Ratio	87.20%	87.20%	87.20%	87.20%	87.20%
11							
12		Jurisdictional E(m) - (\$000)	\$22,295	\$69,060	\$114,728	\$200,344	\$220,036
13							
14		Forecasted Jurisdictional R(m) - (million)	\$956	\$1,013	\$1,038	\$1,077	\$1,131
15							
16		Incremental Billing Factor	2.33%	6.82%	11.05%	18.60%	19.46%
17							
18		Residential Customer Impact					
19		Monthly bill (1,000 kWh per month)	\$1.98	\$5.80	\$9.40	\$15.83	\$16.56
20							
21							
22							
23							
24		Kentucky Utilities Company					
25		Environmental Cost Recovery Surcharge Summary					
26							
27							
28			2011	2012	2013	2014	2015
29							
30		Total E(m) - (\$000)	\$19,019	\$67,529	\$140,626	\$194,228	\$214,991
31							
32		12 Month Average Jurisdictional Ratio	86.99%	86.99%	86.99%	86.99%	86.99%
33							
34		Jurisdictional E(m) - (\$000)	\$16,544	\$58,743	\$122,328	\$168,956	\$187,017
35							
36		Forecasted Jurisdictional R(m) - (million)	\$1,365	\$1,442	\$1,505	\$1,560	\$1,655
37							

	A	B	C	D	E	F	G
38		Incremental Billing Factor	1.21%	4.07%	8.13%	10.83%	11.30%
39							
40		Residential Customer Impact					
41		Monthly bill (1,000 kWh per month)	\$0.94	\$3.15	\$6.29	\$8.38	\$8.75

	A	B	C	D	E	F	G	H	I	J	K
1											
2	State	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
3	Tax Rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
4		LG&E	KU								
5	Tax Rate-Retirements	35.5900%	35.5900%	Filing will include retirements - VERIFY TAX RATE FOR FILING							
6	Property Tax Rate	0.15%	0.15%								
7											
8											
9	LG&E Rate of Return Calculation										
10	August 31, 2010										
11		Total Company	Elec Rate Base %	Electric Capitaliz	Post 1995 Plan	Adjusted Electric Capitalization	Annual Cost Rate	2011 Weighted C	2012 Weighted C	2013 Weighted C	
12	Long-Term Debt					723,812,195	38.65%	5.17%	2.00%	2.00%	2.00%
13	Short-Term Debt					95,575,046	5.10%	0.28%	0.01%	0.01%	0.01%
14	Preferred Stock					0	0.00%	0.00%	0.00%	0.00%	0.00%
15	Common Equity					1,053,422,249	56.25%	10.63%	5.98%	5.98%	5.98%
16	Total					1,872,809,491			7.99%	7.99%	7.99%
17	Composite Debt Rate								2.01%	2.01%	2.01%
18	Composite Tax Rate								35.59%	35.59%	35.59%
19	Overall Rate of Return Grossed Up								11.30%	11.30%	11.30%
20											
21	KU Rate of Return Calculation										
22	August 31, 2010										
23		Total Company	Elec Rate Base %	Electric Capitaliz	1994 ECR Roll-	Post 1994 Plan	Adjusted Electric Capitalization	Annual Cost Rate	2011 Weighted C	2012 Weighted C	
24	Long-Term Debt						1,392,025,319	44.25%	4.69%	2.08%	2.08%
25	Short-Term Debt						49,905,206	1.59%	28.00%	0.44%	0.44%
26	Preferred Stock						0	0.00%	0.00%	0.00%	0.00%
27	Common Equity						1,704,192,519	54.17%	10.63%	5.76%	5.76%
28	Total						3,146,123,044			8.26%	8.26%
29	Composite Debt Rate									2.52%	2.52%
30	Composite Tax Rate									35.59%	35.59%
31	Overall Rate of Return Grossed Up									11.46%	11.46%

	L	M	N	O	P	Q	R	S	T	U
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11	2014 Weighted Cost of Capital	2015 Weighted Cost of Capital	2016 Weighted Cost of Capital	2017 Weighted Cost of Capital	2018 Weighted Cost of Capital	2019 Weighted Cost of Capital	2020 Weighted Cost of Capital			
12	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%			
13	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%			
14	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
15	5.98%	5.98%	5.98%	5.98%	5.98%	5.98%	5.98%			
16	7.99%	7.99%	7.99%	7.99%	7.99%	7.99%	7.99%			
17	2.01%	2.01%	2.01%	2.01%	2.01%	2.01%	2.01%			
18	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%			
19	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%			
20										
21										
22										
23	2013 Weighted Cost of Capital	2014 Weighted Cost of Capital	2015 Weighted Cost of Capital	2016 Weighted Cost of Capital	2017 Weighted Cost of Capital	2018 Weighted Cost of Capital	2019 Weighted Cost of Capital	2020 Weighted Cost of Capital		
24	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%		
25	0.44%	0.44%	0.44%	0.44%	0.44%	0.44%	0.44%	0.44%		
26	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
27	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%		
28	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%		
29	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%		
30	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%		
31	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%		

	A	B	C	D	E	F	G	H	I	J	K
32											
33	Jurisdictional Ratios from ECR Filings					Billing Factors as of					
34						12/1/2010 Expense Month					
35	Billing Month	LG&E	KU					LG&E	KU		
36	Mar-10	86.20%	84.36%			Customer Charge		8.50	8.50		
37	Apr-10	80.32%	81.71%			Energy		0.07068	0.06805		
38	May-10	88.90%	89.28%			FAC		0.00241	(0.00160)		
39	Jun-10	84.15%	87.37%			DSM		0.00350	0.00243		
40	Jul-10	85.36%	86.68%			ECR Factor		0.01290	0.02550		
41	Aug-10	93.53%	86.14%								
42	Sep-10	92.29%	86.06%					40513.00			
43	Oct-10	92.56%	87.69%								
44	Nov-10	90.68%	88.85%								
45	Dec-10	85.51%	90.72%								
46	Jan-11	83.47%	88.01%								
47	Feb-11	83.46%	86.99%								
48	Average	87.20%	86.99%								
49											
50	12/1/2010 Expense Month Avg Mth Juris Rev	858,529,356	1,251,944,184								
51											
52	Revenue Calculations Percentage Change										
53	LG&E	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
54	Non-Fuel Base Revenues	612,299,201	616,463,124	661,886,884	674,166,088	706,062,084	731,555,030	793,375,938	810,638,275	848,006,746	871,350,286
55	Base Fuel Revenues	252,871,140	254,605,555	256,654,116	258,061,715	260,515,941	263,215,132	265,505,098	268,936,102	273,316,507	277,998,218
56	FAC Revenues	6,569,387	52,094,215	65,106,480	72,573,881	76,932,645	99,476,590	101,719,476	119,181,391	136,745,475	144,911,542
57	Environmental Cost Recovery	8,489,276	24,911,926	67,205,086	182,489,410	273,508,372	314,131,086	319,850,631	314,016,635	303,107,092	290,548,494
58	Energy Efficient Operations Cost Recovery	25,020,225	32,753,925	29,101,484	33,689,359	33,435,195	36,698,749	34,810,786	37,017,622	34,610,250	36,819,727
59	Total (less ECR)	896,759,953	955,916,819	1,012,748,964	1,038,491,023	1,076,945,865	1,130,945,501	1,195,411,298	1,235,773,380	1,292,678,978	1,331,079,773
60	% Change		0.06597	0.05945	0.02542	0.03703	0.05014	0.05700	0.03376	0.04605	0.02971
61				0.1293	0.1580	0.2009	0.2611	0.3330	0.3780	0.4415	0.4843
62											
63	KU	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
64	Non-Fuel Base Revenues	772,207,990	783,997,444	847,674,177	864,767,856	904,788,293	931,637,550	986,720,335	1,024,534,800	1,117,837,185	1,144,830,904
65	Base Fuel Revenues	508,150,329	517,236,870	526,269,091	532,138,408	541,521,192	549,025,330	555,266,141	563,396,145	573,613,393	583,751,081

	L	M	N	O	P	Q	R	S	T	U
32										
33	Proportional Share TC Facilities Ash Pond & La									
34										
35										
36		Utility		75%						
37		LG&E	52%		39.000%					
38		KU	48%		36.000%					
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										
51										
52										
53										
54						10000	1/1/2008			
55						2750	3/1/2008			
56										
57						4250	10/30/2008			
58						3250	2/15/2009			
59						2750	4/1/2009			
60						30%				
61										
62										
63										
64										
65										

	A	B	C	D	E	F	G	H	I	J	K
66	FAC Revenues	16,174,164	32,016,696	38,186,813	73,393,620	78,267,833	135,900,479	142,822,427	184,547,422	236,117,586	261,130,956
67	Environmental Cost Recovery	64,844,127	88,800,705	126,933,711	177,716,989	238,127,822	292,469,292	297,641,363	286,104,421	273,917,972	257,929,664
68	Energy Efficient Operations Cost Recovery	23,709,208	31,483,879	30,165,987	34,916,610	35,013,260	38,155,163	36,392,806	38,652,987	36,197,617	38,503,851
69	Total (less ECR)	1,320,241,691	1,364,734,889	1,442,296,068	1,505,216,494	1,559,590,578	1,654,718,522	1,721,201,709	1,811,131,354	1,963,765,781	2,028,216,792
70	% Change		0.03370	0.05683	0.04363	0.03612	0.06100	0.04018	0.05225	0.08428	0.03262
71				0.0924	0.1401	0.1813	0.2533	0.3037	0.3718	0.4874	0.5362
72											
73											

	L	M	N	O	P	Q	R	S	T	U
66										
67										
68										
69										
70										
71										
72										
73										

	A	B	C	D	E	F	G	H	I	J	K
74	Incremental O&M										
75	LG&E										
76	Project 26	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
77	MC Air Compliance (FGDs/Baghouses) - All Units	0	0	3,444,837	11,467,688	41,509,977	48,720,281	49,694,687	50,688,581	51,702,352	52,736,400
78	Project 27										
79	TC1 Air Compliance (Baghouse)	0	0	0	0	3,732,365	7,614,024	7,766,305	7,921,631	8,080,064	8,241,665
80	Total-LGE	0	0	3,444,837	11,467,688	45,242,342	56,334,306	57,460,992	58,610,212	59,782,416	60,978,064
81											
82	KU										
83	Project 29-Amended	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
84	BR Landfill (Phase I)	0	0	0	4,000,000	4,080,000	4,161,800	4,244,832	4,329,729	4,416,323	4,504,650
85	Project 34										
86	BR Air Compliance (Baghouses) - All Units	0	0	0	8,786,902	15,404,562	15,712,653	16,026,906	16,347,444	16,674,393	17,007,881
87	Project 35										
88	GH Air Compliance (Baghouses) - All Units	0	329,460	16,317,795	36,443,513	54,597,105	67,962,562	69,321,813	70,708,249	72,122,414	73,564,862
89	Total-KU	0	329,460	16,317,795	49,230,414	74,081,667	87,836,815	89,593,551	91,385,422	93,213,130	95,077,393

A	B	C	D	E	F	G	H	I	J	K	L
1	Incremental O&M Estimates for Projects in the 2011 ECR Plan										
2											
3	Area below used as inputs into Project tabs										
4	## Beneficial Reuse			2011	2012	2013	2014	2015	2016	2017	2018
5											
6	Louisville Gas and Electric Company										
7	Proposed Project 26	MC Air Compliance - FGDs & Baghouses	\$ -	\$ -	\$ 3,444,837	\$ 11,467,688	\$ 41,509,977	\$ 48,720,281	\$ 49,694,687	\$ 50,688,581	
8											
9		Mill Creek 1 - Combined 1 & 2 FGD					\$ 386,428	\$ 394,157	\$ 402,040	\$ 410,081	
10		Mill Creek 1 - Baghouse					\$ 6,508,408	\$ 6,638,576	\$ 6,771,348	\$ 6,906,775	
11		Mill Creek 1 - SAM Mitigation					\$ 1,439,404	\$ 2,516,900	\$ 2,567,238	\$ 2,618,583	
12		Total Mill Creek 1					\$ 8,334,240	\$ 9,549,633	\$ 9,740,626	\$ 9,935,438	
13											
14		Mill Creek 2 - Combined 1& 2 FGD					\$ 386,428	\$ 394,157	\$ 402,040	\$ 410,081	
15		Mill Creek 2 - Baghouse					\$ 6,846,051	\$ 6,982,972	\$ 7,122,632	\$ 7,265,084	
16		Mill Creek 2 - SAM Mitigation					\$ 1,736,875	\$ 2,657,419	\$ 2,710,567	\$ 2,764,778	
17		Total Mill Creek 2					\$ 8,969,354	\$ 10,034,548	\$ 10,235,239	\$ 10,439,943	
18											
19		Mill Creek 3 - FGD (U4 update and tie in)			\$ -	\$ 317,153	\$ 646,991	\$ 659,931	\$ 673,130	\$ 686,592	
20		Mill Creek 3 - Baghouse			\$ -	\$ -	\$ 4,358,422	\$ 8,891,180	\$ 9,069,004	\$ 9,250,384	
21		Mill Creek 3 - SCR Turn-Down			\$ 3,396,285	\$ 3,464,211	\$ 3,533,495	\$ 3,604,165	\$ 3,676,248	\$ 3,749,773	
22		Mill Creek 3 - SAM Mitigation			\$ 48,552	\$ 74,285	\$ 75,770	\$ 77,286	\$ 78,831	\$ 80,408	
23		Total Mill Creek 3			\$ 3,444,837	\$ 3,855,648	\$ 8,614,678	\$ 13,232,562	\$ 13,497,213	\$ 13,767,157	
24											
25		Mill Creek 4 - FGD				\$ 466,873	\$ 952,420	\$ 971,469	\$ 990,898	\$ 1,010,716	
26		Mill Creek 4 - Baghouse				\$ 5,036,669	\$ 10,275,212	\$ 10,480,717	\$ 10,690,331	\$ 10,904,138	
27		Mill Creek 4 - SCR Turn-Down				\$ 2,102,109	\$ 4,283,302	\$ 4,374,068	\$ 4,461,549	\$ 4,550,780	
28		Mill Creek 4 - SAM Mitigation				\$ 6,190	\$ 75,770	\$ 77,286	\$ 78,831	\$ 80,408	
29		Total Mill Creek 4				\$ 7,612,041	\$ 15,591,705	\$ 15,903,539	\$ 16,221,609	\$ 16,546,042	
30											
31	Proposed Project 27	TC1 Air Compliance - Baghouse	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,732,365	\$ 7,614,024	\$ 7,766,305	\$ 7,921,631
32											
33	Kentucky Utilities Company										
34	Amended Project 29	BR Landfill (Phase I)	\$ -	\$ -	\$ -	\$ 4,000,000	\$ 4,080,000	\$ 4,161,600	\$ 4,244,832	\$ 4,329,729	
35											
36	Proposed Project 34	BR Air Compliance - Baghouses	\$ -	\$ -	\$ -	\$ 8,786,902	\$ 15,404,562	\$ 15,712,653	\$ 16,026,906	\$ 16,347,444	
37											
38		Brown 1 - Baghouse				\$ 2,060,866	\$ 2,102,083	\$ 2,144,125	\$ 2,187,007	\$ 2,230,748	
39		Brown 1 - SAM Mitigation				\$ 1,383,684	\$ 2,419,471	\$ 2,467,860	\$ 2,517,217	\$ 2,567,562	
40		Total Brown 1				\$ 3,444,550	\$ 4,521,554	\$ 4,611,985	\$ 4,704,225	\$ 4,798,309	
41											
42		Brown 2 - Baghouse				\$ 2,970,321	\$ 3,029,728	\$ 3,090,322	\$ 3,152,129	\$ 3,215,171	
43		Brown 2 - SAM Mitigation				\$ 2,372,030	\$ 2,419,471	\$ 2,467,860	\$ 2,517,217	\$ 2,567,562	
44		Total Brown 2				\$ 5,342,351	\$ 5,449,198	\$ 5,558,182	\$ 5,669,346	\$ 5,782,733	
45											
46		Brown 3 - Baghouse					\$ 5,433,809	\$ 5,542,486	\$ 5,653,335	\$ 5,766,402	

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4	2019	2020		
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7	\$ 51,702,352	\$ 52,736,400		
8				
9	\$ 418,282	\$ 426,648		
10	\$ 7,044,910	\$ 7,185,808		
11	\$ 2,670,955	\$ 2,724,374		
12	\$ 10,134,147	\$ 10,336,830		
13				
14	\$ 418,282	\$ 426,648		
15	\$ 7,410,386	\$ 7,558,594		
16	\$ 2,820,074	\$ 2,876,475		
17	\$ 10,648,742	\$ 10,861,717		
18				
19	\$ 700,324	\$ 714,331		
20	\$ 9,435,392	\$ 9,624,100		
21	\$ 3,824,768	\$ 3,901,264		
22	\$ 82,016	\$ 83,656		
23	\$ 14,042,501	\$ 14,323,351		
24				
25	\$ 1,030,930	\$ 1,051,549		
26	\$ 11,122,220	\$ 11,344,665		
27	\$ 4,641,796	\$ 4,734,632		
28	\$ 82,016	\$ 83,656		
29	\$ 16,876,963	\$ 17,214,502		
30				
31	\$ 8,080,064	\$ 8,241,665		
32				
33				
34	\$ 4,416,323	\$ 4,504,650		
35				
36	\$ 16,674,393	\$ 17,007,881		
37				
38	\$ 2,275,363	\$ 2,320,870		
39	\$ 2,618,913	\$ 2,671,291		
40	\$ 4,894,275	\$ 4,992,161		
41				
42	\$ 3,279,475	\$ 3,345,064		
43	\$ 2,618,913	\$ 2,671,291		
44	\$ 5,898,388	\$ 6,016,355		
45				
46	\$ 5,881,730	\$ 5,999,365		

	A	B	C	D	E	F	G	H	I	J	K	L
47				Total Brown 3					\$ 5,433,809	\$ 5,542,486	\$ 5,653,335	\$ 5,766,402
48												
49		Proposed Project 35		GH Air Compliance - Baghouses	\$ -	\$ 329,460	\$ 16,317,795	\$ 36,443,513	\$ 54,597,105	\$ 67,962,562	\$ 69,321,813	\$ 70,708,249
50												
51				Ghent 1 - Baghouse			\$ -	\$ 11,828,755	\$ 12,065,330	\$ 12,306,637	\$ 12,552,769	\$ 12,803,825
52				Ghent 1 - SCR Turn-Down			\$ -	\$ 74,285	\$ 75,770	\$ 77,286	\$ 78,831	\$ 80,408
53				Ghent 1 - SAM Mitigation			\$ 4,096,370	\$ 5,013,957	\$ 5,114,237	\$ 5,216,521	\$ 5,320,852	\$ 5,427,269
54				Total Ghent 1			\$ 4,096,370	\$ 16,916,997	\$ 17,255,337	\$ 17,600,444	\$ 17,952,452	\$ 18,311,501
55												
56				Ghent 2 - Baghouse		\$ -	\$ -	\$ 5,286,142	\$ 10,783,730	\$ 10,999,405	\$ 11,219,393	\$ 11,443,781
57				Ghent 2 - SAM Mitigation		\$ 329,460	\$ 4,032,590	\$ 4,113,242	\$ 4,195,507	\$ 4,279,417	\$ 4,365,006	\$ 4,452,306
58				Total Ghent 2		\$ 329,460	\$ 4,032,590	\$ 9,399,385	\$ 14,979,237	\$ 15,278,822	\$ 15,584,399	\$ 15,896,087
59												
60				Ghent 3 - Baghouse			\$ -	\$ -	\$ 6,188,535	\$ 12,624,612	\$ 12,877,104	\$ 13,134,646
61				Ghent 3 - SCR Turn-Down			\$ 36,414	\$ 74,285	\$ 75,770	\$ 77,286	\$ 78,831	\$ 80,408
62				Ghent 3 - SAM Mitigation			\$ 3,857,718	\$ 4,721,847	\$ 4,816,284	\$ 4,912,610	\$ 5,010,862	\$ 5,111,079
63				Total Ghent 3			\$ 3,894,132	\$ 4,796,132	\$ 11,080,590	\$ 17,614,507	\$ 17,966,797	\$ 18,326,133
64												
65				Ghent 4 - Baghouse			\$ -	\$ -	\$ 5,844,322	\$ 11,922,417	\$ 12,160,865	\$ 12,404,082
66				Ghent 4 - SCR Turn-Down			\$ -	\$ 74,285	\$ 75,770	\$ 77,286	\$ 78,831	\$ 80,408
67				Ghent 4 - SAM Mitigation			\$ 4,294,702	\$ 5,256,715	\$ 5,361,849	\$ 5,469,086	\$ 5,578,468	\$ 5,690,037
68				Total Ghent 4			\$ 4,294,702	\$ 5,331,000	\$ 11,281,941	\$ 17,468,789	\$ 17,818,164	\$ 18,174,528
69												
70												
71												
72								4,000,000	4,080,000	4,161,600	4,244,832	4,329,729

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47	\$ 5,881,730	\$ 5,999,365		
48				
49	\$ 72,122,414	\$ 73,564,862		
50				
51	\$ 13,059,901	\$ 13,321,099		
52	\$ 82,016	\$ 83,656		
53	\$ 5,535,814	\$ 5,646,530		
54	\$ 18,677,732	\$ 19,051,286		
55				
56	\$ 11,672,657	\$ 11,906,110		
57	\$ 4,541,352	\$ 4,632,179		
58	\$ 16,214,008	\$ 16,538,289		
59				
60	\$ 13,397,339	\$ 13,665,286		
61	\$ 82,016	\$ 83,656		
62	\$ 5,213,301	\$ 5,317,567		
63	\$ 18,692,656	\$ 19,066,509		
64				
65	\$ 12,652,164	\$ 12,905,207		
66	\$ 82,016	\$ 83,656		
67	\$ 5,803,838	\$ 5,919,915		
68	\$ 18,538,018	\$ 18,908,779		
69				
70				
71				
72	4,416,323	4,504,650		

	A	B	C	D	E	F	G	H	I	J	K	L
1		Revenue Requirements Summary										
2		2011 Amended Plan - LG&E										
3												
4			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
5	Project 26	MC Air Compliance - All Units - FGDs & Baghouses										
6		Revenue Requirement										
7		Eligible Plant	9,618,429	226,222,641	644,137,762	1,018,878,163	#####	1,280,872,458	#####	#####	1,280,872,458	#####
8		Less: Retired Plant	-	-	-	(76,551,617)	(171,243,250)	(171,243,250)	(171,243,250)	(171,243,250)	(171,243,250)	(171,243,250)
9		Less: Accumulated Depreciation	-	-	-	(2,081,190)	(40,723,559)	(93,170,948)	(145,618,337)	(198,065,727)	(250,513,116)	(302,960,505)
10		Plus: Accumulated Depreciation on retired plant	-	-	-	37,301,196	107,305,608	107,305,608	107,305,608	107,305,608	107,305,608	107,305,608
11		Less: Deferred Tax Balance	-	-	-	(5,131,218)	(14,111,052)	(27,457,149)	(38,401,949)	(47,126,988)	(53,796,378)	(58,565,957)
12		Plus: Deferred Tax Balance on retired plant	-	-	-	4,330,205	6,101,406	6,101,406	6,101,406	6,101,406	6,101,406	6,101,406
13		Environmental Compliance Rate Base	9,618,429	226,222,641	644,137,762	976,745,539	#####	1,102,408,124	#####	977,843,506	918,726,727	861,509,759
14		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
15			\$ 1,086,443	\$ 25,552,811	\$ 72,758,103	\$ 110,327,567	\$ 131,101,014	\$ 124,521,691	\$ 117,361,274	\$ 110,451,587	\$ 103,774,096	\$ 97,311,195
16												
17		Operating expenses	-	-	3,444,837	11,467,688	41,509,977	48,720,281	49,694,667	50,688,581	51,702,352	52,736,400
18		Annual Depreciation expense	-	-	-	2,081,190	38,842,369	52,447,389	52,447,389	52,447,389	52,447,389	52,447,389
19		Less depreciation on retired plant	-	-	-	(240,226)	(557,649)	(557,649)	(557,649)	(557,649)	(557,649)	(557,649)
20		Annual Property Tax expense	-	14,428	339,334	966,207	1,525,195	1,848,905	1,781,552	1,702,881	1,624,210	1,545,539
21		Total OE	\$ -	\$ 14,428	\$ 3,784,171	\$ 14,274,858	\$ 81,119,893	\$ 102,458,926	\$ 103,365,980	\$ 104,281,202	\$ 105,216,303	\$ 106,171,679
22												
23		Total E(m)	1,086,443	25,567,238	76,542,274	124,602,426	212,220,907	226,980,616	220,727,253	214,732,790	208,990,398	203,482,874
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25	Project 27	TC1 Air Compliance - Baghouse										
26		Revenue Requirement										
27		Eligible Plant	-	-	23,479,889	61,329,417	118,470,025	123,752,357	123,752,357	123,752,357	123,752,357	123,752,357
28		Less: Retired Plant	-	-	-	-	-	-	-	-	-	-
29		Less: Accumulated Depreciation	-	-	-	-	(536,077)	(5,015,912)	(9,495,748)	(13,975,583)	(18,455,418)	(22,935,254)
30		Plus: Accumulated Depreciation on retired plant	-	-	-	-	-	-	-	-	-	-
31		Less: Deferred Tax Balance	-	-	-	-	(1,390,341)	(2,975,465)	(4,321,874)	(5,448,065)	(6,369,895)	(7,103,219)
32		Plus: Deferred Tax Balance on retired plant	-	-	-	-	-	-	-	-	-	-
33		Environmental Compliance Rate Base	-	-	23,479,889	61,329,417	116,543,608	115,760,980	109,934,736	104,328,709	98,927,044	93,713,885
34		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
35			\$ -	\$ -	\$ 2,652,151	\$ 6,927,419	\$ 13,164,097	\$ 13,075,696	\$ 12,417,596	\$ 11,784,372	\$ 11,174,231	\$ 10,585,382
36												
37		Operating expenses	-	-	-	-	3,732,365	7,614,024	7,766,305	7,921,631	8,080,064	8,241,665
38		Annual Depreciation expense	-	-	-	-	536,077	4,479,835	4,479,835	4,479,835	4,479,835	4,479,835
39		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-	-
40		Annual Property Tax expense	-	-	-	35,220	91,994	176,901	178,105	171,385	164,665	157,945
41		Total OE	\$ -	\$ -	\$ -	\$ 35,220	\$ 4,360,436	\$ 12,270,761	\$ 12,424,245	\$ 12,572,851	\$ 12,724,564	\$ 12,879,446
42												
43		Total E(m)	-	-	2,652,151	6,962,639	17,524,533	25,346,456	24,841,841	24,357,223	23,898,795	23,464,828
44												
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46												
47		Total E(m) - All LG&E Projects	1,086,443	25,567,238	79,194,425	131,565,064	229,745,439	252,327,074	245,569,095	239,090,013	232,889,193	226,947,702
48			1,086,443	25,567,238	79,194,425	131,565,064	229,745,439	252,327,074	245,569,095	239,090,013	232,889,193	226,947,702
49		Total Revenue Requirements										
50		Project 26	1,086,443	25,567,238	76,542,274	124,602,426	212,220,907	228,980,618	220,727,253	214,732,790	208,990,398	203,482,874
51		0	-	-	2,652,151	6,962,639	17,524,533	25,346,456	24,841,841	24,357,223	23,898,795	23,464,828
52												
53												
54		Total	1,086,443	25,567,238	79,194,425	131,565,064	229,745,439	252,327,074	245,569,095	239,090,013	232,889,193	226,947,702
55			-	-	-	-	-	-	-	-	-	-
56		12 Month Average Jurisdictional Ratio	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%
57												
58		Jurisdictional Allocation	947,405	22,295,271	69,059,518	114,728,025	200,343,767	220,035,517	214,142,390	208,492,468	203,085,199	197,904,070
59												
60		Forecasted 12-Month Retail Revenue	896,759,953	955,916,819	#####	1,038,491,023	1,076,945,865	1,130,945,501	1,195,411,298	1,235,773,390	1,292,678,978	1,331,079,773
61												
62		Billing Factor	0.11%	2.33%	6.82%	11.05%	18.60%	19.46%	17.91%	16.87%	15.71%	14.87%
63												
64		LGE Residential Bill Impact										
65		Customer Charge	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50
66		Energy - 1,000 Kwh @ \$0.07068	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68
67		FAC billings (Dec 10 factor - \$0.00241/kWh)	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41
68		DSM billings (Dec 10 factor - \$0.0035/kWh)	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50
69		ECR billings (Dec 10 factor: 1.29%)	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10
70		Additional ECR factor	\$0.09	\$1.98	\$5.80	\$9.40	\$15.83	\$16.56	\$15.24	\$14.36	\$13.37	\$12.65
71				181%				1508%				
72												
73			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
74	Project 26	Eligible Plant	9,618,429	226,222,641	644,137,762	1,018,878,163	#####	1,280,872,458	#####	#####	1,280,872,458	#####
75	Project 27	Eligible Plant	-	-	23,479,869	61,329,417	118,470,025	123,752,357	123,752,357	123,752,357	123,752,357	123,752,357
76												
77												
78		Total Plant-LG&E	9,618,429	226,222,641	667,617,631	1,080,207,580	#####	1,404,624,815	#####	#####	1,404,624,815	#####

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54		8,522,413	6,599,535
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58		7,431,757	5,754,960
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	A	B	C	D	E	F	G	H	I	J	K
1	Summary Cash Flow										
2	Cash Flow for 2011 thru 2020										
3	2011 LG&E Amended ECR Plan										
4											
5											
6			2	3	4	5	6	7	8	9	10
7	Date	MC1 & MC2 (GDs - MC2 (Proj	GDs - MC3 (Proj	GDs - MC4 (Proj	compliance - MC1 (P	compliance - MC2 (P	compliance - MC3 (P	compliance - MC4 (P	compliance - TC1 (P		
8	2009	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	2010	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	2011	\$ -	\$ -	\$ -	\$ 4,049,212	\$ -	\$ -	\$ 192,372	\$ 5,376,845	\$ -	\$ -
11	2012	\$ 50,384,502	\$ -	\$ 6,892,461	\$ 70,537,279	\$ 13,571,615	\$ 12,967,870	\$ 7,830,765	\$ 54,419,721	\$ -	\$ -
12	2013	\$ 104,799,763	\$ -	\$ 32,256,716	\$ 87,592,561	\$ 42,786,742	\$ 41,386,869	\$ 48,247,370	\$ 60,845,099	\$ 23,479,869	\$ -
13	2014	\$ 108,991,754	\$ -	\$ 29,819,542	\$ 44,409,428	\$ 49,569,617	\$ 49,120,072	\$ 49,061,558	\$ 43,768,430	\$ 37,849,548	\$ -
14	2015	\$ 89,616,306	\$ -	\$ 3,876,540	\$ 11,842,514	\$ 48,617,413	\$ 47,612,217	\$ 43,768,430	\$ 9,115,060	\$ 57,140,608	\$ -
15	2016	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,545,814	\$ -	\$ 5,282,332	\$ -
16	2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17	2018	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
18	2019	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
19	2020	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20											
21		\$ 353,792,325	\$ -	\$ 72,845,258	\$ 218,430,995	\$ 154,545,387	\$ 151,087,029	\$ 156,646,309	\$ 173,525,155	\$ 123,752,357	\$ -

	L	M	N	O	P	Q	R
1							
2							
3							
4							
5							
6							
7	object 27)	Total					
8		\$ -					
9		\$ -					
10		\$ 9,618,429					
11		\$ 216,604,212					
12		\$ 441,394,990					
13		\$ 412,589,949			49,061,556.00	43,768,430.00	92,829,986.00
14		\$ 311,589,088			43,768,429.79	9,115,059.61	52,883,489.40
15		\$ 12,828,146					
16		\$ -					
17		\$ -					
18		\$ -					
19		\$ -					
20							
21	\$ -	\$ 1,404,624,815					

	A	B	C	D	E	F	G	H	I	J	K
1		Revenue Requirements									
2		Project 26 - LG&E									
3							April				
4			2011	2012	2013	2014	2015	2016	2017	2018	2019
5		In-Service					1	2	3	4	5
6		Mill Creek 2PC									
7	Project 26	CapEx - Mill Creek FGDs - Combined MC1-MC2 new FGD	\$ -	\$ 50,384,502	\$ 104,799,763	\$ 108,991,754	\$ 89,616,306	\$ -	\$ -	\$ -	\$ -
8	2	Accumulated Expenditures	\$ -	\$ 50,384,502	\$ 155,184,265	\$ 264,176,019	\$ 353,792,325	\$ 353,792,325	\$ 353,792,325	\$ 353,792,325	\$ 353,792,325
9	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	4.280%	4.280%	4.280%	4.280%	4.280%
10	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%
11		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
12		Deferred Tax Balance	-	-	-	-	904,487	4,605,120	7,623,295	10,011,897	11,816,254
13		Book Accumulated Depreciation Balance	-	-	-	-	10,725,804	25,868,115	41,010,427	56,152,739	71,295,050
14		Unrecovered Investment -- Book	-	50,384,502	155,184,265	264,176,019	353,792,325	353,792,325	353,792,325	353,792,325	353,792,325
15		Book Depreciation	-	-	-	-	10,725,804	15,142,312	15,142,312	15,142,312	15,142,312
16		Unrecovered Investment -- Tax total	-	50,384,502	155,184,265	264,176,019	353,792,325	353,792,325	353,792,325	353,792,325	353,792,325
17		Tax Depreciation	-	-	-	-	13,267,212	25,540,268	23,622,714	21,853,752	20,212,156
18		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
19		Book Depreciation expense total	-	-	-	-	10,725,804	15,142,312	15,142,312	15,142,312	15,142,312
20		Tax Depreciation expense total	-	-	-	-	13,267,212	25,540,268	23,622,714	21,853,752	20,212,156
21		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
22		Deferred Tax Balance	-	-	-	-	904,487	3,700,633	3,018,175	2,388,602	1,804,357
23											
24		Revenue Recovery on Capital Expenditure to date									
25		Eligible Plant, cumulative capital expenditures	-	50,384,502	155,184,265	264,176,019	353,792,325	353,792,325	353,792,325	353,792,325	353,792,325
26	2002	Less: Retired Plant	-	-	-	-	(94,691,633)	(94,691,633)	(94,691,633)	(94,691,633)	(94,691,633)
27		Less: Accumulated Depreciation	-	-	-	-	(10,725,804)	(25,868,115)	(41,010,427)	(56,152,739)	(71,295,050)
28		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	70,004,411	70,004,411	70,004,411	70,004,411	70,004,411
29		Less: Deferred Tax Balance	-	-	-	-	(904,487)	(4,605,120)	(7,623,295)	(10,011,897)	(11,816,254)
30		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	1,771,201	1,771,201	1,771,201	1,771,201	1,771,201
31		Environmental Compliance Rate Base	-	50,384,502	155,184,265	264,176,019	319,246,013	300,403,069	282,242,583	264,711,669	247,765,000
32		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
33		Return on Environmental Compliance Rate Base	\$ -	\$ 5,691,144	\$ 17,528,723	\$ 29,839,806	\$ 36,060,196	\$ 33,931,806	\$ 31,880,501	\$ 29,900,310	\$ 27,986,112
34											
35		Operating Expenses	-	-	-	-	772,857	788,314	804,080	820,162	836,565
36		Annual Depreciation expense	-	-	-	-	10,725,804	15,142,312	15,142,312	15,142,312	15,142,312
37		Less depreciation on retired plant	-	-	-	-	(317,423)	(317,423)	(317,423)	(317,423)	(317,423)

	L	M	N	O	P	Q	R
1							
2							
3							
4	2020						
5	6	Difference				January	1
6						February	2
7	\$ -	\$ -				March	3
8	\$ 353,792,325					April	4
9	4.280%					May	5
10	5.285%					June	6
11	35.59%					July	7
12	13,081,697					August	8
13	86,437,362					September	9
14	353,792,325					October	10
15	15,142,312					November	11
16	353,792,325					December	12
17	18,697,924						
18	11.30%						
19	15,142,312						
20	18,697,924						
21	0.1500%						
22	1,265,443						
23							
24							
25	353,792,325						
26	(94,691,633)						
27	(86,437,362)						
28	70,004,411						
29	(13,081,697)						
30	1,771,201						
31	231,357,246						
32	11.30%						
33	\$ 26,132,786						
34							
35	853,296						
36	15,142,312						
37	(317,423)						

	A	B	C	D	E	F	G	H	I	J	K
38		Annual Property Tax expense	-	-	75,577	232,776	396,264	514,600	491,886	469,173	446,459
39		Total OE	\$ -	\$ -	\$ 75,577	\$ 232,776	\$ 396,264	\$ 514,600	\$ 491,886	\$ 469,173	\$ 446,459
40											
41		Total E(m) - Project	-	5,691,144	17,604,300	30,072,583	47,637,698	50,059,608	48,001,357	46,014,533	44,094,025
42											

	L	M	N	O	P	Q	R
38	423,746						
39	\$ 16,101,931						
40							
41	42,234,717						
42							

	A	B	C	D	E	F	G	H	I	J	K
43											
44							April				
45			2011	2012	2013	2014	2015	2016	2017	2018	2019
46		In-Service					1	2	3	4	5
47		Mill Creek 2PC									
48	Project 26	CapEx - Mill Creek FGDs - MC2 FGD upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
49	3	Accumulated Expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
50	2	Book Depreciation rate per year	0.000%	0.000%	0.000%	0.000%	4.280%	4.280%	4.280%	4.280%	4.280%
51	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%
52		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
53		Deferred Tax Balance	-	-	-	-	-	-	-	-	-
54		Book Accumulated Depreciation Balance	-	-	-	-	-	-	-	-	-
55		Unrecovered Investment -- Book	-	-	-	-	-	-	-	-	-
56		Book Depreciation	-	-	-	-	-	-	-	-	-
57		Unrecovered Investment -- Tax total	-	-	-	-	-	-	-	-	-
58		Tax Depreciation	-	-	-	-	-	-	-	-	-
59		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
60		Book Depreciation expense total	-	-	-	-	-	-	-	-	-
61		Tax Depreciation expense total	-	-	-	-	-	-	-	-	-
62		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
63		Deferred Tax Balance	-	-	-	-	-	-	-	-	-
64											
65		Revenue Recovery on Capital Expenditure to date									
66		Eligible Plant, cumulative capital expenditures	-	-	-	-	-	-	-	-	-
67	2002	Less: Retired Plant	-	-	-	-	-	-	-	-	-
68		Less: Accumulated Depreciation	-	-	-	-	-	-	-	-	-
69		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
70		Less: Deferred Tax Balance	-	-	-	-	-	-	-	-	-
71		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
72		Environmental Compliance Rate Base	-	-	-	-	-	-	-	-	-
73		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
74		Return on Environmental Compliance Rate Base	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
75											
76		Operating Expenses	-	-	-	-	-	-	-	-	-
77		Annual Depreciation expense	-	-	-	-	-	-	-	-	-
78		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
79		Annual Property Tax expense	-	-	-	-	-	-	-	-	-

	L	M	N	O	P	Q	R
43							
44							
45	2020						
46	6	Difference				January	1
47						February	2
48	\$ -	\$ -				March	3
49	\$ -					April	4
50	4.280%					May	5
51	5.285%					June	6
52	35.59%					July	7
53	-					August	8
54	-					September	9
55	-					October	10
56	-					November	11
57	-					December	12
58	-						
59	11.30%						
60	-						
61	-						
62	0.1500%						
63	-						
64							
65							
66	-						
67	-						
68	-						
69	-						
70	-						
71	-						
72	-						
73	11.30%						
74	\$ -						
75							
76	-						
77	-						
78	-						
79	-						

	A	B	C	D	E	F	G	H	I	J	K
80		Total OE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
81											
82		Total E(m) - Project	-	-	-	-	-	-	-	-	-
83											

	L	M	N	O	P	Q	R
80	\$ -						
81							
82	-						
83							

	A	B	C	D	E	F	G	H	I	J	K
84											
85						November					
86			2011	2012	2013	2014	2015	2016	2017	2018	2019
87		In-Service				1	2	3	4	5	6
88		Mill Creek 3PC									
89	Project 26	CapEx - Mill Creek FGDs - MC3 FGD (Old MC4 FGD tied-in)	\$ -	\$ 6,892,461	\$ 32,256,716	\$ 29,819,542	\$ 3,876,540	\$ -	\$ -	\$ -	\$ -
90	4	Accumulated Expenditures	\$ -	\$ 6,892,461	\$ 39,149,176	\$ 68,968,718	\$ 72,845,258	\$ 72,845,258	\$ 72,845,258	\$ 72,845,258	\$ 72,845,258
91	2	Book Depreciation rate per year	0.000%	0.000%	0.000%	3.850%	3.850%	3.850%	3.850%	3.850%	3.850%
92	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
93		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
94		Deferred Tax Balance	-	-	-	802,346	1,675,781	2,408,698	3,011,988	3,494,982	3,867,015
95		Book Accumulated Depreciation Balance	-	-	-	331,912	3,136,454	5,940,997	8,745,539	11,550,082	14,354,624
96		Unrecovered Investment -- Book	-	6,892,461	39,149,176	68,968,718	72,845,258	72,845,258	72,845,258	72,845,258	72,845,258
97		Book Depreciation	-	-	-	331,912	2,804,542	2,804,542	2,804,542	2,804,542	2,804,542
98		Unrecovered Investment -- Tax total	-	6,892,461	39,149,176	68,968,718	72,845,258	72,845,258	72,845,258	72,845,258	72,845,258
99		Tax Depreciation	-	-	-	2,586,327	5,258,699	4,863,878	4,499,652	4,161,650	3,849,872
100		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
101		Book Depreciation expense total	-	-	-	331,912	2,804,542	2,804,542	2,804,542	2,804,542	2,804,542
102		Tax Depreciation expense total	-	-	-	2,586,327	5,258,699	4,863,878	4,499,652	4,161,650	3,849,872
103		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
104		Deferred Tax Balance	-	-	-	802,346	873,434	732,917	603,289	482,994	372,033
105											
106		Revenue Recovery on Capital Expenditure to date									
107		Eligible Plant, cumulative capital expenditures	-	6,892,461	39,149,176	68,968,718	72,845,258	72,845,258	72,845,258	72,845,258	72,845,258
108	2002	Less: Retired Plant	-	-	-	(76,551,617)	(76,551,617)	(76,551,617)	(76,551,617)	(76,551,617)	(76,551,617)
109		Less: Accumulated Depreciation	-	-	-	(331,912)	(3,136,454)	(5,940,997)	(8,745,539)	(11,550,082)	(14,354,624)
110		Plus: Accumulated Depreciation on Retired Plant	-	-	-	37,301,196	37,301,196	37,301,196	37,301,196	37,301,196	37,301,196
111		Less: Deferred Tax Balance	-	-	-	(802,346)	(1,675,781)	(2,408,698)	(3,011,988)	(3,494,982)	(3,867,015)
112		Plus: Deferred Tax Balance on Retired Plant	-	-	-	4,330,205	4,330,205	4,330,205	4,330,205	4,330,205	4,330,205
113		Environmental Compliance Rate Base	-	6,892,461	39,149,176	32,914,244	33,112,807	29,575,347	26,167,515	22,879,979	19,703,403
114		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
115		Return on Environmental Compliance Rate Base	\$ -	\$ 778,533	\$ 4,422,066	\$ 3,717,804	\$ 3,740,233	\$ 3,340,661	\$ 2,955,732	\$ 2,584,391	\$ 2,225,583
116											
117		Operating Expenses	-	-	-	317,153	646,991	659,931	673,130	686,592	700,324
118		Annual Depreciation expense	-	-	-	331,912	2,804,542	2,804,542	2,804,542	2,804,542	2,804,542
119		Less depreciation on retired plant	-	-	-	(240,226)	(240,226)	(240,226)	(240,226)	(240,226)	(240,226)
120		Annual Property Tax expense	-	-	10,339	58,724	102,955	104,563	100,356	96,150	91,943

	L	M	N	O	P	Q	R
84							
85							
86	2020						
87	7	Difference				January	1
88						February	2
89	\$ -	\$ -				March	3
90	\$ 72,845,258					April	4
91	3.850%					May	5
92	4.888%					June	6
93	35.59%					July	7
94	4,136,123					August	8
95	17,159,167					September	9
96	72,845,258					October	10
97	2,804,542					November	11
98	72,845,258					December	12
99	3,560,676						
100	11.30%						
101	2,804,542						
102	3,560,676						
103	0.1500%						
104	269,108						
105							
106							
107	72,845,258						
108	(76,551,617)						
109	(17,159,167)						
110	37,301,196						
111	(4,136,123)						
112	4,330,205						
113	16,629,753						
114	11.30%						
115	\$ 1,878,401						
116							
117	714,331						
118	2,804,542						
119	(240,226)						
120	87,736						

	A	B	C	D	E	F	G	H	I	J	K
121		Total OE	\$ -	\$ -	\$ 10,339	\$ 467,562	\$ 3,314,263	\$ 3,328,811	\$ 3,337,802	\$ 3,347,058	\$ 3,366,583
122											
123		Total E(m) - Project	-	778,533	4,432,405	4,185,366	7,054,495	6,669,472	6,293,535	5,931,449	5,582,167
124											

	L	M	N	O	P	Q	R
121	\$ 3,366,383						
122							
123	5,244,784						
124							

	A	B	C	D	E	F	G	H	I	J	K
125											
126						November					
127			2011	2012	2013	2014	2015	2016	2017	2018	2019
128		In-Service				1	2	3	4	5	6
129		Mill Creek 4PC									
130	Project 26	CapEx - Mill Creek FGDs - MC4 New FGD	\$ 4,049,212	\$ 70,537,279	\$ 87,592,561	\$ 44,409,428	\$ 11,842,514	\$ -	\$ -	\$ -	\$ -
131	5	Accumulated Expenditures	\$ 4,049,212	\$ 74,586,491	\$ 162,179,052	\$ 206,588,481	\$ 218,430,995	\$ 218,430,995	\$ 218,430,995	\$ 218,430,995	\$ 218,430,995
132	2	Book Depreciation rate per year	0.000%	0.000%	0.000%	3.710%	3.710%	3.710%	3.710%	3.710%	3.710%
133	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
134		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
135		Deferred Tax Balance	-	-	-	2,416,210	5,144,092	7,450,626	9,368,462	10,925,586	12,149,984
136		Book Accumulated Depreciation Balance	-	-	-	958,054	9,061,844	17,165,634	25,269,424	33,373,214	41,477,004
137		Unrecovered Investment -- Book	4,049,212	74,586,491	162,179,052	206,588,481	218,430,995	218,430,995	218,430,995	218,430,995	218,430,995
138		Book Depreciation	-	-	-	958,054	8,103,790	8,103,790	8,103,790	8,103,790	8,103,790
139		Unrecovered Investment -- Tax total	4,049,212	74,586,491	162,179,052	206,588,481	218,430,995	218,430,995	218,430,995	218,430,995	218,430,995
140		Tax Depreciation	-	-	-	7,747,068	15,768,534	14,584,638	13,492,483	12,478,963	11,544,078
141		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
142		Book Depreciation expense total	-	-	-	958,054	8,103,790	8,103,790	8,103,790	8,103,790	8,103,790
143		Tax Depreciation expense total	-	-	-	7,747,068	15,768,534	14,584,638	13,492,483	12,478,963	11,544,078
144		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
145		Deferred Tax Balance	-	-	-	2,416,210	2,727,882	2,306,534	1,917,836	1,557,124	1,224,398
146											
147		Revenue Recovery on Capital Expenditure to date									
148		Eligible Plant, cumulative capital expenditures	4,049,212	74,586,491	162,179,052	206,588,481	218,430,995	218,430,995	218,430,995	218,430,995	218,430,995
149	2002	Less: Retired Plant	-	-	-	-	-	-	-	-	-
150		Less: Accumulated Depreciation	-	-	-	(958,054)	(9,061,844)	(17,165,634)	(25,269,424)	(33,373,214)	(41,477,004)
151		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
152		Less: Deferred Tax Balance	-	-	-	(2,416,210)	(5,144,092)	(7,450,626)	(9,368,462)	(10,925,586)	(12,149,984)
153		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
154		Environmental Compliance Rate Base	4,049,212	74,586,491	162,179,052	203,214,216	204,225,059	193,814,735	183,793,109	174,132,195	164,804,007
155		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
156		Return on Environmental Compliance Rate Base	\$ 457,376	\$ 8,424,862	\$ 18,318,814	\$ 22,953,911	\$ 23,088,090	\$ 21,892,200	\$ 20,760,214	\$ 19,668,973	\$ 18,615,314
157											
158		Operating Expenses	-	-	-	466,873	952,420	971,469	990,898	1,010,716	1,030,930
159		Annual Depreciation expense	-	-	-	958,054	8,103,790	8,103,790	8,103,790	8,103,790	8,103,790
160		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
161		Annual Property Tax expense	-	6,074	111,880	243,269	308,446	314,054	301,898	289,742	277,587

	L	M	N	O	P	Q	R
125							
126							
127	2020						
128	7	Difference				January	1
129						February	2
130	\$ -	\$ -				March	3
131	\$ 218,430,995					April	4
132	3.710%					May	5
133	4.888%					June	6
134	35.59%					July	7
135	13,065,757					August	8
136	49,580,794					September	9
137	218,430,995					October	10
138	8,103,790					November	11
139	218,430,995					December	12
140	10,676,907						
141	11.30%						
142	8,103,790						
143	10,676,907						
144	0.1500%						
145	915,772						
146							
147							
148	218,430,995						
149	-						
150	(49,580,794)						
151	-						
152	(13,065,757)						
153	-						
154	155,784,445						
155	11.30%						
156	\$ 17,598,516						
157							
158	1,051,549						
159	8,103,790						
160	-						
161	265,431						

	A	B	C	D	E	F	G	H	I	J	K
162		Total OE	\$ -	\$ 6,074	\$ 111,880	\$ 1,668,195	\$ 9,364,656	\$ 9,389,312	\$ 9,396,586	\$ 9,404,248	\$ 9,412,307
163											
164		Total E(m) - Project	457,376	8,430,936	18,430,694	24,622,106	32,432,746	31,281,512	30,166,800	29,073,221	28,027,621
165											
166											
167							May				
168			2011	2012	2013	2014	2015	2016	2017	2018	2019
169		In-Service					1	2	3	4	5
170		Mill Creek 1NPC									
171	Project 26	Capital Expenditures - Project 26 - MC1 Baghouse	\$ -	\$ 13,571,615	\$ 42,786,742	\$ 49,569,617	\$ 48,617,413	\$ -	\$ -	\$ -	\$ -
172	6	Accumulated Expenditures	\$ -	\$ 13,571,615	\$ 56,358,357	\$ 105,927,974	\$ 154,545,387	\$ 154,545,387	\$ 154,545,387	\$ 154,545,387	\$ 154,545,387
173	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	4.240%	4.240%	4.240%	4.240%	4.240%
174	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%
175		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
176		Deferred Tax Balance	-	-	-	-	605,030	2,243,560	3,583,976	4,649,378	5,459,568
177		Book Accumulated Depreciation Balance	-	-	-	-	4,095,453	10,648,177	17,200,902	23,753,626	30,306,350
178		Unrecovered Investment -- Book	-	13,571,615	56,358,357	105,927,974	154,545,387	154,545,387	154,545,387	154,545,387	154,545,387
179		Book Depreciation	-	-	-	-	4,095,453	6,552,724	6,552,724	6,552,724	6,552,724
180		Unrecovered Investment -- Tax total	-	13,571,615	56,358,357	105,927,974	154,545,387	154,545,387	154,545,387	154,545,387	154,545,387
181		Tax Depreciation	-	-	-	-	5,795,452	11,156,631	10,318,995	9,546,269	8,829,178
182		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
183		Book Depreciation expense total	-	-	-	-	4,095,453	6,552,724	6,552,724	6,552,724	6,552,724
184		Tax Depreciation expense total	-	-	-	-	5,795,452	11,156,631	10,318,995	9,546,269	8,829,178
185		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
186		Deferred Tax Balance	-	-	-	-	605,030	1,638,531	1,340,415	1,065,402	810,190
187											
188		Revenue Recovery on Capital Expenditure to date									
189		Eligible Plant, cumulative capital expenditures	-	13,571,615	56,358,357	105,927,974	154,545,387	154,545,387	154,545,387	154,545,387	154,545,387
190	2002	Less: Retired Plant	-	-	-	-	-	-	-	-	-
191		Less: Accumulated Depreciation	-	-	-	-	(4,095,453)	(10,648,177)	(17,200,902)	(23,753,626)	(30,306,350)
192		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
193		Less: Deferred Tax Balance	-	-	-	-	(605,030)	(2,243,560)	(3,583,976)	(4,649,378)	(5,459,568)
194		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
195		Environmental Compliance Rate Base	-	13,571,615	56,358,357	105,927,974	149,844,904	141,653,649	133,760,509	126,142,382	118,779,468
196		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
197		Return on Environmental Compliance Rate Base	\$ -	\$ 1,532,972	\$ 6,365,916	\$ 11,965,016	\$ 16,925,620	\$ 16,000,383	\$ 15,108,819	\$ 14,248,319	\$ 13,416,647
198											

	L	M	N	O	P	Q	R
162	\$ 9,420,770						
163							
164	27,017,286						
165							
166							
167							
168	2020						
169	6	Difference				January	1
170						February	2
171	\$ -	\$ -				March	3
172	\$ 154,545,387					April	4
173	4.240%					May	5
174	5.285%					June	6
175	35.59%					July	7
176	6,034,347					August	8
177	36,859,075					September	9
178	154,545,387					October	10
179	6,552,724					November	11
180	154,545,387					December	12
181	8,167,724						
182	11.30%						
183	6,552,724						
184	8,167,724						
185	0.1500%						
186	574,778						
187							
188							
189	154,545,387						
190	-						
191	(36,859,075)						
192	-						
193	(6,034,347)						
194	-						
195	111,651,965						
196	11.30%						
197	\$ 12,611,565						
198							

	A	B	C	D	E	F	G	H	I	J	K
199		Operating Expenses	-	-	-	-	7,947,812	9,155,476	9,338,586	9,525,358	9,715,865
200		Annual Depreciation expense	-	-	-	-	4,095,453	6,552,724	6,552,724	6,552,724	6,552,724
201		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
202		Annual Property Tax expense	-	-	20,357	84,538	158,892	225,675	215,846	206,017	196,188
203		Total OE	\$ -	\$ -	\$ 20,357	\$ 84,538	\$ 12,202,156	\$ 15,933,876	\$ 16,107,156	\$ 16,284,099	\$ 16,464,777
204											
205		Total E(m) - Project	-	1,532,972	6,386,274	12,049,553	29,127,776	31,934,258	31,215,975	30,532,418	29,881,423
206											
207											

	L	M	N	O	P	Q	R
199	9,910,182						
200	6,552,724						
201	-						
202	186,359						
203	\$ 16,649,265						
204							
205	29,260,830						
206							
207							

	A	B	C	D	E	F	G	H	I	J	K
208							April				
209			2011	2012	2013	2014	2015	2016	2017	2018	2019
210		In-Service					1	2	3	4	5
211		Mill Creek 2NPC									
212	Project 26	Capital Expenditures - Project 26 - MC2 Baghouse	\$ -	\$ 12,967,870	\$ 41,386,869	\$ 49,120,072	\$ 47,612,217	\$ -	\$ -	\$ -	\$ -
213	7	Accumulated Expenditures	\$ -	\$ 12,967,870	\$ 54,354,739	\$ 103,474,812	\$ 151,087,029	\$ 151,087,029	\$ 151,087,029	\$ 151,087,029	\$ 151,087,029
214	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	4.700%	4.700%	4.700%	4.700%	4.700%
215	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%
216		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
217		Deferred Tax Balance	-	-	-	-	226,290	1,580,803	2,643,873	3,438,084	3,982,793
218		Book Accumulated Depreciation Balance	-	-	-	-	5,029,939	12,131,029	19,232,120	26,333,210	33,434,300
219		Unrecovered Investment -- Book	-	12,967,870	54,354,739	103,474,812	151,087,029	151,087,029	151,087,029	151,087,029	151,087,029
220		Book Depreciation	-	-	-	-	5,029,939	7,101,090	7,101,090	7,101,090	7,101,090
221		Unrecovered Investment -- Tax total	-	12,967,870	54,354,739	103,474,812	151,087,029	151,087,029	151,087,029	151,087,029	151,087,029
222		Tax Depreciation	-	-	-	-	5,665,764	10,906,973	10,088,081	9,332,646	8,631,602
223		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
224		Book Depreciation expense total	-	-	-	-	5,029,939	7,101,090	7,101,090	7,101,090	7,101,090
225		Tax Depreciation expense total	-	-	-	-	5,665,764	10,906,973	10,088,081	9,332,646	8,631,602
226		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
227		Deferred Tax Balance	-	-	-	-	226,290	1,354,513	1,063,070	794,211	544,709
228											
229		Revenue Recovery on Capital Expenditure to date									
230		Eligible Plant, cumulative capital expenditures	-	12,967,870	54,354,739	103,474,812	151,087,029	151,087,029	151,087,029	151,087,029	151,087,029
231	2002	Less: Retired Plant	-	-	-	-	-	-	-	-	-
232		Less: Accumulated Depreciation	-	-	-	-	(5,029,939)	(12,131,029)	(19,232,120)	(26,333,210)	(33,434,300)
233		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
234		Less: Deferred Tax Balance	-	-	-	-	(226,290)	(1,580,803)	(2,643,873)	(3,438,084)	(3,982,793)
235		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
236		Environmental Compliance Rate Base	-	12,967,870	54,354,739	103,474,812	145,830,800	137,375,196	129,211,036	121,315,735	113,669,935
237		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
238		Return on Environmental Compliance Rate Base	\$ -	\$ 1,464,776	\$ 6,139,599	\$ 11,687,921	\$ 16,472,210	\$ 15,517,113	\$ 14,594,937	\$ 13,703,129	\$ 12,839,503
239											
240		Operating Expenses	-	-	-	-	8,582,926	9,640,391	9,833,199	10,029,863	10,230,460
241		Annual Depreciation expense	-	-	-	-	5,029,939	7,101,090	7,101,090	7,101,090	7,101,090
242		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
243		Annual Property Tax expense	-	-	19,452	81,532	155,212	219,086	208,434	197,782	187,131
244		Total OE	\$ -	\$ -	\$ 19,452	\$ 81,532	\$ 13,768,077	\$ 16,960,567	\$ 17,142,723	\$ 17,328,735	\$ 17,518,681

	L	M	N	O	P	Q	R
208							
209	2020						
210	6	Difference				January	1
211						February	2
212	\$ -	\$ -				March	3
213	\$ 151,087,029					April	4
214	4.700%					May	5
215	5.285%					June	6
216	35.59%					July	7
217	4,297,359					August	8
218	40,535,391					September	9
219	151,087,029					October	10
220	7,101,090					November	11
221	151,087,029					December	12
222	7,984,949						
223	11.30%						
224	7,101,090						
225	7,984,949						
226	0.1500%						
227	314,595						
228							
229							
230	151,087,029						
231	-						
232	(40,535,391)						
233	-						
234	(4,297,359)						
235	-						
236	106,254,279						
237	11.30%						
238	\$ 12,001,873						
239							
240	10,435,059						
241	7,101,090						
242	-						
243	176,479						
244	\$ 17,712,639						

	A	B	C	D	E	F	G	H	I	J	K
245											
246		Total E(m) - Project	-	1,464,776	6,159,051	11,769,453	30,240,287	32,477,660	31,737,660	31,031,864	30,358,184
247											
248											

	L	M	N	O	P	Q	R
245							
246	29,714,512						
247							
248							

	A	B	C	D	E	F	G	H	I	J	K
249							October				
250			2011	2012	2013	2014	2015	2016	2017	2018	2019
251		In-Service					1	2	3	4	5
252		Mill Creek 3NPC									
253	Project 26	Capital Expenditures - Project 26 - MC3 Baghouse & SCR Modification	\$ 192,372	\$ 7,830,765	\$ 48,247,370	\$ 49,061,558	\$ 43,768,430	\$ 7,545,814	\$ -	\$ -	\$ -
254	8	Accumulated Expenditures	\$ 192,372	\$ 8,023,137	\$ 56,270,507	\$ 105,332,065	\$ 149,100,495	\$ 156,646,309	\$ 156,646,309	\$ 156,646,309	\$ 156,646,309
255	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.870%	3.870%	3.870%	3.870%	3.870%
256	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%
257		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
258		Deferred Tax Balance	-	-	-	-	1,562,097	3,429,179	4,994,093	6,280,255	7,307,735
259		Book Accumulated Depreciation Balance	-	-	-	-	1,202,123	7,264,335	13,326,547	19,388,759	25,450,971
260		Unrecovered Investment -- Book	192,372	8,023,137	56,270,507	105,332,065	149,100,495	156,646,309	156,646,309	156,646,309	156,646,309
261		Book Depreciation	-	-	-	-	1,202,123	6,062,212	6,062,212	6,062,212	6,062,212
262		Unrecovered Investment -- Tax total	192,372	8,023,137	56,270,507	105,332,065	149,100,495	156,646,309	156,646,309	156,646,309	156,646,309
263		Tax Depreciation	-	-	-	-	5,591,269	11,308,297	10,459,274	9,676,043	8,949,204
264		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
265		Book Depreciation expense total	-	-	-	-	1,202,123	6,062,212	6,062,212	6,062,212	6,062,212
266		Tax Depreciation expense total	-	-	-	-	5,591,269	11,308,297	10,459,274	9,676,043	8,949,204
267		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
268		Deferred Tax Balance	-	-	-	-	1,562,097	1,867,082	1,564,914	1,286,162	1,027,480
269											
270		Revenue Recovery on Capital Expenditure to date									
271		Eligible Plant, cumulative capital expenditures	192,372	8,023,137	56,270,507	105,332,065	149,100,495	156,646,309	156,646,309	156,646,309	156,646,309
272	2002	Less: Retired Plant	-	-	-	-	-	-	-	-	-
273		Less: Accumulated Depreciation	-	-	-	-	(1,202,123)	(7,264,335)	(13,326,547)	(19,388,759)	(25,450,971)
274		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
275		Less: Deferred Tax Balance	-	-	-	-	(1,562,097)	(3,429,179)	(4,994,093)	(6,280,255)	(7,307,735)
276		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
277		Environmental Compliance Rate Base	192,372	8,023,137	56,270,507	105,332,065	146,336,275	145,952,796	138,325,669	130,977,295	123,887,603
278		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
279		Return on Environmental Compliance Rate Base	\$ 21,729	\$ 906,247	\$ 6,355,993	\$ 11,897,705	\$ 16,529,305	\$ 16,485,990	\$ 15,624,473	\$ 14,794,443	\$ 13,993,632
280											
281		Operating Expenses	-	-	3,444,837	3,538,495	7,967,687	12,572,631	12,824,083	13,080,565	13,342,176
282		Annual Depreciation expense	-	-	-	-	1,202,123	6,062,212	6,062,212	6,062,212	6,062,212
283		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
284		Annual Property Tax expense	-	289	12,035	84,406	157,996	221,848	224,073	214,980	205,886
285		Total OE	\$ -	\$ 289	\$ 3,456,872	\$ 3,622,901	\$ 9,327,808	\$ 18,856,690	\$ 19,110,368	\$ 19,357,757	\$ 19,610,275

	L	M	N	O	P	Q	R
249							
250	2020						
251	6	Difference				January	1
252						February	2
253	\$ -	\$ -				March	3
254	\$ 156,646,309					April	4
255	3.870%					May	5
256	5.285%					June	6
257	35.59%					July	7
258	8,096,604					August	8
259	31,513,184					September	9
260	156,646,309					October	10
261	6,062,212					November	11
262	156,646,309					December	12
263	8,278,757						
264	11.30%						
265	6,062,212						
266	8,278,757						
267	0.1500%						
268	788,868						
269							
270							
271	156,646,309						
272	-						
273	(31,513,184)						
274	-						
275	(8,096,604)						
276	-						
277	117,036,522						
278	11.30%						
279	\$ 13,219,773						
280							
281	13,609,020						
282	6,062,212						
283	-						
284	196,793						
285	\$ 19,868,025						

	A	B	C	D	E	F	G	H	I	J	K
286											
287		Total E(m) - Project	21,729	906,536	9,812,865	15,520,606	25,857,113	35,342,660	34,734,842	34,152,200	33,603,907
288											
289											

	L	M	N	O	P	Q	R
286							
287	33,087,798						
288							
289							

	A	B	C	D	E	F	G	H	I	J	K
290						November					
291			2011	2012	2013	2014	2015	2016	2017	2018	2019
292		In-Service				1	2	3	4	5	6
293		Mill Creek 4NPC									
294	Project 26	Capital Expenditures - Project 26 - MC4 Baghouse, & SCR Upgrade & Mc	\$ 5,376,845	\$ 54,419,721	\$ 60,845,099	\$ 43,768,430	\$ 9,115,060	\$ -	\$ -	\$ -	\$ -
295	9	Accumulated Expenditures	\$ 5,376,845	\$ 59,796,566	\$ 120,641,665	\$ 164,410,095	\$ 173,525,155	\$ 173,525,155	\$ 173,525,155	\$ 173,525,155	\$ 173,525,155
296	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	3.850%	3.850%	3.850%	3.850%	3.850%	3.850%
297	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
298		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
299		Deferred Tax Balance	-	-	-	1,912,662	3,993,275	5,739,163	7,176,262	8,326,806	9,213,028
300		Book Accumulated Depreciation Balance	-	-	-	791,224	7,471,942	14,152,660	20,833,379	27,514,097	34,194,816
301		Unrecovered Investment -- Book	5,376,845	59,796,566	120,641,665	164,410,095	173,525,155	173,525,155	173,525,155	173,525,155	173,525,155
302		Book Depreciation	-	-	-	791,224	6,680,718	6,680,718	6,680,718	6,680,718	6,680,718
303		Unrecovered Investment -- Tax total	5,376,845	59,796,566	120,641,665	164,410,095	173,525,155	173,525,155	173,525,155	173,525,155	173,525,155
304		Tax Depreciation	-	-	-	6,165,379	12,526,781	11,586,275	10,718,649	9,913,492	9,170,804
305		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
306		Book Depreciation expense total	-	-	-	791,224	6,680,718	6,680,718	6,680,718	6,680,718	6,680,718
307		Tax Depreciation expense total	-	-	-	6,165,379	12,526,781	11,586,275	10,718,649	9,913,492	9,170,804
308		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
309		Deferred Tax Balance	-	-	-	1,912,662	2,080,614	1,745,887	1,437,099	1,150,544	886,222
310											
311		Revenue Recovery on Capital Expenditure to date									
312		Eligible Plant, cumulative capital expenditures	5,376,845	59,796,566	120,641,665	164,410,095	173,525,155	173,525,155	173,525,155	173,525,155	173,525,155
313	2002	Less: Retired Plant	-	-	-	-	-	-	-	-	-
314		Less: Accumulated Depreciation	-	-	-	(791,224)	(7,471,942)	(14,152,660)	(20,833,379)	(27,514,097)	(34,194,816)
315		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
316		Less: Deferred Tax Balance	-	-	-	(1,912,662)	(3,993,275)	(5,739,163)	(7,176,262)	(8,326,806)	(9,213,028)
317		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
318		Environmental Compliance Rate Base	5,376,845	59,796,566	120,641,665	161,706,210	162,059,937	153,633,331	145,515,513	137,684,251	130,117,311
319		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
320		Return on Environmental Compliance Rate Base	\$ 607,338	\$ 6,754,277	\$ 13,626,990	\$ 18,265,405	\$ 18,305,360	\$ 17,353,539	\$ 16,436,597	\$ 15,552,022	\$ 14,697,304
321											
322		Operating Expenses	-	-	-	7,145,168	14,639,284	14,932,070	15,230,712	15,535,326	15,846,032
323		Annual Depreciation expense	-	-	-	791,224	6,680,718	6,680,718	6,680,718	6,680,718	6,680,718
324		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
325		Annual Property Tax expense	-	8,065	89,695	180,962	245,428	249,080	239,059	229,038	219,017
326		Total OE	\$ -	\$ 8,065	\$ 89,695	\$ 8,117,354	\$ 21,565,431	\$ 21,861,868	\$ 22,150,489	\$ 22,445,082	\$ 22,745,767

	L	M	N	O	P	Q	R
290							
291	2020						
292	7	Difference				January	1
293						February	2
294	\$ -	\$ -				March	3
295	\$ 173,525,155					April	4
296	3.850%					May	5
297	4.888%					June	6
298	35.59%					July	7
299	9,854,072					August	8
300	40,875,534					September	9
301	173,525,155					October	10
302	6,680,718					November	11
303	173,525,155					December	12
304	8,481,910						
305	11.30%						
306	6,680,718						
307	8,481,910						
308	0.1500%						
309	641,044						
310							
311							
312	173,525,155						
313	-						
314	(40,875,534)						
315	-						
316	(9,854,072)						
317	-						
318	122,795,548						
319	11.30%						
320	\$ 13,870,280						
321							
322	16,162,953						
323	6,680,718						
324	-						
325	208,996						
326	\$ 23,052,667						

	A	B	C	D	E	F	G	H	I	J	K
327											
328		Total E(m) - Project	607,338	6,762,342	13,716,685	26,382,759	39,870,791	39,215,407	38,587,086	37,997,104	37,443,072

	L	M	N	O	P	Q	R
327							
328	36,922,947						

	A	B	C	D	E	F	G	H	I	J
1		Revenue Requirements								
2		Project 27 - LG&E								
3							November			
4			2011	2012	2013	2014	2015	2016	2017	2018
5		In-Service					1	2	3	4
6		TrimblePC								
7	Project 27	Capital Expenditures - Project 27 - TC1 Baghouse	\$ -	\$ -	\$ 23,479,869	\$ 37,849,548	\$ 57,140,608	\$ 5,282,332	\$ -	\$ -
8	10	Accumulated Expenditures	\$ -	\$ -	\$ 23,479,869	\$ 61,329,417	\$ 118,470,025	\$ 123,752,357	\$ 123,752,357	\$ 123,752,357
9	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.620%	3.620%	3.620%	3.620%
10	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%
11		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
12		Deferred Tax Balance	-	-	-	-	1,390,341	2,975,465	4,321,874	5,448,065
13		Book Accumulated Depreciation Balance	-	-	-	-	536,077	5,015,912	9,495,748	13,975,583
14		Unrecovered Investment -- Book	-	-	23,479,869	61,329,417	118,470,025	123,752,357	123,752,357	123,752,357
15		Book Depreciation	-	-	-	-	536,077	4,479,835	4,479,835	4,479,835
16		Unrecovered Investment -- Tax total	-	-	23,479,869	61,329,417	118,470,025	123,752,357	123,752,357	123,752,357
17		Tax Depreciation	-	-	-	-	4,442,626	8,933,683	8,262,945	7,644,183
18		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
19		Book Depreciation expense total	-	-	-	-	536,077	4,479,835	4,479,835	4,479,835
20		Tax Depreciation expense total	-	-	-	-	4,442,626	8,933,683	8,262,945	7,644,183
21		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
22		Deferred Tax Balance	-	-	-	-	1,390,341	1,585,124	1,346,409	1,126,191
23										
24		Revenue Recovery on Capital Expenditure to date								
25		Eligible Plant, cumulative capital expenditures	-	-	23,479,869	61,329,417	118,470,025	123,752,357	123,752,357	123,752,357
26	2002	Less: Retired Plant	-	-	-	-	-	-	-	-
27		Less: Accumulated Depreciation	-	-	-	-	(536,077)	(5,015,912)	(9,495,748)	(13,975,583)
28		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-
29		Less: Deferred Tax Balance	-	-	-	-	(1,390,341)	(2,975,465)	(4,321,874)	(5,448,065)
30		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-
31		Environmental Compliance Rate Base	-	-	23,479,869	61,329,417	116,543,608	115,760,980	109,934,736	104,328,709
32		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
33			\$ -	\$ -	\$ 2,652,151	\$ 6,927,419	\$ 13,164,097	\$ 13,075,696	\$ 12,417,596	\$ 11,784,372
34										
35		Operating Expenses	-	-	-	-	3,732,365	7,614,024	7,766,305	7,921,631
36		Annual Depreciation expense	-	-	-	-	536,077	4,479,835	4,479,835	4,479,835
37		Less depreciation on retired plant	-	-	-	-	-	-	-	-

	K	L	M	N	O	P	Q	R
1								
2								
3								
4	2019	2020						
5	5	6	Difference				January	1
6							February	2
7	\$ -	\$ -	\$ -				March	3
8	\$ 123,752,357	\$ 123,752,357					April	4
9	3.620%	3.620%					May	5
10	5.713%	5.285%					June	6
11	35.59%	35.59%					July	7
12	6,369,895	7,103,219					August	8
13	18,455,418	22,935,254					September	9
14	123,752,357	123,752,357					October	10
15	4,479,835	4,479,835					November	11
16	123,752,357	123,752,357					December	12
17	7,069,972	6,540,312						
18	11.30%	11.30%						
19	4,479,835	4,479,835						
20	7,069,972	6,540,312						
21	0.1500%	0.1500%						
22	921,830	733,324						
23								
24								
25	123,752,357	123,752,357						
26	-	-						
27	(18,455,418)	(22,935,254)						
28	-	-						
29	(6,369,895)	(7,103,219)						
30	-	-						
31	98,927,044	93,713,885						
32	11.30%	11.30%						
33	\$ 11,174,231	\$ 10,585,382						
34								
35	8,080,064	8,241,665						
36	4,479,835	4,479,835						
37	-	-						

	A	B	C	D	E	F	G	H	I	J
38		Annual Property Tax expense	-	-	-	35,220	91,994	176,901	178,105	171,385
39		Total OE	\$ -	\$ -	\$ -	\$ 35,220	\$ 4,360,436	\$ 12,270,761	\$ 12,424,245	\$ 12,572,851
40										
41		Total E(m) - Project	-	-	2,652,151	6,962,639	17,524,533	25,346,456	24,841,841	24,357,223

	K	L	M	N	O	P	Q	R
38	164,665	157,945						
39	\$ 12,724,564	\$ 12,879,446						
40								
41	23,898,795	23,464,828						

	A	B	C	D	E	F	G	H	I	J	K
1		Revenue Requirements Summary									
2		2011 Amended Plan - KU									
3											
4			2010	2011	2012	2013	2014	2015	2016	2017	2018
5	Project 29	Brown Landfill (Phase I)									
6		Revenue Requirement									
7		Eligible Plant	6,335,235	33,057,613	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920
8		Less: Retired Plant	-	-	-	-	-	-	-	-	-
9		Less: Accumulated Depreciation	-	-	-	(1,532,772)	(3,132,185)	(4,731,599)	(6,331,013)	(7,930,427)	(9,529,840)
10		Plus: Accumulated Depreciation on retired plant	-	-	-	-	-	-	-	-	-
11		Less: Deferred Tax Balance	-	-	-	(216,850)	(1,115,219)	(1,903,401)	(2,589,935)	(3,182,139)	(3,687,332)
12		Plus: Deferred Tax Balance on retired plant	-	-	-	-	-	-	-	-	-
13		Environmental Compliance Rate Base	6,335,235	33,057,613	57,121,920	55,372,298	52,874,516	50,486,920	48,200,972	46,009,355	43,904,748
14		Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
15			\$ 725,953	\$ 3,788,063	\$ 6,545,585	\$ 6,345,097	\$ 6,058,876	\$ 5,785,282	\$ 5,523,336	\$ 5,272,199	\$ 5,031,033
16											
17		Operating expenses	-	-	-	4,000,000	4,080,000	4,161,600	4,244,832	4,329,729	4,416,323
18		Annual Depreciation expense	-	-	-	1,532,772	1,599,414	1,599,414	1,599,414	1,599,414	1,599,414
19		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
20		Annual Property Tax expense	-	9,503	49,586	85,683	83,384	80,985	78,585	76,186	73,787
21		Total OE	\$ -	\$ 9,503	\$ 49,586	\$ 5,618,454	\$ 5,762,797	\$ 5,841,998	\$ 5,922,831	\$ 6,005,329	\$ 6,089,524
22											
23		Total E(m)	725,953	3,797,566	6,595,172	11,963,551	11,821,674	11,627,281	11,446,168	11,277,528	11,120,557
24											

	L	M	N	O
1				
2				
3				
4	2019			
5				
6				
7	57,121,920			
8	-			
9	(11,129,254)			
10	-			
11	(4,111,816)			
12	-			
13	41,880,850			
14	11.46%			
15	\$ 4,799,115			
16				
17	4,504,650			
18	1,599,414			
19	-			
20	71,388			
21	\$ 6,175,452			
22				
23	10,974,567			
24				

	A	B	C	D	E	F	G	H	I	J	K
25	Project 34	BR Air Compliance - All Units - Baghouses									
26		Revenue Requirement									
27		Eligible Plant	1,997,488	28,033,301	87,732,905	148,493,367	173,587,165	173,587,165	173,587,165	173,587,165	173,587,165
28		Less: Retired Plant	-	-	-	-	-	-	-	-	-
29		Less: Accumulated Depreciation	-	-	-	(1,751,216)	(5,961,899)	(11,017,824)	(16,073,749)	(21,129,674)	(26,185,599)
30		Plus: Accumulated Depreciation on retired plant	-	-	-	-	-	-	-	-	-
31		Less: Deferred Tax Balance	-	-	-	(619,116)	(2,586,551)	(5,067,457)	(7,227,432)	(9,090,436)	(10,678,709)
32		Plus: Deferred Tax Balance on retired plant	-	-	-	-	-	-	-	-	-
33		Environmental Compliance Rate Base	1,997,488	28,033,301	87,732,905	146,123,034	165,038,715	157,501,883	150,285,983	143,367,055	136,722,857
34		Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
35			\$ 228,892	\$ 3,212,328	\$ 10,053,290	\$ 16,744,199	\$ 18,911,742	\$ 18,048,098	\$ 17,221,230	\$ 16,428,392	\$ 15,667,035
36											
37		Operating expenses	-	-	-	8,786,902	15,404,562	15,712,653	16,026,906	16,347,444	16,674,393
38		Annual Depreciation expense	-	-	-	1,751,216	4,210,683	5,055,925	5,055,925	5,055,925	5,055,925
39		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
40		Annual Property Tax expense	-	2,996	42,050	131,599	220,113	251,438	243,854	236,270	228,686
41		Total OE	\$ -	\$ 2,996	\$ 42,050	\$ 10,669,717	\$ 19,835,358	\$ 21,020,016	\$ 21,326,685	\$ 21,639,640	\$ 21,959,005
42											
43		Total E(m)	228,892	3,215,325	10,095,340	27,413,916	38,747,100	39,068,114	38,547,915	38,068,032	37,626,040
44											

	L	M	N	O
25				
26				
27	173,587,165			
28	-			
29	(31,241,525)			
30	-			
31	(12,012,834)			
32	-			
33	130,332,806			
34	11.46%			
35	\$ 14,934,801			
36				
37	17,007,881			
38	5,055,925			
39	-			
40	221,102			
41	\$ 22,284,909			
42				
43	37,219,709			
44				

	A	B	C	D	E	F	G	H	I	J	K
45	Project 35	GH Air Compliance - All Units - Baghouses									
46		Revenue Requirement									
47		Eligible Plant	5,094,166	101,828,630	299,923,984	530,338,048	698,652,348	711,534,820	711,534,820	711,534,820	711,534,820
48		Less: Retired Plant	-	-	-	-	-	-	-	-	-
49		Less: Accumulated Depreciation	-	-	-	(4,400,802)	(15,808,453)	(36,310,719)	(56,812,985)	(77,315,251)	(97,817,517)
50		Plus: Accumulated Depreciation on retired plant	-	-	-	-	-	-	-	-	-
51		Less: Deferred Tax Balance	-	-	-	(2,732,168)	(12,055,530)	(22,405,651)	(31,432,379)	(39,235,053)	(45,904,838)
52		Plus: Deferred Tax Balance on retired plant	-	-	-	-	-	-	-	-	-
53		Environmental Compliance Rate Base	5,094,166	101,828,630	299,923,984	523,205,078	670,788,365	652,818,450	623,289,456	594,984,516	567,812,465
54		Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
55			\$ 583,739	\$ 11,668,515	\$ 34,368,208	\$ 59,953,928	\$ 76,865,457	\$ 74,806,290	\$ 71,422,570	\$ 68,179,115	\$ 65,065,477
56											
57		Operating expenses	-	329,460	16,317,795	36,443,513	54,597,105	67,962,562	69,321,813	70,708,249	72,122,414
58		Annual Depreciation expense	-	-	-	4,400,802	11,407,651	20,502,266	20,502,266	20,502,266	20,502,266
59		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
60		Annual Property Tax expense	-	7,641	152,743	449,886	788,906	1,024,266	1,012,836	982,083	951,329
61		Total OE	\$ -	\$ 337,101	\$ 16,470,538	\$ 41,294,201	\$ 66,793,662	\$ 89,489,093	\$ 90,836,915	\$ 92,192,598	\$ 93,576,009
62											
63		Total E(m)	583,739	12,005,616	50,838,746	101,248,129	143,659,120	164,295,383	162,259,485	160,371,713	158,641,486
64											

	L	M	N	O
45				
46				
47	711,534,820			
48	-			
49	(118,319,783)			
50	-			
51	(51,527,048)			
52	-			
53	541,687,989			
54	11.46%			
55	\$ 62,071,880			
56				
57	73,564,862			
58	20,502,266			
59	-			
60	920,576			
61	\$ 94,987,704			
62				
63	157,059,584			
64				

	A	B	C	D	E	F	G	H	I	J	K
65		Total E(m) - All KU Projects	1,538,584	19,018,507	67,529,257	140,625,596	194,227,893	214,990,778	212,253,568	209,717,272	207,388,083
66			1,538,584	19,018,507	67,529,257	140,625,596	194,227,893	214,990,778	212,253,568	209,717,272	207,388,083
67		Total Revenue Requirements									
68		Project 29	725,953	3,797,566	6,595,172	11,963,551	11,821,674	11,627,281	11,446,168	11,277,526	11,120,557
69		Project 34	228,892	3,215,325	10,095,340	27,413,916	38,747,100	39,068,114	38,547,915	38,068,032	37,626,040
70		Project 35	583,739	12,005,616	50,838,746	101,248,129	143,659,120	164,295,383	162,259,485	160,371,713	158,641,486
71		Total	1,538,584	19,018,507	67,529,257	140,625,596	194,227,893	214,990,778	212,253,568	209,717,272	207,388,083
72			-	-	-	-	-	-	-	-	-
73		12 Month Average Jurisdictional Ratio	86.99%	86.99%	86.99%	86.99%	86.99%	86.99%	86.99%	86.99%	86.99%
74											
75		Jurisdictional Allocation	1,338,388	16,543,882	58,742,576	122,327,862	168,955,607	187,016,895	184,635,841	182,429,560	180,403,437
76											
77		Forecasted 12-Month Retail Revenue	1,251,944,184	1,364,734,889	1,442,298,068	1,505,216,494	1,559,590,578	1,654,718,522	1,721,201,709	1,811,131,354	1,963,765,781
78											
79		Billing Factor	0.11%	1.21%	4.07%	8.13%	10.83%	11.30%	10.73%	10.07%	9.19%
80											
81		KU Residential Bill Impact									
82		Customer Charge	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50
83		Energy - 1,000 Kwh @ \$0.06805	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05
84		FAC billings (12/1/201 factor - \$-0.0016/kWh)	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60
85		DSM billings (12/1/201 factor - \$0.00243/kWh)	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43
86		ECR billings (12/1/201 factor: 2.55%)	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97
87		Additional ECR factor	\$0.06	\$0.94	\$3.15	\$6.29	\$8.36	\$8.75	\$8.30	\$7.79	\$7.11
88				47.54%			424.84%				
89											
90			2010	2011	2012	2013	2014	2015	2016	2017	2018
91	Project 29	Eligible Plant	6,335,235	33,057,613	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920
92	Project 34	Eligible Plant	1,997,488	28,033,301	87,732,905	148,493,367	173,587,165	173,587,165	173,587,165	173,587,165	173,587,165
93	Project 35	Eligible Plant	5,094,166	101,828,630	299,923,984	530,338,048	698,652,348	711,534,820	711,534,820	711,534,820	711,534,820
94		Total-KU	13,426,889	162,919,545	444,778,808	735,953,335	929,361,433	942,243,905	942,243,905	942,243,905	942,243,905

	L	M	N	O
65	205,253,861			
66	205,253,861			
67				
68	10,974,567			
69	37,219,709			
70	157,059,584			
71	205,253,861		6,339,502	#####
72	-			
73	86.99%			
74				
75	178,546,913		5,514,627	#####
76				
77	2,028,216,792			
78				
79	8.80%			
80				
81				
82	\$8.50			
83	\$68.05			
84	-\$1.60			
85	\$2.43			
86	\$1.97			
87	\$6.81			
88				
89				
90	2019			
91	57,121,920			
92	173,587,165			
93	711,534,820			
94	942,243,905			

	A	B	C	D	E	F	G	H	I	J	K
1	Summary Cash Flow										
2	Cash Flow for 2011 thru 2020										
3	2011 KU Amended ECR Plan										
4											
5											
6		¹	²	³	⁴	⁵	⁶	⁷	⁸	⁹	
7		Date	Landfill	(Pro)ance - BR1 & B	mpliance - BR3 (P	mpliance - GH1 (P	mpliance - GH2 (P	mpliance - GH3	mpliance - GH4	(Project 35)	Total
8	2010	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	2011	\$ 6,335,235	\$ 1,997,488	\$ -	\$ 2,178,929	\$ 148,784	\$ 1,307,716	\$ 1,458,737	\$ -	\$ 7,091,654	
10	2012	\$ 26,722,378	\$ 24,548,593	\$ 1,487,220	\$ 50,248,800	\$ 37,354,857	\$ 4,809,001	\$ 4,321,807	\$ -	\$ 122,770,278	
11	2013	\$ 24,064,307	\$ 40,365,747	\$ 19,333,856	\$ 66,924,592	\$ 48,163,861	\$ 47,890,171	\$ 35,116,729	\$ -	\$ 257,794,957	
12	2014	\$ -	\$ 26,176,061	\$ 34,584,401	\$ 44,857,567	\$ 72,191,638	\$ 56,057,325	\$ 57,307,535	\$ -	\$ 291,174,527	
13	2015	\$ -	\$ -	\$ 25,093,798	\$ -	\$ 6,693,304	\$ 84,049,087	\$ 77,571,909	\$ -	\$ 193,408,098	
14	2016	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,898,032	\$ 8,984,440	\$ -	\$ 12,882,472	
15	2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
16	2018	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
17											\$ -
18		\$ 57,121,920	\$ 93,087,890	\$ 80,499,275	\$ 164,209,888	\$ 164,552,444	\$ 198,011,331	\$ 184,761,157	\$ -	\$ 885,121,985	

	A	B	C	D	E	F	G	H	I	J	K
1		Revenue Requirements									
2		Project 29 - KU									
3						January					
4		2011	2012	2013	2014	2015	2016	2017	2018	2019	
5		In-Service			1	2	3	4	5	6	
6		Brown 3									
7	Project 29	Capital Expenditures - Project 29 - Brown Landfill - Phase II	\$ 6,335,235	\$ 26,722,378	\$ 24,064,307	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	2	Accumulated Expenditures	\$ 6,335,235	\$ 33,057,613	\$ 57,121,920	\$ 57,121,920	\$ 57,121,920	\$ 57,121,920	\$ 57,121,920	\$ 57,121,920	\$ 57,121,920
9	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	2.800%	2.800%	2.800%	2.800%	2.800%	2.800%
10	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
11		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
12		Deferred Tax Balance	-	-	-	216,850	1,115,219	1,903,401	2,589,935	3,182,139	3,687,332
13		Book Accumulated Depreciation Balance	-	-	-	1,532,772	3,132,185	4,731,599	6,331,013	7,930,427	9,529,840
14		Unrecovered Investment -- Book	6,335,235	33,057,613	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920
15		Book Depreciation	-	-	-	1,532,772	1,599,414	1,599,414	1,599,414	1,599,414	1,599,414
16		Unrecovered Investment -- Tax total	6,335,235	33,057,613	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920
17		Tax Depreciation	-	-	-	2,142,072	4,123,631	3,814,031	3,528,421	3,263,375	3,018,893
18		Allowed Rate of Return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
19		Book Depreciation expense total	-	-	-	1,532,772	1,599,414	1,599,414	1,599,414	1,599,414	1,599,414
20		Tax Depreciation expense total	-	-	-	2,142,072	4,123,631	3,814,031	3,528,421	3,263,375	3,018,893
21		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
22		Deferred Tax Balance	-	-	-	216,850	898,369	788,182	666,534	592,204	505,193
23											
24		Revenue Recovery on Capital Expenditure to date									
25		Eligible Plant, cumulative capital expenditures	6,335,235	33,057,613	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920
26	2002	Less: Retired Plant	-	-	-	-	-	-	-	-	-
27		Less: Accumulated Depreciation	-	-	-	(1,532,772)	(3,132,185)	(4,731,599)	(6,331,013)	(7,930,427)	(9,529,840)
28		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
29		Less: Deferred Tax Balance	-	-	-	(216,850)	(1,115,219)	(1,903,401)	(2,589,935)	(3,182,139)	(3,687,332)
30		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
31		Environmental Compliance Rate Base	6,335,235	33,057,613	57,121,920	55,372,298	52,874,516	50,486,920	48,200,972	46,009,355	43,904,746
32		Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
33		Return on Environmental Compliance Rate Base	\$ 725,953	\$ 3,788,063	\$ 6,545,585	\$ 6,345,097	\$ 6,058,876	\$ 5,785,282	\$ 5,523,336	\$ 5,272,199	\$ 5,031,033
34											
35		Operating Expenses	-	-	-	4,000,000	4,080,000	4,161,600	4,244,832	4,329,729	4,416,323
36		Annual Depreciation expense	-	-	-	1,532,772	1,599,414	1,599,414	1,599,414	1,599,414	1,599,414
37		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-

	L	M	N	O	P	Q	R
1							
2							
3							
4	2020						
5	7	Difference				January	1
6						February	2
7	\$ -	\$ -				March	3
8	\$ 57,121,920					April	4
9	2.800%					May	5
10	4.888%					June	6
11	35.59%					July	7
12	4,111,816					August	8
13	11,129,254					September	9
14	57,121,920					October	10
15	1,599,414					November	11
16	57,121,920					December	12
17	2,792,119						
18	11.46%						
19	1,599,414						
20	2,792,119						
21	0.1500%						
22	424,484						
23							
24							
25	57,121,920						
26	-						
27	(11,129,254)						
28	-						
29	(4,111,816)						
30	-						
31	41,880,850						
32	11.46%						
33	\$ 4,799,115						
34							
35	4,504,650						
36	1,599,414						
37	-						

	A	B	C	D	E	F	G	H	I	J	K
38		Annual Property Tax expense	-	9,503	49,566	85,683	83,384	80,985	78,585	76,186	73,787
39		Total OE	\$ -	\$ 9,503	\$ 49,566	\$ 5,618,454	\$ 5,762,797	\$ 5,841,998	\$ 5,922,831	\$ 6,005,329	\$ 6,089,524
40											
41		Total E(m) - Project	725,953	3,797,566	6,595,172	11,963,551	11,821,674	11,627,281	11,446,168	11,277,528	11,120,557

	L	M	N	O	P	Q	R
38	71,388						
39	\$ 6,175,452						
40							
41	10,974,567						

	A	B	C	D	E	F	G	H	I	J
1	Revenue Requirements									
2	Project 34 - KU									
3						May				
4			2011	2012	2013	2014	2015	2016	2017	2018
5		In-Service				1	2	3	4	5
6		Brown 2								
7	Project 34	Capital Expenditures - Project 34 - BR1-BR2 Shared Baghouse	\$ 1,997,488	\$ 24,548,593	\$ 40,365,747	\$ 26,176,061	\$ -	\$ -	\$ -	\$ -
8	3	Accumulated Expenditures	\$ 1,997,488	\$ 26,546,082	\$ 66,911,829	\$ 93,087,890	\$ 93,087,890	\$ 93,087,890	\$ 93,087,890	\$ 93,087,890
9	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	3.010%	3.010%	3.010%	3.010%	3.010%
10	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%
11		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
12		Deferred Tax Balance	-	-	-	619,116	2,013,557	3,228,434	4,277,660	5,173,164
13		Book Accumulated Depreciation Balance	-	-	-	1,751,216	4,553,161	7,355,107	10,157,052	12,958,998
14		Unrecovered Investment -- Book	1,997,488	26,546,082	66,911,829	93,087,890	93,087,890	93,087,890	93,087,890	93,087,890
15		Book Depreciation	-	-	-	1,751,216	2,801,945	2,801,945	2,801,945	2,801,945
16		Unrecovered Investment -- Tax total	1,997,488	26,546,082	66,911,829	93,087,890	93,087,890	93,087,890	93,087,890	93,087,890
17		Tax Depreciation	-	-	-	3,490,796	6,720,015	6,215,478	5,750,039	5,318,111
18		Allowed Rate of Return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
19		Book Depreciation expense total	-	-	-	1,751,216	2,801,945	2,801,945	2,801,945	2,801,945
20		Tax Depreciation expense total	-	-	-	3,490,796	6,720,015	6,215,478	5,750,039	5,318,111
21		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
22		Deferred Tax Balance	-	-	-	619,116	1,394,441	1,214,876	1,049,226	895,503
23										
24		Revenue Recovery on Capital Expenditure to date								
25		Eligible Plant, cumulative capital expenditures	1,997,488	26,546,082	66,911,829	93,087,890	93,087,890	93,087,890	93,087,890	93,087,890
26	2002	Less: Retired Plant	-	-	-	-	-	-	-	-
27		Less: Accumulated Depreciation	-	-	-	(1,751,216)	(4,553,161)	(7,355,107)	(10,157,052)	(12,958,998)
28		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-
29		Less: Deferred Tax Balance	-	-	-	(619,116)	(2,013,557)	(3,228,434)	(4,277,660)	(5,173,164)
30		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-
31		Environmental Compliance Rate Base	1,997,488	26,546,082	66,911,829	90,717,557	86,521,171	82,504,349	78,653,177	74,955,728
32		Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
33		Return on Environmental Compliance Rate Base	\$ 228,892	\$ 3,041,908	\$ 7,667,408	\$ 10,395,300	\$ 9,914,438	\$ 9,454,151	\$ 9,012,846	\$ 8,589,157
34										
35		Operating Expenses	-	-	-	8,786,902	9,970,752	10,170,167	10,373,571	10,581,042
36		Annual Depreciation expense	-	-	-	1,751,216	2,801,945	2,801,945	2,801,945	2,801,945
37		Less depreciation on retired plant	-	-	-	-	-	-	-	-

	K	L	M	N	O	P	Q	R
1								
2								
3								
4	2019	2020						
5	6	7	Difference				January	1
6							February	2
7	\$ -	\$ -	\$ -				March	3
8	\$ 93,087,890	\$ 93,087,890					April	4
9	3.010%	3.010%					May	5
10	5.285%	4.888%					June	6
11	35.59%	35.59%					July	7
12	5,926,871	6,549,052					August	8
13	15,760,943	18,562,889					September	9
14	93,087,890	93,087,890					October	10
15	2,801,945	2,801,945					November	11
16	93,087,890	93,087,890					December	12
17	4,919,695	4,550,136						
18	11.46%	11.46%						
19	2,801,945	2,801,945						
20	4,919,695	4,550,136						
21	0.1500%	0.1500%						
22	753,707	622,181						
23								
24								
25	93,087,890	93,087,890						
26	-	-						
27	(15,760,943)	(18,562,889)						
28	-	-						
29	(5,926,871)	(6,549,052)						
30	-	-						
31	71,400,076	67,975,949						
32	11.46%	11.46%						
33	\$ 8,181,715	\$ 7,789,346						
34								
35	10,792,663	11,008,516						
36	2,801,945	2,801,945						
37	-	-						

	A	B	C	D	E	F	G	H	I	J
38		Annual Property Tax expense	-	2,996	39,819	100,368	137,005	132,802	128,599	124,396
39		Total OE	\$ -	\$ 2,996	\$ 39,819	\$ 10,638,485	\$ 12,909,703	\$ 13,104,915	\$ 13,304,115	\$ 13,507,384
40										
41		Total E(m) - Project	228,892	3,044,905	7,707,228	21,033,786	22,824,140	22,559,066	22,316,962	22,096,541
42										

	K	L	M	N	O	P	Q	R
38	120,193	115,990						
39	\$ 13,714,802	\$ 13,926,452						
40								
41	21,896,517	21,715,798						
42								

	A	B	C	D	E	F	G	H	I	J
43										
44							May			
45			2011	2012	2013	2014	2015	2016	2017	2018
46		In-Service					1	2	3	4
47		Brown 3								
48	Project 34	Capital Expenditures - Project 34 - BR3 Baghouse	\$ -	\$ 1,487,220	\$ 19,333,856	\$ 34,584,401	\$ 25,093,798	\$ -	\$ -	\$ -
49	4	Accumulated Expenditures	\$ -	\$ 1,487,220	\$ 20,821,076	\$ 55,405,477	\$ 80,499,275	\$ 80,499,275	\$ 80,499,275	\$ 80,499,275
50	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	2.800%	2.800%	2.800%	2.800%
51	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%
52		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
53		Deferred Tax Balance	-	-	-	-	572,994	1,839,024	2,949,772	3,917,272
54		Book Accumulated Depreciation Balance	-	-	-	-	1,408,737	3,662,717	5,916,697	8,170,676
55		Unrecovered Investment -- Book	-	1,487,220	20,821,076	55,405,477	80,499,275	80,499,275	80,499,275	80,499,275
56		Book Depreciation	-	-	-	-	1,408,737	2,253,980	2,253,980	2,253,980
57		Unrecovered Investment -- Tax total	-	1,487,220	20,821,076	55,405,477	80,499,275	80,499,275	80,499,275	80,499,275
58		Tax Depreciation	-	-	-	-	3,018,723	5,811,243	5,374,937	4,972,440
59		Allowed Rate of Return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
60		Book Depreciation expense total	-	-	-	-	1,408,737	2,253,980	2,253,980	2,253,980
61		Tax Depreciation expense total	-	-	-	-	3,018,723	5,811,243	5,374,937	4,972,440
62		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
63		Deferred Tax Balance	-	-	-	-	572,994	1,266,030	1,110,749	967,500
64										
65		Revenue Recovery on Capital Expenditure to date								
66		Eligible Plant, cumulative capital expenditures	-	1,487,220	20,821,076	55,405,477	80,499,275	80,499,275	80,499,275	80,499,275
67	2002	Less: Retired Plant	-	-	-	-	-	-	-	-
68		Less: Accumulated Depreciation	-	-	-	-	(1,408,737)	(3,662,717)	(5,916,697)	(8,170,676)
69		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-
70		Less: Deferred Tax Balance	-	-	-	-	(572,994)	(1,839,024)	(2,949,772)	(3,917,272)
71		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-
72		Environmental Compliance Rate Base	-	1,487,220	20,821,076	55,405,477	78,517,544	74,997,535	71,632,806	68,411,326
73		Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
74		Return on Environmental Compliance Rate Base	\$ -	\$ 170,420	\$ 2,385,681	\$ 6,348,899	\$ 8,997,304	\$ 8,593,947	\$ 8,208,384	\$ 7,839,235
75										
76		Operating Expenses	-	-	-	-	5,433,809	5,542,486	5,653,335	5,766,402
77		Annual Depreciation expense	-	-	-	-	1,408,737	2,253,980	2,253,980	2,253,980
78		Less depreciation on retired plant	-	-	-	-	-	-	-	-
79		Annual Property Tax expense	-	-	2,231	31,232	83,108	118,636	115,255	111,874

	K	L	M	N	O	P	Q	R
43								
44								
45	2019	2020						
46	5	6	Difference				January	1
47							February	2
48	\$ -	\$ -	\$ -				March	3
49	\$ 80,499,275	\$ 80,499,275					April	4
50	2.800%	2.800%					May	5
51	5.713%	5.285%					June	6
52	35.59%	35.59%					July	7
53	4,751,838	5,463,783					August	8
54	10,424,656	12,678,636					September	9
55	80,499,275	80,499,275					October	10
56	2,253,980	2,253,980					November	11
57	80,499,275	80,499,275					December	12
58	4,598,924	4,254,387						
59	11.46%	11.46%						
60	2,253,980	2,253,980						
61	4,598,924	4,254,387						
62	0.1500%	0.1500%						
63	834,566	711,945						
64								
65								
66	80,499,275	80,499,275						
67	-	-						
68	(10,424,656)	(12,678,636)						
69	-	-						
70	(4,751,838)	(5,463,783)						
71	-	-						
72	65,322,781	62,356,857						
73	11.46%	11.46%						
74	\$ 7,485,320	\$ 7,145,455						
75								
76	5,881,730	5,999,385						
77	2,253,980	2,253,980						
78	-	-						
79	108,493	105,112						

	A	B	C	D	E	F	G	H	I	J
80		Total OE	\$ -	\$ -	\$ 2,231	\$ 31,232	\$ 6,925,655	\$ 7,915,101	\$ 8,022,570	\$ 8,132,256
81										
82		Total E(m) - Project	-	170,420	2,388,112	6,380,130	15,922,959	16,509,048	16,230,954	15,971,491

	K	L	M	N	O	P	Q	R
80	\$ 8,244,203	\$ 8,358,456						
81								
82	15,729,523	15,503,912						

	A	B	C	D	E	F	G	H	I	J	K
1	Revenue Requirements										
2	Project 35 - KU										
3						May					
4		2011	2012	2013	2014	2015	2016	2017	2018	2019	
5	In-Service				1	2	3	4	5	6	
6	Ghent 1										
7	Project 35 Capital Expenditures - Project 35 - GH1 Baghouse & SAM Mitigation	\$ 2,178,929	\$ 50,248,800	\$ 66,924,592	\$ 44,857,567	\$ -	\$ -	\$ -	\$ -	\$ -	
8	5 Accumulated Expenditures	\$ 2,178,929	\$ 52,427,728	\$ 119,352,320	\$ 164,209,888	\$ 164,209,888	\$ 164,209,888	\$ 164,209,888	\$ 164,209,888	\$ 164,209,888	
9	2 Book Depreciation rate, per year	0.000%	0.000%	0.000%	3.840%	3.840%	3.840%	3.840%	3.840%	3.840%	
10	2 Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.265%	
11	Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	
12	Deferred Tax Balance	-	-	-	788,971	2,763,736	4,421,744	5,787,541	6,882,165	7,726,656	
13	Book Accumulated Depreciation Balance	-	-	-	3,941,037	10,246,697	16,552,357	22,858,016	29,163,676	35,469,336	
14	Unrecovered Investment -- Book	2,178,929	52,427,728	119,352,320	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888	
15	Book Depreciation	-	-	-	3,941,037	6,305,660	6,305,660	6,305,660	6,305,660	6,305,660	
16	Unrecovered Investment -- Tax total	2,178,929	52,427,728	119,352,320	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888	
17	Tax Depreciation	-	-	-	6,157,871	11,854,312	10,964,294	10,143,245	9,381,311	8,678,493	
18	Allowed Rate of Return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	
19	Book Depreciation expense total	-	-	-	3,941,037	6,305,660	6,305,660	6,305,660	6,305,660	6,305,660	
20	Tax Depreciation expense total	-	-	-	6,157,871	11,854,312	10,964,294	10,143,245	9,381,311	8,678,493	
21	Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	
22	Deferred Tax Balance	-	-	-	788,971	1,974,765	1,658,008	1,365,797	1,094,624	844,491	
23											
24	Revenue Recovery on Capital Expenditure to date										
25	Eligible Plant cumulative capital expenditures	2,178,929	52,427,728	119,352,320	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888	
26	2002 Less: Retired Plant	-	-	-	-	-	-	-	-	-	
27	Less: Accumulated Depreciation	-	-	-	(3,941,037)	(10,246,697)	(16,552,357)	(22,858,016)	(29,163,676)	(35,469,336)	
28	Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-	
29	Less: Deferred Tax Balance	-	-	-	(788,971)	(2,763,736)	(4,421,744)	(5,787,541)	(6,882,165)	(7,726,656)	
30	Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-	
31	Environmental Compliance Rate Base	2,178,929	52,427,728	119,352,320	159,479,879	151,199,454	143,235,787	135,564,330	128,164,046	121,013,896	
32	Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	
33	Return on Environmental Compliance Rate Base	\$ 249,683	\$ 6,007,679	\$ 13,676,550	\$ 18,274,756	\$ 17,325,905	\$ 16,413,350	\$ 15,534,280	\$ 14,686,283	\$ 13,866,950	
34											
35	Operating Expenses	-	-	4,096,370	16,916,997	17,255,337	17,600,444	17,952,452	18,311,501	18,677,732	
36	Annual Depreciation expense	-	-	-	3,941,037	6,305,660	6,305,660	6,305,660	6,305,660	6,305,660	
37	Less depreciation on retired plant	-	-	-	-	-	-	-	-	-	

	L	M	N	O	P	Q	R
1							
2							
3							
4	2020						
5	7	Difference			January		1
6					February		2
7	\$ -	\$ -			March		3
8	\$ 164,209,888				April		4
9	3.840%				May		5
10	4.888%				June		6
11	35.59%				July		7
12	8,339,132				August		8
13	41,774,995				September		9
14	164,209,888				October		10
15	6,305,660				November		11
16	164,209,888				December		12
17	8,026,579						
18	11.46%						
19	6,305,660						
20	8,026,579						
21	0.1500%						
22	612,475						
23							
24							
25	164,209,888						
26	-						
27	(41,774,995)						
28	-						
29	(8,339,132)						
30	-						
31	114,095,761						
32	11.46%						
33	\$ 13,074,202						
34							
35	19,051,286						
36	6,305,660						
37	-						

	A	B	C	D	E	F	G	H	I	J	K
38		Annual Property Tax expense	-	3,268	78,642	179,028	240,403	230,945	221,486	212,028	202,569
39		Total OE	\$ -	\$ 3,268	\$ 4,175,012	\$ 21,037,063	\$ 23,801,400	\$ 24,137,048	\$ 24,479,598	\$ 24,829,189	\$ 25,185,961
40											
41		Total E(m) - Project	249,683	6,010,948	17,851,562	39,311,819	41,127,304	40,550,398	40,013,878	39,515,472	39,052,910
42											
43											

	L	M	N	O	P	Q	R
38	193,111						
39	\$ 25,550,057						
40							
41	38,624,259						
42							
43							

	A	B	C	D	E	F	G	H	I	J	K
44						November					
45			2011	2012	2013	2014	2015	2016	2017	2018	2019
46		In-Service				1	2	3	4	5	6
47		Ghent 2									
48	Project 35	Capital Expenditures - Project 35 - GH2 Baghouse & SAM Mitigation	\$ 148,784	\$ 37,354,857	\$ 48,163,861	\$ 72,191,638	\$ 6,693,304	\$ -	\$ -	\$ -	\$ -
49		6 Accumulated Expenditures	\$ 148,784	\$ 37,503,641	\$ 85,667,502	\$ 157,859,140	\$ 164,552,444	\$ 164,552,444	\$ 164,552,444	\$ 164,552,444	\$ 164,552,444
50		2 Book Depreciation rate, per year	0.000%	0.000%	0.000%	2.330%	2.330%	2.330%	2.330%	2.330%	2.330%
51		2 Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
52		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
53		Deferred Tax Balance	-	-	-	1,943,197	4,806,402	7,352,188	9,605,154	11,586,381	13,316,953
54		Book Accumulated Depreciation Balance	-	-	-	459,765	4,293,837	8,127,909	11,961,981	15,796,053	19,630,124
55		Unrecovered Investment -- Book	148,784	37,503,641	85,667,502	157,859,140	164,552,444	164,552,444	164,552,444	164,552,444	164,552,444
56		Book Depreciation	-	-	-	459,765	3,834,072	3,834,072	3,834,072	3,834,072	3,834,072
57		Unrecovered Investment -- Tax total	148,784	37,503,641	85,667,502	157,859,140	164,552,444	164,552,444	164,552,444	164,552,444	164,552,444
58		Tax Depreciation	-	-	-	5,919,718	11,879,041	10,987,167	10,164,404	9,400,881	8,696,597
59		Allowed Rate of Return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
60		Book Depreciation expense total	-	-	-	459,765	3,834,072	3,834,072	3,834,072	3,834,072	3,834,072
61		Tax Depreciation expense total	-	-	-	5,919,718	11,879,041	10,987,167	10,164,404	9,400,881	8,696,597
62		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
63		Deferred Tax Balance	-	-	-	1,943,197	2,863,204	2,545,786	2,252,965	1,981,227	1,730,573
64											
65		Revenue Recovery on Capital Expenditure to date									
66		Eligible Plant cumulative capital expenditures	148,784	37,503,641	85,667,502	157,859,140	164,552,444	164,552,444	164,552,444	164,552,444	164,552,444
67		2002 Less: Retired Plant	-	-	-	-	-	-	-	-	-
68		Less: Accumulated Depreciation	-	-	-	(459,765)	(4,293,837)	(8,127,909)	(11,961,981)	(15,796,053)	(19,630,124)
69		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
70		Less: Deferred Tax Balance	-	-	-	(1,943,197)	(4,806,402)	(7,352,188)	(9,605,154)	(11,586,381)	(13,316,953)
71		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
72		Environmental Compliance Rate Base	148,784	37,503,641	85,667,502	155,456,178	155,452,206	149,072,347	142,985,310	137,170,011	131,605,366
73		Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
74		Return on Environmental Compliance Rate Base	\$ 17,049	\$ 4,297,532	\$ 9,816,616	\$ 17,813,631	\$ 17,813,226	\$ 17,082,160	\$ 16,384,648	\$ 15,718,274	\$ 15,060,623
75											
76		Operating Expenses	-	329,460	4,032,590	9,399,385	14,979,237	15,278,822	15,584,399	15,896,087	16,214,008
77		Annual Depreciation expense	-	-	-	459,765	3,834,072	3,834,072	3,834,072	3,834,072	3,834,072
78		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
79		Annual Property Tax expense	-	223	56,255	128,501	236,099	240,388	234,637	228,886	223,135
80		Total OE	\$ -	\$ 329,683	\$ 4,088,846	\$ 9,987,651	\$ 19,049,408	\$ 19,353,282	\$ 19,653,107	\$ 19,959,044	\$ 20,271,215

	L	M	N	O	P	Q	R
44							
45	2020						
46	7	Difference			January		1
47					February		2
48	\$ -	\$ -			March		3
49	\$ 164,552,444				April		4
50	2.330%				May		5
51	4.888%				June		6
52	35.59%				July		7
53	14,815,026				August		8
54	23,464,196				September		9
55	164,552,444				October		10
56	3,834,072				November		11
57	164,552,444				December		12
58	8,043,323						
59	11.46%						
60	3,834,072						
61	8,043,323						
62	0.1500%						
63	1,498,073						
64							
65							
66	164,552,444						
67	-						
68	(23,464,196)						
69	-						
70	(14,815,026)						
71	-						
72	126,273,222						
73	11.46%						
74	\$ 14,459,614						
75							
76	16,538,289						
77	3,834,072						
78	-						
79	217,383						
80	\$ 20,589,744						

	A	B	C	D	E	F	G	H	I	J	K
81											
82		Total E(m) - Project	17,049	4,627,215	13,905,462	27,801,332	36,862,635	36,435,442	36,037,755	35,677,319	35,351,838
83											
84											

	L	M	N	O	P	Q	R
81							
82	35,059,358						
83							
84							

	A	B	C	D	E	F	G	H	I	J	K
85							October				
86			2011	2012	2013	2014	2015	2016	2017	2018	2019
87		In-Service					1	2	3	4	5
88		Ghent 3									
89	Project 35	Capital Expenditures - Project 35 - GH3 Baghouse & SAM Mitigation	\$ 1,307,716	\$ 4,809,001	\$ 47,890,171	\$ 56,057,325	\$ 84,049,087	\$ 3,898,032	\$ -	\$ -	\$ -
90		7 Accumulated Expenditures	\$ 1,307,716	\$ 6,116,717	\$ 54,006,888	\$ 110,064,213	\$ 194,113,300	\$ 198,011,331	\$ 198,011,331	\$ 198,011,331	\$ 198,011,331
91		2 Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	2.630%	2.630%	2.630%	2.630%	2.630%
92		2 Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%
93		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
94		Deferred Tax Balance	-	-	-	-	2,212,157	5,446,128	8,298,139	10,797,789	12,970,448
95		Book Accumulated Depreciation Balance	-	-	-	-	1,063,579	6,271,277	11,478,975	16,686,673	21,894,371
96		Unrecovered Investment -- Book	1,307,716	6,116,717	54,006,888	110,064,213	194,113,300	198,011,331	198,011,331	198,011,331	198,011,331
97		Book Depreciation	-	-	-	-	1,063,579	5,207,698	5,207,698	5,207,698	5,207,698
98		Unrecovered Investment -- Tax total	1,307,716	6,116,717	54,006,888	110,064,213	194,113,300	198,011,331	198,011,331	198,011,331	198,011,331
99		Tax Depreciation	-	-	-	-	7,279,249	14,294,438	13,221,217	12,231,160	11,312,387
100		Allowed Rate of Return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
101		Book Depreciation expense total	-	-	-	-	1,063,579	5,207,698	5,207,698	5,207,698	5,207,698
102		Tax Depreciation expense total	-	-	-	-	7,279,249	14,294,438	13,221,217	12,231,160	11,312,387
103		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
104		Deferred Tax Balance	-	-	-	-	2,212,157	3,233,971	2,852,011	2,499,650	2,172,659
105											
106		Revenue Recovery on Capital Expenditure to date									
107		Eligible Plant cumulative capital expenditures	1,307,716	6,116,717	54,006,888	110,064,213	194,113,300	198,011,331	198,011,331	198,011,331	198,011,331
108		2002 Less: Retired Plant	-	-	-	-	-	-	-	-	-
109		Less: Accumulated Depreciation	-	-	-	-	(1,063,579)	(6,271,277)	(11,478,975)	(16,686,673)	(21,894,371)
110		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
111		Less: Deferred Tax Balance	-	-	-	-	(2,212,157)	(5,446,128)	(8,298,139)	(10,797,789)	(12,970,448)
112		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
113		Environmental Compliance Rate Base	1,307,716	6,116,717	54,006,888	110,064,213	190,837,564	186,293,927	178,234,217	170,526,869	163,146,512
114		Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
115		Return on Environmental Compliance Rate Base	\$ 149,851	\$ 700,913	\$ 6,188,635	\$ 12,612,228	\$ 21,868,025	\$ 21,347,371	\$ 20,423,811	\$ 19,540,628	\$ 18,694,915
116											
117		Operating Expenses	-	-	3,894,132	4,796,132	11,080,590	17,614,507	17,966,797	18,326,133	18,692,656
118		Annual Depreciation expense	-	-	-	-	1,063,579	5,207,698	5,207,698	5,207,698	5,207,698
119		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
120		Annual Property Tax expense	-	1,962	9,175	81,010	165,096	289,575	287,610	279,799	271,987
121		Total OE	\$ -	\$ 1,962	\$ 3,903,307	\$ 4,877,142	\$ 12,309,265	\$ 23,111,780	\$ 23,462,106	\$ 23,813,630	\$ 24,172,341

	L	M	N	O	P	Q	R
85							
86	2020						
87	6	Difference				January	1
88						February	2
89	\$ -	\$ -				March	3
90	\$ 198,011,331					April	4
91	2.630%					May	5
92	5.285%					June	6
93	35.59%					July	7
94	14,841,486					August	8
95	27,102,069					September	9
96	198,011,331					October	10
97	5,207,698					November	11
98	198,011,331					December	12
99	10,464,899						
100	11.46%						
101	5,207,698						
102	10,464,899						
103	0.1500%						
104	1,871,038						
105							
106							
107	198,011,331						
108	-						
109	(27,102,069)						
110	-						
111	(14,841,486)						
112	-						
113	156,067,776						
114	11.46%						
115	\$ 17,883,764						
116							
117	19,066,509						
118	5,207,698						
119	-						
120	264,175						
121	\$ 24,538,383						

	A	B	C	D	E	F	G	H	I	J	K
122											
123		Total E(m) - Project	149,851	702,874	10,091,942	17,489,370	34,177,290	44,459,151	43,885,916	43,354,258	42,867,256
124											
125											

	L	M	N	O	P	Q	R
122							
123	42,422,147						
124							
125							

	A	B	C	D	E	F	G	H	I	J	K
126							December				
127			2011	2012	2013	2014	2015	2016	2017	2018	2019
128		In-Service					1	2	3	4	5
129		Ghent 4									
130	Project 35	Capital Expenditures - Project 35 - GH4 Baghouse & SAM Mitigation	\$ 1,458,737	\$ 4,321,807	\$ 35,116,729	\$ 57,307,535	\$ 77,571,909	\$ 8,984,440	\$ -	\$ -	\$ -
131		8 Accumulated Expenditures	\$ 1,458,737	\$ 5,780,544	\$ 40,897,273	\$ 98,204,808	\$ 175,776,717	\$ 184,761,157	\$ 184,761,157	\$ 184,761,157	\$ 184,761,157
132		2 Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	2.790%	2.790%	2.790%	2.790%	2.790%
133		2 Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%
134		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
135		Deferred Tax Balance	-	-	-	-	2,273,235	5,185,590	7,741,545	9,968,718	11,890,780
136		Book Accumulated Depreciation Balance	-	-	-	-	204,340	5,359,177	10,514,013	15,668,849	20,823,686
137		Unrecovered Investment -- Book	1,458,737	5,780,544	40,897,273	98,204,808	175,776,717	184,761,157	184,761,157	184,761,157	184,761,157
138		Book Depreciation	-	-	-	-	204,340	5,154,836	5,154,836	5,154,836	5,154,836
139		Unrecovered Investment -- Tax total	1,458,737	5,780,544	40,897,273	98,204,808	175,776,717	184,761,157	184,761,157	184,761,157	184,761,157
140		Tax Depreciation	-	-	-	-	6,591,627	13,337,908	12,336,502	11,412,697	10,555,405
141		Allowed Rate of Return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
142		Book Depreciation expense total	-	-	-	-	204,340	5,154,836	5,154,836	5,154,836	5,154,836
143		Tax Depreciation expense total	-	-	-	-	6,591,627	13,337,908	12,336,502	11,412,697	10,555,405
144		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
145		Deferred Tax Balance	-	-	-	-	2,273,235	2,912,355	2,555,955	2,227,173	1,922,062
146											
147		Revenue Recovery on Capital Expenditure to date									
148		Eligible Plant cumulative capital expenditures	1,458,737	5,780,544	40,897,273	98,204,808	175,776,717	184,761,157	184,761,157	184,761,157	184,761,157
149		2002 Less: Retired Plant	-	-	-	-	-	-	-	-	-
150		Less: Accumulated Depreciation	-	-	-	-	(204,340)	(5,359,177)	(10,514,013)	(15,668,849)	(20,823,686)
151		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
152		Less: Deferred Tax Balance	-	-	-	-	(2,273,235)	(5,185,590)	(7,741,545)	(9,968,718)	(11,890,780)
153		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
154		Environmental Compliance Rate Base	1,458,737	5,780,544	40,897,273	98,204,808	173,299,141	174,216,390	166,505,599	159,123,590	152,046,691
155		Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
156		Return on Environmental Compliance Rate Base	\$ 167,156	\$ 662,391	\$ 4,686,407	\$ 11,253,252	\$ 19,858,302	\$ 19,963,409	\$ 19,079,831	\$ 18,233,929	\$ 17,422,989
157											
158		Operating Expenses	-	-	4,294,702	5,331,000	11,281,941	17,468,789	17,818,164	18,174,528	18,538,018
159		Annual Depreciation expense	-	-	-	-	204,340	5,154,836	5,154,836	5,154,836	5,154,836
160		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
161		Annual Property Tax expense	-	2,188	8,671	61,346	147,307	263,359	269,103	261,371	253,638
162		Total OE	\$ -	\$ 2,188	\$ 4,303,373	\$ 5,392,346	\$ 11,633,589	\$ 22,886,983	\$ 23,242,104	\$ 23,590,735	\$ 23,946,493

	L	M	N	O	P	Q	R
126							
127	2020						
128	6	Difference				January	1
129						February	2
130	\$ -	\$ -				March	3
131	\$ 184,761,157					April	4
132	2.790%					May	5
133	5.285%					June	6
134	35.59%					July	7
135	13,531,405					August	8
136	25,978,522					September	9
137	184,761,157					October	10
138	5,154,836					November	11
139	184,761,157					December	12
140	9,764,627						
141	11.46%						
142	5,154,836						
143	9,764,627						
144	0.1500%						
145	1,640,625						
146							
147							
148	184,761,157						
149	-						
150	(25,978,522)						
151	-						
152	(13,531,405)						
153	-						
154	145,251,230						
155	11.46%						
156	\$ 16,644,299						
157							
158	18,908,779						
159	5,154,836						
160	-						
161	245,906						
162	\$ 24,309,521						

	A	B	C	D	E	F	G	H	I	J	K
163											
164		Total E(m) - Project	167,156	664,579	8,989,780	16,645,608	31,491,891	42,850,392	42,321,935	41,824,664	41,369,482

	L	M	N	O	P	Q	R
163							
164	40,953,820						

	A	B	C	D	E	F	G	H	I	J	K
1	Year in Service	Tax Depreciation, 20 yr HL			Book Depreciation						Assumes all investments to plant account 312
2	1	3.75%		Ghent 1PC	3.87%						Updated using Depreciation Rates in effect as of 2/6/09
3	2	7.22%		Ghent 1	3.84%						Source: KU and LG&E ECR Databases
4	3	6.68%		Ghent 2	2.33%						
5	4	6.18%		Ghent 3	2.63%						
6	5	5.71%		Ghent 4	2.79%						
7	6	5.29%		Brown 1	2.99%						PC = Scrubber/FGD
8	7	4.89%		Brown 2	3.01%						NPC = All other Pollution Control
9	8	4.52%		Brown 3	2.80%						
10	9	4.46%		Ghent 1,3,&4	3.09%						
11	10	4.46%		Mill Creek 1PC	4.50%						
12	11	4.46%		Mill Creek 1NPC	4.24%						
13	12	4.46%		Mill Creek 2PC	4.29%						
14	13	4.46%		Mill Creek 2NPC	4.70%						
15	14	4.46%		Mill Creek 3PC	3.85%						
16	15	4.46%		Mill Creek 3NPC	3.87%						
17	16	4.46%		Mill Creek 4NPC	3.85%						
18	17	4.46%		Mill Creek 4PC	3.71%						
19	18	4.46%		TrimblePC	3.62%						
20	19	4.46%		TrimbleNPC	3.62%						
21	20	4.46%		All Plants-LGE	4.59%						
22	21	2.23%		All Plants-KU	3.07%						
23	22	0.00%									
24	23	0.00%									
25	24	0.00%									
26	25	0.00%									
27	26	0.00%		Cane Run 4	5.88%						
28	27	0.00%		Cane Run 5	6.11%						
29	28	0.00%		Cane Run 6	4.46%						
30	29	0.00%		Green River 3	3.08%						
31	30	0.00%		Green River 4	4.20%						
32	31	0.00%									
33	32	0.00%									
34	33	0.00%									
35	34	0.00%									
36	35	0.00%									
37	36	0.00%									
38	37	0.00%									
39	38	0.00%									
40	39	0.00%									
41	40	0.00%									
42	41	0.00%									
43	42	0.00%									
44	43	0.00%									
45	44	0.00%									
46	45	0.00%									
47	46	0.00%									
48	47	0.00%									
49	48	0.00%									
50	49	0.00%									
51	50	0.00%									
52	51	0.00%									
53	52	0.00%									
54	53	0.00%									
55	54	0.00%									
56	55	0.00%									
57	56	0.00%									

	A	B	C	D	E	F	G	H	I	J	K
58	57	0.00%									

	A	B	C	D
1		12/31/1995	1/1/2005	2/6/2009
2	Unit	Rate	Rate	
3	BR1N.1311	2.90%	2.90%	0.60%
4	BR1N.1312	2.88%	2.88%	2.98%
5	BR1N.1314	2.88%	2.88%	1.12%
6	BR1N.1315	2.88%	2.88%	2.10%
7	BR1N.1316	2.88%	2.88%	2.28%
8	BR2N.1311	2.88%	2.88%	0.08%
9	BR2N.1312	2.88%	2.88%	3.01%
10	BR2N.1314	2.88%	2.88%	2.91%
11	BR2N.1315	2.88%	2.88%	0.48%
12	BR2N.1316	2.88%	2.88%	0.71%
13	BR3N.1311	3.91%	3.91%	0.54%
14	BR3N.1312	3.91%	3.91%	2.80%
15	BR3N.1314	3.91%	3.91%	3.17%
16	BR3N.1315	3.91%	3.91%	0.54%
17	BR3N.1316	3.91%	3.91%	2.33%
18	BR3S.1311	3.91%	3.91%	2.65%
19	BR3S.1312	3.91%	3.91%	3.87%
20	BR3S.1314	3.91%	3.91%	0.00%
21	BR3S.1315	3.91%	3.91%	2.70%
22	GH1N.1311	3.12%	3.12%	0.39%
23	GH1N.1312	3.12%	3.12%	3.84%
24	GH1N.1314	3.12%	3.12%	2.23%
25	GH1N.1315	3.12%	3.12%	0.55%
26	GH1N.1316	3.12%	3.12%	1.38%
27	GH1S.1311	3.12%	3.12%	2.65%
28	GH1S.1312	3.12%	3.12%	3.87%
29	GH1S.1314	3.12%	3.12%	0.00%
30	GH1S.1315	3.12%	3.12%	2.70%
31	GH1S.1316	3.12%	3.12%	2.87%
32	GH2N.1311	1.84%	1.84%	0.50%
33	GH2N.1312	1.84%	1.84%	2.33%
34	GH2N.1314	1.84%	1.84%	2.08%
35	GH2N.1315	1.84%	1.84%	0.60%
36	GH2N.1316	1.84%	1.84%	1.07%
37	GH2S.1311	1.84%	1.84%	2.65%
38	GH2S.1312	1.84%	1.84%	3.87%
39	GH2S.1314	1.84%	1.84%	0.00%
40	GH2S.1315	1.84%	1.84%	2.70%
41	GH2S.1316	1.84%	1.84%	2.87%
42	GH3N.1311	2.22%	2.22%	1.19%
43	GH3N.1312	2.22%	2.22%	2.63%
44	GH3N.1314	2.22%	2.22%	2.03%
45	GH3N.1315	2.22%	2.22%	1.03%
46	GH3N.1316	2.22%	2.22%	1.40%
47	GH3N.1392	2.22%	2.22%	0.00%
48	GH3S.1311	5.67%	5.67%	2.65%
49	GH3S.1312	5.67%	5.67%	3.87%
50	GH3S.1314	5.67%	5.67%	0.00%
51	GH3S.1315	5.67%	5.67%	2.70%
52	GH3S.1316	5.67%	5.67%	0.00%
53	GH4N.1311	2.16%	2.16%	1.41%
54	GH4N.1312	2.16%	2.16%	2.79%
55	GH4N.1314	2.16%	2.16%	2.20%
56	GH4N.1315	2.16%	2.16%	1.22%
57	GH4N.1316	2.16%	2.16%	2.03%

	A	B	C	D
58	GH4S.1311	2.16%	5.67%	2.65%
59	GH4S.1312	2.16%	5.67%	3.87%
60	GH4S.1314	2.16%	5.67%	0.00%
61	GH4S.1315	2.16%	5.67%	2.70%
62	GH4S.1316	2.16%	5.67%	0.00%
63	GR2N.1311	0.00%	1.94%	0.00%
64	GR2N.1312	0.00%	1.94%	2.18%
65	GR2N.1314	0.00%	1.94%	0.00%
66	GR2N.1315	0.00%	1.94%	0.00%
67	GR2N.1316	0.00%	1.94%	0.00%
68	GR3N.1311	0.00%	1.94%	0.00%
69	GR3N.1312	0.00%	1.94%	3.08%
70	GR3N.1314	0.00%	1.94%	2.90%
71	GR3N.1315	0.00%	1.94%	0.00%
72	GR3N.1316	0.00%	1.94%	3.97%
73	GR4N.1311	3.10%	3.10%	0.00%
74	GR4N.1312	3.10%	3.10%	4.20%
75	GR4N.1314	3.10%	3.10%	3.79%
76	GR4N.1315	3.10%	3.10%	1.48%
77	GR4N.1316	3.10%	3.10%	2.71%
78	KJTR.1392	2.22%	5.67%	20.00%
79	SW00.1391	20%	20%	10.14%
80	TY3N.1311	2.13%	2.13%	0.00%
81	TY3N.1312	2.13%	2.13%	3.99%
82	TY3N.1314	2.13%	2.13%	3.44%
83	TY3N.1315	2.13%	2.13%	0.00%
84	TY3N.1316	2.13%	2.13%	3.12%

	A	B	C	D
1		12/31/1995	1/1/2005	2/6/2009
2	Unit	Rate	Rate	
3	CR4N.131100	2.94%	2.94%	1.14%
4	CR4N.131200	2.94%	2.94%	5.88%
5	CR4N.131500	2.94%	2.94%	3.18%
6	CR4S.131100	3.47%	3.47%	0.95%
7	CR4S.131200	3.47%	3.47%	4.93%
8	CR4S.131500	3.47%	3.47%	0.82%
9	CR5N.131100	2.87%	2.87%	1.92%
10	CR5N.131200	2.87%	2.87%	6.11%
11	CR5N.131500	2.87%	2.87%	2.97%
12	CR5S.131100	3.47%	3.47%	1.56%
13	CR5S.131200	3.47%	3.47%	4.07%
14	CR5S.131500	3.47%	3.47%	1.49%
15	CR6N.131100	3.06%	3.06%	2.13%
16	CR6N.131200	3.06%	3.06%	5.19%
17	CR6N.131500	3.06%	3.06%	2.80%
18	CR6S.131100	2.18%	2.18%	2.04%
19	CR6S.131200	2.18%	2.18%	4.46%
20	CR6S.131500	2.18%	2.18%	1.44%
21	CRLF.131200	2.82%	2.82%	2.13%
22	MC1N.131100	2.39%	2.39%	1.64%
23	MC1N.131200	2.39%	2.39%	4.24%
24	MC1N.131500	2.39%	2.39%	2.75%
25	MC1S.131100	3.90%	3.90%	1.65%
26	MC1S.131200	3.90%	3.90%	4.50%
27	MC1S.131500	3.90%	3.90%	1.67%
28	MC2N.131100	2.29%	2.29%	1.42%
29	MC2N.131200	2.29%	2.29%	4.70%
30	MC2N.131500	2.29%	2.29%	2.03%
31	MC2S.131100	3.99%	3.99%	1.81%
32	MC2S.131200	3.99%	3.99%	4.28%
33	MC2S.131500	3.99%	3.99%	1.69%
34	MC3N.131100	3.03%	3.03%	1.51%
35	MC3N.131200	3.03%	3.03%	3.87%
36	MC3N.131500	2.29%	2.29%	1.58%
37	MC3S.131100	4.54%	4.54%	1.47%
38	MC3S.131200	4.54%	4.54%	3.85%
39	MC3S.131500	3.99%	3.99%	1.56%
40	MC4N.131020	2.82%	2.82%	0.00%
41	MC4N.131100	2.82%	2.82%	1.85%
42	MC4N.131200	2.82%	2.82%	3.85%
43	MC4N.131500	2.29%	2.29%	1.75%
44	MC4S.131100	5.38%	5.38%	1.76%
45	MC4S.131200	5.38%	5.38%	3.71%
46	MC4S.131500	3.99%	3.99%	1.71%
47	MSUB.135310	2.10%	2.10%	1.32%
48	SW00.339130	20.00%	20.00%	21.96%
49	TC1N.131100	2.41%	2.41%	2.08%
50	TC1N.131200	2.41%	2.41%	3.62%
51	TC1N.131500	2.41%	2.41%	2.13%
52	TC1S.131100	3.47%	3.47%	2.28%
53	TC1S.131200	3.47%	3.47%	3.62%
54	TC1S.131500	3.47%	3.47%	2.12%
55	TC2N.131100	2.41%	2.41%	2.10%
56	TC2N.131200	2.41%	2.41%	4.28%
57	TC2N.131500	2.41%	2.41%	2.49%

	A	B	C	D
58	TC2S.131100	3.47%	3.47%	2.10%
59	TC2S.131200	3.47%	3.47%	4.28%
60	TC2S.131500	3.47%	3.47%	2.49%

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	LG&E-Project 21	Year in Service	Plant Amt	Tax Depreciation		Book Depreciation		Def Tax										
2	Opacity Monitors	1984	-	3.75%	-	4.24%	-	-	6.5			167,480.1						
3	Mill Creek 1NPC	1985	-	7.22%	-	4.24%	-	-	12									
4		1986	-	6.68%	-	4.24%	-	-	12									
5	-	1987	-	6.18%	-	4.24%	-	-	12									
6		1988	-	5.71%	-	4.24%	-	-	12									
7		1989	-	5.29%	-	4.24%	-	-	12									
8		1990	-	4.89%	-	4.24%	-	-	12									
9		1991	-	4.52%	-	4.24%	-	-	12									
10		1992	-	4.46%	-	4.24%	-	-	12									
11		1993	-	4.46%	-	4.24%	-	-	12									
12		1994	-	4.46%	-	4.24%	-	-	12									
13		1995	-	4.46%	-	4.24%	-	-	12									
14		1996	-	4.46%	-	4.24%	-	-	12									
15		1997	-	4.46%	-	4.24%	-	-	12									
16		1998	-	4.46%	-	4.24%	-	-	12									
17		1999	-	4.46%	-	4.24%	-	-	12									
18		2000	-	4.46%	-	4.24%	-	-	12									
19		2001	-	4.46%	-	4.24%	-	-	12									
20		2002	-	4.46%	-	4.24%	-	-	12									
21		2003	-	4.46%	-	4.24%	-	-	9									
22		2004	-	2.23%	-	4.24%	-	-	12									
23		2005	-	0.00%	-	4.24%	-	-	12									
24		2006	-	0.00%	-	4.24%	-	-	12									
25		2007	-	0.00%	-	4.24%	-	-	12									
26		2008	-	0.00%	-	4.24%	-	-	12									
27																		
28																		
29																		
30	KU-Project 27	Year in Service	Plant Amt	Tax Depreciation		Book Depreciation		Def Tax										
31	Precip Inlet Duct Rep	1976	267,426	3.75%	10,028	3.01%	5,031	(4,993)	7.5									
32	Brown 2	1977	267,426	7.22%	19,305	3.01%	8,050	(11,255)	12									
33		1978	267,426	6.68%	17,856	3.01%	8,050	(9,807)	12									
34	28,069	1979	267,426	6.18%	16,519	3.01%	8,050	(8,469)	12									
35		1980	267,426	5.71%	15,278	3.01%	8,050	(7,229)	12									
36		1981	267,426	5.29%	14,133	3.01%	8,050	(6,084)	12									
37		1982	267,426	4.89%	13,072	3.01%	8,050	(5,022)	12									
38		1983	267,426	4.52%	12,093	3.01%	8,050	(4,043)	12									
39		1984	267,426	4.46%	11,933	3.01%	8,050	(3,883)	12									
40		1985	267,426	4.46%	11,930	3.01%	8,050	(3,880)	12									
41		1986	267,426	4.46%	11,933	3.01%	8,050	(3,883)	12									
42		1987	267,426	4.46%	11,930	3.01%	8,050	(3,880)	12									
43		1988	267,426	4.46%	11,933	3.01%	8,050	(3,883)	12									
44		1989	267,426	4.46%	11,930	3.01%	8,050	(3,880)	12									
45		1990	267,426	4.46%	11,933	3.01%	8,050	(3,883)	12									
46		1991	267,426	4.46%	11,933	3.01%	8,050	(3,883)	12									
47		1992	267,426	4.46%	11,933	3.01%	8,050	(3,883)	12									
48		1993	267,426	4.46%	11,933	3.01%	8,050	(3,883)	12									
49		1994	267,426	4.46%	11,933	3.01%	8,050	(3,883)	12									
50		1995	267,426	4.46%	11,933	3.01%	8,050	(3,883)	12									
51		1996	267,426	2.23%	5,964	3.01%	8,050	2,085	12									
52		1997	267,426	0.00%	-	3.01%	8,050	8,050	12									
53		1998	267,426	0.00%	-	3.01%	8,050	8,050	12									
54		1999	267,426	0.00%	-	3.01%	8,050	8,050	12									
55		2000	267,426	0.00%	-	3.01%	8,050	8,050	12									
56		2001	267,426	0.00%	-	3.01%	8,050	8,050	12									
57		2002	267,426	0.00%	-	3.01%	8,050	8,050	12									

Do not delete this sheet. Retirement

	X	Y	Z	AA	AB
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58		2003	267,426	0.00%	-	3.01%	6,037	6,037	9									
59		2004	267,426	0.00%	-	3.01%	-	-	12									
60		2005	267,426	0.00%	-	3.01%	-	-	12									
61		2006	267,426	0.00%	-	3.01%	-	-	12									
62			267,426		267,431		220,356	(47,076)			47,070							

From: Walters, Kim
To: 'Riggs, Kendrick R.'; Conroy, Robert; Schroeder, Andrea; Bellar, Lonnie; Schram, Chuck; Wilson, Stuart; LGEC12 West 1201 (Cap 20)
Sent: 4/20/2011 7:47:01 AM
Subject: ECR Testimony Review-Chuck Schram-Stuart Wilson

When: Monday, May 09, 2011 10:00 AM-11:30 AM (UTC-05:00) Eastern Time (US & Canada).

Where: LGEC 1201

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

From: Walters, Kim </O=LGE/OU=LOUISVILLE/CN=RECIPIENTS/CN=E010358>
Sent: 4/20/2011 7:49:19 AM
To: Bellar, Lonnie <Lonnie.Bellar@lge-ku.com>; 'Riggs, Kendrick R.' <kendrick.riggs@skofirm.com>; LGEC12 West 1201 (Cap 20) <LGEC12West1201Cap20@lge-ku.com>; Conroy, Robert <Robert.Conroy@lge-ku.com>; Schroeder, Andrea <Andrea.Schroeder@lge-ku.com>
Subject: Copy: ECR Testimony Review-Robert Conroy
Location: LGEC 1201
Start: Mon 5/9/2011 1:30:00 PM
End: Mon 5/9/2011 3:00:00 PM
Recurrence: (none)
Meeting Status: Not yet responded

Required Attendees: Bellar, Lonnie; 'Riggs, Kendrick R.'; LGEC12 West 1201 (Cap 20); Conroy, Robert; Schroeder, Andrea

From: Conroy, Robert
To: Sturgeon, Allyson
Sent: 4/20/2011 7:50:17 AM
Subject: Accepted: ECR Testimony Review-Chuck Schram-Stuart Wilson

From: Conroy, Robert
To: Sturgeon, Allyson
Sent: 4/20/2011 7:50:10 AM
Subject: Accepted: ECR Testimony Review-Robert Conroy

From: Walters, Kim </O=LGE/OU=LOUISVILLE/CN=RECIPIENTS/CN=E010358>
Sent: 4/20/2011 7:51:59 AM
To: Straight, Scott <Scott.Straight@lge-ku.com>; Bellar, Lonnie <Lonnie.Bellar@lge-ku.com>; LGEC12 West 1201 (Cap 20) <LGEC12West1201Cap20@lge-ku.com>; Conroy, Robert <Robert.Conroy@lge-ku.com>; Schroeder, Andrea <Andrea.Schroeder@lge-ku.com>; 'Riggs, Kendrick R.' <kendrick.riggs@skofirm.com>; Saunders, Eileen <Eileen.Saunders@lge-ku.com>; Voyles, John <John.Voyles@lge-ku.com>
Subject: Copy: ECR Testimony Review-Voyles
Location: LGEC 1201
Start: Tue 5/10/2011 1:30:00 PM
End: Tue 5/10/2011 3:00:00 PM
Recurrence: (none)
Meeting Status: Not yet responded

Required Attendees: Straight, Scott; Bellar, Lonnie; LGEC12 West 1201 (Cap 20); Conroy, Robert; Schroeder, Andrea; 'Riggs, Kendrick R.'; Saunders, Eileen; Voyles, John

From: Conroy, Robert
To: Sturgeon, Allyson
Sent: 4/20/2011 7:54:49 AM
Subject: Accepted: ECR Testimony Review-Voyles

From: Walters, Kim
To: 'Riggs, Kendrick R.'; Conroy, Robert; Schroeder, Andrea; Bellar, Lonnie; LGEC12 West 1201 (Cap 20)
Sent: 4/20/2011 7:57:54 AM
Subject: ECR Testimony Review-Bellar

When: Thursday, May 12, 2011 3:00 PM-4:30 PM (UTC-05:00) Eastern Time (US & Canada).

Where: LGEC 1201

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

From: Walters, Kim
To: 'Riggs, Kendrick R.'; Conroy, Robert; Schroeder, Andrea; Bellar, Lonnie; Charnas, Shannon; LGEC12 South (Video) (Cap 15)
Sent: 4/20/2011 7:55:51 AM
Subject: ECR Testimony Review-Charnas

When: Wednesday, May 11, 2011 10:30 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).

Where: LGEC 12 South

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

From: Walters, Kim </O=LGE/OU=LOUISVILLE/CN=RECIPIENTS/CN=E010358>
Sent: 4/20/2011 8:03:41 AM
To: Schroeder, Andrea <Andrea.Schroeder@lge-ku.com>; Bellar, Lonnie <Lonnie.Bellar@lge-ku.com>; Revlett, Gary <Gary.Revlett@lge-ku.com>; Conroy, Robert <Robert.Conroy@lge-ku.com>; LGEC12 West 1201 (Cap 20) <LGEC12West1201Cap20@lge-ku.com>; 'Riggs, Kendrick R.' <kendrick.riggs@skofirm.com>
Subject: Copy: ECR Testimony Review-Revlett
Location: LGEC1201
Start: Fri 5/13/2011 2:00:00 PM
End: Fri 5/13/2011 3:30:00 PM
Recurrence: (none)
Meeting Status: Not yet responded

Required Attendees: Schroeder, Andrea; Bellar, Lonnie; Revlett, Gary; Conroy, Robert; LGEC12 West 1201 (Cap 20); 'Riggs, Kendrick R.'

From: Conroy, Robert
To: Sturgeon, Allyson
Sent: 4/20/2011 8:07:52 AM
Subject: Accepted: ECR Testimony Review-Charnas

From: Conroy, Robert
To: Sturgeon, Allyson
Sent: 4/20/2011 8:07:58 AM
Subject: Accepted: ECR Testimony Review-Bellar

From: Conroy, Robert
To: Sturgeon, Allyson
Sent: 4/20/2011 8:08:06 AM
Subject: Accepted: ECR Testimony Review-Revlett

From: Walters, Kim
To: 'Riggs, Kendrick R.'; Conroy, Robert; Schroeder, Andrea; Bellar, Lonnie; Charnas, Shannon; LGEC12 West 1201 (Cap 20)
Sent: 4/20/2011 9:31:07 AM
Subject: ECR Testimony Review-Charnas

When: Wednesday, May 11, 2011 9:30 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).

Where: LGEC 1201

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

From: Conroy, Robert
To: Sturgeon, Allyson
Sent: 4/20/2011 10:51:58 AM
Subject: Accepted: ECR Testimony Review-Charnas

From: Conroy, Robert
To: Voyles, John
CC: Schram, Chuck; Bellar, Lonnie
Sent: 4/20/2011 7:15:57 PM
Subject: Re: ECR update mtg

I can update on 1) testimony, 2) bill impact, and 3) KPSC letter request. We are waiting on three items from Scott on contracting dates, cancellation \$s, and actual breaking ground dates for Kendrick to finish legal memo on CPCN risk. I met with Chris W earlier this week to give her all the info needed for communication plan.

Robert

Sent from my iPhone

On Apr 20, 2011, at 6:44 PM, "Voyles, John" <John.Voyles@lge-ku.com> wrote:

> I have not thought about this update mtg or materials to speak from.
>
> Chuck - Will you have updates on the analytics?
>
> Robert - progress or go forward plan for rate calcs?
>
> Is there missing data I need to pursue?
>
> Will double check with you guys in the a.m.
>
> We've asked chip & c. Whelan to try to join us for communication planning.
>
>
> Thanks
>
> JV

From: Schroeder, Andrea
To: Conroy, Robert; Bellar, Lonnie; Straight, Scott; Saunders, Eileen; Voyles, John; Sturgeon, Allyson; Kendrick Riggs ; Crosby, W. Duncan
Sent: 4/21/2011 12:54:17 PM
Subject: Discuss supporting documents for Voyles ECR Testimony

When: Wednesday, May 04, 2011 10:00 AM-11:00 AM (GMT-05:00) Eastern Time (US & Canada).

Where: LGEC12 North 1 (Cap 15)

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

The purpose of the meeting is to finalize the documents to be provided as support to John Voyles's testimony in the 2011 ECR Plan filings.

From: Conroy, Robert
To: Schroeder, Andrea
Sent: 4/25/2011 12:35:19 PM
Subject: FW: GH SAM Mitigation Milling proposal
Attachments: PAI_GH SAM FINAL 4-18-11 (2).docx

Robert M. Conroy

Director, Rates

LG&E and KU Services Company

(502) 627-3324 (phone)

(502) 627-3213 (fax)

(502) 741-4322 (mobile)

robert.conroy@lge-ku.com

From: Imber, Philip
Sent: Monday, April 25, 2011 12:12 PM
To: Revlett, Gary; Conroy, Robert
Subject: FW: GH SAM Mitigation Milling proposal

Gary, Robert,

I was asked if you are in agreement to the Ghent SAM Milling proposal.

Gary and I have discussed numerous times and I believe we are on the same page.

I believe Rates/Regulatory and I are on the same page - as this is planned for the June ECR filing.

Please respond with your agreement and I can "check my box".

Philip

From: Hudson, Rusty
Sent: Monday, April 25, 2011 11:31 AM
To: Imber, Philip; Mooney, Mike (BOC 3)
Cc: Straight, Scott
Subject: FW: GH SAM Mitigation proposal

Attached are the questions from Financial Planning (first three for Philip, fourth one for Mike) on the Ghent SAM mitigation proposal. Mike, I'm thinking we decided not to show the 2012 amounts (from the 2011 MTP) since there could be other work down the road, but I'm not sure on the 2011 difference. If you can respond back by mid-day tomorrow, Megan will try to send the proposals out later tomorrow. Rusty

From: Kuhl, Megan
Sent: Monday, April 25, 2011 11:27 AM
To: Hudson, Rusty
Subject: GH SAM Mitigation proposal

Rusty,

We have the following questions/comments:

- Has environmental affairs agreed to this?
- Has rates and regulatory agreed to this?
- Was UCC asked for details on their proposal since there was concern?
- I'm having trouble tying the MTP to what is in the financial details table. I am showing \$8.7m for 2011 and \$15.4m for 2012. Are there other project numbers?

Thanks,

Megan Kuhl

Financial Analyst II, Financial Planning
LG&E and KU Services Company
(502) 627-3716

Investment Proposal for Investment Committee Meeting on: April 28, 2011

Project Name: Ghent SAM Mitigation Mill Upgrades for Units 1, 3, and 4

Total Expenditures: \$3,500k

Project Numbers: 130905 (U1), 130907 (U3) and 130909 (U4)

Business Unit/Line of Business: Project Engineering

Prepared/Presented By: Philip A. Imber, Manager Major Capital Projects

Executive Summary

This document seeks project approval of \$3,500k to retrofit milling equipment on the existing Ghent Units 1, 3, and 4 Sulfuric Acid Mist (SAM) Mitigation Systems.

The addition of milling equipment to the SAM Mitigation Systems is anticipated to increase reagent utilization/effectiveness by generating smaller sorbent particles, higher sorbent surface area, and potentially improved in-flight sorbent mixing. This technology implementation is one step towards SAM Mitigation System improvements and plant betterment required to meet anticipated Unit specific SAM limits at the Ghent Station.

The goal of this project is to progress dry sorbent injection technology effectiveness as the least cost technology and to meet a continuous goal of 5 ppm at the stack. To this end, there will be two mills installed per Unit with bypass capability for continued operation while maintenance is being performed. The milling equipment will enhance SAM Mitigation and potentially reduce operating cost and reagent usage if bag house equipment is installed.

Milling is not being installed on Unit 2 at this time. Ghent Unit 2 utilizes Hydrated Lime reagent via a temporary injection system. Milling will be reassessed on Unit 2 when a permanent reagent injection system is installed. At the present time, Ghent Unit 1 uses both TRONA and Hydrated Lime, while Units 3 and 4 use only TRONA.

This project will be included in the June 1, 2011 ECR filing. This project is fully budgeted.

Background

In March 2009 the Ghent Station received a Notice of Violation (NOV) from the Environmental Protection Agency (EPA) and the Department of Justice (DOJ) regarding SAM emissions, a Potential for Significant Deterioration (PSD) criteria pollutant. The NOV, which Kentucky Utilities (KU) disputes, results from the addition of SCR (on Units 1, 3, and 4), the addition of FGD (on Units 2, 3, and 4), and switching to fuels with higher sulfur content (on Units 2, 3, and 4). In conjunction with the FGD technology installation at Ghent, KU installed SAM Mitigation,

dry sorbent injection systems, on Units 1, 3, and 4 due to the industry concerns of increased stack particulate matter, increased plume opacity, and concerns for plume “touchdown.” These emission concerns are caused by increased SAM generated by SCR oxidation of SO₂ to SO₃ and its condensation to H₂SO₄ in the FGD. A temporary SAM Mitigation System was installed on Unit 2 in the summer of 2009 in response to the NOV. The SAM Mitigation Systems were installed with the expectation of SAM control to 5 ppm at the stack. The systems installed have not consistently controlled SAM to the 5 ppm expectation.

Utilizing milling technology on SAM Mitigation Systems is a new technology advancement. AES Somerset, Southern Company Plant Crist, Duke Zimmer, and Duke Gallagher plants have recently installed milling technology (AES having the longest service of over one year).

A Sturtevant mill was tested over a two week period on Ghent Unit 1 and Unit 4 in the summer of 2010 with positive reductions in visible opacity. A UCC mill was tested on Ghent Unit 4 in April of 2011 with positive reductions in visible opacity as well as reduced reagent consumption. A Hosokawa mill was tested at Ghent April of 2011; the Hosokawa mill experienced operational problems with bridging of material on the pins.

Nol-Tec (marketing Sturtevant milling technology), BCSI/Nalco Mobotec (marketing Hosokawa milling technology), and UCC (marketing their own milling technology) bid on the installation of milling technology at Ghent.

Project Description

- **Project Scope and Timeline**

Project Engineering (PE) plans to mill the reagent for the two injection locations on Unit 1, 3, and 4. To this end, these units will get two mills with bypass capability such that the SAM Mitigation System can continue to feed un-milled reagent to the injection locations during maintenance cycles.

The turnkey project will include civil, mechanical, electrical, and controls required to install permanent milling systems for all the Ghent Units. The milling equipment is anticipated to be skid mounted and pre-packaged for ease of installation.

March 2011	Bid Evaluation
April 2011	Contract Award
April - June 2011	Detail Engineering
June 2011	Site Mobilization
June – September 2011	Shop Fabrication
November 2011	Mechanical Completion
December 2011	Commercial Operation
January 2012	Turnover Packages Complete

Economic Analysis and Risks

- **Bid Summary**

Nol-Tec (marketing Sturtevant milling technology), BCSI/Nalco Mobotec (marketing Hosokawa milling technology), and UCC (marketing their own milling technology) bid on the installation of milling technology at Ghent.

The initial bids were received, assessed and technical meetings were held with each supplier. Best and Final Proposals were received following bid clarifications and technical meetings.

All three bidders have negotiated General Service Agreements on file or ready for execution.

The following table depicts the Best and Final Offer; a fully wrapped engineering, procurement and construction contract from the three vendors for milling at Units 1, 3, and 4:

	BCSI/Nalco Mobotec	UCC	Nol-Tec
MBE/WBE	No	No	No
Total Cost	\$2.5M	\$2.1M	\$2.5M

The key mill performance indicator of a mill is the particle size after it is processed. Particle size is depicted by the percentage of material that is smaller than a stated micron; for example the “d50” term used in the table below means 50% of the material is smaller than the numerical micron value listed in the table. The milling performance guarantee for each vendor is depicted in the following table:

Milling Effectiveness	Nol-Tec	BCSI/Nalco	UCC
d50	10	12	15
d90	30	20	50

The technical team consisting of Project Engineering and Ghent Plant staff assessed each of the bids and each of the site milling tests. Nol-Tec was chosen as the preferred mill for the following reasons:

1. Best milling test performance. The Sturtevant mill did not surge during operation like the UCC and Hosokawa mills.
2. Best milling performance guarantee
3. Nol-Tec defined the terminal points as required in the bid process. UCC did not define the terminal points in their proposal, generating concern for change orders.
4. Nol-Tec installed the existing SAM Mitigation systems and is best suited to dovetail the design, operation, and controls of the milling system with the existing SAM Mitigation systems.
5. Nol-Tec and their constructor UGS have continued to provide quality customer service and support on the existing SAM Mitigation systems.

6. Nol-Tec and their constructor UGS propose a strong Project Management and Construction team with past success at Ghent.

The low price bidder, UCC, was not chosen due to the following reasons:

1. The UCC mill amperage continuously surged during the testing period. This leads to concern for the robustness of design and the maximum throughput of reagent the equipment can handle.
2. Lack of detail in the proposal, particularly UCC did not define the terminal points in their proposal, generating concern for change orders.

- **Project Cost**

(\$000's)	GH1	GH3	GH4	TOTAL (all units)
Nol-Tec Cost	\$777	\$777	\$897	\$2,451
Owner's Cost	\$408	\$223	\$173	\$804
Contingency (10%)	\$78	\$78	\$90	\$245
Total	\$1,263	\$1,078	\$1,159	\$3,500

Owner's Costs including Project Management, Plant Support, Demolition Work, Abatement Work, Particle Size Testing Equipment and Spare Parts total \$804k.

A 10% contingency is assessed to the contract price.

- **Assumptions**

Capital expenditures are based on \$3.5M project cost estimate. Cash flow analysis is based on 39-year period. There is no O&M besides calculated Property Tax @ 0.15%.

- **Financial Summary (\$000's)**

Summary by Unit

Capital Investment		2011	2012	2013	Post 2013	Total
Unit 1	#130905	\$1,263				\$1,263
Unit 3	#130907	\$1,078				\$1,078
Unit 4	#130909	\$1,159				\$1,159
Total		\$3,500	\$0	\$0	\$0	\$3,500

EBIT		2011	2012	2013	Post 2013	Total
Unit 1	#130905	\$89	\$133	\$127	\$1,789	\$2,138
Unit 3	#130907	\$67	\$114	\$109	\$1,527	\$1,817
Unit 4	#130909	\$80	\$122	\$117	\$1,642	\$1,961
Total		\$236	\$369	\$353	\$4,958	\$5,916

Financial Detail by Year (\$000s)	2011	2012	2013	Post 2013	Total
1. Capital Investment Proposed	3,300				3,300
2. Cost of Removal Proposed	200				200
3. Total Capital and Removal Proposed (1+2)	3,500	-	-	-	3,500
4. Capital Investment 2011 MTP	16,050				16,050
5. Cost of Removal 2011 MTP					-
6. Total Capital and Removal 2011 MTP (4+5)	16,050	-	-	-	16,050
7. Capital Investment variance to MTP (4-1)	12,750	-	-	-	12,750
8. Cost of Removal variance to MTP (5-2)	(200)	-	-	-	(200)
9. Total Capital and Removal variance to MTP (6-3)	12,550	-	-	-	12,550
10. Project O&M Proposed					-
11. Total Project Proposed (3+10)	3,500	-	-	-	3,500
12. EBIT *	\$236	\$369	\$353	\$4,958	\$5,916

*Refer to tables above and below for further details

Project Results By Unit:

	Unit 1 #130905	Unit 3 #130907	Unit 4 #130909	Total
Capital Expenditure	\$1,263	\$1,078	\$1,159	\$3,500
NPVRR	\$1,574	\$1,335	\$1,443	\$4,352
NPV	\$29	\$24	\$26	\$79
IRR	7%	7%	7%	7%
Discount Rate	6.68%	6.68%	6.68%	6.68%

- **Sensitivities**

SENSITIVITIES		Change in EBIT			Change in NPVRR	Change in NPV
		2011	2012	2013		
Project Costs (capital +/-10%)						
Unit 1	#130905	\$9	\$13	\$13	\$157	\$3
Unit 3	#130907	\$7	\$11	\$11	\$134	\$2
Unit 4	#130909	\$8	\$12	\$12	\$144	\$3
Totals	All Units	\$24	\$37	\$35	\$435	\$3
Project Costs (O&M +/-10%)*		\$0	\$0	\$0	\$0	\$0
Availability Savings (+/-10%)*		\$0	\$0	\$0	\$0	\$0

*These lines include all units

- **Environmental**

New Source Review Evaluation, questions 1-6 (as applicable) must be completed on all investment proposals.		
1	Does the project include any new equipment or component with emissions, result in emissions not previously emitted or cause the unit to exceed any emission limit? If yes, Environmental Affairs is required to review this project. If no, go to Question #2.	NO
2	Question 2: Is the change a like-kind or functionally equivalent replacement under \$500K? If yes, the project is not subject to NSR and no further evaluation is required. If no, go to Question #3.	NO
3	Question 3: Does the equipment change increase the emissions unit's maximum hourly heat input? If yes, Environmental Affairs is required to review this project. If no, go to Question #4.	NO
4	Question 4: Does the equipment change increase the emissions unit's electrical output? If yes, Environmental Affairs is required to review this project. If no, go to Question #5.	NO
5	Question 5: Has the equipment being repaired/replaced been repaired or replaced in the past at this unit or other units in the fleet? If no, Environmental Affairs is required to review this project. If yes, list any known projects and go to Question #6.	NO
6	Question 6: Have there been forced outages or unit de-rates in the past 5 years due to this component? If no, the project is not subject to NSR and no further evaluation is required; if the answer is yes, Environmental Affairs needs to review this project.	NO

- **Risks**

This project sets out to reduce the risks associated with the NOV litigation from DOJ/EPA. Final terms on the SAM NOV have not been negotiated.

Operational risks related to dry sorbent injection are low. The SAM Mitigation technology is in service under minor modifications to the existing Title V Operating Permit. Milling of TRONA has been performed at other utility sites with operational success. Milling of Hydrated Lime has not been performed at other operational sites. Hydrated Lime may react with CO₂ in air and plate on the milling equipment; this issue has not been observed with TRONA.

- **Other Alternatives Considered**

An alternative to having mills installed for dry sorbent injection is to have a wet injection system. Wet and dry reagent injection systems are expected to have similar operations and maintenance labor requirements, however the wet injection system has higher water consumption and water treatment costs. Due to the following reasons, a dry sorbent injection is the recommended technology under the scenario of a 5 ppmvd SAM limit at the stack:

1. Lower capital cost (particularly with respect to the existing systems).
2. Better contractual terms and conditions.
3. Higher confidence in project execution.
4. Dry sorbent injection investment today will reduce equipment costs for the future CATR & NAAQS AQCS upgrades.
5. Reagent utilization is expected to improve with technology advancements on dry systems leveling the reagent cost (main factor in O&M cost) assessment between the two technologies.
6. LG&E and KU have existing dry sorbent injection operating experience.
7. PPL has negative experience with wet sorbent injection at the Montour Plant.

As part of meeting the anticipated Consent Decree SAM limits Project Engineering and the Ghent Plant have also considered:

1. Switch to lower sulfur fuels.
2. Install equipment to manage the boiler outlet temperature.
3. Install low conversion SCR catalyst.
4. Install in-duct mixing equipment to increase reagent utilization.

Conclusions and Recommendation

It is recommended that the Investment Committee approve the Ghent SAM Mitigation Mill Upgrades Project for Units 1, 3 and 4 for \$3,500k. This project expenditure improves SAM Mitigation performance, generates goodwill with regulatory agencies, and provides a step toward sustaining a sub 5 ppm emission at the stack of each Unit.

Upon Investment Committee approval of this project a final contract will be prepared and released to Nol-Tec.

	A	B	C	D	E	F
1	Financial Detail by Year (\$000s)	2011	2012	2013	Post	Total
2					2013	
3	1. Capital Investment Proposed	3,300				3,300
4	2. Cost of Removal Proposed	200				200
5	3. Total Capital and Removal Proposed (1+2)	3,500	-	-	-	3,500
6	4. Capital Investment 2011 MTP	16,050				16,050
7	5. Cost of Removal 2011 MTP					-
8	6. Total Capital and Removal 2011 MTP (4+5)	16,050	-	-	-	16,050
9	7. Capital Investment variance to MTP (4-1)	12,750	-	-	-	12,750
10	8. Cost of Removal variance to MTP (5-2)	(200)	-	-	-	(200)
11	9. Total Capital and Removal variance to MTP (6-3)	12,550	-	-	-	12,550
12	10. Project O&M Proposed					-
13	11. Total Project Proposed (3+10)	3,500	-	-	-	3,500
14						
15	12. EBIT *	\$236	\$369	\$353	\$4,958	\$5,916
16						

From: Schroeder, Andrea </O=LGE/OU=LOUISVILLE/CN=RECIPIENTS/CN=E026206>
Sent: 4/27/2011 11:35:44 AM
To: Conroy, Robert <Robert.Conroy@lge-ku.com>; Crosby, W. Duncan <duncan.crosby@skofirm.com>; Bellar, Lonnie <Lonnie.Bellar@lge-ku.com>; Straight, Scott <Scott.Straight@lge-ku.com>; Saunders, Eileen <Eileen.Saunders@lge-ku.com>; Voyles, John <John.Voyles@lge-ku.com>; Kendrick Riggs <kendrick.riggs@skofirm.com>; Sturgeon, Allyson <Allyson.Sturgeon@lge-ku.com>
Subject: Copy: Discuss supporting documents for Voyles ECR Testimony
Location: LGEC12 North 1 (Cap 15)
Start: Tue 5/3/2011 8:30:00 AM
End: Tue 5/3/2011 10:00:00 AM
Recurrence: (none)
Meeting Status: Not yet responded

Required Attendees: Conroy, Robert; Crosby, W. Duncan; Bellar, Lonnie; Straight, Scott; Saunders, Eileen; Voyles, John; Kendrick Riggs ; Sturgeon, Allyson

The purpose of the meeting is to finalize the documents to be provided as support to John Voyles's testimony in the 2011 ECR Plan filings.

From: Schroeder, Andrea
To: Conroy, Robert; Bellar, Lonnie; Straight, Scott; Saunders, Eileen; Voyles, John; Sturgeon, Allyson; Kendrick Riggs ; Crosby, W. Duncan
Sent: 4/27/2011 11:35:44 AM
Subject: Discuss supporting documents for Voyles ECR Testimony

When: Tuesday, May 03, 2011 8:30 AM-10:00 AM (GMT-05:00) Eastern Time (US & Canada).

Where: LGEC12 North 1 (Cap 15)

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

The purpose of the meeting is to finalize the documents to be provided as support to John Voyles's testimony in the 2011 ECR Plan filings.

From: Conroy, Robert
To: Schroeder, Andrea
Sent: 4/27/2011 11:38:42 AM
Subject: Accepted: Discuss supporting documents for Voyles ECR Testimony

From: Sturgeon, Allyson </O=LGE/OU=LOUISVILLE/CN=RECIPIENTS/CN=N093308>
Sent: 5/5/2011 1:52:36 PM
To: Riggs, Kendrick R. <kendrick.riggs@skofirm.com>; Conroy, Robert <Robert.Conroy@lge-ku.com>; Schram, Chuck <Chuck.Schram@lge-ku.com>; Bellar, Lonnie <Lonnie.Bellar@lge-ku.com>; Wilson, Stuart <Stuart.Wilson@lge-ku.com>; Schroeder, Andrea <Andrea.Schroeder@lge-ku.com>
Subject: Copy: ECR Testimony Review-Chuck Schram-Stuart Wilson
Location: LGEC12 North 1 (Cap 15)
Start: Mon 5/9/2011 3:00:00 PM
End: Mon 5/9/2011 4:30:00 PM
Recurrence: (none)
Meeting Status: Not yet responded

Required Attendees: Riggs, Kendrick R.; Conroy, Robert; Schram, Chuck; Bellar, Lonnie; Wilson, Stuart; Schroeder, Andrea

From: Sturgeon, Allyson
To: Riggs, Kendrick R.; Conroy, Robert; Schroeder, Andrea; Bellar, Lonnie; Schram, Chuck; Wilson, Stuart
Sent: 5/5/2011 1:52:36 PM
Subject: ECR Testimony Review-Chuck Schram-Stuart Wilson

When: Monday, May 09, 2011 3:00 PM-4:30 PM (GMT-05:00) Eastern Time (US & Canada).

Where: LGEC12 North 1 (Cap 15)

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

From: Sturgeon, Allyson
To: Voyles, John; Schram, Chuck; Charnas, Shannon; Bellar, Lonnie; Conroy, Robert; Revlett, Gary; Straight, Scott; Wilson, Stuart; Saunders, Eileen; Schroeder, Andrea; Riggs, Kendrick R.; Crosby, W. Duncan
Sent: 5/9/2011 3:06:06 PM
Subject: Final ECR Application and Testimony Review

When: Wednesday, May 18, 2011 1:00 PM-3:00 PM (GMT-05:00) Eastern Time (US & Canada).

Where: LGEC12 North 1 (Cap 15)

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

From: Walters, Kim </O=LGE/OU=LOUISVILLE/CN=RECIPIENTS/CN=E010358>
Sent: 5/11/2011 9:12:03 AM
To: Schroeder, Andrea <Andrea.Schroeder@lge-ku.com>; Conroy, Robert <Robert.Conroy@lge-ku.com>; Charnas, Shannon <Shannon.Charnas@lge-ku.com>; Bellar, Lonnie <Lonnie.Bellar@lge-ku.com>; 'Riggs, Kendrick R.' <kendrick.riggs@skofirm.com>; LGEC12 West 1201 (Cap 20) <LGEC12West1201Cap20@lge-ku.com>
Subject: Copy: ECR Testimony Review-Charnas
Location: LGEC 1201
Start: Wed 5/11/2011 10:00:00 AM
End: Wed 5/11/2011 11:00:00 AM
Recurrence: (none)
Meeting Status: Not yet responded

Required Attendees: Schroeder, Andrea; Conroy, Robert; Charnas, Shannon; Bellar, Lonnie; 'Riggs, Kendrick R.'; LGEC12 West 1201 (Cap 20)
Optional Attendees: 'Crosby, W. Duncan'

From: Walters, Kim
To: 'Riggs, Kendrick R.'; Conroy, Robert; Schroeder, Andrea; Bellar, Lonnie; Charnas, Shannon; LGEC12 West 1201 (Cap 20)
CC: 'Crosby, W. Duncan'
Sent: 5/11/2011 9:12:03 AM
Subject: ECR Testimony Review-Charnas

When: Wednesday, May 11, 2011 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: LGEC 1201

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

From: Walters, Kim
To: 'Riggs, Kendrick R.'; Conroy, Robert; Schroeder, Andrea; Bellar, Lonnie; LGEC12 West 1201 (Cap 20)
CC: 'Crosby, W. Duncan'
Sent: 5/11/2011 2:34:21 PM
Subject: ECR Testimony Review-Bellar

When: Thursday, May 12, 2011 3:00 PM-4:30 PM
 (UTC-05:00) Eastern Time (US & Canada).
 Where: LGEC 1201/Conference Bridge

Note: The GMT offset above does not reflect daylight saving time adjustments. 3825 Moderator Code: 3497

~~*~*~*~*~*~*~*~*

Conferee code:

Conference Phone Numbers: 2526, LG&E Internal
 7-627-2526, KU On-net
 7+seven
 627-2526, Louisville area local call
 502-627-2526, North America Long Distance
 866-877-4571, North America Toll Free
 0 800 666 0569, Argentina FK Region
 0 800-444-8188, Argentina AG Region

From: Walters, Kim </O=LGE/OU=LOUISVILLE/CN=RECIPIENTS/CN=E010358>
Sent: 5/11/2011 2:34:21 PM
To: 'Riggs, Kendrick R.' <kendrick.riggs@skofirm.com>; Bellar, Lonnie <Lonnie.Bellar@lge-ku.com>; LGEC12 West 1201 (Cap 20) <LGEC12West1201Cap20@lge-ku.com>; Schroeder, Andrea <Andrea.Schroeder@lge-ku.com>; Conroy, Robert <Robert.Conroy@lge-ku.com>
Subject: Copy: ECR Testimony Review-Bellar
Location: LGEC 1201/Conference Bridge
Start: Thu 5/12/2011 3:00:00 PM
End: Thu 5/12/2011 4:30:00 PM
Recurrence: (none)
Meeting Status: Not yet responded

Required Attendees: 'Riggs, Kendrick R.'; Bellar, Lonnie; LGEC12 West 1201 (Cap 20); Schroeder, Andrea; Conroy, Robert
Optional Attendees: 'Crosby, W. Duncan'

Conferee code: 3825 Moderator Code: 3497
Conference Phone Numbers: 2526, LG&E Internal
7-627-2526, KU On-net 7+seven
627-2526, Louisville area local call
502-627-2526, North America Long Distance
866-877-4571, North America Toll Free
0 800 666 0569, Argentina FK Region
0 800-444-8188, Argentina AG Region

From: Schroeder, Andrea
To: Conroy, Robert
Sent: 5/11/2011 5:25:38 PM
Subject: ECR

Robert,

On your desk are several things you've either requested or need to review:

1. FINAL versions of the newspaper notices and bill inserts for KU and LG&E
2. DRAFT bullet point document with key dates, projects and capital dollars, bill impacts, etc.
3. List of Testimony Exhibits by Witness - you requested a table showing John's exhibits, but I expanded it to include all witnesses

Also, I spoke with Darin Carr to confirm posting of the ECR on the corporate website on June 1. He didn't see any issues with the posting or the timing. When the posting is ready, he will add a link to the filing on the homepage to make it easier for interested parties to find.

If you have any questions, please let me know in the morning.

Thanks,
Andrea

Andrea Schroeder
LG&E and KU
State Regulation and Rates
502-627-3651
502-627-3213 (fax)

From: Conroy, Robert
To: Schroeder, Andrea
Sent: 5/11/2011 7:27:27 PM
Subject: RE: ECR

Thanks. We may be revising the Brown numbers. Will know more tomorrow after further discussions in the morning.

Robert M. Conroy

Director, Rates

LG&E and KU Services Company

(502) 627-3324 (phone)

(502) 627-3213 (fax)

(502) 741-4322 (mobile)

robert.conroy@lge-ku.com

From: Schroeder, Andrea
Sent: Wednesday, May 11, 2011 5:26 PM
To: Conroy, Robert
Subject: ECR

Robert,

On your desk are several things you've either requested or need to review:

1. FINAL versions of the newspaper notices and bill inserts for KU and LG&E
2. DRAFT bullet point document with key dates, projects and capital dollars, bill impacts, etc.
3. List of Testimony Exhibits by Witness - you requested a table showing John's exhibits, but I expanded it to include all witnesses

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If you have any questions, please let me know in the morning.

Thanks,
Andrea

Andrea Schroeder
LG&E and KU
State Regulation and Rates
502-627-3651
502-627-3213 (fax)

From: Conroy, Robert
To: Saunders, Eileen
Sent: 5/17/2011 2:44:20 PM
Subject: Diagrams.
Attachments: FGD System.docx; SCR system.docx

Eileen,

Per my voice-mail. Attached are some diagrams that were used for FGDs and SCRs in testimony. Do we have, readily available, something similar for what a PJFF with PAC injection would look like?

Robert M. Conroy

Director, Rates

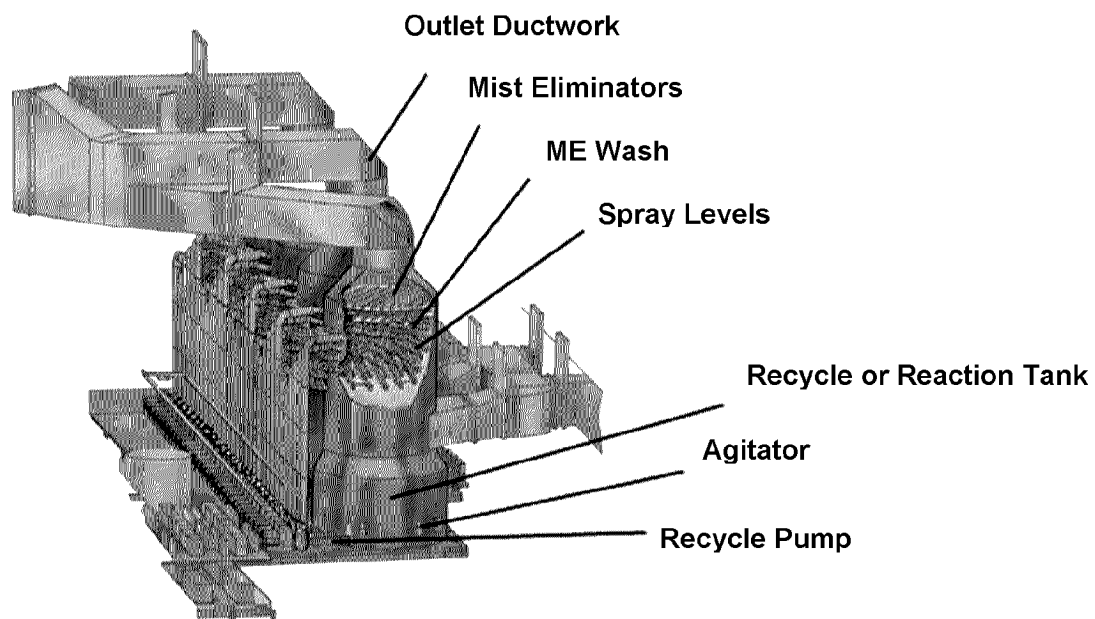
LG&E and KU Services Company

(502) 627-3324 (phone)

(502) 627-3213 (fax)

(502) 741-4322 (mobile)

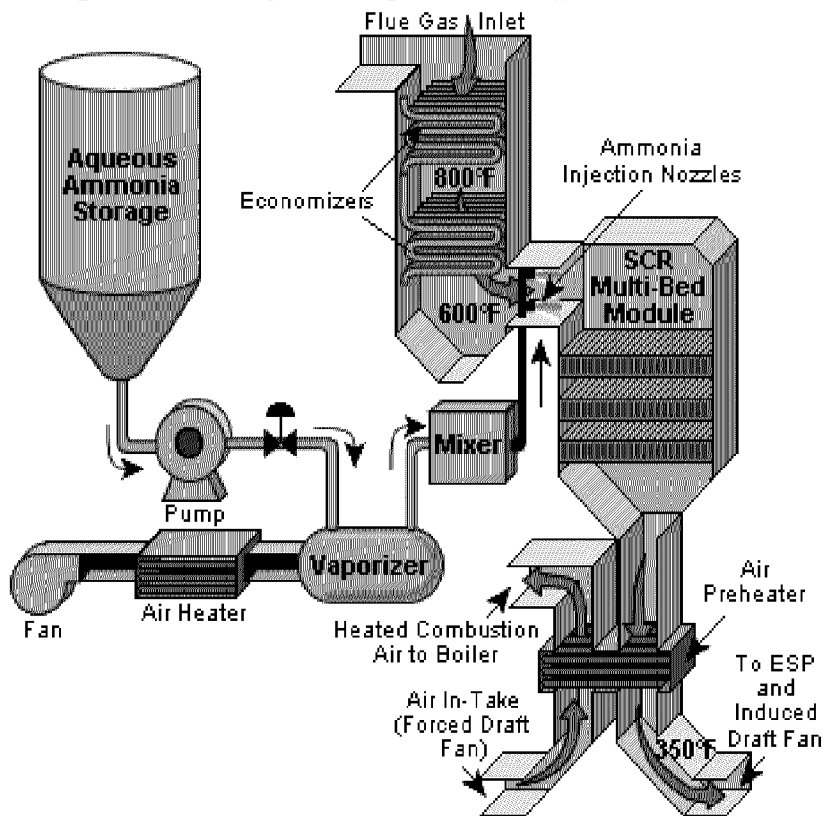
robert.conroy@lge-ku.com



FGD System

SCR system from 2006 ECR filing Testimony.

Figure 7. Example SCR System for NO_x Control in a Boiler



From: Conroy, Robert
To: Saunders, Eileen
Sent: 5/18/2011 7:42:05 AM
Subject: RE: Diagrams.

Thanks.

Robert M. Conroy
Director, Rates
LG&E and KU Services Company
(502) 627-3324 (phone)
(502) 627-3213 (fax)
(502) 741-4322 (mobile)
robert.conroy@lge-ku.com

From: Saunders, Eileen
Sent: Wednesday, May 18, 2011 7:09 AM
To: Conroy, Robert
Subject: FW: Diagrams.
Importance: High

Good Morning Robert,

Please take a look at these diagrams. I agree with Tim, the PJFF diagrams are really good but I am not sure if you will like the PAC injection ones. If you are going to use one, I would choose the one with the black background.

Let me know what you think.

Thanks,

Eileen

From: Hillman, Timothy M. [mailto:HillmanTM@bv.com]
Sent: Tuesday, May 17, 2011 5:35 PM
To: Saunders, Eileen
Cc: Wehrly, M. R.; Lucas, Kyle J.
Subject: RE: Diagrams.
Importance: High

Eileen,

Here are a couple excellent figures to choose from for the PJFF. The PAC/Sorbent Injection figures are so-so, but I've sent you what we have.

Hope this helps,
TIM HILLMAN | Project Manager, Energy
Black & Veatch Corporation | 11401 Lamar Ave., Overland Park, KS 66211
+ 1 913-458-7928 p | HillmanTM@BV.com
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From: Saunders, Eileen [mailto:Eileen.Saunders@lge-ku.com]
Sent: Tuesday, May 17, 2011 3:43 PM

To: Hillman, Timothy M.
Subject: Re: Diagrams.

Thanks!!

From: Hillman, Timothy M. [mailto:HillmanTM@bv.com]
Sent: Tuesday, May 17, 2011 04:23 PM
To: Saunders, Eileen
Cc: Wehrly, M. R. <WehrlyMR@bv.com>; Lucas, Kyle J. <LucasKJ@bv.com>
Subject: RE: Diagrams.

Eileen,

I think we can help. I'm having our guys look at into it now.

Regards,
TIM HILLMAN | Project Manager, Energy
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From: Saunders, Eileen [mailto:Eileen.Saunders@lge-ku.com]
Sent: Tuesday, May 17, 2011 3:14 PM
To: Hillman, Timothy M.
Subject: FW: Diagrams.

Tim,

Our Rates/Regulatory Director has asked me if we can provide a diagram of a PJFF with PAC injection system to include in the rate case. He sent me an example of what has been used in other filings. Can you help me out? We would need something that is easy to read and clearly labeled.

As always, I appreciate your help.

Thanks,

Eileen

From: Conroy, Robert
Sent: Tuesday, May 17, 2011 2:44 PM
To: Saunders, Eileen
Subject: Diagrams.

Eileen,

Per my voice-mail. Attached are some diagrams that were used for FGDs and SCRs in testimony. Do we have, readily available, something similar for what a PJFF with PAC injection would look like?

Robert M. Conroy
Director, Rates
LG&E and KU Services Company
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robert.conroy@lge-ku.com

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From: Saunders, Eileen
To: Conroy, Robert
Sent: 5/18/2011 7:08:49 AM
Subject: FW: Diagrams.
Attachments: PAC Injection System for Hg Reduction.docx; PJFF diagram(s).docx

Good Morning Robert,

Please take a look at these diagrams. I agree with Tim, the PJFF diagrams are really good but I am not sure if you will like the PAC injection ones. If you are going to use one, I would choose the one with the black background.

Let me know what you think.

Thanks,

Eileen

From: Hillman, Timothy M. [mailto:HillmanTM@bv.com]
Sent: Tuesday, May 17, 2011 5:35 PM
To: Saunders, Eileen
Cc: Wehrly, M. R.; Lucas, Kyle J.
Subject: RE: Diagrams.
Importance: High

Eileen,

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TIM HILLMAN | Project Manager, Energy

Black & Veatch Corporation | 11401 Lamar Ave., Overland Park, KS 66211

+ 1 913-458-7928 p | HillmanTM@BV.com

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From: Saunders, Eileen [mailto:Eileen.Saunders@lge-ku.com]
Sent: Tuesday, May 17, 2011 3:43 PM
To: Hillman, Timothy M.
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From: Saunders, Eileen [mailto:Eileen.Saunders@lge-ku.com]

Sent: Tuesday, May 17, 2011 3:14 PM

To: Hillman, Timothy M.

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Eileen

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Sent: Tuesday, May 17, 2011 2:44 PM

To: Saunders, Eileen

Subject: Diagrams.

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Robert M. Conroy

Director, Rates

LG&E and KU Services Company

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(502) 741-4322 (mobile)

robert.conroy@lge-ku.com

NOTE: The extension for all E.ON U.S. e-mail addresses has changed from @eon-us.com to @lge-ku.com. Please update your address book accordingly.

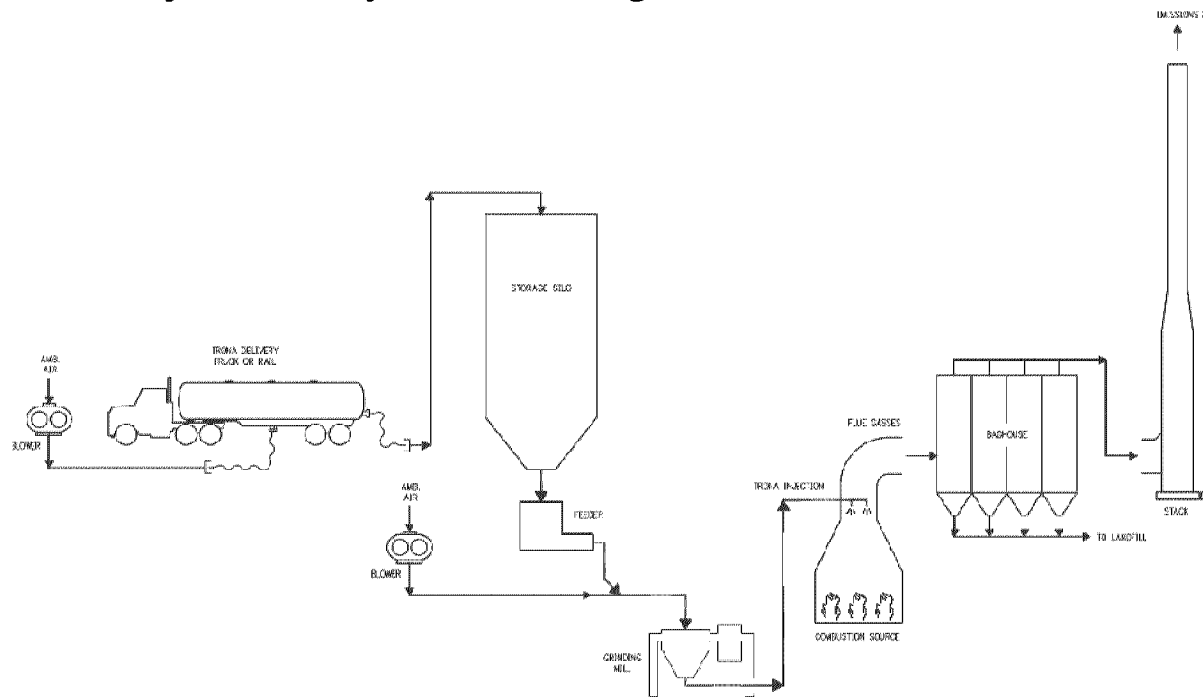
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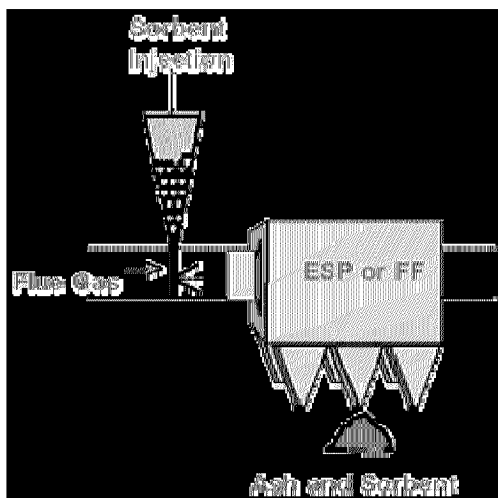
NOTE: The extension for all E.ON U.S. e-mail addresses has changed from @eon-us.com to @lge-ku.com. Please update your address book accordingly.

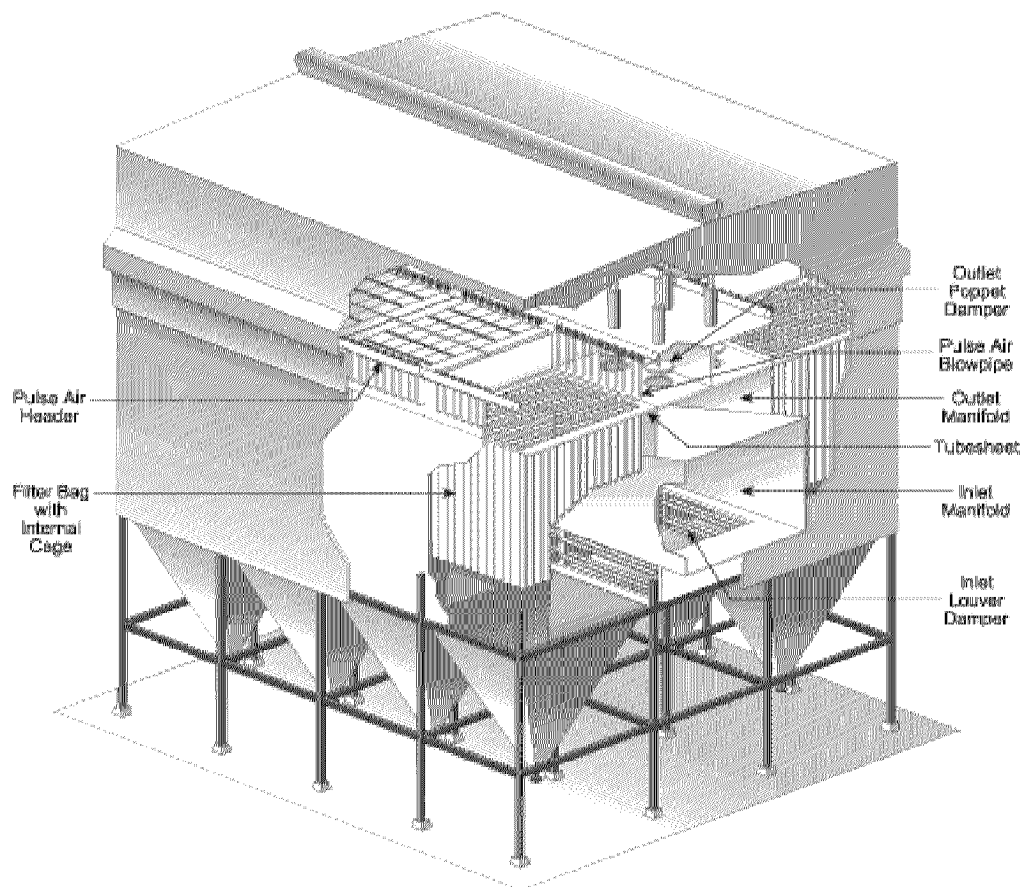
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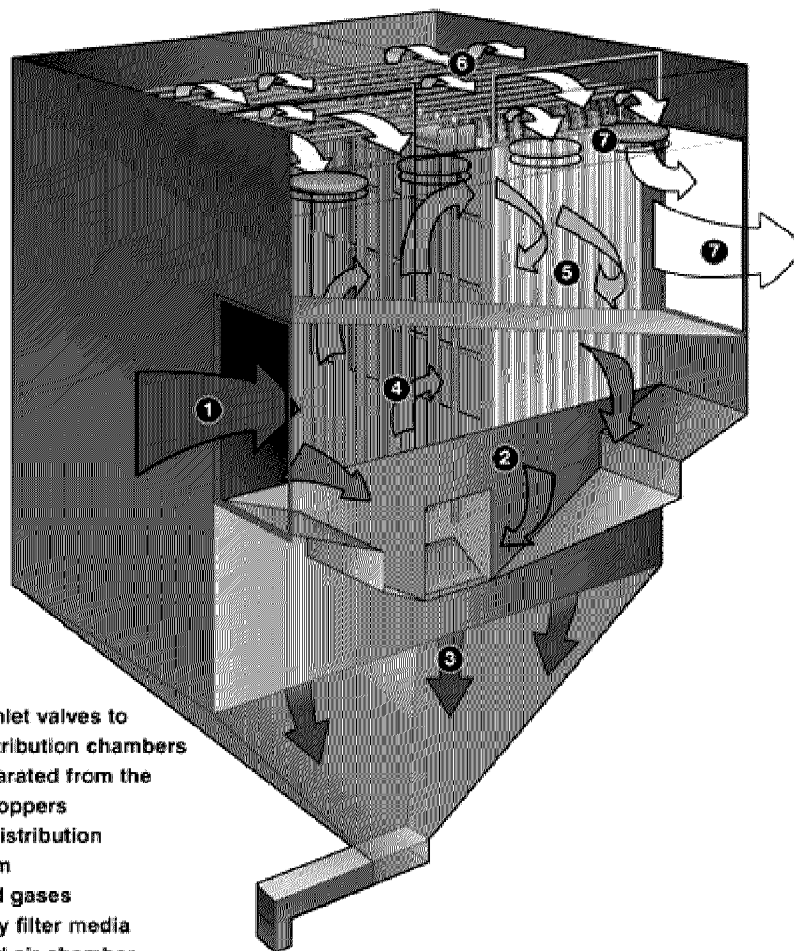
PAC Injection System for Hg Reduction



Sorbent Injection







- ❶ Process gas inlet
- ❷ Gas passes through inlet valves to pre-separator and distribution chambers
- ❸ Heavy particulate separated from the gas for collection in hoppers
- ❹ Gas passes through distribution system giving optimum dispersion of dust and gases
- ❺ Particulate removed by filter media
- ❻ Gas passes to cleaned air chamber
- ❼ Clean gases exit through outlet valves and cleaned air duct

From: Walters, Kim </O=LGE/OU=LOUISVILLE/CN=RECIPIENTS/CN=E010358>
Sent: 5/18/2011 7:58:07 AM
To: Schroeder, Andrea <Andrea.Schroeder@lge-ku.com>; Charnas, Shannon <Shannon.Charnas@lge-ku.com>; Saunders, Eileen <Eileen.Saunders@lge-ku.com>; Straight, Scott <Scott.Straight@lge-ku.com>; 'Riggs, Kendrick R.' <kendrick.riggs@skofirm.com>; Conroy, Robert <Robert.Conroy@lge-ku.com>; Wilson, Stuart <Stuart.Wilson@lge-ku.com>; Revlett, Gary <Gary.Revlett@lge-ku.com>; Schram, Chuck <Chuck.Schram@lge-ku.com>; Bellar, Lonnie <Lonnie.Bellar@lge-ku.com>; Voyles, John <John.Voyles@lge-ku.com>; 'Crosby, W. Duncan' <duncan.crosby@skofirm.com>; LGEC12 West 1202 (Cap 35) <EONUSC12WEST1202@lge-ku.com>
Subject: Copy: Final ECR Application and Testimony Review (Updated with new location)
Location: LGEC 1202
Start: Wed 5/18/2011 1:00:00 PM
End: Wed 5/18/2011 3:00:00 PM
Recurrence: (none)
Meeting Status: Not yet responded

Required Attendees: Schroeder, Andrea; Charnas, Shannon; Saunders, Eileen; Straight, Scott; 'Riggs, Kendrick R.'; Conroy, Robert; Wilson, Stuart; Revlett, Gary; Schram, Chuck; Bellar, Lonnie; Voyles, John; 'Crosby, W. Duncan'; LGEC12 West 1202 (Cap 35)

From: Walters, Kim
To: Voyles, John; Schram, Chuck; Charnas, Shannon; Bellar, Lonnie; Conroy, Robert; Revlett, Gary; Straight, Scott; Wilson, Stuart; Saunders, Eileen; Schroeder, Andrea; 'Riggs, Kendrick R.'; 'Crosby, W. Duncan'; LGEC12 West 1202 (Cap 35)
Sent: 5/18/2011 7:58:07 AM
Subject: Final ECR Application and Testimony Review (Updated with new location)

When: Wednesday, May 18, 2011 1:00 PM-3:00 PM (UTC-05:00) Eastern Time (US & Canada).

Where: LGEC 1202

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

From: Schroeder, Andrea
To: Conroy, Robert
Sent: 5/24/2011 6:54:22 PM
Subject: ECR tariff

Let me know what you get worked out on the ECR tariffs so I can work with Mary to prepare the version with revision marks in the margin to attach to the Applications.

Andrea Schroeder
LG&E and KU
State Regulation and Rates
502-627-3651
502-627-3213 (fax)

From: Conroy, Robert
To: Foxworthy, Carol; Thomson, Robert
CC: Schram, Chuck; Schroeder, Andrea
Sent: 1/17/2011 6:40:57 PM
Subject: FW: Rate impact of EPA proposals
Attachments: KU Rev Req template - environmental retrofits.xlsx; LG&E Rev Req template - environmental retrofits.xlsx; Potential rate impacts of EPA proposals; Rate impact of EPA proposals 01_14_11.xlsx

Carol,

Please review since you worked with Bob the first go around.

Bob,

What is this being used for? How different are the capital cost estimate from what is in the MTP and what Andrea is using to develop ECR bill impacts for the 2011 Plan Filing? We have developed ECR revenue requirement for the plan filing.

Robert M. Conroy
Director, Rates
LG&E and KU Services Company
 (502) 627-3324 (phone)
 (502) 627-3213 (fax)
 (502) 741-4322 (mobile)
 robert.conroy@lge-ku.com

From: Thomson, Robert
Sent: Monday, January 17, 2011 11:06 AM
To: Conroy, Robert
Cc: Schram, Chuck; Foxworthy, Carol
Subject: Rate impact of EPA proposals

Robert,

Back in November we took a first shot at estimating EPA rate impacts at a company and customer-category level (see attached email). We used a revenue-share basis for cost allocation as recommended by Rates & Reg.

Last week John Voyles asked for an update of this approach using more detailed capital cost estimates for the necessary retrofits, and recognizing an accelerated schedule of implementation (everything completed by the end of 2016). The provisional results are shown in the attached file; I have also attached our revenue requirements calculation for each utility (how we convert the capital expenditure profile for each utility to an annual carrying charge).

One thing that has not been updated is the revenue share of each customer category, for each utility (residential, commercial, industrial) in 2016. I have left the 2019 shares unchanged. I would expect that these shares do not change greatly from year to year; however I am still not clear on what the actual 2019 revenue totals (from Rates) represent - presumably some projection of base rate revenues (only)? The relative impact on the different customer classes is of course critically dependent on this projection (cells C162:C164 (LG&E) and C179:C181 (KU) of the Rate Impact tab).

I'd appreciate if the Rates group could take a look at our approach and confirm that you are comfortable with the new results. If you need more details on the composition of the capex totals for each company I can forward those also.

Thanks,

Bob

	A	B	C	D	E	F	G	
1		Revenue Requirements Template: Inputs						
2								
3		Start year	2011					
4		Asset life	25					
5		Include deferred tax impact	Yes					
6		Tax life	15					
7								
8		Capital structure						
9		Debt	50%					
10		Equity	50%					
11								
12		Interest rate (pre-tax)	5.0%					
13		Equity return (post-tax)	10.5%					
14		Tax rate	40%					
15								
16		WACC						
17		Pre-tax	11.3%					
18		Post-tax	6.8%					
19								
20		Property tax	0.25%					
21		Insurance	1.00%					
22								
23							Choose scenario	
24		Total LG&E CapEx	Scenario 1	Scenario 2	Scenario 3	Scenario 4	4	
25			Air (exc SCR)	Air (inc SCR)	Air (inc SCR) + C	Air (exc SCR) + CCP		
26		2010	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	
27		2011	\$18.7	\$44.0	\$45.1	\$19.8	\$19.8	
28		2012	\$33.3	\$168.0	\$182.2	\$47.5	\$47.5	
29		2013	\$78.3	\$262.3	\$263.2	\$79.1	\$79.1	
30		2014	\$276.5	\$368.6	\$395.4	\$303.3	\$303.3	
31		2015	\$379.4	\$379.4	\$534.1	\$534.1	\$534.1	
32		2016	\$81.7	\$81.7	\$230.0	\$230.0	\$230.0	
33								
34			\$869.7	\$1,305.9	\$1,651.8	\$1,215.6		

	A	B
1	Variable O&M	
2		
3	2011	\$0.00
4	2012	\$0.00
5	2013	\$0.00
6	2014	\$0.00
7	2015	\$0.00
8	2016	\$0.00
9	2017	\$0.00
10	2018	\$0.00
11	2019	\$0.00
12	2020	\$0.00
13	2021	\$0.00
14	2022	\$0.00
15	2023	\$0.00
16	2024	\$0.00
17	2025	\$0.00
18	2026	\$0.00
19	2027	\$0.00
20	2028	\$0.00
21	2029	\$0.00
22	2030	\$0.00
23	2031	\$0.00
24	2032	\$0.00
25	2033	\$0.00
26	2034	\$0.00
27	2035	\$0.00
28	2036	\$0.00
29	2037	\$0.00
30	2038	\$0.00
31	2039	\$0.00
32	2040	\$0.00
33	2041	\$0.00
34	2042	\$0.00
35	2043	\$0.00
36	2044	\$0.00
37	2045	\$0.00
38	2046	\$0.00
39	2047	\$0.00
40	2048	\$0.00
41	2049	\$0.00
42	2050	\$0.00
43	2051	\$0.00
44	2052	\$0.00
45	2053	\$0.00
46	2054	\$0.00
47	2055	\$0.00
48	2056	\$0.00
49	2057	\$0.00
50	2058	\$0.00
51	2059	\$0.00

	A	B
52	2060	\$0.00
53	2061	\$0.00
54	2062	\$0.00
55	2063	\$0.00
56	2064	\$0.00
57	2065	\$0.00
58	2066	\$0.00
59	2067	\$0.00
60	2068	\$0.00

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Capital-related Revenue Requirements																
2																	
3			CapEx		Retirements		GBV	Ann Depr	Cum Depr	NBV		Revenue Requirements					
4					(cumulative)							Depr	Interest	Dividend	Tax & Ins	Total	
5	2011	0	20		0		20			20		0	0	0			0
6	2012	1	48		0		67	1	1	67		1	0	2	1		4
7	2013	2	79		0		146	3	3	143		3	2	6	1		11
8	2014	3	303		0		450	6	9	440		6	4	12	4		26
9	2015	4	534		0		984	18	27	956		18	11	38	9		76
10	2016	5	230		0		1,214	39	67	1,147		39	24	83	13		159
11	2017	6	0		0		1,214	49	115	1,099		49	28	99	14		190
12	2018	7	0		0		1,214	49	164	1,050		49	27	93	13		181
13	2019	8	0		0		1,214	49	212	1,001		49	25	87	13		173
14	2020	9	0		0		1,214	49	261	953		49	23	81	12		165
15	2021	10	0		0		1,214	49	309	904		49	22	76	12		157
16	2022	11	0		0		1,214	49	358	856		49	20	70	11		150
17	2023	12	0		0		1,214	49	407	807		49	19	65	10		143
18	2024	13	0		0		1,214	49	455	759		49	17	60	10		136
19	2025	14	0		0		1,214	49	504	710		49	16	55	9		129
20	2026	15	0		0		1,214	49	552	662		49	14	50	9		122
21	2027	16	0		0		1,214	49	601	613		49	13	45	8		114
22	2028	17	0		0		1,214	49	649	564		49	11	40	7		107
23	2029	18	0		0		1,214	49	698	516		49	10	35	7		100
24	2030	19	0		0		1,214	49	746	467		49	9	30	6		94
25	2031	20	0		0		1,214	49	795	419		49	7	26	6		87
26	2032	21	0		0		1,214	49	843	370		49	6	22	5		82
27	2033	22	0		0		1,214	49	892	322		49	6	19	4		78
28	2034	23	0		0		1,214	49	941	273		49	5	17	4		74
29	2035	24	0		0		1,214	49	989	225		49	4	14	3		70
30	2036	25	0		20		1,214	49	1,038	176		49	3	12	3		66
31	2037	26	0		67		1,194	48	1,066	128		48	3	9	2		62
32	2038	27	0		146		1,146	46	1,064	82		46	2	7	1		56
33	2039	28	0		450		1,067	43	1,028	40		43	1	4	1		49
34	2040	29	0		984		764	31	755	9		31	1	2	0		34
35	2041	30	0		1,214		230	9	230	0		9	0	0	0		10
36	2042	31	0		1,214		0	0	0	0		0	0	0	0		0
37	2043	32	0		1,214		0	0	0	0		0	0	0	0		0
38	2044	33	0		1,214		0	0	0	0		0	0	0	0		0
39	2045	34	0		1,214		0	0	0	0		0	0	0	0		0
40	2046	35	0		1,214		0	0	0	0		0	0	0	0		0
41	2047	36	0		1,214		0	0	0	0		0	0	0	0		0
42	2048	37	0		1,214		0	0	0	0		0	0	0	0		0
43	2049	38	0		1,214		0	0	0	0		0	0	0	0		0
44	2050	39	0		1,214		0	0	0	0		0	0	0	0		0
45	2051	40	0		1,214		0	0	0	0		0	0	0	0		0
46	2052	41	0		1,214		0	0	0	0		0	0	0	0		0
47	2053	42	0		1,214		0	0	0	0		0	0	0	0		0

	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
1																
2																
3	Tax Depr	Def Tax	Book Deprecation													
4			2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
5																
6	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	4	1	0	2	2	2	2	2	2	2	2	2	2	2	2	2
8	10	2	0	0	3	3	3	3	3	3	3	3	3	3	3	3
9	28	4	0	0	0	12	12	12	12	12	12	12	12	12	12	12
10	67	11	0	0	0	0	21	21	21	21	21	21	21	21	21	21
11	99	20	0	0	0	0	0	9	9	9	9	9	9	9	9	9
12	100	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	91	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	82	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	76	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	72	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	72	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	72	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	72	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	72	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	71	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	69	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	65	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	54	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	29	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	7	-17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	-17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
1																
2																
3																
4	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
5																
6	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
7	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0
8	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	0
9	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
10	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
11	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM
1																
2																
3																
4	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
5																
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC
1																
2																
3														Tax Depreciation		
4	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068		2012	2013	2014
5																
6	0	0	0	0	0	0	0	0	0	0	0	0		1	2	2
7	0	0	0	0	0	0	0	0	0	0	0	0		0	2	5
8	0	0	0	0	0	0	0	0	0	0	0	0		0	0	4
9	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0

	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR
1															
2															
3															
4	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
5															
6	2	1	1	1	1	1	1	1	1	1	1	1	1	0	0
7	4	4	3	3	3	3	3	3	3	3	3	3	3	1	0
8	8	7	6	5	5	5	5	5	5	5	5	5	5	5	2
9	15	29	26	23	21	19	18	18	18	18	18	18	18	18	18
10	0	27	51	46	41	37	33	32	32	32	32	32	32	32	32
11	0	0	11	22	20	18	16	14	14	14	14	14	14	14	14
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG
1															
2															
3															
4	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
5															
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	32	16	0	0	0	0	0	0	0	0	0	0	0	0	0
11	14	14	7	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV
1															
2															
3															
4	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059
5															
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP
1																				
2																				
3											Tax Depreciation Year									
4	2060	2061	2062	2063	2064	2065	2066	2067	2068	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
5																				
6	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	
7	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	
8	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	
9	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	
10	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	
1																											
2																											
3																											
4	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	
5																											
6	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
7	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
9	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
10	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
11	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
12	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
13	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
14	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
15	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
17	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
18	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
19	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
20	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
21	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
22	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
23	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
24	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
25	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
26	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
27	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
28	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
29	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	

	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	
1																						
2																						
3																						
4	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	
5																						
6	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	
7	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	
8	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
9	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	
10	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	
11	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	
12	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	
13	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
14	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	
15	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
16	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	
17	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	
18	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	
19	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	
20	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	
22	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	
23	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
24	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	
25	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	
26	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
27	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
28	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
29	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
30	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
31	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
32	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
33	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
34	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
35	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
36	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
37	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
38	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
39	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
40	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
41	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
42	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
43	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
44	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
45	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
46	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
47	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
48	2054	43	0		1,214		0	0	0	0		0	0	0	0	0	0
49	2055	44	0		1,214		0	0	0	0		0	0	0	0	0	0
50	2056	45	0		1,214		0	0	0	0		0	0	0	0	0	0
51	2057	46	0		1,214		0	0	0	0		0	0	0	0	0	0
52	2058	47	0		1,214		0	0	0	0		0	0	0	0	0	0
53	2059	48	0		1,214		0	0	0	0		0	0	0	0	0	0
54	2060	49	0		1,214		0	0	0	0		0	0	0	0	0	0
55	2061	50	0		1,214		0	0	0	0		0	0	0	0	0	0
56	2062	51	0		1,214		0	0	0	0		0	0	0	0	0	0
57	2063	52	0		1,214		0	0	0	0		0	0	0	0	0	0
58	2064	53	0		1,214		0	0	0	0		0	0	0	0	0	0
59	2065	54	0		1,214		0	0	0	0		0	0	0	0	0	0
60	2066	55	0		1,214		0	0	0	0		0	0	0	0	0	0
61	2067	56	0		1,214		0	0	0	0		0	0	0	0	0	0
62	2068	57	0		1,214		0	0	0	0		0	0	0	0	0	0
63																	
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	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63				1	3	6	18	39	49	49	49	49	49	49	49	49
64																
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	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	49	49	49	49	49	49	49	49	49	49	49	49	48	46	43	31
64																
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	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64																
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	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	28	67	99	100	91	82	76	72	72	72	72	72	71	69	65
64															
65															
66															
67															
68															
69															
70	ES														
71															
72		1	2	3	4	5	6	7	8	9	10	11	12	13	14
73		20.0%	32.0%	19.2%	11.5%	11.5%	5.8%								
74		14.3%	24.5%	17.5%	12.5%	8.9%	8.9%	8.9%	4.5%						
75		10.0%	18.0%	14.4%	11.5%	9.2%	7.4%	6.6%	6.6%	6.6%	6.6%	3.3%			
76		5.0%	9.5%	8.6%	7.7%	6.9%	6.2%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%
77		3.8%	7.2%	6.7%	6.2%	5.7%	5.3%	4.9%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
78		1.7%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
79		1	2	3	4	5	6	7	8	9	10	11	12	13	14
80		5.0%	9.5%	8.6%	7.7%	6.9%	6.2%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%

	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	54	29	7	0	0	0	0	0	0	0	0	0	0	0	0
64															
65															
66															
67															
68															
69															
70															
71															
72	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
73															
74															
75															
76	5.9%	3.0%													
77	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	2.2%								
78	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
79	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
80	5.9%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64															
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70															
71															
72	30	31													
73															
74															
75															
76															
77															
78	2.6%	2.6%													
79	30	31													
80	0.0%	0.0%													

	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0											
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	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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78																										
79																										
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	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK
48	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
49	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
50	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13
51	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12
52	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
53	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10
54	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9
55	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Proforma Financial Projection																
2																	
3	Income statement			<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
4																	
5	Revenue			4	11	26	76	159	190	181	173	165	157	150	143	136	
6																	
7	Expenses																
8	Fixed O&M			1	1	4	9	13	14	13	13	12	12	11	10	10	
9	Variable O&M			-	-	-	-	-	-	-	-	-	-	-	-	-	
10	Depreciation			1	3	6	18	39	49	49	49	49	49	49	49	49	
11				1	4	10	27	52	63	62	61	61	60	60	59	58	
12																	
13	Operating profit (EBIT)			2	7	16	49	107	127	119	112	104	97	91	84	77	
14																	
15	Interest expense			0	2	4	11	24	28	27	25	23	22	20	19	17	
16																	
17	EBT			2	6	12	38	83	99	93	87	81	76	70	65	60	
18																	
19	Tax			1	2	5	15	33	40	37	35	32	30	28	26	24	
20																	
21	Net Income (NIAC)			1	3	7	23	50	59	56	52	49	45	42	39	36	
22																	
23	Deferred taxes			0	1	2	4	11	20	21	17	13	11	10	9	9	
24																	
25																	
26	Balance sheet			<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
27																	
28	Assets			20	67	143	440	956	1,147	1,099	1,050	1,001	953	904	856	807	759
29																	
30	Liabilities																
31	LT Debt			10	33	71	219	475	565	530	496	463	432	402	373	344	315
32	Cum Deferred Taxes			-	0	1	2	7	18	38	59	75	89	100	109	119	128
33	Equity			10	33	71	219	475	565	530	496	463	432	402	373	344	315
34				20	67	143	440	956	1,147	1,099	1,050	1,001	953	904	856	807	759
35																	
36																	
37	Free Cash Flow to Equity			<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
38																	
39	EBT			-	2	6	12	38	83	99	93	87	81	76	70	65	60
40	Depreciation			-	1	3	6	18	39	49	49	49	49	49	49	49	49
41	Cash Taxes			-	(1)	(2)	(3)	(11)	(22)	(19)	(16)	(18)	(19)	(19)	(19)	(17)	(15)
42	Capital Expenditure			(20)	(48)	(79)	(303)	(534)	(230)	-	-	-	-	-	-	-	-
43	Residual Value			-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	Debt Finance			10	24	40	152	267	115	-	-	-	-	-	-	-	-
45	Debt Repayment (loan principal)			(0)	(2)	(4)	(11)	(25)	(34)	(35)	(33)	(31)	(30)	(29)	(29)	(29)	(29)
46				(10)	(22)	(34)	(140)	(233)	(40)	94	90	85	80	75	71	68	65
47																	
48		NPV at 10.5% DR:		0.000													
49		IRR:		10.5%													

	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1																		
2																		
3	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>
4																		
5	129	122	114	107	100	94	87	82	78	74	70	66	62	56	49	34	10	0
6																		
7																		
8	9	9	8	7	7	6	6	5	4	4	3	3	2	1	1	0	0	0
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	49	49	49	49	49	49	49	49	49	49	49	49	48	46	43	31	9	-
11	58	57	57	56	55	55	54	53	53	52	52	51	50	47	43	31	9	0
12																		
13	71	64	58	51	45	39	33	29	25	22	18	15	12	9	6	3	1	0
14																		
15	16	14	13	11	10	9	7	6	6	5	4	3	3	2	1	1	0	0
16																		
17	55	50	45	40	35	30	26	22	19	17	14	12	9	7	4	2	0	0
18																		
19	22	20	18	16	14	12	10	9	8	7	6	5	4	3	2	1	0	0
20																		
21	33	30	27	24	21	18	15	13	12	10	9	7	6	4	3	1	0	0
22																		
23	9	9	9	8	7	2	(8)	(17)	(19)	(19)	(19)	(19)	(19)	(18)	(17)	(12)	(4)	-
24																		
25																		
26	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>
27																		
28	710	662	613	564	516	467	419	370	322	273	225	176	128	82	40	9	0	-
29																		
30																		
31	287	258	229	200	173	147	127	111	97	82	67	53	38	25	12	3	0	(0)
32	137	146	155	164	170	172	165	148	129	109	90	70	51	33	16	4	-	0
33	287	258	229	200	173	147	127	111	97	82	67	53	38	25	12	3	0	(0)
34	710	662	613	564	516	467	419	370	322	273	225	176	128	82	40	9	0	-
35																		
36																		
37	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>
38																		
39	55	50	45	40	35	30	26	22	19	17	14	12	9	7	4	2	0	0
40	49	49	49	49	49	49	49	49	49	49	49	49	48	46	43	31	9	-
41	(13)	(11)	(9)	(8)	(7)	(10)	(18)	(26)	(27)	(26)	(25)	(24)	(23)	(21)	(19)	(13)	(4)	(0)
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	(29)	(29)	(29)	(28)	(28)	(25)	(20)	(16)	(15)	(15)	(15)	(15)	(14)	(14)	(13)	(9)	(3)	(0)
46	62	59	56	52	49	44	36	29	26	25	23	22	20	18	15	10	3	(0)
47																		
48																		
49																		

	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB
1																			
2																			
3	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>	<u>2047</u>	<u>2048</u>	<u>2049</u>	<u>2050</u>	<u>2051</u>	<u>2052</u>	<u>2053</u>	<u>2054</u>	<u>2055</u>	<u>2056</u>	<u>2057</u>	<u>2058</u>	<u>2059</u>	<u>2060</u>	<u>2061</u>
4																			
5	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6																			
7																			
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12																			
13	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14																			
15	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16																			
17	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18																			
19	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20																			
21	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22																			
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24																			
25																			
26	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>	<u>2047</u>	<u>2048</u>	<u>2049</u>	<u>2050</u>	<u>2051</u>	<u>2052</u>	<u>2053</u>	<u>2054</u>	<u>2055</u>	<u>2056</u>	<u>2057</u>	<u>2058</u>	<u>2059</u>	<u>2060</u>	<u>2061</u>
27																			
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29																			
30																			
31	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35																			
36																			
37	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>	<u>2047</u>	<u>2048</u>	<u>2049</u>	<u>2050</u>	<u>2051</u>	<u>2052</u>	<u>2053</u>	<u>2054</u>	<u>2055</u>	<u>2056</u>	<u>2057</u>	<u>2058</u>	<u>2059</u>	<u>2060</u>	<u>2061</u>
38																			
39	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
47																			
48																			
49																			

	BC	BD	BE	BF	BG	BH	BI
1							
2							
3	<u>2062</u>	<u>2063</u>	<u>2064</u>	<u>2065</u>	<u>2066</u>	<u>2067</u>	<u>2068</u>
4							
5	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6							
7							
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-
12							
13	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14							
15	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16							
17	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18							
19	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20							
21	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22							
23	-	-	-	-	-	-	-
24							
25							
26	<u>2062</u>	<u>2063</u>	<u>2064</u>	<u>2065</u>	<u>2066</u>	<u>2067</u>	<u>2068</u>
27							
28	-	-	-	-	-	-	-
29							
30							
31	(0)	(0)	(0)	(0)	(0)	(0)	(0)
32	0	0	0	0	0	0	0
33	(0)	(0)	(0)	(0)	(0)	(0)	(0)
34	-	-	-	-	-	-	-
35							
36							
37	<u>2062</u>	<u>2063</u>	<u>2064</u>	<u>2065</u>	<u>2066</u>	<u>2067</u>	<u>2068</u>
38							
39	(0)	(0)	(0)	(0)	(0)	(0)	(0)
40	-	-	-	-	-	-	-
41	0	0	0	0	0	0	0
42	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-
46	(0)	(0)	(0)	(0)	(0)	(0)	(0)
47							
48							
49							

	A	B	C	D	E	F	G
1		Revenue Requirements Template: Inputs					
2							
3		Start year	2011				
4		Asset life	25				
5		Include deferred tax impact	Yes				
6		Tax life	15				
7							
8		Capital structure					
9		Debt	50%				
10		Equity	50%				
11							
12		Interest rate (pre-tax)	5.0%				
13		Equity return (post-tax)	10.5%				
14		Tax rate	40%				
15							
16		WACC					
17		Pre-tax	11.3%				
18		Post-tax	6.8%				
19							
20		Property tax	0.25%				
21		Insurance	1.00%				
22							
23							Choose scenario
24		Total LG&E CapEx	Scenario 1	Scenario 2	Scenario 3	Scenario 4	4
25			Air (exc SCR)	Air (inc SCR)	Air (inc SCR) + C	Air (exc SCR) + CCP	
26		2010	\$1.8	\$1.8	\$1.8	\$1.8	\$1.8
27		2011	\$52.6	\$52.6	\$52.8	\$52.8	\$52.8
28		2012	\$231.3	\$234.6	\$237.9	\$234.6	\$234.6
29		2013	\$492.7	\$527.8	\$528.5	\$493.5	\$493.5
30		2014	\$575.1	\$649.7	\$666.8	\$592.2	\$592.2
31		2015	\$346.8	\$447.7	\$533.7	\$432.7	\$432.7
32		2016	\$74.1	\$123.6	\$213.5	\$163.9	\$163.9
33							
34			\$1,774.5	\$2,037.8	\$2,234.9	\$1,971.6	

	A	B
1	Variable O&M	
2		
3	2011	\$0.00
4	2012	\$0.00
5	2013	\$0.00
6	2014	\$0.00
7	2015	\$0.00
8	2016	\$0.00
9	2017	\$0.00
10	2018	\$0.00
11	2019	\$0.00
12	2020	\$0.00
13	2021	\$0.00
14	2022	\$0.00
15	2023	\$0.00
16	2024	\$0.00
17	2025	\$0.00
18	2026	\$0.00
19	2027	\$0.00
20	2028	\$0.00
21	2029	\$0.00
22	2030	\$0.00
23	2031	\$0.00
24	2032	\$0.00
25	2033	\$0.00
26	2034	\$0.00
27	2035	\$0.00
28	2036	\$0.00
29	2037	\$0.00
30	2038	\$0.00
31	2039	\$0.00
32	2040	\$0.00
33	2041	\$0.00
34	2042	\$0.00
35	2043	\$0.00
36	2044	\$0.00
37	2045	\$0.00
38	2046	\$0.00
39	2047	\$0.00
40	2048	\$0.00
41	2049	\$0.00
42	2050	\$0.00
43	2051	\$0.00
44	2052	\$0.00
45	2053	\$0.00
46	2054	\$0.00
47	2055	\$0.00
48	2056	\$0.00
49	2057	\$0.00
50	2058	\$0.00
51	2059	\$0.00

	A	B
52	2060	\$0.00
53	2061	\$0.00
54	2062	\$0.00
55	2063	\$0.00
56	2064	\$0.00
57	2065	\$0.00
58	2066	\$0.00
59	2067	\$0.00
60	2068	\$0.00

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Capital-related Revenue Requirements																
2																	
3			CapEx		Retirements		GBV	Ann Depr	Cum Depr	NBV		Revenue Requirements					
4					(cumulative)							Depr	Interest	Dividend	Tax & Ins	Total	
5	2011	0	53		0		53			53		0	0	0			0
6	2012	1	235		0		287	2	2	285		2	1	5	2		10
7	2013	2	493		0		781	11	14	767		11	7	25	7		50
8	2014	3	592		0		1,373	31	45	1,328		31	19	67	13		130
9	2015	4	433		0		1,806	55	100	1,706		55	33	115	19		222
10	2016	5	164		0		1,970	72	172	1,798		72	42	147	22		283
11	2017	6	0		0		1,970	79	251	1,719		79	44	152	22		297
12	2018	7	0		0		1,970	79	330	1,640		79	41	143	21		283
13	2019	8	0		0		1,970	79	408	1,561		79	38	133	20		270
14	2020	9	0		0		1,970	79	487	1,483		79	36	124	19		258
15	2021	10	0		0		1,970	79	566	1,404		79	33	116	18		246
16	2022	11	0		0		1,970	79	645	1,325		79	31	108	17		234
17	2023	12	0		0		1,970	79	724	1,246		79	28	99	16		223
18	2024	13	0		0		1,970	79	802	1,167		79	26	91	15		211
19	2025	14	0		0		1,970	79	881	1,089		79	24	83	14		200
20	2026	15	0		0		1,970	79	960	1,010		79	21	75	13		188
21	2027	16	0		0		1,970	79	1,039	931		79	19	67	12		176
22	2028	17	0		0		1,970	79	1,117	852		79	17	58	11		165
23	2029	18	0		0		1,970	79	1,196	773		79	14	51	10		154
24	2030	19	0		0		1,970	79	1,275	695		79	12	43	9		144
25	2031	20	0		0		1,970	79	1,354	616		79	11	37	8		135
26	2032	21	0		0		1,970	79	1,433	537		79	9	33	7		128
27	2033	22	0		0		1,970	79	1,511	458		79	8	28	6		121
28	2034	23	0		0		1,970	79	1,590	380		79	7	24	5		115
29	2035	24	0		0		1,970	79	1,669	301		79	6	20	4		109
30	2036	25	0		53		1,970	79	1,748	222		79	5	16	3		102
31	2037	26	0		287		1,917	77	1,772	145		77	3	12	2		94
32	2038	27	0		781		1,682	67	1,604	78		67	2	8	1		78
33	2039	28	0		1,373		1,189	48	1,158	30		48	1	4	1		53
34	2040	29	0		1,806		597	24	590	7		24	0	2	0		26
35	2041	30	0		1,970		164	7	164	0		7	0	0	0		7
36	2042	31	0		1,970		0	0	0	0		0	0	0	0		0
37	2043	32	0		1,970		0	0	0	0		0	0	0	0		0
38	2044	33	0		1,970		0	0	0	0		0	0	0	0		0
39	2045	34	0		1,970		0	0	0	0		0	0	0	0		0
40	2046	35	0		1,970		0	0	0	0		0	0	0	0		0
41	2047	36	0		1,970		0	0	0	0		0	0	0	0		0
42	2048	37	0		1,970		0	0	0	0		0	0	0	0		0
43	2049	38	0		1,970		0	0	0	0		0	0	0	0		0
44	2050	39	0		1,970		0	0	0	0		0	0	0	0		0
45	2051	40	0		1,970		0	0	0	0		0	0	0	0		0
46	2052	41	0		1,970		0	0	0	0		0	0	0	0		0
47	2053	42	0		1,970		0	0	0	0		0	0	0	0		0

	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
1																
2																
3	Tax Depr	Def Tax	Book Deprecation													
4			2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
5																
6	3	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2
7	17	2	0	9	9	9	9	9	9	9	9	9	9	9	9	9
8	51	8	0	0	20	20	20	20	20	20	20	20	20	20	20	20
9	101	18	0	0	0	24	24	24	24	24	24	24	24	24	24	24
10	142	28	0	0	0	0	17	17	17	17	17	17	17	17	17	17
11	157	31	0	0	0	0	0	7	7	7	7	7	7	7	7	7
12	150	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	136	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	126	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	119	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	117	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	116	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	116	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	116	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	116	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	115	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	106	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	85	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	53	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	22	-23	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	5	-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	-32	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	-32	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	-32	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	-32	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	-31	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	-27	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
1																
2																
3																
4	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
5																
6	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0
7	9	9	9	9	9	9	9	9	9	9	9	9	9	0	0	0
8	20	20	20	20	20	20	20	20	20	20	20	20	20	20	0	0
9	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	0
10	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
11	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM
1																
2																
3																
4	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
5																
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC
1																
2																
3														Tax Depreciation		
4	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068		2012	2013	2014
5																
6	0	0	0	0	0	0	0	0	0	0	0	0		3	5	5
7	0	0	0	0	0	0	0	0	0	0	0	0		0	12	22
8	0	0	0	0	0	0	0	0	0	0	0	0		0	0	25
9	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0

	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR
1															
2															
3															
4	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
5															
6	4	4	3	3	3	3	3	3	3	3	3	3	2	0	0
7	20	18	16	15	14	14	14	14	14	14	14	14	14	7	0
8	47	42	38	34	31	29	29	29	29	29	29	29	29	29	15
9	30	56	51	46	41	37	35	35	35	35	35	35	35	35	35
10	0	22	41	37	33	30	27	26	26	26	26	26	26	26	26
11	0	0	8	16	14	13	11	10	10	10	10	10	10	10	10
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG
1															
2															
3															
4	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
5															
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	26	13	0	0	0	0	0	0	0	0	0	0	0	0	0
11	10	10	5	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV
1															
2															
3															
4	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059
5															
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP
1																				
2																				
3											Tax Depreciation Year									
4	2060	2061	2062	2063	2064	2065	2066	2067	2068		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
5																				
6	0	0	0	0	0	0	0	0	0		1	2	3	4	5	6	7	8	9	10
7	0	0	0	0	0	0	0	0	0		0	1	2	3	4	5	6	7	8	9
8	0	0	0	0	0	0	0	0	0		0	0	1	2	3	4	5	6	7	8
9	0	0	0	0	0	0	0	0	0		0	0	0	1	2	3	4	5	6	7
10	0	0	0	0	0	0	0	0	0		0	0	0	0	1	2	3	4	5	6
11	0	0	0	0	0	0	0	0	0		0	0	0	0	0	1	2	3	4	5
12	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	1	2	3	4
13	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	1	2	3
14	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	1	2
15	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	1
16	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0

	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP
1																										
2																										
3																										
4	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
5																										
6	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
7	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
9	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
10	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
11	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
12	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
13	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
14	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
15	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
17	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
18	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
19	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
20	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
21	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
22	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
23	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
24	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
25	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
26	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
27	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
28	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
29	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK
1																					
2																					
3																					
4	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
5																					
6	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
7	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
8	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
9	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
10	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
11	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
12	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
13	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
14	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
15	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
16	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
17	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
18	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
19	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
20	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
22	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
23	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
24	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
25	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
26	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
27	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
28	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
29	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
30	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
31	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
32	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
33	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
34	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
35	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
36	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
37	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
38	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
39	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
40	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
41	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
42	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
43	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
44	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
45	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
46	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
47	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
48	2054	43	0		1,970		0	0	0	0		0	0	0	0	0	0
49	2055	44	0		1,970		0	0	0	0		0	0	0	0	0	0
50	2056	45	0		1,970		0	0	0	0		0	0	0	0	0	0
51	2057	46	0		1,970		0	0	0	0		0	0	0	0	0	0
52	2058	47	0		1,970		0	0	0	0		0	0	0	0	0	0
53	2059	48	0		1,970		0	0	0	0		0	0	0	0	0	0
54	2060	49	0		1,970		0	0	0	0		0	0	0	0	0	0
55	2061	50	0		1,970		0	0	0	0		0	0	0	0	0	0
56	2062	51	0		1,970		0	0	0	0		0	0	0	0	0	0
57	2063	52	0		1,970		0	0	0	0		0	0	0	0	0	0
58	2064	53	0		1,970		0	0	0	0		0	0	0	0	0	0
59	2065	54	0		1,970		0	0	0	0		0	0	0	0	0	0
60	2066	55	0		1,970		0	0	0	0		0	0	0	0	0	0
61	2067	56	0		1,970		0	0	0	0		0	0	0	0	0	0
62	2068	57	0		1,970		0	0	0	0		0	0	0	0	0	0
63																	
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	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63				2	11	31	55	72	79	79	79	79	79	79	79	79
64																
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	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	79	79	79	79	79	79	79	79	79	79	79	79	77	67	48	24
64																
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	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64																
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78																
79																
80																

	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0	0	0	0	0	3	17	51
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79																
80																

TAX (MACRS) DEPRECIATION RAT
 HALF YEAR CONVENTION
 5 Year Property
 7 Year Property
 10 Year Property
 15 Year Property
 20 Year Property
 30 Year Property
 15

	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	101	142	157	150	136	126	119	117	116	116	116	116	115	106	85
64															
65															
66															
67															
68															
69															
70	ES														
71															
72		1	2	3	4	5	6	7	8	9	10	11	12	13	14
73		20.0%	32.0%	19.2%	11.5%	11.5%	5.8%								
74		14.3%	24.5%	17.5%	12.5%	8.9%	8.9%	8.9%	4.5%						
75		10.0%	18.0%	14.4%	11.5%	9.2%	7.4%	6.6%	6.6%	6.6%	6.6%	3.3%			
76		5.0%	9.5%	8.6%	7.7%	6.9%	6.2%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%
77		3.8%	7.2%	6.7%	6.2%	5.7%	5.3%	4.9%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
78		1.7%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
79		1	2	3	4	5	6	7	8	9	10	11	12	13	14
80		5.0%	9.5%	8.6%	7.7%	6.9%	6.2%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%

	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	53	22	5	0	0	0	0	0	0	0	0	0	0	0	0
64															
65															
66															
67															
68															
69															
70															
71															
72	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
73															
74															
75															
76	5.9%	3.0%													
77	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	2.2%								
78	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
79	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
80	5.9%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64															
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66															
67															
68															
69															
70															
71															
72	30	31													
73															
74															
75															
76															
77															
78	2.6%	2.6%													
79	30	31													
80	0.0%	0.0%													

	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP
48	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0											
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	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK
48	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
49	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
50	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13
51	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12
52	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
53	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10
54	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9
55	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Proforma Financial Projection																
2																	
3	Income statement			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
4																	
5		Revenue			10	50	130	222	283	297	283	270	258	246	234	223	211
6																	
7		Expenses															
8		Fixed O&M			2	7	13	19	22	22	21	20	19	18	17	16	15
9		Variable O&M			-	-	-	-	-	-	-	-	-	-	-	-	-
10		Depreciation			2	11	31	55	72	79	79	79	79	79	79	79	79
11					4	18	44	74	94	101	100	99	98	97	96	95	94
12																	
13		Operating profit (EBIT)			6	32	86	148	189	196	183	171	160	149	138	128	117
14																	
15		Interest expense			1	7	19	33	42	44	41	38	36	33	31	28	26
16																	
17		EBT			5	25	67	115	147	152	143	133	124	116	108	99	91
18																	
19		Tax			2	10	27	46	59	61	57	53	50	46	43	40	36
20																	
21		Net Income (NIAC)			3	15	40	69	88	91	86	80	75	70	65	60	55
22																	
23		Deferred taxes			0	2	8	18	28	31	29	23	19	16	15	15	15
24																	
25																	
26	Balance sheet			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
27																	
28		Assets			53	285	767	1,328	1,706	1,798	1,719	1,640	1,561	1,483	1,404	1,325	1,246
29																	
30		Liabilities															
31		LT Debt			26	143	382	659	839	871	815	762	711	662	615	568	521
32		Cum Deferred Taxes			-	0	2	10	29	57	88	117	139	158	174	190	205
33		Equity			26	143	382	659	839	871	815	762	711	662	615	568	521
34					53	285	767	1,328	1,706	1,798	1,719	1,640	1,561	1,483	1,404	1,325	1,246
35																	
36																	
37	Free Cash Flow to Equity			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
38																	
39		EBT			-	5	25	67	115	147	143	133	124	116	108	99	91
40		Depreciation			-	2	11	31	55	72	79	79	79	79	79	79	79
41		Cash Taxes			-	(2)	(8)	(19)	(28)	(31)	(29)	(30)	(31)	(30)	(28)	(25)	(21)
42		Capital Expenditure			(53)	(235)	(493)	(592)	(433)	(164)	-	-	-	-	-	-	-
43		Residual Value			-	-	-	-	-	-	-	-	-	-	-	-	-
44		Debt Finance			26	117	247	296	216	82	-	-	-	-	-	-	-
45		Debt Repayment (loan principal)			(1)	(7)	(20)	(37)	(50)	(55)	(54)	(51)	(49)	(48)	(47)	(47)	(47)
46					(26)	(113)	(225)	(236)	(111)	56	147	139	131	123	117	112	107
47																	
48		NPV at 10.5% DR:			0.000												
49		IRR:			10.5%												

	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1																		
2																		
3	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>
4																		
5	200	188	176	165	154	144	135	128	121	115	109	102	94	78	53	26	7	0
6																		
7																		
8	14	13	12	11	10	9	8	7	6	5	4	3	2	1	1	0	0	0
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	79	79	79	79	79	79	79	79	79	79	79	79	77	67	48	24	7	-
11	93	92	91	90	89	88	87	86	85	84	83	82	79	69	48	24	7	0
12																		
13	107	96	86	75	65	56	48	42	36	31	26	20	15	10	5	2	0	0
14																		
15	24	21	19	17	14	12	11	9	8	7	6	5	3	2	1	0	0	0
16																		
17	83	75	67	58	51	43	37	33	28	24	20	16	12	8	4	2	0	0
18																		
19	33	30	27	23	20	17	15	13	11	10	8	6	5	3	2	1	0	0
20																		
21	50	45	40	35	30	26	22	20	17	14	12	9	7	5	2	1	0	0
22																		
23	15	15	14	11	2	(10)	(23)	(30)	(32)	(32)	(32)	(32)	(31)	(27)	(19)	(10)	(3)	-
24																		
25																		
26	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>
27																		
28	1,089	1,010	931	852	773	695	616	537	458	380	301	222	145	78	30	7	0	-
29																		
30																		
31	427	380	334	289	248	214	186	161	137	114	90	67	44	23	9	2	0	(0)
32	235	250	264	275	277	267	244	215	183	152	120	89	58	31	12	3	0	0
33	427	380	334	289	248	214	186	161	137	114	90	67	44	23	9	2	0	(0)
34	1,089	1,010	931	852	773	695	616	537	458	380	301	222	145	78	30	7	0	-
35																		
36																		
37	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>
38																		
39	83	75	67	58	51	43	37	33	28	24	20	16	12	8	4	2	0	0
40	79	79	79	79	79	79	79	79	79	79	79	79	77	67	48	24	7	-
41	(18)	(15)	(12)	(12)	(18)	(28)	(38)	(43)	(43)	(41)	(39)	(38)	(35)	(30)	(21)	(10)	(3)	(0)
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	(47)	(47)	(47)	(45)	(41)	(34)	(28)	(25)	(24)	(24)	(24)	(24)	(23)	(20)	(14)	(7)	(2)	(0)
46	97	92	87	80	71	60	51	44	41	38	36	33	30	25	17	8	2	(0)
47																		
48																		
49																		

	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB
1																			
2																			
3	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>	<u>2047</u>	<u>2048</u>	<u>2049</u>	<u>2050</u>	<u>2051</u>	<u>2052</u>	<u>2053</u>	<u>2054</u>	<u>2055</u>	<u>2056</u>	<u>2057</u>	<u>2058</u>	<u>2059</u>	<u>2060</u>	<u>2061</u>
4																			
5	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6																			
7																			
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12																			
13	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14																			
15	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16																			
17	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18																			
19	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20																			
21	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22																			
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24																			
25																			
26	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>	<u>2047</u>	<u>2048</u>	<u>2049</u>	<u>2050</u>	<u>2051</u>	<u>2052</u>	<u>2053</u>	<u>2054</u>	<u>2055</u>	<u>2056</u>	<u>2057</u>	<u>2058</u>	<u>2059</u>	<u>2060</u>	<u>2061</u>
27																			
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29																			
30																			
31	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35																			
36																			
37	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>	<u>2047</u>	<u>2048</u>	<u>2049</u>	<u>2050</u>	<u>2051</u>	<u>2052</u>	<u>2053</u>	<u>2054</u>	<u>2055</u>	<u>2056</u>	<u>2057</u>	<u>2058</u>	<u>2059</u>	<u>2060</u>	<u>2061</u>
38																			
39	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
47																			
48																			
49																			

	BC	BD	BE	BF	BG	BH	BI
1							
2							
3	<u>2062</u>	<u>2063</u>	<u>2064</u>	<u>2065</u>	<u>2066</u>	<u>2067</u>	<u>2068</u>
4							
5	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6							
7							
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-
12							
13	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14							
15	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16							
17	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18							
19	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20							
21	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22							
23	-	-	-	-	-	-	-
24							
25							
26	<u>2062</u>	<u>2063</u>	<u>2064</u>	<u>2065</u>	<u>2066</u>	<u>2067</u>	<u>2068</u>
27							
28	-	-	-	-	-	-	-
29							
30							
31	(0)	(0)	(0)	(0)	(0)	(0)	(0)
32	0	0	0	0	0	0	0
33	(0)	(0)	(0)	(0)	(0)	(0)	(0)
34	-	-	-	-	-	-	-
35							
36							
37	<u>2062</u>	<u>2063</u>	<u>2064</u>	<u>2065</u>	<u>2066</u>	<u>2067</u>	<u>2068</u>
38							
39	(0)	(0)	(0)	(0)	(0)	(0)	(0)
40	-	-	-	-	-	-	-
41	0	0	0	0	0	0	0
42	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-
46	(0)	(0)	(0)	(0)	(0)	(0)	(0)
47							
48							
49							

From: Thomson, Robert
To: Conroy, Robert; Foxworthy, Carol
CC: Schram, Chuck
Sent: 11/3/2010 9:41:27 AM
Subject: Potential rate impacts of EPA proposals
Attachments: EPA Emissions - Draft 15 2010_1_10.pptx; Rate impact of EPA proposals 10_22_10.xlsx

Robert & Carol,

Chuck asked me to forward this 'EPA rate impact' file to you, where we have taken one further step from the previous 'combined company' view by allocating the \$542 million incremental revenue requirement (in 2019) between the two utilities.

In the tab "Company allocation" you'll see that we looked at two sets of cost estimates upon which to base the company allocation. At the top of the sheet we took the cost estimates from Slide 11 of a PowerPoint presentation on the potential EPA impact (also attached below), allocating Brown, Ghent and Green River costs to KU and Cane Run, Mill Creek and Trimble 1 costs to LG&E (i.e. assuming that Cane Run is upgraded rather than replaced). This yielded a 38% KU / 62% LG&E split. In the lower half of the sheet we took revised (B&V estimate) costs for Brown, Ghent, Mill Creek and Trimble and assumed that Cane Run would be replaced by a CCCT (allocated 100% to LG&E). This allocation produced a similar result - 34% KU / 66% LG&E. For purposes of illustration we applied the latter $\frac{1}{3}$ / $\frac{2}{3}$ split to the \$542 million (incremental) revenue requirement in 2019 - \$185 million to KU and \$357 million to LG&E - and then proceeded to allocate between customer classes (residential, industrial, commercial) as before, on a revenue share basis (using the revenue projections for 2019 provided by Carol) (see pages 3 & 4 of tab "Rate Impact"). I assume these 2019 revenue projections (by class) represent base rate revenue (only), since the total projected 2019 revenue is lower than 2009 actual (all-inclusive) revenue.

As before, after allocating the \$542 million by company and then by class, we divide the class increments by projected (2019) class sales to derive the \$/kWh 'impact', which is then compared to all-in average \$/kWh revenue in July 2010.

Clearly there are other methodologies that we could apply to justify other allocations; however this simple approach highlights potential (escalating) challenges ahead in squaring joint planning and dispatch with individual asset ownership.

Bob



**Proposed EPA Regulations Will
Increase the Cost of Coal-fired
Electricity**

October 1, 2010

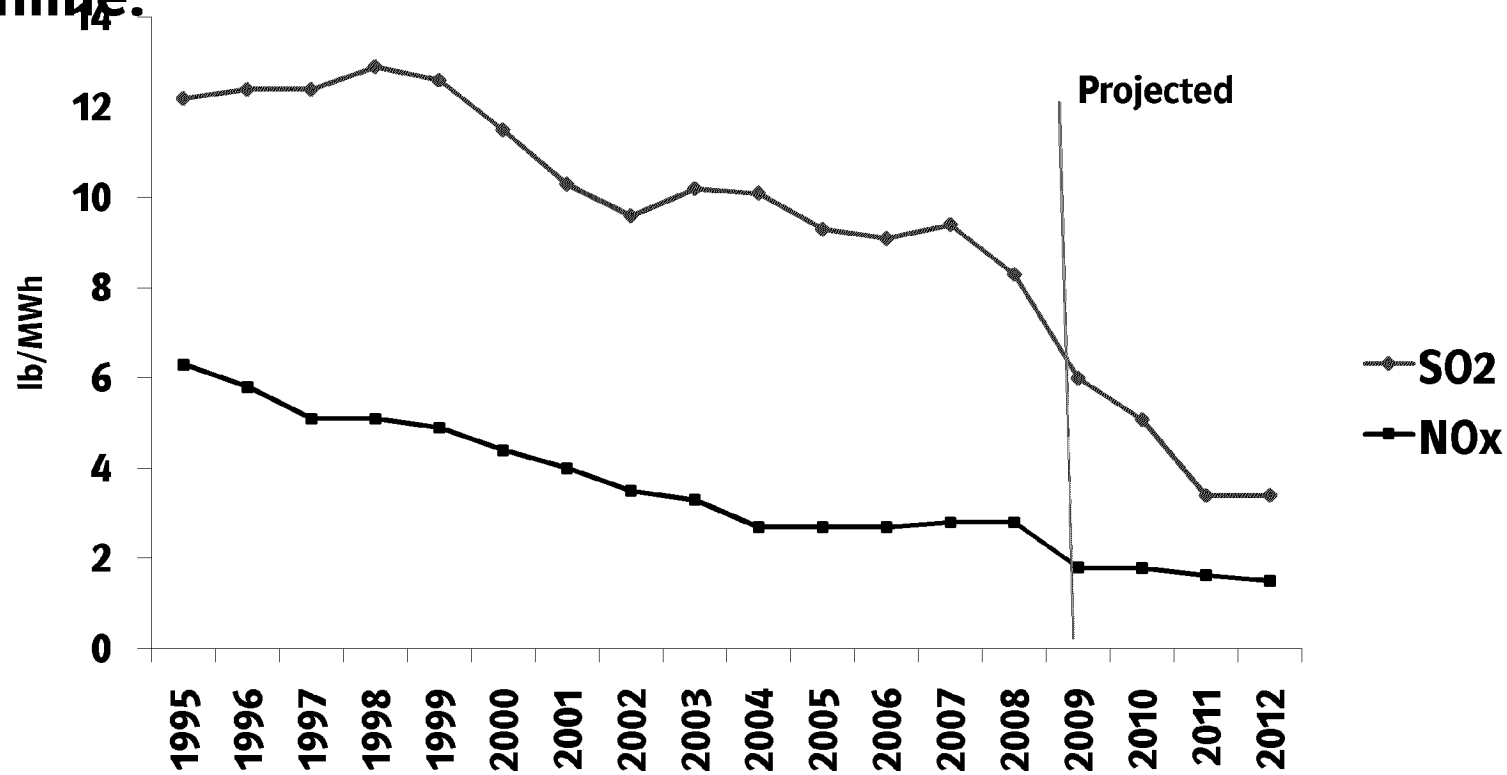


Environmental compliance is a high priority for E.ON U.S.

- **In the 1970's, we pioneered flue gas desulfurization (FGD) or "scrubber" technology used to control SO₂.**
- **LG&E and KU and their customers have spent \$2.6 billion on emission controls since the 1970's.**
- **Our new Trimble County 2 generating unit will be among the cleanest coal-fired power plants in the U.S., as evidenced by the receipt of the advance coal technology tax incentive for efficiency and environmental controls. Control Technology installed on TC2 includes the following:**
 - **Selective Catalytic Reduction (SCR)**
 - **Dry Electrostatic Precipitator (ESP)**
 - **Powdered Activated Carbon Injection**
 - **Fabric Filter Baghouse**
 - **Wet Flue Gas Desulfurization (WFGD)**
 - **Wet Electrostatic Precipitator (WESP)**



Since 1995, LG&E/KU coal SO₂ emission rates have been reduced by 50%; NO_x emission rates by 70%. Further reductions are expected as TC2 and Brown FGD are online.





Unprecedented number of proposed regulations

EPA is proposing an unprecedented number of regulations that will have a major impact on coal-fired utilities and their customers. The significant risks are as follows –

- **Absence of a comprehensive and coordinated federal strategy compels implementation on a piecemeal basis.**
- **Reversal of prior regulatory determinations will generate large economic impacts.**
- **Inconsistent deadlines will cause unnecessary compliance costs.**
- **Short deadlines are compromising state and utility efforts to prepare proper implementation plans.**
- **Practical implication: We will be proposing construction projects without benefit of final regulations in order to meet federal deadlines for compliance because of long lead time in fabrication and construction.**



New air regulations

National Ambient Air Quality Standards (NAAQS) - lowers the SO₂, NO_x, ozone, and Particulate Matter (PM) standards which will make Louisville a "nonattainment" area subject to federal sanctions.

Clean Air Transport Rule (CATR) - aimed at reducing air quality problems (SO₂, NO_x, ozone and PM) in the eastern U.S.

Maximum Achievable Control Technology (MACT) for Hazardous Air Pollutants (HAP) - new federal focus on plant by plant controls (as opposed to a system basis) will dramatically increase the cost of reducing mercury and HAP other emissions.

Carbon Dioxide (CO₂) Best Available Control Technology (BACT) - EPA will require implementation of BACT despite the consensus that no commercial scale control technology is currently available.



New coal combustion products and water regulations

Coal Combustion Residuals (CCR) - (Ash ponds and landfills) - Despite past EPA determinations that CCPs do not pose any significant human health or environmental risks, EPA is considering designation of CCPs as a "hazardous waste" subject to extensive requirements or modifying current "non-hazardous" rules with more stringent requirements. Both approaches will increase costs.

Water quality - EPA is revising cooling water withdrawal and water discharge guidelines and standards.



The new EPA regulations will significantly impact Kentucky's electric customers

The new regulations are focused on coal-fired power plants.

95% of Kentucky's electricity is provided by coal.

LG&E/KU will comply with any new EPA regulations in the most cost effective manner possible, but the cost increase will be significant.



Short compliance timelines likely once final rules are issued

National Ambient Air Quality Standards (NAAQS) for NO₂ and SO₂ – Issued: February - June 2010; Compliance: 2016, 2017 respectively

Clean Air Transport Rule (CATR) – Projected Final Rule: June 2011; Compliance: January 2012 & January 2014

Maximum Achievable Control Technology (MACT) for Hazardous Air Pollutants (HAP) – Projected Final Rule: November 2011; Compliance: January 2015

Carbon Dioxide (CO₂) Best Available Control Technology (BACT) – Issued: May 2010; Compliance: January 2011

Coal Combustion Residuals (CCR) – Alternatives Proposed: May 2010; Projected Final Rule: uncertain; Compliance: within 5 years of final rule

Water quality – Water withdrawal Projected Issue date: December 2010; Water Discharge Projected Issue date: 2012; Compliance: Uncertain



LG&E/KU's coal fleet already has a high level of control technologies, but some additions or enhancements will be required

	Commercial Dates	Net Summer Capacity (MW)	Cooling Towers	SO ₂			NO _x		
				FGD Install	Emission Rate (lb/MMBtu)	Emission Control Efficiency	SCR Install	Emission Rate (lb/MMBtu)	Emission Control Efficiency
Brown	1957 - 1971	684	Yes	2010 (3 units)	0.12	98%	2012 (1 Unit)	0.38	90%
Ghent	1974 - 1984	1,918	Yes	2000 - 2009 (4 units)	0.17	94 - 98%	2003 - 2004 (3 Units)	0.12	80 - 90%
Green River	1954 - 1959	163	No	None	2.99	None	None	0.40	None
Tyrone	1953	71	No	None	1.33	None	None	0.50	None
Cane Run	1962 - 1969	563	No	1976 - 1978 (3 units)	0.59	90 %	None	0.34	None
Mill Creek	1972 - 1982	1,472	Yes	1978 - 1982 (4 Units)	0.49	90 - 92%	2003 (2 Units)	0.16	85 - 87%
Trimble County 1	1990	383	Yes	1990	0.12	98 %	2002	0.06	80 - 85%
Trimble County 2	2010	549	Yes	2010	0.10	98 %	2010	0.04	90%

- All units have precipitators
- Mill Creek 1 does not have a cooling tower.
- Trimble 1 and 2 capacities reflects 75% ownership



Technology options for addressing air emissions are known - except for CO₂

Technology	Targeted Pollutant	Regulation Addressed	Removal Rate	LG&E/KU Estimated Cost (\$/kW)	LG&E/KU Estimated Cost (\$/quantity captured)
Flue Gas Desulfurization (FGD)	SO ₂	CATR, NAAQS	98%	450 - 900	5,000 - 11,000 /ton
Selective Catalytic Reduction (SCR)	NO _x	CATR, NAAQS	90%	300 - 500	4,000 - 8,000 /ton
FGD + SCR (Hg Co-Benefit)	Hg	MACT for HAP	60-70%	Co-benefit	Co-benefit
Fabric Filter & PAC* Injection (with FGD and SCR)	Hg	MACT for HAP	25-35%	200 - 500	150,000 - 450,000 /lb
Sorbent Injection	SO ₃ , Hg	MACT for HAP	TBD	15 - 30	TBD
<i>Replace Coal Plant with Gas Plant</i>					
Combined Cycle Combustion Turbine	All	All	NA	950 - 1,250	NA

* Powdered Activated Carbon



Despite low emission levels at most stations, sizable investments will be required to meet new air regulations

Station	Capacity (Net MW)	Options to Address Regulations	Cost (\$M)
Brown	684	SCR, Fabric Filter Baghouse, PAC Injection, Lime Injection	350 - 450
Ghent	1,918	SCR, Fabric Filter Baghouse, PAC Injection	950 - 1,150
Green River	163	SCR, Fabric Filter Baghouse, PAC Injection	150 - 250
Cane Run	563	FGD, SCR, Fabric Filter Baghouse, PAC Injection, Lime Injection	850 - 950
Mill Creek	1,472	FGD, SCR, Fabric Filter Baghouse, Electrostatic Precipitator (ESP), PAC Injection, Lime Injection, Ammonia	1,250 - 1,900
Trimble County	932	Fabric Filter Baghouse, PAC Injection	150 - 200
<i>Replace Coal Plant with Gas Plant</i>			
Potential CCCT Replacement	640	600 MW 2x1 Combined Cycle Combustion Turbine	600 - 800

Note: does not include any investment to control for CO₂



Proposed EPA CCR regulations would require dry storage and closing of existing ash ponds

Retrofit or close 21 ponds, including 10 ash ponds and 11 process/runoff ponds across the fleet (8 stations)

Build landfills for future storage (Brown, Cane Run, Ghent, Mill Creek, Trimble County)

Construct new process water ponds for each operating site

Closing ponds and moving to dry storage will cost an estimated \$700 million over the next ten years under the proposed CCR rules for non-hazardous waste. Additional closure costs will be incurred upon plant retirements.



Increased water withdrawal and discharge requirements

Potential federal EPA water regulations would impose more stringent requirements on water withdrawal and discharges

Potential addition of cooling towers or discharge water treatment systems

- **Stations without cooling towers: Cane Run, Green River, Mill Creek 1, Tyrone**

New treatment technologies are being developed for water discharges but are not widely deployed in utility operations

- **Physical-chemical treatment and/or biological treatment systems may be required**
- **Cost of \$40 - \$300 million for each site pending final regulations, specific standards, and treatment volumes**



Estimate at least \$4 billion in capital costs needed over next ten years

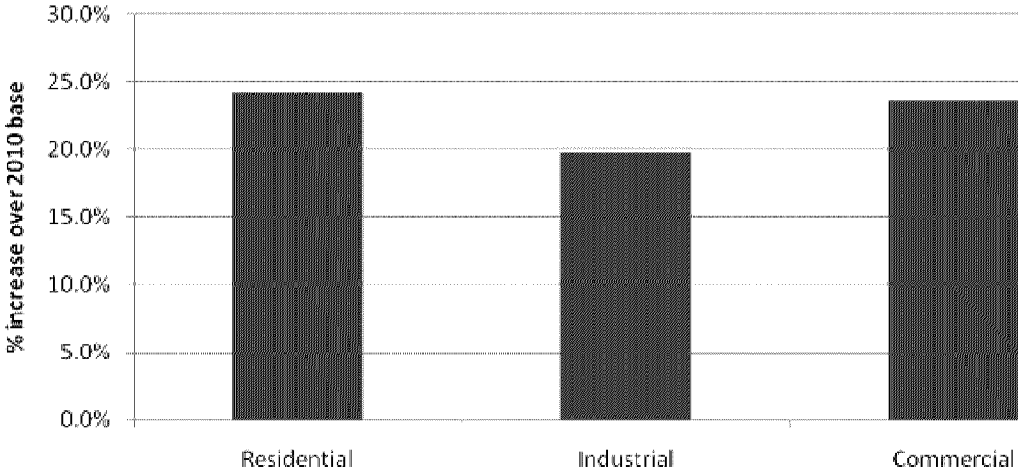
Regulation	Capital (\$M)	Annual Operating Expense (\$M)
Air	3,300 - 5,000	150 - 300
CCP	700	<i>To be determined</i>
Water	<i>To be determined</i>	



Cumulative impact of proposed EPA regulations will significantly increase electricity rates

Due to these regulations, by 2019 rates could increase by over 20% and almost \$550 million annually.

Rate Impact of proposed EPA regulations



Note: This calculation does not include potential compliance costs for water regulations, Renewal Portfolio Standards (RPS) or carbon dioxide (CO2) reductions.



Challenges and risks related to proposed regulations

Short time horizon – some air regulations would require compliance as early as 2012 with the most costly regulations beginning in 2014 and 2015. This allows insufficient time to design facilities, obtain necessary federal and state regulatory approvals, contract with vendors and install equipment.

Potential impacts on system reliability and transmission system – one consequence of the proposed regulations will be the retirement of significant amounts of coal-fired generation across the region.

Rapid cost escalation – industry rush to achieve compliance will drive up labor and material costs (repeat of 2008) and make it difficult to obtain labor and equipment at any price.

CO₂ policy could change – uncertainty associated with future CO₂ legislation could result in less than optimal long-term investment decisions.



What should the KPSC expect?

Requests for approval of environmental compliance projects perhaps before the federal regulations are finalized

Compressed construction timelines due to compliance timing

Additional compliance costs to meet implementation dates of federal rules

More frequent requests for rate increases due to substantial upward cost pressures caused by compliance with the federal regulations



What is the Company doing?

Evaluating multiple compliance alternatives

Participating in industry efforts to advocate more reasonable regulations and timelines

Communicating our concerns directly with EPA on proposed regulations

Educating elected officials, regulators and customers on the effect of the federal regulations will have on their electric bill

	A	B	C
1		SO2	NOx
2	1995	12.2	6.3
3	1996	12.4	5.8
4	1997	12.4	5.1
5	1998	12.9	5.1
6	1999	12.6	4.9
7	2000	11.5	4.4
8	2001	10.3	4
9	2002	9.6	3.5
10	2003	10.2	3.3
11	2004	10.1	2.7
12	2005	9.3	2.7
13	2006	9.1	2.7
14	2007	9.4	2.8
15	2008	8.3	2.8
16	2009	6	1.8
17	2010	5.1	1.8
18	2011	3.4	1.6
19	2012	3.4	1.5

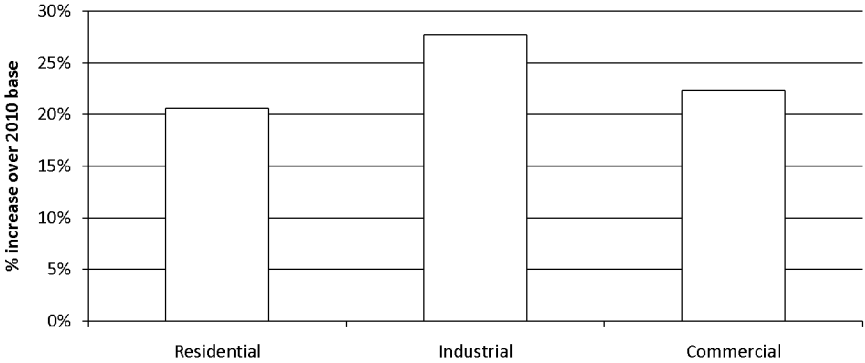
	A	B	C	D	E	F	G	H	I	J	K	L
1	Sales, Revenue and Average Unit Rates (per Utility Financial Reports)											
2												
3			2008				2009				July 2010	
4												
5	LG&E		kWh	\$	\$/kWh		kWh	\$	\$/kWh		kWh	\$
6	Residential Sales		4,206,410,526	301,021,844	0.072		4,095,806,460	310,340,508	0.076		593,573,594	44,858,233
7	Small Commercial and Industrial Sales		1,392,051,319	111,125,344	0.080		1,344,247,037	110,666,000	0.082		154,077,990	12,849,498
8	Large Commercial Sales		2,331,119,751	137,250,087	0.059		2,272,699,738	141,774,569	0.062		232,055,516	14,896,275
9	Large Industrial Sales		2,850,830,033	138,314,832	0.049		2,412,418,682	124,099,537	0.051		252,296,232	13,405,650
10	Public Street and Highway Lighting		61,974,931	6,896,924	0.111		59,012,932	6,806,105	0.115		3,705,924	534,560
11	Other Sales to Public Authorities		1,240,681,990	68,992,558	0.056		1,220,972,154	71,502,523	0.059		126,045,463	7,458,653
12	Total - Ultimate Consumers		12,083,068,550	763,601,589	0.063		11,405,157,003	765,189,241	0.067		1,361,754,719	94,002,869
13												
14												
15	KU (including ODP)		kWh	\$	\$/kWh		kWh	\$	\$/kWh		kWh	\$
16	Residential Sales		6,802,830,237	462,085,548	0.068		6,594,160,339	480,270,452	0.073		679,264,592	51,758,876
17	Commercial Sales		4,713,879,375	316,402,846	0.067		4,518,585,415	320,837,831	0.071		445,622,461	32,224,752
18	Industrial Sales		5,125,141,555	268,939,540	0.052		4,867,629,386	267,669,673	0.055		506,098,071	28,765,346
19	Mine Power		870,237,299	50,316,630	0.058		784,985,635	48,322,690	0.062		49,166,234	3,444,565
20	Public Street and Highway Lighting		57,575,377	10,014,050	0.174		53,938,858	10,185,756	0.189		4,245,108	942,854
21	Other Sales to Public Authorities		1,572,082,501	93,273,848	0.059		1,524,112,658	95,587,730	0.063		150,438,149	9,267,928
22	Municipal Pumping		76,854,641	4,760,365	0.062		69,094,357	4,532,294	0.066		5,711,572	379,950
23	Refunds							(469,231)				
24	Total - Ultimate Consumers		19,218,600,985	1,205,792,827	0.063		18,412,506,648	1,226,937,195	0.067		1,840,546,187	126,784,273
25												
26												
27	Combined Company		kWh	\$	\$/kWh		kWh	\$	\$/kWh		kWh	\$
28	Residential		11,009,240,763	763,107,392	0.069		10,689,966,799	790,610,959	0.074		1,272,838,186	96,617,110
29	Industrial		8,846,208,887	457,571,002	0.052		8,065,033,703	440,091,901	0.055		807,560,537	45,615,561
30	Commercial / Other		11,446,219,885	748,716,021	0.065		11,062,663,149	761,892,807	0.069		1,121,902,183	78,554,472
31	Total - Ultimate Consumers		31,301,669,535	1,969,394,416	0.063		29,817,663,651	1,992,126,436	0.067		3,202,300,906	220,787,142
32												
33												
34	KU											
35	Residential										679,264,592	51,758,876
36	Industrial										555,264,305	32,209,911
37	Commercial / Other										606,017,290	42,815,485
38												
39	LGE											
40	Residential										593,573,594	44,858,233
41	Industrial										252,296,232	13,405,650
42	Commercial / Other										515,884,893	35,738,986

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5	\$/kWh
6	0.076
7	0.083
8	0.064
9	0.053
10	0.144
11	0.059
12	0.069
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15	\$/kWh
16	0.076
17	0.072
18	0.057
19	0.070
20	0.222
21	0.062
22	0.067
23	
24	0.069
25	
26	
27	\$/kWh
28	0.076
29	0.056
30	0.070
31	0.069
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35	0.076
36	0.058
37	0.071
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40	0.076
41	0.053
42	0.069

	A	B	C	D	E	F	G
1	2011 MTP Sales Forecast						
2							
3	2019 Forecasted Billed Sales by Revenue Class (GWh)						
4							
5		Residential	Industrial	Commercial	- Ultimate Consumers	Municipals	Total sales
6	KU	6,841	6,473	7,056	20,370	2,176	22,546
7	LG&E	4,435	2,868	5,978	13,281		13,281
8	Total KY	11,276	9,341	13,034	33,651	2,176	35,827
9							
10	ODP	419	224	332	975		975
11	Total	11,695	9,565	13,366	34,626	2,176	36,802
12							
13	Commercial includes Public Authority, Street Lighting, and Municipal Pumping						
14	Industrial includes Mine Power						
15	Source: 20100621_LF Results_0304D03.docx						

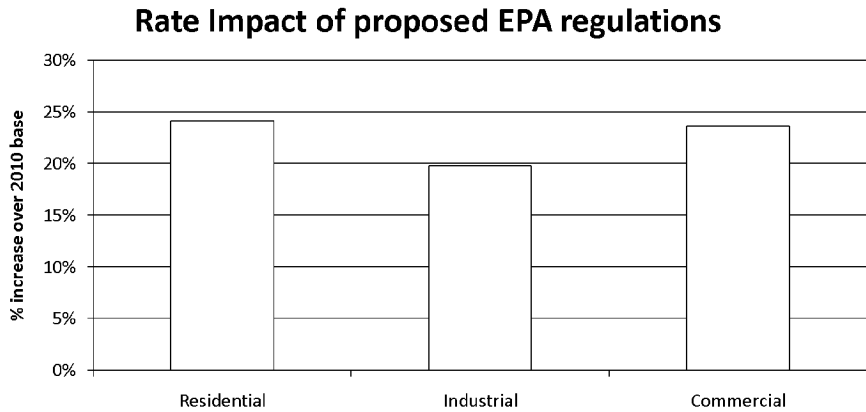
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Rate impact of environmental compliance costs												
2													
3	1. Cost allocation on Sales Share Basis (Combined Company, Total Retail Sales)												
4													
5	Incremental revenue requirement in 2019			\$542 million									
6													
7	July 2010 Sales, Revenue and Average Rates					Forecasted sales in 2019			Cost allocation (\$M)		Rate adder (\$/kWh)		
8													
9		Sales (GWh)		Revenue	Rates (\$/kWh)		GWh	Share					
10	Residential	1,273	40%	\$96,617,110	0.076		11,695	34%	\$183	0.016			
11	Industrial	808	25%	\$45,615,561	0.056		9,565	28%	\$150	0.016			
12	Commercial	1,122	35%	\$78,554,472	0.070		13,366	39%	\$209	0.016			
13		3,202		220,787,142	0.069		34,626	100%	\$542				
14													
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Rate Impact of proposed EPA regulations



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7	Rate increase over 2010 base	
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10	21%	
11	28%	
12	22%	
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33													
34	2. Cost allocation on Revenue Share Basis (Combined Company, Total Retail Sales)												
35													
36	Incremental revenue requirement in 2019			\$542 million									
37													
38	<i>Cost allocation</i>		2019 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
39	Residential		\$485 million		40%		\$214 million						
40	Industrial		\$242 million		20%		\$107 million						
41	Commercial/Other		\$501 million		41%		\$221 million						
42			\$1,228				\$542						
43													
44	<i>Rate impact</i>		2019 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010			Percent Change			
45	Residential		11,695		\$0.018		\$0.076			24%			
46	Industrial		9,565		\$0.011		\$0.056			20%			
47	Commercial/Other		13,366		\$0.017		\$0.070			24%			
48													
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	A	B	C	D	E	F	G	H	I	J	K	L	M
145	Rate Impact by Company												
146													
147	Cost allocation on revenue share basis, retail sales only												
148													
149	(i) LG&E												
150													
151	Incremental revenue requirement in 2019			\$357 million									
152													
153	<i>Cost allocation</i>		2019 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
154	Residential		\$235 million		40%		\$143 million						
155	Industrial		\$94 million		16%		\$57 million						
156	Commercial/Other		\$260 million		44%		\$158 million						
157			\$588				\$357						
158													
159	<i>Rate impact</i>		2019 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010					Percent Change	
160	Residential		4,435		\$0.032		\$0.076					43%	
161	Industrial		2,868		\$0.020		\$0.053					37%	
162	Commercial/Other		5,978		\$0.026		\$0.069					38%	
163			13,281										
164													
165													
166	(ii) KU												
167													
168	Incremental revenue requirement in 2019			\$185 million									
169													
170	<i>Cost allocation</i>		2019 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
171	Residential		\$250 million		39%		\$72 million						
172	Industrial		\$148 million		23%		\$43 million						
173	Commercial/Other		\$242 million		38%		\$70 million						
174			\$640				\$185						
175													
176	<i>Rate impact</i>		2019 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010					Percent Change	
177	Residential		7,260		\$0.010		\$0.076					13%	
178	Industrial		6,697		\$0.006		\$0.058					11%	
179	Commercial/Other		7,388		\$0.009		\$0.071					13%	
180			21,345										
181													
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	A	B	C	D	E	F	G	H	I	J	K	L	M																
183	Rate Impacts Summary																												
184		LG&E	KU	Combined																									
185	Residential	43%	13%	24%																									
186	Industrial	37%	11%	20%																									
187	Commercial	38%	13%	24%																									
188																													
189																													
190	Rate Impact of Proposed EPA Regulations																												
191	<table border="1" style="display: none;"> <caption>Rate Impact of Proposed EPA Regulations Data</caption> <thead> <tr> <th>Sector</th> <th>LG&E (%)</th> <th>KU (%)</th> <th>Combined (%)</th> </tr> </thead> <tbody> <tr> <td>Residential</td> <td>43</td> <td>13</td> <td>24</td> </tr> <tr> <td>Industrial</td> <td>37</td> <td>11</td> <td>20</td> </tr> <tr> <td>Commercial</td> <td>38</td> <td>13</td> <td>24</td> </tr> </tbody> </table>				Sector	LG&E (%)	KU (%)	Combined (%)	Residential	43	13	24	Industrial	37	11	20	Commercial	38	13	24									
Sector					LG&E (%)	KU (%)	Combined (%)																						
Residential					43	13	24																						
Industrial					37	11	20																						
Commercial					38	13	24																						
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1	Total Company ECR Revenue Requirements, 2019 (FW Model BV.xls; ECRRevenues)								Questions					
2		Total		Jurisdictional					What is the source of 2019 revenues in Rate Impact tab? Represents					
3	LGE	\$541	million	\$481	million				Why is total 2019 EPA-related revenue requirement \$760 million (vs					
4	KU	\$329	million	\$286	million				Why are "jurisdictional" costs used to calculate impacts based on re					
5									Check - allocation shares, cells d31:d33 (correction)					
6	Capital Expenditure for New EPA Regulations, total (CapEx Rollforward BV.xls; Capex B&V, rows 6-20)													
7	LGE	\$2,815	million	66%										
8	KU	\$1,456	million	34%										
9														
10	Total Capital Expenditures for ECR Recovery, per LTP (FW Model BV.xls; ECRRevenues)													
11	LGE	\$2,995	million											
12	KU	\$1,901	million											
13														
14	Percent of total ECR expenditures related to new regulations:													
15	LGE	94.0%												
16	KU	76.6%												
17														
18	ECR Revenue Requirement related to new EPA regulations:													
19		Total		Jurisdictional										
20	LGE	\$508.57	million	\$452.17				67%						
21	KU	\$252.02	million	\$219.16				33%						
22														
23	Rate Impact of ECR revenue requirement, based on percent of revenue estimates													
24	LGE	July 2010 Revenues			Forecast 2019	Rate Impact								
25	Residential	\$ 44,858,233	47.7%	\$215.78	4,435.00	0.0486528								
26	Industrial	\$ 13,405,650	14.3%	\$64.48	2,868.00	0.0224837								
27	Commercial/Other	\$ 35,738,986	38.0%	\$171.91	5,978.00	0.0287571								
28		\$ 94,002,869												
29														
30	KU	July 2010 Revenues			Forecast 2019	Rate Impact								
31	Residential	\$ 51,758,876	40.8%	\$89.47	6,841.00	0.0130783								
32	Industrial	\$ 32,209,911	25.4%	\$55.68	6,473.00	0.0086014								
33	Commercial/Other	\$ 42,815,485	33.8%	\$74.01	7,056.00	0.0104889								
34		\$ 126,784,273												
35														
36														

	AA	AB	AC	AD	AE	AF	AG	AH
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2	base rate revenue only?							
3	\$542 million shown in Rate Impact tab)							
4	venue shares, and "total" costs used to calculate impacts based on demand shares							
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	A	B	C	D	E	F	G	H	I	V	W	X	Y	Z
37														
38	Rate Impact of ECR revenue requirement, based on demand allocation													
39	LGE total ECR revenue requirement for new regulation:				\$508.57	million								
40	Demands, per 2008 rate case cost of service study													
41		Peak		Intermediate		Base								
42	Residential	1,314,970	49.8%	692,749	39.0%	197,877	21.6%							
43	Industrial	417,687	15.8%	680,875	38.3%	413,717	45.2%							
44	Commercial/Other	908,226	34.4%	403,280	22.7%	302,899	33.1%							
45														
46	Demand Allocator	0.5078		0.1532		0.3389								
47														
48	ECR costs by demand	\$258.25		\$77.91		\$172.35								
49														
50	ECR costs to classes										Total			
51	Residential	\$128.59		\$30.38		\$37.29	\$196.26							
52	Industrial	\$40.85		\$29.85		\$77.97	\$148.67							
53	Commercial/Other	\$88.82		\$17.68		\$57.09	\$163.59							
54							\$508.52							
55														
56														
57	Estimated Peak Dem	2008 COS load factor	2019 sales	2019 NCP, MW	Rate Impact									
58	Residential		4,435		\$0.044 per kWh									
59	Industrial	69.8%	2,868	469	\$2.64 per kw-month									
60	Commercial/Other	54.3%	5,978	1,256	\$1.09 per kw-month									
61														
62														
63	Rate Impact of ECR revenue requirement, based on demand allocation													
64	KU total ECR revenue requirement for new regulation:				\$252.02	million								
65	Demands, per 2008 rate case cost of service study													
66		Peak		Intermediate		Base								
67	Residential	1,565,459	36.0%	1,896,227	44.5%	258,530	17.7%							
68	Industrial	901,997	20.8%	776,586	18.2%	475,925	32.6%							
69	Commercial/Other	1,463,426	33.7%	1,250,642	29.3%	583,314	40.0%							
70	Wholesale	413,276	9.5%	340,623	8.0%	140,494	9.6%							
71														
72	Demand Allocator	0.5078		0.1532		0.3389								
73														
74	ECR costs by demand	\$127.97		\$38.61		\$85.41								
75														
76	ECR costs to classes										Total			
77	Residential	\$46.12		\$17.17		\$15.14	\$78.43							
78	Industrial	\$26.57		\$7.03		\$27.87	\$61.48							
79	Commercial/Other	\$43.11		\$11.32		\$34.16	\$88.60							
80	Wholesale	\$12.17		\$3.08		\$8.23	\$23.49							

	AA	AB	AC	AD	AE	AF	AG	AH
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81								\$251.99						
82														
83	Estimated Peak Dema	08 COS load factor	2019 sales	2019 NCP, MW	Rate Impact									
84	Residential		6,841		\$0.011	per kWh								
85	Industrial	0.42979	6,473	1,719.27	\$0.30	per kw-month								
86	Commercial/Other	0.62918	7,056	1,280.21	\$0.58	per kw-month								
87	Wholesale	0.55226	2,176	449.79	\$0.44	per kw-month								

	A	B	C	D	E	F	G	H	I
1	Capital Expenditures for EPA Compliance								
2									
3	Station		MW		Capital expenditure required (\$ million)				
4					Min	Max	Expected		\$/kW
5	Brown	KU	684	SCR, Fabric Filter Baghouse, PAC Injection, Lime Injection	350	450	400		585
6	Ghent	KU	1,918	SCR, Fabric Filter Baghouse, PAC Injection	950	1,150	1,050		547
7	Green River	KU	163	SCR, Fabric Filter Baghouse, PAC Injection	150	250	200		1,227
8	Cane Run	LG&E	563	FGD, SCR, Fabric Filter Baghouse, PAC Injection, Lime Injec	850	950	900		1,599
9	Mill Creek	LG&E	1,472	FGD, SCR, Fabric Filter Baghouse, Electrostatic Precipitator	1,250	1,900	1,575		1,070
10	Trimble 1	LG&E	932	Fabric Filter Baghouse, PAC Injection	150	200	175		188
11			5,732		3,700	4,900	4,300		750
12									
13	KU assets		2,765		1,450	1,850	1,650		38%
14	LG&E assets		2,967		2,250	3,050	2,650		62%
15									
16	CCCT replacement		640	600 MW 2x1 Combined Cycle Combustion Turbine	600	800	700		1,094
17					4,300	5,700	5,000		
18									
19									
20									
21	Alternative CapEx Allocation								
22				Expected CapEx (\$ million)					
23	Brown	KU		389					
24	Ghent	KU		909					
25	Mill Creek	LG&E		1645					
26	Trimble	LG&E		166					
27									
28	CCCT replacement	LG&E		700					
29									
30	KU share			1298	34%				
31	LG&E share			2511	66%				
32				3809	100%				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Projection of Muni revenues (from LTP model - 2011-20)														
2															
3	2011-2020 LTP (Final)		2011	2012	2013	2014	2015	2016	2017	2018	2019				
4	Non-Fuel Base Rates		61.6	62.2	62.8	63.4	64.0	64.6	65.2	65.8	66.5				
5	Fuel (Base + FAC)		51.3	53.5	54.6	58.8	59.8	66.3	67.5	72.3	78.0				
6	Base Rate Increases		2.1	8.9	15.6	18.9	23.1	29.6	37.9	44.4	47.2				
7															
8	FERC Revenues (\$MMs-excl Misc Charges)		115.0	124.6	132.9	141.1	146.8	160.5	170.6	182.6	191.7			32.6	Increase from
9											0.0		CO2		
10															
11	2011-2020 LTP (Preliminary Draft used in EPA regulations presentation)	2011	2011	2012	2013	2014	2015	2016	2017	2018	2019				
12	Non-Fuel Base Rates	46.2	47.3	49.5	50.4	50.9	51.8	52.2	52.5	52.9	53.3				
13	Fuel (Base + FAC)	47.7	49.4	55.3	58.2	58.0	55.9	60.3	62.4	66.1	70.7				
14	Base Rate Increases	4.3	10.5	15.8	21.3	28.2	37.4	47.6	58.5	68.9	75.7				
15															
16	FERC Revenues (\$MMs-excl Misc Charges)		107.2	120.6	129.9	137.1	145.0	160.1	173.3	187.8	199.8			40.7	
17											0.0		CO2		
18															
19	2010-2019 LTP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019				
20	Non-Fuel Base Rates	46.2	47.3	49.5	50.4	50.9	51.8	52.2	52.5	52.9	53.3				
21	Fuel (Base + FAC)	47.7	49.4	55.3	58.4	58.9	57.3	59.6	61.7	64.7	68.2				
22	Base Rate Increases	5.1	13.2	19.6	24.6	30.2	37.3	44.2	49.4	52.3	54.0				
23															
24	FERC Revenues (\$MMs-excl Misc Charges)	99.0	110.0	124.3	133.4	140.0	146.4	156.0	163.6	169.8	175.5				
25											(16.5)		CO2		
26															
27															
28	Projected 2019 Muni sales (GWh)	2,176													
29	EPA-related increase (\$/kWh) in 2019	\$0.0150													
30															
31		2008	2009	2010	Jul-10										
32	Revenue from sales to Munis (\$ million)	91.9	91.2	62.2	12.6										
33	Muni sales (GWh)	1,971	1,848	1,177	199										
34	Unit revenue from sales to Munis (\$/kWh)	\$0.0466	\$0.0493	\$0.0529	\$0.0633										
35															
36	EPA-related impact in 2019 as % of 2010 unit revenue			28%											
37															
38															
39	KU MUNICIPALS - 2010 RATES														
40	AVERAGE COST PER MWH FOR POWER USED DURING THE MONTH LISTED - BILL DUE DATE TWO MONTHS LATER														
41															
42		Jan	Feb	Mar	Apr	May	Jun	Jul	YTD						
43															
44	Barbourville	\$50.72	\$49.84	\$51.27	\$49.66	\$54.56	\$57.25	\$59.93	\$53.32						

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45	Bardstown	\$51.04	\$49.62	\$48.69	\$49.54	\$53.11	\$55.30	\$58.60	\$52.27						
46	Bardwell	\$52.35	\$50.39	\$49.73	\$52.65	\$58.43	\$58.96	\$61.83	\$54.91						
47	Benham	\$57.26	\$54.45	\$60.03	\$58.96	\$57.57	\$59.68	\$63.20	\$58.74						
48	Berea	\$52.22	\$51.43	\$52.74	\$48.46	\$53.33	\$56.42	\$59.17	\$53.40						
49	Corbin	\$51.07	\$49.75	\$50.50	\$51.16	\$55.84	\$58.37	\$60.80	\$53.93						
50	Falmouth	\$51.83	\$52.09	\$51.85	\$52.38	\$61.19	\$63.03	\$65.48	\$56.84						
51	Frankfort	\$50.38	\$49.81	\$49.35	\$49.48	\$53.95	\$56.05	\$59.06	\$52.58						
52	Madisonville	\$50.30	\$48.39	\$47.28	\$50.33	\$53.84	\$55.82	\$58.90	\$52.12						
53	Nicholasville	\$50.42	\$49.17	\$49.16	\$47.90	\$52.04	\$54.88	\$58.94	\$51.79						
54	Paris	\$39.04	\$36.78	\$36.32	\$30.93	\$35.76	\$45.98	\$45.99	\$38.69						
55	Providence	\$50.94	\$49.62	\$49.90	\$51.47	\$58.47	\$58.27	\$60.87	\$54.22						
56															
57	Average All Muni's	\$50.63	\$49.28	\$49.73	\$49.41	\$54.01	\$56.67	\$59.40	\$52.73						
58	Average All Muni's except Paris	\$51.68	\$50.41	\$50.95	\$51.09	\$55.67	\$57.64	\$60.62	\$54.01						
59	Avg All Muni's except Benham & Paris	\$51.13	\$50.01	\$50.05	\$50.31	\$55.47	\$57.44	\$60.36	\$53.54						

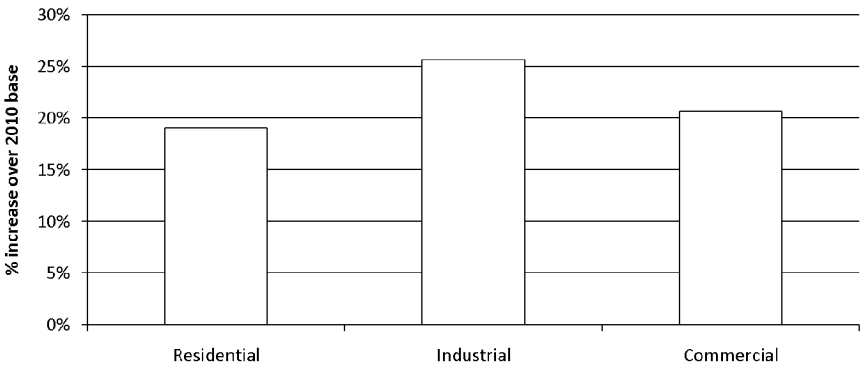
	A	B	C	D	E	F	G	H	I	J	K	L
1	Sales, Revenue and Average Unit Rates (per Utility Financial Reports)											
2												
3			June-05				July-05				July 2010	
4												
5	LG&E		kWh	\$	\$/kWh		kWh	\$	\$/kWh		kWh	\$
6	Residential Sales		4,206,410,526	301,021,844	0.072		4,095,806,460	310,340,508	0.076		593,573,594	44,858,233
7	Small Commercial and Industrial Sales		1,392,051,319	111,125,344	0.080		1,344,247,037	110,666,000	0.082		154,077,990	12,849,498
8	Large Commercial Sales		2,331,119,751	137,250,087	0.059		2,272,699,738	141,774,569	0.062		232,055,516	14,896,275
9	Large Industrial Sales		2,850,830,033	138,314,832	0.049		2,412,418,682	124,099,537	0.051		252,296,232	13,405,650
10	Public Street and Highway Lighting		61,974,931	6,896,924	0.111		59,012,932	6,806,105	0.115		3,705,924	534,560
11	Other Sales to Public Authorities		1,240,681,990	68,992,558	0.056		1,220,972,154	71,502,523	0.059		126,045,463	7,458,653
12	Total - Ultimate Consumers		12,083,068,550	763,601,589	0.063		11,405,157,003	765,189,241	0.067		1,361,754,719	94,002,869
13												
14												
15	KU (including ODP)		kWh	\$	\$/kWh		kWh	\$	\$/kWh		kWh	\$
16	Residential Sales		6,802,830,237	462,085,548	0.068		6,594,160,339	480,270,452	0.073		679,264,592	51,758,876
17	Commercial Sales		4,713,879,375	316,402,846	0.067		4,518,585,415	320,837,831	0.071		445,622,461	32,224,752
18	Industrial Sales		5,125,141,555	268,939,540	0.052		4,867,629,386	267,669,673	0.055		506,098,071	28,765,346
19	Mine Power		870,237,299	50,316,630	0.058		784,985,635	48,322,690	0.062		49,166,234	3,444,565
20	Public Street and Highway Lighting		57,575,377	10,014,050	0.174		53,938,858	10,185,756	0.189		4,245,108	942,854
21	Other Sales to Public Authorities		1,572,082,501	93,273,848	0.059		1,524,112,658	95,587,730	0.063		150,438,149	9,267,928
22	Municipal Pumping		76,854,641	4,760,365	0.062		69,094,357	4,532,294	0.066		5,711,572	379,950
23	Refunds							(469,231)				
24	Total - Ultimate Consumers		19,218,600,985	1,205,792,827	0.063		18,412,506,648	1,226,937,195	0.067		1,840,546,187	126,784,273
25												
26												
27	Combined Company		kWh	\$	\$/kWh		kWh	\$	\$/kWh		kWh	\$
28	Residential		11,009,240,763	763,107,392	0.069		10,689,966,799	790,610,959	0.074		1,272,838,186	96,617,110
29	Industrial		8,846,208,887	457,571,002	0.052		8,065,033,703	440,091,901	0.055		807,560,537	45,615,561
30	Commercial / Other		11,446,219,885	748,716,021	0.065		11,062,663,149	761,892,807	0.069		1,121,902,183	78,554,472
31	Total - Ultimate Consumers		31,301,669,535	1,969,394,416	0.063		29,817,663,651	1,992,126,436	0.067		3,202,300,906	220,787,142
32												
33												
34	KU											
35	Residential										679,264,592	51,758,876
36	Industrial										555,264,305	32,209,911
37	Commercial / Other										606,017,290	42,815,485
38											1,840,546,187	126,784,273
39	LGE											
40	Residential										593,573,594	44,858,233
41	Industrial										252,296,232	13,405,650
42	Commercial / Other										515,884,893	35,738,986
43											1,361,754,719	94,002,869

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5	\$/kWh			
6	0.076			
7	0.083			
8	0.064			
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10	0.144			
11	0.059			
12	0.069			
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15	\$/kWh			
16	0.076			
17	0.072			
18	0.057			
19	0.070			
20	0.222			
21	0.062			
22	0.067			
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24	0.069			
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27	\$/kWh			
28	0.076		January-00	January-00
29	0.056		January-00	January-00
30	0.070		January-00	January-00
31	0.069			
32				
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35	0.076		January-00	January-00
36	0.058		January-00	January-00
37	0.071		January-00	January-00
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40	0.076		January-00	January-00
41	0.053		January-00	January-00
42	0.069		January-00	January-00
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	A	B	C	D	E	F	G
1	2011 MTP Sales Forecast						
2							
3	2016 Forecasted Billed Sales by Revenue Class (GWh)						
4							
5		Residential	Industrial	Commercial	- Ultimate Consumers	Municipals	Total sales
6	KU	6,560	6,607	6,768	19,935	2,116	22,051
7	LG&E	4,277	2,821	5,692	12,790		12,790
8	Total KY	10,837	9,428	12,460	32,725	2,116	34,841
9							
10	ODP	414	217	321	952		952
11	Total	11,251	9,645	12,781	33,677	2,116	35,793
12							
13	Commercial includes Public Authority, Street Lighting, and Municipal Pumping						
14	Industrial includes Mine Power						
15	Source: 20100621_LF Results_0304D03.docx						

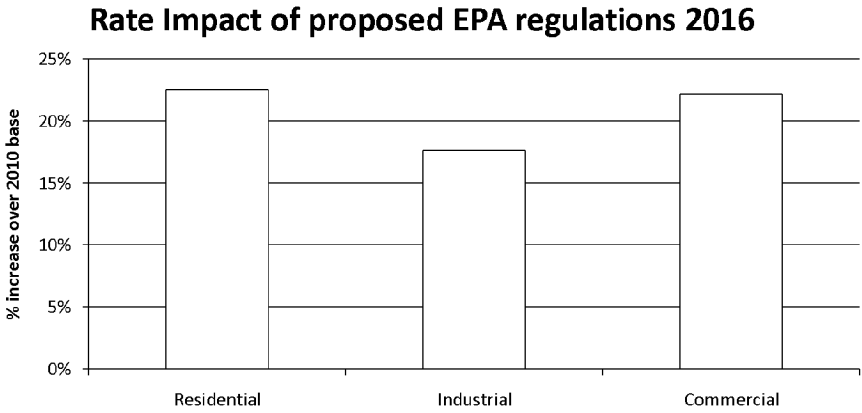
	A	B	C	D	E	F	G	H	I	J	K	L	M	
1	Rate impact of environmental compliance costs													
2														
3	Choose scenario 4													
4														
5	2016 Revenue Requirements (\$ million)						Scenarios							
6		January-00	January-00	January-00	January-00		January-00	Air compliance (exc SCR)						
7	LG&E	\$265	\$306	\$338	\$297		January-00	Air compliance (inc SCR)						
8	KU	\$134	\$197	\$252	\$190		January-00	Air compliance (inc SCR) + CCP compliance						
9	Combined Co	\$399	\$503	\$590	\$487		January-00	Air compliance (exc SCR) + CCP compliance						
10														
11	1. Cost allocation on Sales Share Basis (Combined Company, Total Retail Sales)													
12														
13	Incremental revenue requirement in 2016 \$487 million													
14														
15	July 2010 Sales, Revenue and Average Rates						Forecasted sales in 2016			Cost allocation (\$M)	Rate adder (\$/kWh)			
16														
17		Sales (GWh)		Revenue	Rates (\$/kWh)		GWh	Share						
18	Residential	1,273	40%	\$96,617,110	0.076	11,251	33%	\$163	0.014					
19	Industrial	808	25%	\$45,615,561	0.056	9,645	29%	\$139	0.014					
20	Commercial	1,122	35%	\$78,554,472	0.070	12,781	38%	\$185	0.014					
21		3,202		220,787,142	0.069	33,677	100%	\$487						
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Rate Impact of proposed EPA regulations - 2016



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15	Rate increase over 2010 base	
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41													
42	2. Cost allocation on Revenue Share Basis (Combined Company, Total Retail Sales)												
43													
44	Incremental revenue requirement in 2016			\$487 million									
45													
46	<i>Cost allocation</i>		2019 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
47	Residential		\$485 million		40%		\$192 million						
48	Industrial		\$242 million		20%		\$96 million						
49	Commercial/Other		\$501 million		41%		\$199 million						
50			\$1,228				\$487						
51													
52	<i>Rate impact</i>		2016 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010			Percent Change			
53	Residential		11,251		\$0.017		\$0.076			23%			
54	Industrial		9,645		\$0.010		\$0.056			18%			
55	Commercial/Other		12,781		\$0.016		\$0.070			22%			
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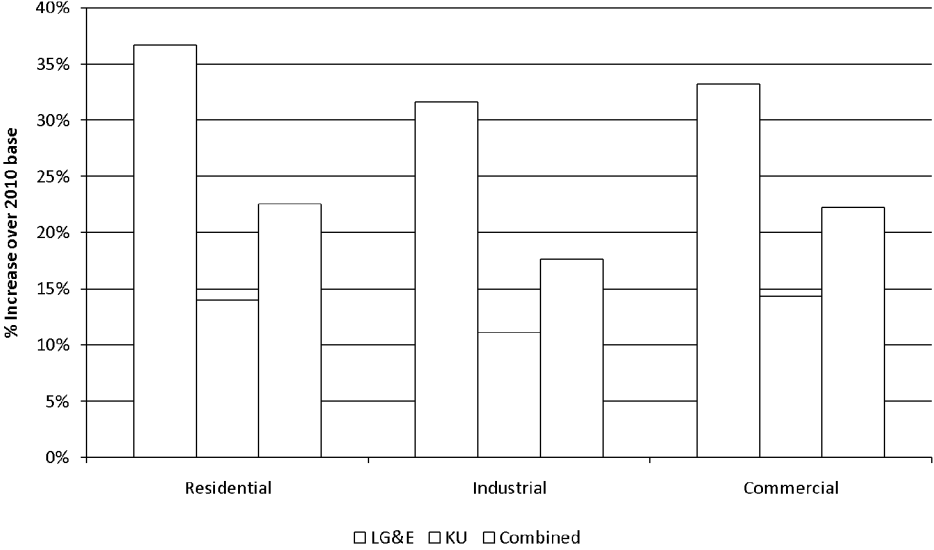
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153	Rate Impact by Company												
154													
155	Cost allocation on revenue share basis, retail sales only												
156													
157	(i) LG&E												
158													
159	Incremental revenue requirement in 2016			\$297	million								
160													
161	<i>Cost allocation</i>		2019 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
162	Residential		\$235	million	40%		\$119	million					
163	Industrial		\$94	million	16%		\$47	million					
164	Commercial/Other		\$260	million	44%		\$131	million					
165			\$588				\$297						
166													
167	<i>Rate impact</i>		2016 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010			Percent Change			
168	Residential		4,277		\$0.028		\$0.076				37%		
169	Industrial		2,821		\$0.017		\$0.053				32%		
170	Commercial/Other		5,692		\$0.023		\$0.069				33%		
171			12,790										
172													
173													
174	(ii) KU												
175													
176	Incremental revenue requirement in 2016			\$190	million								
177													
178	<i>Cost allocation</i>		2019 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
179	Residential		\$250	million	39%		\$74	million					
180	Industrial		\$148	million	23%		\$44	million					
181	Commercial/Other		\$242	million	38%		\$72	million					
182			\$640				\$190						
183													
184	<i>Rate impact</i>		2016 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010			Percent Change			
185	Residential		6,974		\$0.011		\$0.076				14%		
186	Industrial		6,824		\$0.006		\$0.058				11%		
187	Commercial/Other		7,089		\$0.010		\$0.071				14%		
188			20,887										
189													
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191	Rate Impacts Summary												
192		LG&E	KU	Combined									
193	Residential	37%	14%	23%									
194	Industrial	32%	11%	18%									
195	Commercial	33%	14%	22%									
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Rate Impact of Proposed EPA Regulations - 2016



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Rate impact of environmental compliance costs												
2													
3	Choose scenario		4										
4													
5	2016 Revenue Requirements (\$ million)						Scenarios						
6		January-00	January-00	January-00	January-00	January-00	January-00	Air compliance (exc SCR)					
7	LG&E	\$265	\$306	\$338	\$297	January-00	Air compliance (inc SCR)						
8	KU	\$134	\$197	\$252	\$190	January-00	Air compliance (inc SCR) + CCP compliance						
9	Combined Co	\$399	\$503	\$590	\$487	January-00	Air compliance (exc SCR) + CCP compliance						
10													
11	1. Cost allocation on Sales Share Basis (Combined Company, Total Retail Sales)												
12													
13	Incremental revenue requirement in 2016			\$487	million								
14													
15	July 2010 Sales, Revenue and Average Rates						Forecasted sales in 2016			Cost allocation (\$M)	Rate adder (\$/kWh)		
16													
17		Sales (GWh)		Revenue	Rates (\$/kWh)		GWh	historic Revenue					
18	Residential	1,273	40%	\$96,617,110	0.076		11,251	44%	\$213	0.019			
19	Industrial	808	25%	\$45,615,561	0.056		9,645	21%	\$101	0.010			
20	Commercial	1,122	35%	\$78,554,472	0.070		12,781	36%	\$173	0.014			
21		3,202		220,787,142	0.069		33,677	100%	\$487				
22													
23													
24				2016 Plan Revenue, Base non-fuel only									
25				KU	LGE								
26	Residential			November-00	September-00								
27	Commercial			July-00	July-00								
28	Industrial			November-00	July-00								
29				April-02	September-01								
30													
31				fuel, KU	fuel, LGE								
32	Residential			\$261	\$121								
33	Commercial			\$265	\$161								
34	Industrial			\$255	\$80								
35				\$781	\$363								
36													
37		KU, gwh	LGE, gwh	total revenue		Combined	Share of Plan Revenue	Cost allocation	rate adder				
38	Residential	February-19	September-11	\$578	\$374	\$952	37%	\$177.99	0.016				
39	Commercial	May-19	August-15	\$464	\$344	\$808	31%	\$151.13	0.012				
40	Industrial	September-18	September-07	\$562	\$282	\$844	32%	\$157.88	0.016				
41		March-57	January-35	\$1,604	\$1,001	\$2,605		\$487.00					

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37	rate increase	
38	21%	
39	21%	
40	23%	
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	A	B	C	D	E	F	G	H	I	J	K	L	M
42													
43	2. Cost allocation on Revenue Share Basis (Combined Company, Total Retail Sales)												
44													
45	Incremental revenue requirement in 2016		\$487 million										
46													
47	<i>Cost allocation</i>		2016 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
48	Residential		\$485 million		40%		\$192 million						
49	Industrial		\$242 million		20%		\$96 million						
50	Commercial/Other		\$501 million		41%		\$199 million						
51			\$1,228				\$487						
52													
53	<i>Rate impact</i>		2016 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010			Percent Change			
54	Residential		11,251		\$0.017		\$0.076			23%			
55	Industrial		9,645		\$0.010		\$0.056			18%			
56	Commercial/Other		12,781		\$0.016		\$0.070			22%			
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154	Rate Impact by Company												
155													
156	Cost allocation on revenue share basis, retail sales only												
157													
158	(i) LG&E												
159													
160	Incremental revenue requirement in 2016			\$297	million								
161													
162	<i>Cost allocation</i>		2019 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
163	Residential		\$235	million	40%		\$119	million					
164	Industrial		\$94	million	16%		\$47	million					
165	Commercial/Other		\$260	million	44%		\$131	million					
166			\$588				\$297						
167													
168	<i>Rate impact</i>		2016 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010			Percent Change			
169	Residential		4,277		\$0.028		\$0.076				37%		
170	Industrial		2,821		\$0.017		\$0.053				32%		
171	Commercial/Other		5,692		\$0.023		\$0.069				33%		
172			12,790										
173													
174													
175	(ii) KU												
176													
177	Incremental revenue requirement in 2016			\$190	million								
178													
179	<i>Cost allocation</i>		2019 Revenue		% of total revenue		Allocated Portion of Revenue Requirement						
180	Residential		\$250	million	39%		\$74	million					
181	Industrial		\$148	million	23%		\$44	million					
182	Commercial/Other		\$242	million	38%		\$72	million					
183			\$640				\$190						
184													
185	<i>Rate impact</i>		2016 Sales (GWh)		Rate impact per kWh		"All-in" \$/kwh, July 2010			Percent Change			
186	Residential		6,974		\$0.011		\$0.076				14%		
187	Industrial		6,824		\$0.006		\$0.058				11%		
188	Commercial/Other		7,089		\$0.010		\$0.071				14%		
189			20,887										
190													
191													

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	A	B	C	D	E	F	G	H	I	J	K	L	M
192	Rate Impacts Summary												
193		LG&E	KU	Combined									
194	Residential	37%	14%	23%									
195	Industrial	32%	11%	18%									
196	Commercial	33%	14%	22%									

From: Schroeder, Andrea
To: Conroy, Robert; Foxworthy, Carol
Sent: 4/19/2011 4:39:17 PM
Subject: 2011 ECR Plan Bill Impact
Attachments: ECR Bill Impact-DRAFT v2.xlsx

Attached is the DRAFT 2011 ECR Plan Bill Impact calculations. Please review the file and provide any comments, questions or feedback by Thursday (4/21) afternoon. The bill impact includes incremental O&M, retirements and the current capital estimates. The capital, O&M and retirements used in this file are consistent with the data used by Gen Planning in their analysis. The file is also saved in the case directory in the Bill Impact folder.

If you have any questions, please let me know.

Thanks,
Andrea
X3651

Andrea Schroeder
LG&E and KU
State Regulation and Rates
502-627-3651
502-627-3213 (fax)

	A	B	C	D	E	F	G
1							
2		Louisville Gas and Electric Company					
3		Environmental Cost Recovery Surcharge Summary					
4							
5							
6			2011	2012	2013	2014	2015
7							
8		Total E(m) - (\$000)	\$25,567	\$79,194	\$131,565	\$229,745	\$252,327
9							
10		12 Month Average Jurisdictional Ratio	87.20%	87.20%	87.20%	87.20%	87.20%
11							
12		Jurisdictional E(m) - (\$000)	\$22,295	\$69,060	\$114,728	\$200,344	\$220,036
13							
14		Forecasted Jurisdictional R(m) - (million)	\$956	\$1,013	\$1,038	\$1,077	\$1,131
15							
16		Incremental Billing Factor	2.33%	6.82%	11.05%	18.60%	19.46%
17							
18		Residential Customer Impact					
19		Monthly bill (1,000 kWh per month)	\$1.98	\$5.80	\$9.40	\$15.83	\$16.56
20							
21							
22							
23							
24		Kentucky Utilities Company					
25		Environmental Cost Recovery Surcharge Summary					
26							
27							
28			2011	2012	2013	2014	2015
29							
30		Total E(m) - (\$000)	\$19,019	\$67,529	\$140,626	\$194,228	\$214,991
31							
32		12 Month Average Jurisdictional Ratio	86.99%	86.99%	86.99%	86.99%	86.99%
33							
34		Jurisdictional E(m) - (\$000)	\$16,544	\$58,743	\$122,328	\$168,956	\$187,017
35							
36		Forecasted Jurisdictional R(m) - (million)	\$1,365	\$1,442	\$1,505	\$1,560	\$1,655
37							

	A	B	C	D	E	F	G
38		Incremental Billing Factor	1.21%	4.07%	8.13%	10.83%	11.30%
39							
40		Residential Customer Impact					
41		Monthly bill (1,000 kWh per month)	\$0.94	\$3.15	\$6.29	\$8.38	\$8.75

	A	B	C	D	E	F	G	H	I	J	K
1											
2	State	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
3	Tax Rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
4		LG&E	KU								
5	Tax Rate-Retirements	35.5900%	35.5900%	Filing will include retirements - VERIFY TAX RATE FOR FILING							
6	Property Tax Rate	0.15%	0.15%								
7											
8											
9	LG&E Rate of Return Calculation										
10	August 31, 2010										
11		Total Company	Elec Rate Base %	Electric Capitaliz	Post 1995 Plan	Adjusted Electric Capitalization	Annual Cost Rate	2011 Weighted C	2012 Weighted C	2013 Weighted C	
12	Long-Term Debt					723,812,195	38.65%	5.17%	2.00%	2.00%	2.00%
13	Short-Term Debt					95,575,046	5.10%	0.28%	0.01%	0.01%	0.01%
14	Preferred Stock					0	0.00%	0.00%	0.00%	0.00%	0.00%
15	Common Equity					1,053,422,249	56.25%	10.63%	5.98%	5.98%	5.98%
16	Total					1,872,809,491			7.99%	7.99%	7.99%
17	Composite Debt Rate								2.01%	2.01%	2.01%
18	Composite Tax Rate								35.59%	35.59%	35.59%
19	Overall Rate of Return Grossed Up								11.30%	11.30%	11.30%
20											
21	KU Rate of Return Calculation										
22	August 31, 2010										
23		Total Company	Elec Rate Base %	Electric Capitaliz	1994 ECR Roll-	Post 1994 Plan	Adjusted Electric Capitalization	Annual Cost Rate	2011 Weighted C	2012 Weighted C	
24	Long-Term Debt						1,392,025,319	44.25%	4.69%	2.08%	2.08%
25	Short-Term Debt						49,905,206	1.59%	28.00%	0.44%	0.44%
26	Preferred Stock						0	0.00%	0.00%	0.00%	0.00%
27	Common Equity						1,704,192,519	54.17%	10.63%	5.76%	5.76%
28	Total						3,146,123,044			8.26%	8.26%
29	Composite Debt Rate									2.52%	2.52%
30	Composite Tax Rate									35.59%	35.59%
31	Overall Rate of Return Grossed Up									11.46%	11.46%

	L	M	N	O	P	Q	R	S	T	U
1										
2										
3										
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5										
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7										
8										
9										
10										
11	2014 Weighted Cost of Capital	2015 Weighted Cost of Capital	2016 Weighted Cost of Capital	2017 Weighted Cost of Capital	2018 Weighted Cost of Capital	2019 Weighted Cost of Capital	2020 Weighted Cost of Capital			
12	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%			
13	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%			
14	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
15	5.98%	5.98%	5.98%	5.98%	5.98%	5.98%	5.98%			
16	7.99%	7.99%	7.99%	7.99%	7.99%	7.99%	7.99%			
17	2.01%	2.01%	2.01%	2.01%	2.01%	2.01%	2.01%			
18	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%			
19	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%			
20										
21										
22										
23	2013 Weighted Cost of Capital	2014 Weighted Cost of Capital	2015 Weighted Cost of Capital	2016 Weighted Cost of Capital	2017 Weighted Cost of Capital	2018 Weighted Cost of Capital	2019 Weighted Cost of Capital	2020 Weighted Cost of Capital		
24	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%		
25	0.44%	0.44%	0.44%	0.44%	0.44%	0.44%	0.44%	0.44%		
26	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
27	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%		
28	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%		
29	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%		
30	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%		
31	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%		

	A	B	C	D	E	F	G	H	I	J	K
32											
33	Jurisdictional Ratios from ECR Filings					Billing Factors as of					
34						12/1/2010 Expense Month					
35	Billing Month	LG&E	KU					LG&E	KU		
36	Mar-10	86.20%	84.36%			Customer Charge		8.50	8.50		
37	Apr-10	80.32%	81.71%			Energy		0.07068	0.06805		
38	May-10	88.90%	89.28%			FAC		0.00241	(0.00160)		
39	Jun-10	84.15%	87.37%			DSM		0.00350	0.00243		
40	Jul-10	85.36%	86.68%			ECR Factor		0.01290	0.02550		
41	Aug-10	93.53%	86.14%								
42	Sep-10	92.29%	86.06%					40513.00			
43	Oct-10	92.56%	87.69%								
44	Nov-10	90.68%	88.85%								
45	Dec-10	85.51%	90.72%								
46	Jan-11	83.47%	88.01%								
47	Feb-11	83.46%	86.99%								
48	Average	87.20%	86.99%								
49											
50	12/1/2010 Expense Month Avg Mth Juris Rev	858,529,356	1,251,944,184								
51											
52	Revenue Calculations Percentage Change										
53	LG&E	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
54	Non-Fuel Base Revenues	612,299,201	616,463,124	661,886,884	674,166,088	706,062,084	731,555,030	793,375,938	810,638,275	848,006,746	871,350,286
55	Base Fuel Revenues	252,871,140	254,605,555	256,654,116	258,061,715	260,515,941	263,215,132	265,505,098	268,936,102	273,316,507	277,998,218
56	FAC Revenues	6,569,387	52,094,215	65,106,480	72,573,881	76,932,645	99,476,590	101,719,476	119,181,391	136,745,475	144,911,542
57	Environmental Cost Recovery	8,489,276	24,911,926	67,205,086	182,489,410	273,508,372	314,131,086	319,850,631	314,016,635	303,107,092	290,548,494
58	Energy Efficient Operations Cost Recovery	25,020,225	32,753,925	29,101,484	33,689,359	33,435,195	36,698,749	34,810,786	37,017,622	34,610,250	36,819,727
59	Total (less ECR)	896,759,953	955,916,819	1,012,748,964	1,038,491,023	1,076,945,865	1,130,945,501	1,195,411,298	1,235,773,380	1,292,678,978	1,331,079,773
60	% Change		0.06597	0.05945	0.02542	0.03703	0.05014	0.05700	0.03376	0.04605	0.02971
61				0.1293	0.1580	0.2009	0.2611	0.3330	0.3780	0.4415	0.4843
62											
63	KU	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
64	Non-Fuel Base Revenues	772,207,990	783,997,444	847,674,177	864,767,856	904,788,293	931,637,550	986,720,335	1,024,534,800	1,117,837,185	1,144,830,904
65	Base Fuel Revenues	508,150,329	517,236,870	526,269,091	532,138,408	541,521,192	549,025,330	555,266,141	563,396,145	573,613,393	583,751,081

	L	M	N	O	P	Q	R	S	T	U
32										
33	Proportional Share TC Facilities Ash Pond & La									
34										
35										
36		Utility	75%							
37		LG&E	52%	39.000%						
38		KU	48%	36.000%						
39										
40										
41										
42										
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44										
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49										
50										
51										
52										
53										
54					10000	1/1/2008				
55					2750	3/1/2008				
56										
57					4250	10/30/2008				
58					3250	2/15/2009				
59					2750	4/1/2009				
60					30%					
61										
62										
63										
64										
65										

	A	B	C	D	E	F	G	H	I	J	K
66	FAC Revenues	16,174,164	32,016,696	38,186,813	73,393,620	78,267,833	135,900,479	142,822,427	184,547,422	236,117,586	261,130,956
67	Environmental Cost Recovery	64,844,127	88,800,705	126,933,711	177,716,989	238,127,822	292,469,292	297,641,363	286,104,421	273,917,972	257,929,664
68	Energy Efficient Operations Cost Recovery	23,709,208	31,483,879	30,165,987	34,916,610	35,013,260	38,155,163	36,392,806	38,652,987	36,197,617	38,503,851
69	Total (less ECR)	1,320,241,691	1,364,734,889	1,442,296,068	1,505,216,494	1,559,590,578	1,654,718,522	1,721,201,709	1,811,131,354	1,963,765,781	2,028,216,792
70	% Change		0.03370	0.05683	0.04363	0.03612	0.06100	0.04018	0.05225	0.08428	0.03262
71				0.0924	0.1401	0.1813	0.2533	0.3037	0.3718	0.4874	0.5362
72											
73											

	L	M	N	O	P	Q	R	S	T	U
66										
67										
68										
69										
70										
71										
72										
73										

	A	B	C	D	E	F	G	H	I	J	K
74	Incremental O&M										
75	LG&E										
76	Project 26	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
77	MC Air Compliance (FGDs/Baghouses) - All Units	0	0	3,444,837	11,467,688	41,509,977	48,720,281	49,694,687	50,688,581	51,702,352	52,736,400
78	Project 27										
79	TC1 Air Compliance (Baghouse)	0	0	0	0	3,732,365	7,614,024	7,766,305	7,921,631	8,080,064	8,241,665
80	Total-LGE	0	0	3,444,837	11,467,688	45,242,342	56,334,306	57,460,992	58,610,212	59,782,416	60,978,064
81											
82	KU										
83	Project 29-Amended	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
84	BR Landfill (Phase I)	0	0	0	4,000,000	4,080,000	4,161,800	4,244,832	4,329,729	4,416,323	4,504,650
85	Project 34										
86	BR Air Compliance (Baghouses) - All Units	0	0	0	8,786,902	15,404,562	15,712,653	16,026,906	16,347,444	16,674,393	17,007,881
87	Project 35										
88	GH Air Compliance (Baghouses) - All Units	0	329,460	16,317,795	36,443,513	54,597,105	67,962,562	69,321,813	70,708,249	72,122,414	73,564,862
89	Total-KU	0	329,460	16,317,795	49,230,414	74,081,667	87,836,815	89,593,551	91,385,422	93,213,130	95,077,393

A	B	C	D	E	F	G	H	I	J	K	L
1	Incremental O&M Estimates for Projects in the 2011 ECR Plan										
2											
3	Area below used as inputs into Project tabs										
4	## Beneficial Reuse			2011	2012	2013	2014	2015	2016	2017	2018
5											
6	Louisville Gas and Electric Company										
7	Proposed Project 26	MC Air Compliance - FGDs & Baghouses	\$ -	\$ -	\$ 3,444,837	\$ 11,467,688	\$ 41,509,977	\$ 48,720,281	\$ 49,694,687	\$ 50,688,581	
8											
9		Mill Creek 1 - Combined 1 & 2 FGD					\$ 386,428	\$ 394,157	\$ 402,040	\$ 410,081	
10		Mill Creek 1 - Baghouse					\$ 6,508,408	\$ 6,638,576	\$ 6,771,348	\$ 6,906,775	
11		Mill Creek 1 - SAM Mitigation					\$ 1,439,404	\$ 2,516,900	\$ 2,567,238	\$ 2,618,583	
12		Total Mill Creek 1					\$ 8,334,240	\$ 9,549,633	\$ 9,740,626	\$ 9,935,438	
13											
14		Mill Creek 2 - Combined 1& 2 FGD					\$ 386,428	\$ 394,157	\$ 402,040	\$ 410,081	
15		Mill Creek 2 - Baghouse					\$ 6,846,051	\$ 6,982,972	\$ 7,122,632	\$ 7,265,084	
16		Mill Creek 2 - SAM Mitigation					\$ 1,736,875	\$ 2,657,419	\$ 2,710,567	\$ 2,764,778	
17		Total Mill Creek 2					\$ 8,969,354	\$ 10,034,548	\$ 10,235,239	\$ 10,439,943	
18											
19		Mill Creek 3 - FGD (U4 update and tie in)			\$ -	\$ 317,153	\$ 646,991	\$ 659,931	\$ 673,130	\$ 686,592	
20		Mill Creek 3 - Baghouse			\$ -	\$ -	\$ 4,358,422	\$ 8,891,180	\$ 9,069,004	\$ 9,250,384	
21		Mill Creek 3 - SCR Turn-Down			\$ 3,396,285	\$ 3,464,211	\$ 3,533,495	\$ 3,604,165	\$ 3,676,248	\$ 3,749,773	
22		Mill Creek 3 - SAM Mitigation			\$ 48,552	\$ 74,285	\$ 75,770	\$ 77,286	\$ 78,831	\$ 80,408	
23		Total Mill Creek 3			\$ 3,444,837	\$ 3,855,648	\$ 8,614,678	\$ 13,232,562	\$ 13,497,213	\$ 13,767,157	
24											
25		Mill Creek 4 - FGD				\$ 466,873	\$ 952,420	\$ 971,469	\$ 990,898	\$ 1,010,716	
26		Mill Creek 4 - Baghouse				\$ 5,036,669	\$ 10,275,212	\$ 10,480,717	\$ 10,690,331	\$ 10,904,138	
27		Mill Creek 4 - SCR Turn-Down				\$ 2,102,109	\$ 4,283,302	\$ 4,374,068	\$ 4,461,549	\$ 4,550,780	
28		Mill Creek 4 - SAM Mitigation				\$ 6,190	\$ 75,770	\$ 77,286	\$ 78,831	\$ 80,408	
29		Total Mill Creek 4				\$ 7,612,041	\$ 15,591,705	\$ 15,903,539	\$ 16,221,609	\$ 16,546,042	
30											
31	Proposed Project 27	TC1 Air Compliance - Baghouse	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,732,365	\$ 7,614,024	\$ 7,766,305	\$ 7,921,631
32											
33	Kentucky Utilities Company										
34	Amended Project 29	BR Landfill (Phase I)	\$ -	\$ -	\$ -	\$ 4,000,000	\$ 4,080,000	\$ 4,161,600	\$ 4,244,832	\$ 4,329,729	
35											
36	Proposed Project 34	BR Air Compliance - Baghouses	\$ -	\$ -	\$ -	\$ 8,786,902	\$ 15,404,562	\$ 15,712,653	\$ 16,026,906	\$ 16,347,444	
37											
38		Brown 1 - Baghouse				\$ 2,060,866	\$ 2,102,083	\$ 2,144,125	\$ 2,187,007	\$ 2,230,748	
39		Brown 1 - SAM Mitigation				\$ 1,383,684	\$ 2,419,471	\$ 2,467,860	\$ 2,517,217	\$ 2,567,562	
40		Total Brown 1				\$ 3,444,550	\$ 4,521,554	\$ 4,611,985	\$ 4,704,225	\$ 4,798,309	
41											
42		Brown 2 - Baghouse				\$ 2,970,321	\$ 3,029,728	\$ 3,090,322	\$ 3,152,129	\$ 3,215,171	
43		Brown 2 - SAM Mitigation				\$ 2,372,030	\$ 2,419,471	\$ 2,467,860	\$ 2,517,217	\$ 2,567,562	
44		Total Brown 2				\$ 5,342,351	\$ 5,449,198	\$ 5,558,182	\$ 5,669,346	\$ 5,782,733	
45											
46		Brown 3 - Baghouse					\$ 5,433,809	\$ 5,542,486	\$ 5,653,335	\$ 5,766,402	

	M	N	O	P
1				
2				1000
3				
4	2019	2020		
5				
6				
7	\$ 51,702,352	\$ 52,736,400		
8				
9	\$ 418,282	\$ 426,648		
10	\$ 7,044,910	\$ 7,185,808		
11	\$ 2,670,955	\$ 2,724,374		
12	\$ 10,134,147	\$ 10,336,830		
13				
14	\$ 418,282	\$ 426,648		
15	\$ 7,410,386	\$ 7,558,594		
16	\$ 2,820,074	\$ 2,876,475		
17	\$ 10,648,742	\$ 10,861,717		
18				
19	\$ 700,324	\$ 714,331		
20	\$ 9,435,392	\$ 9,624,100		
21	\$ 3,824,768	\$ 3,901,264		
22	\$ 82,016	\$ 83,656		
23	\$ 14,042,501	\$ 14,323,351		
24				
25	\$ 1,030,930	\$ 1,051,549		
26	\$ 11,122,220	\$ 11,344,665		
27	\$ 4,641,796	\$ 4,734,632		
28	\$ 82,016	\$ 83,656		
29	\$ 16,876,963	\$ 17,214,502		
30				
31	\$ 8,080,064	\$ 8,241,665		
32				
33				
34	\$ 4,416,323	\$ 4,504,650		
35				
36	\$ 16,674,393	\$ 17,007,881		
37				
38	\$ 2,275,363	\$ 2,320,870		
39	\$ 2,618,913	\$ 2,671,291		
40	\$ 4,894,275	\$ 4,992,161		
41				
42	\$ 3,279,475	\$ 3,345,064		
43	\$ 2,618,913	\$ 2,671,291		
44	\$ 5,898,388	\$ 6,016,355		
45				
46	\$ 5,881,730	\$ 5,999,365		

	A	B	C	D	E	F	G	H	I	J	K	L
47				Total Brown 3					\$ 5,433,809	\$ 5,542,486	\$ 5,653,335	\$ 5,766,402
48												
49		Proposed Project 35		GH Air Compliance - Baghouses	\$ -	\$ 329,460	\$ 16,317,795	\$ 36,443,513	\$ 54,597,105	\$ 67,962,562	\$ 69,321,813	\$ 70,708,249
50												
51				Ghent 1 - Baghouse			\$ -	\$ 11,828,755	\$ 12,065,330	\$ 12,306,637	\$ 12,552,769	\$ 12,803,825
52				Ghent 1 - SCR Turn-Down			\$ -	\$ 74,285	\$ 75,770	\$ 77,286	\$ 78,831	\$ 80,408
53				Ghent 1 - SAM Mitigation			\$ 4,096,370	\$ 5,013,957	\$ 5,114,237	\$ 5,216,521	\$ 5,320,852	\$ 5,427,269
54				Total Ghent 1			\$ 4,096,370	\$ 16,916,997	\$ 17,255,337	\$ 17,600,444	\$ 17,952,452	\$ 18,311,501
55												
56				Ghent 2 - Baghouse		\$ -	\$ -	\$ 5,286,142	\$ 10,783,730	\$ 10,999,405	\$ 11,219,393	\$ 11,443,781
57				Ghent 2 - SAM Mitigation		\$ 329,460	\$ 4,032,590	\$ 4,113,242	\$ 4,195,507	\$ 4,279,417	\$ 4,365,006	\$ 4,452,306
58				Total Ghent 2		\$ 329,460	\$ 4,032,590	\$ 9,399,385	\$ 14,979,237	\$ 15,278,822	\$ 15,584,399	\$ 15,896,087
59												
60				Ghent 3 - Baghouse			\$ -	\$ -	\$ 6,188,535	\$ 12,624,612	\$ 12,877,104	\$ 13,134,646
61				Ghent 3 - SCR Turn-Down			\$ 36,414	\$ 74,285	\$ 75,770	\$ 77,286	\$ 78,831	\$ 80,408
62				Ghent 3 - SAM Mitigation			\$ 3,857,718	\$ 4,721,847	\$ 4,816,284	\$ 4,912,610	\$ 5,010,862	\$ 5,111,079
63				Total Ghent 3			\$ 3,894,132	\$ 4,796,132	\$ 11,080,590	\$ 17,614,507	\$ 17,966,797	\$ 18,326,133
64												
65				Ghent 4 - Baghouse			\$ -	\$ -	\$ 5,844,322	\$ 11,922,417	\$ 12,160,865	\$ 12,404,082
66				Ghent 4 - SCR Turn-Down			\$ -	\$ 74,285	\$ 75,770	\$ 77,286	\$ 78,831	\$ 80,408
67				Ghent 4 - SAM Mitigation			\$ 4,294,702	\$ 5,256,715	\$ 5,361,849	\$ 5,469,086	\$ 5,578,468	\$ 5,690,037
68				Total Ghent 4			\$ 4,294,702	\$ 5,331,000	\$ 11,281,941	\$ 17,468,789	\$ 17,818,164	\$ 18,174,528
69												
70												
71												
72								4,000,000	4,080,000	4,161,600	4,244,832	4,329,729

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47	\$ 5,881,730	\$ 5,999,365		
48				
49	\$ 72,122,414	\$ 73,564,862		
50				
51	\$ 13,059,901	\$ 13,321,099		
52	\$ 82,016	\$ 83,656		
53	\$ 5,535,814	\$ 5,646,530		
54	\$ 18,677,732	\$ 19,051,286		
55				
56	\$ 11,672,657	\$ 11,906,110		
57	\$ 4,541,352	\$ 4,632,179		
58	\$ 16,214,008	\$ 16,538,289		
59				
60	\$ 13,397,339	\$ 13,665,286		
61	\$ 82,016	\$ 83,656		
62	\$ 5,213,301	\$ 5,317,567		
63	\$ 18,692,656	\$ 19,066,509		
64				
65	\$ 12,652,164	\$ 12,905,207		
66	\$ 82,016	\$ 83,656		
67	\$ 5,803,838	\$ 5,919,915		
68	\$ 18,538,018	\$ 18,908,779		
69				
70				
71				
72	4,416,323	4,504,650		

	A	B	C	D	E	F	G	H	I	J	K	L
1		Revenue Requirements Summary										
2		2011 Amended Plan - LG&E										
3												
4			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
5	Project 26	MC Air Compliance - All Units - FGDs & Baghouses										
6		Revenue Requirement										
7		Eligible Plant	9,618,429	226,222,641	644,137,762	1,018,878,163	#####	1,280,872,458	#####	#####	1,280,872,458	#####
8		Less: Retired Plant	-	-	-	(76,551,617)	(171,243,250)	(171,243,250)	(171,243,250)	(171,243,250)	(171,243,250)	(171,243,250)
9		Less: Accumulated Depreciation	-	-	-	(2,081,190)	(40,723,559)	(93,170,948)	(145,618,337)	(198,065,727)	(250,513,116)	(302,960,505)
10		Plus: Accumulated Depreciation on retired plant	-	-	-	37,301,196	107,305,608	107,305,608	107,305,608	107,305,608	107,305,608	107,305,608
11		Less: Deferred Tax Balance	-	-	-	(5,131,218)	(14,111,052)	(27,457,149)	(38,401,949)	(47,126,988)	(53,796,378)	(58,565,957)
12		Plus: Deferred Tax Balance on retired plant	-	-	-	4,330,205	6,101,406	6,101,406	6,101,406	6,101,406	6,101,406	6,101,406
13		Environmental Compliance Rate Base	9,618,429	226,222,641	644,137,762	976,745,539	#####	1,102,408,124	#####	977,843,506	918,726,727	861,509,759
14		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
15			\$ 1,086,443	\$ 25,552,811	\$ 72,758,103	\$ 110,327,567	\$ 131,101,014	\$ 124,521,691	\$ 117,361,274	\$ 110,451,587	\$ 103,774,096	\$ 97,311,195
16												
17		Operating expenses	-	-	3,444,837	11,467,688	41,509,977	48,720,281	49,694,667	50,688,581	51,702,352	52,736,400
18		Annual Depreciation expense	-	-	-	2,081,190	38,842,369	52,447,389	52,447,389	52,447,389	52,447,389	52,447,389
19		Less depreciation on retired plant	-	-	-	(240,226)	(557,649)	(557,649)	(557,649)	(557,649)	(557,649)	(557,649)
20		Annual Property Tax expense	-	14,428	339,334	966,207	1,525,195	1,848,905	1,781,552	1,702,881	1,624,210	1,545,539
21		Total OE	\$ -	\$ 14,428	\$ 3,784,171	\$ 14,274,858	\$ 81,119,893	\$ 102,458,926	\$ 103,365,980	\$ 104,281,202	\$ 105,216,303	\$ 106,171,679
22												
23		Total E(m)	1,086,443	25,567,238	76,542,274	124,602,426	212,220,907	226,980,616	220,727,253	214,732,790	208,990,398	203,482,874
24												

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25	Project 27	TC1 Air Compliance - Baghouse										
26		Revenue Requirement										
27		Eligible Plant	-	-	23,479,889	61,329,417	118,470,025	123,752,357	123,752,357	123,752,357	123,752,357	123,752,357
28		Less: Retired Plant	-	-	-	-	-	-	-	-	-	-
29		Less: Accumulated Depreciation	-	-	-	-	(536,077)	(5,015,912)	(9,495,748)	(13,975,583)	(18,455,418)	(22,935,254)
30		Plus: Accumulated Depreciation on retired plant	-	-	-	-	-	-	-	-	-	-
31		Less: Deferred Tax Balance	-	-	-	-	(1,390,341)	(2,975,465)	(4,321,874)	(5,448,065)	(6,369,895)	(7,103,219)
32		Plus: Deferred Tax Balance on retired plant	-	-	-	-	-	-	-	-	-	-
33		Environmental Compliance Rate Base	-	-	23,479,889	61,329,417	116,543,608	115,760,980	109,934,736	104,328,709	98,927,044	93,713,885
34		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
35			\$ -	\$ -	\$ 2,652,151	\$ 6,927,419	\$ 13,164,097	\$ 13,075,696	\$ 12,417,596	\$ 11,784,372	\$ 11,174,231	\$ 10,585,382
36												
37		Operating expenses	-	-	-	-	3,732,365	7,614,024	7,766,305	7,921,631	8,080,064	8,241,665
38		Annual Depreciation expense	-	-	-	-	536,077	4,479,835	4,479,835	4,479,835	4,479,835	4,479,835
39		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-	-
40		Annual Property Tax expense	-	-	-	35,220	91,994	176,901	178,105	171,385	164,665	157,945
41		Total OE	\$ -	\$ -	\$ -	\$ 35,220	\$ 4,360,436	\$ 12,270,761	\$ 12,424,245	\$ 12,572,851	\$ 12,724,564	\$ 12,879,446
42												
43		Total E(m)	-	-	2,652,151	6,962,639	17,524,533	25,346,456	24,841,841	24,357,223	23,898,795	23,464,828
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46												
47		Total E(m) - All LG&E Projects	1,086,443	25,567,238	79,194,425	131,565,064	229,745,439	252,327,074	245,569,095	239,090,013	232,889,193	226,947,702
48			1,086,443	25,567,238	79,194,425	131,565,064	229,745,439	252,327,074	245,569,095	239,090,013	232,889,193	226,947,702
49		Total Revenue Requirements										
50		Project 26	1,086,443	25,567,238	76,542,274	124,602,426	212,220,907	228,980,618	220,727,253	214,732,790	208,990,398	203,482,874
51		0	-	-	2,652,151	6,962,639	17,524,533	25,346,456	24,841,841	24,357,223	23,898,795	23,464,828
52												
53												
54		Total	1,086,443	25,567,238	79,194,425	131,565,064	229,745,439	252,327,074	245,569,095	239,090,013	232,889,193	226,947,702
55			-	-	-	-	-	-	-	-	-	-
56		12 Month Average Jurisdictional Ratio	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%
57												
58		Jurisdictional Allocation	947,405	22,295,271	69,059,518	114,728,025	200,343,767	220,035,517	214,142,390	208,492,468	203,085,199	197,904,070
59												
60		Forecasted 12-Month Retail Revenue	896,759,953	955,916,819	#####	1,038,491,023	1,076,945,865	1,130,945,501	1,195,411,298	1,235,773,390	1,292,678,978	1,331,079,773
61												
62		Billing Factor	0.11%	2.33%	6.82%	11.05%	18.60%	19.46%	17.91%	16.87%	15.71%	14.87%
63												
64		LGE Residential Bill Impact										
65		Customer Charge	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50
66		Energy - 1,000 Kwh @ \$0.07068	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68
67		FAC billings (Dec 10 factor - \$0.00241/kWh)	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41
68		DSM billings (Dec 10 factor - \$0.0035/kWh)	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50
69		ECR billings (Dec 10 factor: 1.29%)	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10
70		Additional ECR factor	\$0.09	\$1.98	\$5.80	\$9.40	\$15.83	\$16.56	\$15.24	\$14.36	\$13.37	\$12.65
71				181%				1508%				
72												
73			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
74	Project 26	Eligible Plant	9,618,429	226,222,641	644,137,762	1,018,878,163	#####	1,280,872,458	#####	#####	1,280,872,458	#####
75	Project 27	Eligible Plant	-	-	23,479,869	61,329,417	118,470,025	123,752,357	123,752,357	123,752,357	123,752,357	123,752,357
76												
77												
78		Total Plant-LG&E	9,618,429	226,222,641	667,617,631	1,080,207,580	#####	1,404,624,815	#####	#####	1,404,624,815	#####

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54		8,522,413	6,599,535
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58		7,431,757	5,754,960
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	A	B	C	D	E	F	G	H	I	J	K
1	Summary Cash Flow										
2	Cash Flow for 2011 thru 2020										
3	2011 LG&E Amended ECR Plan										
4											
5											
6			2	3	4	5	6	7	8	9	10
7	Date	MC1 & MC2 (GDs - MC2 (Proj	GDs - MC3 (Proj	GDs - MC4 (Proj	compliance - MC1 (P	compliance - MC2 (P	compliance - MC3 (P	compliance - MC4 (P	compliance - TC1 (P		
8	2009	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	2010	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	2011	\$ -	\$ -	\$ -	\$ 4,049,212	\$ -	\$ -	\$ 192,372	\$ 5,376,845	\$ -	\$ -
11	2012	\$ 50,384,502	\$ -	\$ 6,892,461	\$ 70,537,279	\$ 13,571,615	\$ 12,967,870	\$ 7,830,765	\$ 54,419,721	\$ -	\$ -
12	2013	\$ 104,799,763	\$ -	\$ 32,256,716	\$ 87,592,561	\$ 42,786,742	\$ 41,386,869	\$ 48,247,370	\$ 60,845,099	\$ 23,479,869	\$ -
13	2014	\$ 108,991,754	\$ -	\$ 29,819,542	\$ 44,409,428	\$ 49,569,617	\$ 49,120,072	\$ 49,061,558	\$ 43,768,430	\$ 37,849,548	\$ -
14	2015	\$ 89,616,306	\$ -	\$ 3,876,540	\$ 11,842,514	\$ 48,617,413	\$ 47,612,217	\$ 43,768,430	\$ 9,115,060	\$ 57,140,608	\$ -
15	2016	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,545,814	\$ -	\$ 5,282,332	\$ -
16	2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17	2018	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
18	2019	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
19	2020	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20											
21		\$ 353,792,325	\$ -	\$ 72,845,258	\$ 218,430,995	\$ 154,545,387	\$ 151,087,029	\$ 156,646,309	\$ 173,525,155	\$ 123,752,357	\$ -

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1							
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6							
7	object 27)	Total					
8		\$ -					
9		\$ -					
10		\$ 9,618,429					
11		\$ 216,604,212					
12		\$ 441,394,990					
13		\$ 412,589,949			49,061,556.00	43,768,430.00	92,829,986.00
14		\$ 311,589,088			43,768,429.79	9,115,059.61	52,883,489.40
15		\$ 12,828,146					
16		\$ -					
17		\$ -					
18		\$ -					
19		\$ -					
20							
21	\$ -	\$ 1,404,624,815					

	A	B	C	D	E	F	G	H	I	J	K
1		Revenue Requirements									
2		Project 26 - LG&E									
3							April				
4			2011	2012	2013	2014	2015	2016	2017	2018	2019
5		In-Service					1	2	3	4	5
6		Mill Creek 2PC									
7	Project 26	CapEx - Mill Creek FGDs - Combined MC1-MC2 new FGD	\$ -	\$ 50,384,502	\$ 104,799,763	\$ 108,991,754	\$ 89,616,306	\$ -	\$ -	\$ -	\$ -
8	2	Accumulated Expenditures	\$ -	\$ 50,384,502	\$ 155,184,265	\$ 264,176,019	\$ 353,792,325	\$ 353,792,325	\$ 353,792,325	\$ 353,792,325	\$ 353,792,325
9	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	4.280%	4.280%	4.280%	4.280%	4.280%
10	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%
11		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
12		Deferred Tax Balance	-	-	-	-	904,487	4,605,120	7,623,295	10,011,897	11,816,254
13		Book Accumulated Depreciation Balance	-	-	-	-	10,725,804	25,868,115	41,010,427	56,152,739	71,295,050
14		Unrecovered Investment -- Book	-	50,384,502	155,184,265	264,176,019	353,792,325	353,792,325	353,792,325	353,792,325	353,792,325
15		Book Depreciation	-	-	-	-	10,725,804	15,142,312	15,142,312	15,142,312	15,142,312
16		Unrecovered Investment -- Tax total	-	50,384,502	155,184,265	264,176,019	353,792,325	353,792,325	353,792,325	353,792,325	353,792,325
17		Tax Depreciation	-	-	-	-	13,267,212	25,540,268	23,622,714	21,853,752	20,212,156
18		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
19		Book Depreciation expense total	-	-	-	-	10,725,804	15,142,312	15,142,312	15,142,312	15,142,312
20		Tax Depreciation expense total	-	-	-	-	13,267,212	25,540,268	23,622,714	21,853,752	20,212,156
21		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
22		Deferred Tax Balance	-	-	-	-	904,487	3,700,633	3,018,175	2,388,602	1,804,357
23											
24		Revenue Recovery on Capital Expenditure to date									
25		Eligible Plant, cumulative capital expenditures	-	50,384,502	155,184,265	264,176,019	353,792,325	353,792,325	353,792,325	353,792,325	353,792,325
26	2002	Less: Retired Plant	-	-	-	-	(94,691,633)	(94,691,633)	(94,691,633)	(94,691,633)	(94,691,633)
27		Less: Accumulated Depreciation	-	-	-	-	(10,725,804)	(25,868,115)	(41,010,427)	(56,152,739)	(71,295,050)
28		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	70,004,411	70,004,411	70,004,411	70,004,411	70,004,411
29		Less: Deferred Tax Balance	-	-	-	-	(904,487)	(4,605,120)	(7,623,295)	(10,011,897)	(11,816,254)
30		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	1,771,201	1,771,201	1,771,201	1,771,201	1,771,201
31		Environmental Compliance Rate Base	-	50,384,502	155,184,265	264,176,019	319,246,013	300,403,069	282,242,583	264,711,669	247,765,000
32		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
33		Return on Environmental Compliance Rate Base	\$ -	\$ 5,691,144	\$ 17,528,723	\$ 29,839,806	\$ 36,060,196	\$ 33,931,806	\$ 31,880,501	\$ 29,900,310	\$ 27,986,112
34											
35		Operating Expenses	-	-	-	-	772,857	788,314	804,080	820,162	836,565
36		Annual Depreciation expense	-	-	-	-	10,725,804	15,142,312	15,142,312	15,142,312	15,142,312
37		Less depreciation on retired plant	-	-	-	-	(317,423)	(317,423)	(317,423)	(317,423)	(317,423)

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1							
2							
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4	2020						
5	6	Difference				January	1
6						February	2
7	\$ -	\$ -				March	3
8	\$ 353,792,325					April	4
9	4.280%					May	5
10	5.285%					June	6
11	35.59%					July	7
12	13,081,697					August	8
13	86,437,362					September	9
14	353,792,325					October	10
15	15,142,312					November	11
16	353,792,325					December	12
17	18,697,924						
18	11.30%						
19	15,142,312						
20	18,697,924						
21	0.1500%						
22	1,265,443						
23							
24							
25	353,792,325						
26	(94,691,633)						
27	(86,437,362)						
28	70,004,411						
29	(13,081,697)						
30	1,771,201						
31	231,357,246						
32	11.30%						
33	\$ 26,132,786						
34							
35	853,296						
36	15,142,312						
37	(317,423)						

	A	B	C	D	E	F	G	H	I	J	K
38		Annual Property Tax expense	-	-	75,577	232,776	396,264	514,600	491,886	469,173	446,459
39		Total OE	\$ -	\$ -	\$ 75,577	\$ 232,776	\$ 396,264	\$ 514,600	\$ 491,886	\$ 469,173	\$ 446,459
40											
41		Total E(m) - Project	-	5,691,144	17,604,300	30,072,583	47,637,698	50,059,608	48,001,357	46,014,533	44,094,025
42											

	L	M	N	O	P	Q	R
38	423,746						
39	\$ 16,101,931						
40							
41	42,234,717						
42							

	A	B	C	D	E	F	G	H	I	J	K
43											
44							April				
45			2011	2012	2013	2014	2015	2016	2017	2018	2019
46		In-Service					1	2	3	4	5
47		Mill Creek 2PC									
48	Project 26	CapEx - Mill Creek FGDs - MC2 FGD upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
49	3	Accumulated Expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
50	2	Book Depreciation rate per year	0.000%	0.000%	0.000%	0.000%	4.280%	4.280%	4.280%	4.280%	4.280%
51	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%
52		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
53		Deferred Tax Balance	-	-	-	-	-	-	-	-	-
54		Book Accumulated Depreciation Balance	-	-	-	-	-	-	-	-	-
55		Unrecovered Investment -- Book	-	-	-	-	-	-	-	-	-
56		Book Depreciation	-	-	-	-	-	-	-	-	-
57		Unrecovered Investment -- Tax total	-	-	-	-	-	-	-	-	-
58		Tax Depreciation	-	-	-	-	-	-	-	-	-
59		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
60		Book Depreciation expense total	-	-	-	-	-	-	-	-	-
61		Tax Depreciation expense total	-	-	-	-	-	-	-	-	-
62		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
63		Deferred Tax Balance	-	-	-	-	-	-	-	-	-
64											
65		Revenue Recovery on Capital Expenditure to date									
66		Eligible Plant, cumulative capital expenditures	-	-	-	-	-	-	-	-	-
67	2002	Less: Retired Plant	-	-	-	-	-	-	-	-	-
68		Less: Accumulated Depreciation	-	-	-	-	-	-	-	-	-
69		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
70		Less: Deferred Tax Balance	-	-	-	-	-	-	-	-	-
71		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
72		Environmental Compliance Rate Base	-	-	-	-	-	-	-	-	-
73		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
74		Return on Environmental Compliance Rate Base	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
75											
76		Operating Expenses	-	-	-	-	-	-	-	-	-
77		Annual Depreciation expense	-	-	-	-	-	-	-	-	-
78		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
79		Annual Property Tax expense	-	-	-	-	-	-	-	-	-

	L	M	N	O	P	Q	R
43							
44							
45	2020						
46	6	Difference				January	1
47						February	2
48	\$ -	\$ -				March	3
49	\$ -					April	4
50	4.280%					May	5
51	5.285%					June	6
52	35.59%					July	7
53	-					August	8
54	-					September	9
55	-					October	10
56	-					November	11
57	-					December	12
58	-						
59	11.30%						
60	-						
61	-						
62	0.1500%						
63	-						
64							
65							
66	-						
67	-						
68	-						
69	-						
70	-						
71	-						
72	-						
73	11.30%						
74	\$ -						
75							
76	-						
77	-						
78	-						
79	-						

	A	B	C	D	E	F	G	H	I	J	K
80		Total OE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
81											
82		Total E(m) - Project	-	-	-	-	-	-	-	-	-
83											

	L	M	N	O	P	Q	R
80	\$ -						
81							
82	-						
83							

	A	B	C	D	E	F	G	H	I	J	K
84											
85						November					
86			2011	2012	2013	2014	2015	2016	2017	2018	2019
87		In-Service				1	2	3	4	5	6
88		Mill Creek 3PC									
89	Project 26	CapEx - Mill Creek FGDs - MC3 FGD (Old MC4 FGD tied-in)	\$ -	\$ 6,892,461	\$ 32,256,716	\$ 29,819,542	\$ 3,876,540	\$ -	\$ -	\$ -	\$ -
90	4	Accumulated Expenditures	\$ -	\$ 6,892,461	\$ 39,149,176	\$ 68,968,718	\$ 72,845,258	\$ 72,845,258	\$ 72,845,258	\$ 72,845,258	\$ 72,845,258
91	2	Book Depreciation rate per year	0.000%	0.000%	0.000%	3.850%	3.850%	3.850%	3.850%	3.850%	3.850%
92	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
93		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
94		Deferred Tax Balance	-	-	-	802,346	1,675,781	2,408,698	3,011,988	3,494,982	3,867,015
95		Book Accumulated Depreciation Balance	-	-	-	331,912	3,136,454	5,940,997	8,745,539	11,550,082	14,354,624
96		Unrecovered Investment -- Book	-	6,892,461	39,149,176	68,968,718	72,845,258	72,845,258	72,845,258	72,845,258	72,845,258
97		Book Depreciation	-	-	-	331,912	2,804,542	2,804,542	2,804,542	2,804,542	2,804,542
98		Unrecovered Investment -- Tax total	-	6,892,461	39,149,176	68,968,718	72,845,258	72,845,258	72,845,258	72,845,258	72,845,258
99		Tax Depreciation	-	-	-	2,586,327	5,258,699	4,863,878	4,499,652	4,161,650	3,849,872
100		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
101		Book Depreciation expense total	-	-	-	331,912	2,804,542	2,804,542	2,804,542	2,804,542	2,804,542
102		Tax Depreciation expense total	-	-	-	2,586,327	5,258,699	4,863,878	4,499,652	4,161,650	3,849,872
103		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
104		Deferred Tax Balance	-	-	-	802,346	873,434	732,917	603,289	482,994	372,033
105											
106		Revenue Recovery on Capital Expenditure to date									
107		Eligible Plant, cumulative capital expenditures	-	6,892,461	39,149,176	68,968,718	72,845,258	72,845,258	72,845,258	72,845,258	72,845,258
108	2002	Less: Retired Plant	-	-	-	(76,551,617)	(76,551,617)	(76,551,617)	(76,551,617)	(76,551,617)	(76,551,617)
109		Less: Accumulated Depreciation	-	-	-	(331,912)	(3,136,454)	(5,940,997)	(8,745,539)	(11,550,082)	(14,354,624)
110		Plus: Accumulated Depreciation on Retired Plant	-	-	-	37,301,196	37,301,196	37,301,196	37,301,196	37,301,196	37,301,196
111		Less: Deferred Tax Balance	-	-	-	(802,346)	(1,675,781)	(2,408,698)	(3,011,988)	(3,494,982)	(3,867,015)
112		Plus: Deferred Tax Balance on Retired Plant	-	-	-	4,330,205	4,330,205	4,330,205	4,330,205	4,330,205	4,330,205
113		Environmental Compliance Rate Base	-	6,892,461	39,149,176	32,914,244	33,112,807	29,575,347	26,167,515	22,879,979	19,703,403
114		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
115		Return on Environmental Compliance Rate Base	\$ -	\$ 778,533	\$ 4,422,066	\$ 3,717,804	\$ 3,740,233	\$ 3,340,661	\$ 2,955,732	\$ 2,584,391	\$ 2,225,583
116											
117		Operating Expenses	-	-	-	317,153	646,991	659,931	673,130	686,592	700,324
118		Annual Depreciation expense	-	-	-	331,912	2,804,542	2,804,542	2,804,542	2,804,542	2,804,542
119		Less depreciation on retired plant	-	-	-	(240,226)	(240,226)	(240,226)	(240,226)	(240,226)	(240,226)
120		Annual Property Tax expense	-	-	10,339	58,724	102,955	104,563	100,356	96,150	91,943

	L	M	N	O	P	Q	R
84							
85							
86	2020						
87	7	Difference				January	1
88						February	2
89	\$ -	\$ -				March	3
90	\$ 72,845,258					April	4
91	3.850%					May	5
92	4.888%					June	6
93	35.59%					July	7
94	4,136,123					August	8
95	17,159,167					September	9
96	72,845,258					October	10
97	2,804,542					November	11
98	72,845,258					December	12
99	3,560,676						
100	11.30%						
101	2,804,542						
102	3,560,676						
103	0.1500%						
104	269,108						
105							
106							
107	72,845,258						
108	(76,551,617)						
109	(17,159,167)						
110	37,301,196						
111	(4,136,123)						
112	4,330,205						
113	16,629,753						
114	11.30%						
115	\$ 1,878,401						
116							
117	714,331						
118	2,804,542						
119	(240,226)						
120	87,736						

	A	B	C	D	E	F	G	H	I	J	K
121		Total OE	\$ -	\$ -	\$ 10,339	\$ 467,562	\$ 3,314,263	\$ 3,328,811	\$ 3,337,802	\$ 3,347,058	\$ 3,366,583
122											
123		Total E(m) - Project	-	778,533	4,432,405	4,185,366	7,054,495	6,669,472	6,293,535	5,931,449	5,582,167
124											

	L	M	N	O	P	Q	R
121	\$ 3,366,383						
122							
123	5,244,784						
124							

	A	B	C	D	E	F	G	H	I	J	K
125											
126						November					
127			2011	2012	2013	2014	2015	2016	2017	2018	2019
128		In-Service				1	2	3	4	5	6
129		Mill Creek 4PC									
130	Project 26	CapEx - Mill Creek FGDs - MC4 New FGD	\$ 4,049,212	\$ 70,537,279	\$ 87,592,561	\$ 44,409,428	\$ 11,842,514	\$ -	\$ -	\$ -	\$ -
131	5	Accumulated Expenditures	\$ 4,049,212	\$ 74,586,491	\$ 162,179,052	\$ 206,588,481	\$ 218,430,995	\$ 218,430,995	\$ 218,430,995	\$ 218,430,995	\$ 218,430,995
132	2	Book Depreciation rate per year	0.000%	0.000%	0.000%	3.710%	3.710%	3.710%	3.710%	3.710%	3.710%
133	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
134		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
135		Deferred Tax Balance	-	-	-	2,416,210	5,144,092	7,450,626	9,368,462	10,925,586	12,149,984
136		Book Accumulated Depreciation Balance	-	-	-	958,054	9,061,844	17,165,634	25,269,424	33,373,214	41,477,004
137		Unrecovered Investment -- Book	4,049,212	74,586,491	162,179,052	206,588,481	218,430,995	218,430,995	218,430,995	218,430,995	218,430,995
138		Book Depreciation	-	-	-	958,054	8,103,790	8,103,790	8,103,790	8,103,790	8,103,790
139		Unrecovered Investment -- Tax total	4,049,212	74,586,491	162,179,052	206,588,481	218,430,995	218,430,995	218,430,995	218,430,995	218,430,995
140		Tax Depreciation	-	-	-	7,747,068	15,768,534	14,584,638	13,492,483	12,478,963	11,544,078
141		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
142		Book Depreciation expense total	-	-	-	958,054	8,103,790	8,103,790	8,103,790	8,103,790	8,103,790
143		Tax Depreciation expense total	-	-	-	7,747,068	15,768,534	14,584,638	13,492,483	12,478,963	11,544,078
144		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
145		Deferred Tax Balance	-	-	-	2,416,210	2,727,882	2,306,534	1,917,836	1,557,124	1,224,398
146											
147		Revenue Recovery on Capital Expenditure to date									
148		Eligible Plant, cumulative capital expenditures	4,049,212	74,586,491	162,179,052	206,588,481	218,430,995	218,430,995	218,430,995	218,430,995	218,430,995
149	2002	Less: Retired Plant	-	-	-	-	-	-	-	-	-
150		Less: Accumulated Depreciation	-	-	-	(958,054)	(9,061,844)	(17,165,634)	(25,269,424)	(33,373,214)	(41,477,004)
151		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
152		Less: Deferred Tax Balance	-	-	-	(2,416,210)	(5,144,092)	(7,450,626)	(9,368,462)	(10,925,586)	(12,149,984)
153		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
154		Environmental Compliance Rate Base	4,049,212	74,586,491	162,179,052	203,214,216	204,225,059	193,814,735	183,793,109	174,132,195	164,804,007
155		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
156		Return on Environmental Compliance Rate Base	\$ 457,376	\$ 8,424,862	\$ 18,318,814	\$ 22,953,911	\$ 23,088,090	\$ 21,892,200	\$ 20,760,214	\$ 19,668,973	\$ 18,615,314
157											
158		Operating Expenses	-	-	-	466,873	952,420	971,469	990,898	1,010,716	1,030,930
159		Annual Depreciation expense	-	-	-	958,054	8,103,790	8,103,790	8,103,790	8,103,790	8,103,790
160		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
161		Annual Property Tax expense	-	6,074	111,880	243,269	308,446	314,054	301,898	289,742	277,587

	L	M	N	O	P	Q	R
125							
126							
127	2020						
128	7	Difference				January	1
129						February	2
130	\$ -	\$ -				March	3
131	\$ 218,430,995					April	4
132	3.710%					May	5
133	4.888%					June	6
134	35.59%					July	7
135	13,065,757					August	8
136	49,580,794					September	9
137	218,430,995					October	10
138	8,103,790					November	11
139	218,430,995					December	12
140	10,676,907						
141	11.30%						
142	8,103,790						
143	10,676,907						
144	0.1500%						
145	915,772						
146							
147							
148	218,430,995						
149	-						
150	(49,580,794)						
151	-						
152	(13,065,757)						
153	-						
154	155,784,445						
155	11.30%						
156	\$ 17,598,516						
157							
158	1,051,549						
159	8,103,790						
160	-						
161	265,431						

	A	B	C	D	E	F	G	H	I	J	K
162		Total OE	\$ -	\$ 6,074	\$ 111,880	\$ 1,668,195	\$ 9,364,656	\$ 9,389,312	\$ 9,396,586	\$ 9,404,248	\$ 9,412,307
163											
164		Total E(m) - Project	457,376	8,430,936	18,430,694	24,622,106	32,432,746	31,281,512	30,166,800	29,073,221	28,027,621
165											
166											
167							May				
168			2011	2012	2013	2014	2015	2016	2017	2018	2019
169		In-Service					1	2	3	4	5
170		Mill Creek 1NPC									
171	Project 26	Capital Expenditures - Project 26 - MC1 Baghouse	\$ -	\$ 13,571,615	\$ 42,786,742	\$ 49,569,617	\$ 48,617,413	\$ -	\$ -	\$ -	\$ -
172	6	Accumulated Expenditures	\$ -	\$ 13,571,615	\$ 56,358,357	\$ 105,927,974	\$ 154,545,387	\$ 154,545,387	\$ 154,545,387	\$ 154,545,387	\$ 154,545,387
173	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	4.240%	4.240%	4.240%	4.240%	4.240%
174	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%
175		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
176		Deferred Tax Balance	-	-	-	-	605,030	2,243,560	3,583,976	4,649,378	5,459,568
177		Book Accumulated Depreciation Balance	-	-	-	-	4,095,453	10,648,177	17,200,902	23,753,626	30,306,350
178		Unrecovered Investment -- Book	-	13,571,615	56,358,357	105,927,974	154,545,387	154,545,387	154,545,387	154,545,387	154,545,387
179		Book Depreciation	-	-	-	-	4,095,453	6,552,724	6,552,724	6,552,724	6,552,724
180		Unrecovered Investment -- Tax total	-	13,571,615	56,358,357	105,927,974	154,545,387	154,545,387	154,545,387	154,545,387	154,545,387
181		Tax Depreciation	-	-	-	-	5,795,452	11,156,631	10,318,995	9,546,269	8,829,178
182		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
183		Book Depreciation expense total	-	-	-	-	4,095,453	6,552,724	6,552,724	6,552,724	6,552,724
184		Tax Depreciation expense total	-	-	-	-	5,795,452	11,156,631	10,318,995	9,546,269	8,829,178
185		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
186		Deferred Tax Balance	-	-	-	-	605,030	1,638,531	1,340,415	1,065,402	810,190
187											
188		Revenue Recovery on Capital Expenditure to date									
189		Eligible Plant, cumulative capital expenditures	-	13,571,615	56,358,357	105,927,974	154,545,387	154,545,387	154,545,387	154,545,387	154,545,387
190	2002	Less: Retired Plant	-	-	-	-	-	-	-	-	-
191		Less: Accumulated Depreciation	-	-	-	-	(4,095,453)	(10,648,177)	(17,200,902)	(23,753,626)	(30,306,350)
192		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
193		Less: Deferred Tax Balance	-	-	-	-	(605,030)	(2,243,560)	(3,583,976)	(4,649,378)	(5,459,568)
194		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
195		Environmental Compliance Rate Base	-	13,571,615	56,358,357	105,927,974	149,844,904	141,653,649	133,760,509	126,142,382	118,779,468
196		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
197		Return on Environmental Compliance Rate Base	\$ -	\$ 1,532,972	\$ 6,365,916	\$ 11,965,016	\$ 16,925,620	\$ 16,000,383	\$ 15,108,819	\$ 14,248,319	\$ 13,416,647
198											

	L	M	N	O	P	Q	R
162	\$ 9,420,770						
163							
164	27,017,286						
165							
166							
167							
168	2020						
169	6	Difference				January	1
170						February	2
171	\$ -	\$ -				March	3
172	\$ 154,545,387					April	4
173	4.240%					May	5
174	5.285%					June	6
175	35.59%					July	7
176	6,034,347					August	8
177	36,859,075					September	9
178	154,545,387					October	10
179	6,552,724					November	11
180	154,545,387					December	12
181	8,167,724						
182	11.30%						
183	6,552,724						
184	8,167,724						
185	0.1500%						
186	574,778						
187							
188							
189	154,545,387						
190	-						
191	(36,859,075)						
192	-						
193	(6,034,347)						
194	-						
195	111,651,965						
196	11.30%						
197	\$ 12,611,565						
198							

	A	B	C	D	E	F	G	H	I	J	K
199		Operating Expenses	-	-	-	-	7,947,812	9,155,476	9,338,586	9,525,358	9,715,865
200		Annual Depreciation expense	-	-	-	-	4,095,453	6,552,724	6,552,724	6,552,724	6,552,724
201		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
202		Annual Property Tax expense	-	-	20,357	84,538	158,892	225,675	215,846	206,017	196,188
203		Total OE	\$ -	\$ -	\$ 20,357	\$ 84,538	\$ 12,202,156	\$ 15,933,876	\$ 16,107,156	\$ 16,284,099	\$ 16,464,777
204											
205		Total E(m) - Project	-	1,532,972	6,386,274	12,049,553	29,127,776	31,934,258	31,215,975	30,532,418	29,881,423
206											
207											

	L	M	N	O	P	Q	R
199	9,910,182						
200	6,552,724						
201	-						
202	186,359						
203	\$ 16,649,265						
204							
205	29,260,830						
206							
207							

	A	B	C	D	E	F	G	H	I	J	K
208							April				
209			2011	2012	2013	2014	2015	2016	2017	2018	2019
210		In-Service					1	2	3	4	5
211		Mill Creek 2NPC									
212	Project 26	Capital Expenditures - Project 26 - MC2 Baghouse	\$ -	\$ 12,967,870	\$ 41,386,869	\$ 49,120,072	\$ 47,612,217	\$ -	\$ -	\$ -	\$ -
213	7	Accumulated Expenditures	\$ -	\$ 12,967,870	\$ 54,354,739	\$ 103,474,812	\$ 151,087,029	\$ 151,087,029	\$ 151,087,029	\$ 151,087,029	\$ 151,087,029
214	2	Book Depreciation rate per year	0.000%	0.000%	0.000%	0.000%	4.700%	4.700%	4.700%	4.700%	4.700%
215	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%
216		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
217		Deferred Tax Balance	-	-	-	-	226,290	1,580,803	2,643,873	3,438,084	3,982,793
218		Book Accumulated Depreciation Balance	-	-	-	-	5,029,939	12,131,029	19,232,120	26,333,210	33,434,300
219		Unrecovered Investment -- Book	-	12,967,870	54,354,739	103,474,812	151,087,029	151,087,029	151,087,029	151,087,029	151,087,029
220		Book Depreciation	-	-	-	-	5,029,939	7,101,090	7,101,090	7,101,090	7,101,090
221		Unrecovered Investment -- Tax total	-	12,967,870	54,354,739	103,474,812	151,087,029	151,087,029	151,087,029	151,087,029	151,087,029
222		Tax Depreciation	-	-	-	-	5,665,764	10,906,973	10,088,081	9,332,646	8,631,602
223		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
224		Book Depreciation expense total	-	-	-	-	5,029,939	7,101,090	7,101,090	7,101,090	7,101,090
225		Tax Depreciation expense total	-	-	-	-	5,665,764	10,906,973	10,088,081	9,332,646	8,631,602
226		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
227		Deferred Tax Balance	-	-	-	-	226,290	1,354,513	1,063,070	794,211	544,709
228											
229		Revenue Recovery on Capital Expenditure to date									
230		Eligible Plant, cumulative capital expenditures	-	12,967,870	54,354,739	103,474,812	151,087,029	151,087,029	151,087,029	151,087,029	151,087,029
231	2002	Less: Retired Plant	-	-	-	-	-	-	-	-	-
232		Less: Accumulated Depreciation	-	-	-	-	(5,029,939)	(12,131,029)	(19,232,120)	(26,333,210)	(33,434,300)
233		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
234		Less: Deferred Tax Balance	-	-	-	-	(226,290)	(1,580,803)	(2,643,873)	(3,438,084)	(3,982,793)
235		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
236		Environmental Compliance Rate Base	-	12,967,870	54,354,739	103,474,812	145,830,800	137,375,196	129,211,036	121,315,735	113,669,935
237		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
238		Return on Environmental Compliance Rate Base	\$ -	\$ 1,464,776	\$ 6,139,599	\$ 11,687,921	\$ 16,472,210	\$ 15,517,113	\$ 14,594,937	\$ 13,703,129	\$ 12,839,503
239											
240		Operating Expenses	-	-	-	-	8,582,926	9,640,391	9,833,199	10,029,863	10,230,460
241		Annual Depreciation expense	-	-	-	-	5,029,939	7,101,090	7,101,090	7,101,090	7,101,090
242		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
243		Annual Property Tax expense	-	-	19,452	81,532	155,212	219,086	208,434	197,782	187,131
244		Total OE	\$ -	\$ -	\$ 19,452	\$ 81,532	\$ 13,768,077	\$ 16,960,567	\$ 17,142,723	\$ 17,328,735	\$ 17,518,681

	L	M	N	O	P	Q	R
208							
209	2020						
210	6	Difference				January	1
211						February	2
212	\$ -	\$ -				March	3
213	\$ 151,087,029					April	4
214	4.700%					May	5
215	5.285%					June	6
216	35.59%					July	7
217	4,297,359					August	8
218	40,535,391					September	9
219	151,087,029					October	10
220	7,101,090					November	11
221	151,087,029					December	12
222	7,984,949						
223	11.30%						
224	7,101,090						
225	7,984,949						
226	0.1500%						
227	314,595						
228							
229							
230	151,087,029						
231	-						
232	(40,535,391)						
233	-						
234	(4,297,359)						
235	-						
236	106,254,279						
237	11.30%						
238	\$ 12,001,873						
239							
240	10,435,059						
241	7,101,090						
242	-						
243	176,479						
244	\$ 17,712,639						

	A	B	C	D	E	F	G	H	I	J	K
245											
246		Total E(m) - Project	-	1,464,776	6,159,051	11,769,453	30,240,287	32,477,660	31,737,660	31,031,864	30,358,184
247											
248											

	L	M	N	O	P	Q	R
245							
246	29,714,512						
247							
248							

	A	B	C	D	E	F	G	H	I	J	K
249							October				
250			2011	2012	2013	2014	2015	2016	2017	2018	2019
251		In-Service					1	2	3	4	5
252		Mill Creek 3NPC									
253	Project 26	Capital Expenditures - Project 26 - MC3 Baghouse & SCR Modification	\$ 192,372	\$ 7,830,765	\$ 48,247,370	\$ 49,061,558	\$ 43,768,430	\$ 7,545,814	\$ -	\$ -	\$ -
254	8	Accumulated Expenditures	\$ 192,372	\$ 8,023,137	\$ 56,270,507	\$ 105,332,065	\$ 149,100,495	\$ 156,646,309	\$ 156,646,309	\$ 156,646,309	\$ 156,646,309
255	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.870%	3.870%	3.870%	3.870%	3.870%
256	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%
257		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
258		Deferred Tax Balance	-	-	-	-	1,562,097	3,429,179	4,994,093	6,280,255	7,307,735
259		Book Accumulated Depreciation Balance	-	-	-	-	1,202,123	7,264,335	13,326,547	19,388,759	25,450,971
260		Unrecovered Investment -- Book	192,372	8,023,137	56,270,507	105,332,065	149,100,495	156,646,309	156,646,309	156,646,309	156,646,309
261		Book Depreciation	-	-	-	-	1,202,123	6,062,212	6,062,212	6,062,212	6,062,212
262		Unrecovered Investment -- Tax total	192,372	8,023,137	56,270,507	105,332,065	149,100,495	156,646,309	156,646,309	156,646,309	156,646,309
263		Tax Depreciation	-	-	-	-	5,591,269	11,308,297	10,459,274	9,676,043	8,949,204
264		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
265		Book Depreciation expense total	-	-	-	-	1,202,123	6,062,212	6,062,212	6,062,212	6,062,212
266		Tax Depreciation expense total	-	-	-	-	5,591,269	11,308,297	10,459,274	9,676,043	8,949,204
267		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
268		Deferred Tax Balance	-	-	-	-	1,562,097	1,867,082	1,564,914	1,286,162	1,027,480
269											
270		Revenue Recovery on Capital Expenditure to date									
271		Eligible Plant, cumulative capital expenditures	192,372	8,023,137	56,270,507	105,332,065	149,100,495	156,646,309	156,646,309	156,646,309	156,646,309
272	2002	Less: Retired Plant	-	-	-	-	-	-	-	-	-
273		Less: Accumulated Depreciation	-	-	-	-	(1,202,123)	(7,264,335)	(13,326,547)	(19,388,759)	(25,450,971)
274		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
275		Less: Deferred Tax Balance	-	-	-	-	(1,562,097)	(3,429,179)	(4,994,093)	(6,280,255)	(7,307,735)
276		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
277		Environmental Compliance Rate Base	192,372	8,023,137	56,270,507	105,332,065	146,336,275	145,952,796	138,325,669	130,977,295	123,887,603
278		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
279		Return on Environmental Compliance Rate Base	\$ 21,729	\$ 906,247	\$ 6,355,993	\$ 11,897,705	\$ 16,529,305	\$ 16,485,990	\$ 15,624,473	\$ 14,794,443	\$ 13,993,632
280											
281		Operating Expenses	-	-	3,444,837	3,538,495	7,967,687	12,572,631	12,824,083	13,080,565	13,342,176
282		Annual Depreciation expense	-	-	-	-	1,202,123	6,062,212	6,062,212	6,062,212	6,062,212
283		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
284		Annual Property Tax expense	-	289	12,035	84,406	157,996	221,848	224,073	214,980	205,886
285		Total OE	\$ -	\$ 289	\$ 3,456,872	\$ 3,622,901	\$ 9,327,808	\$ 18,856,690	\$ 19,110,368	\$ 19,357,757	\$ 19,610,275

	L	M	N	O	P	Q	R
249							
250	2020						
251	6	Difference				January	1
252						February	2
253	\$ -	\$ -				March	3
254	\$ 156,646,309					April	4
255	3.870%					May	5
256	5.285%					June	6
257	35.59%					July	7
258	8,096,604					August	8
259	31,513,184					September	9
260	156,646,309					October	10
261	6,062,212					November	11
262	156,646,309					December	12
263	8,278,757						
264	11.30%						
265	6,062,212						
266	8,278,757						
267	0.1500%						
268	788,868						
269							
270							
271	156,646,309						
272	-						
273	(31,513,184)						
274	-						
275	(8,096,604)						
276	-						
277	117,036,522						
278	11.30%						
279	\$ 13,219,773						
280							
281	13,609,020						
282	6,062,212						
283	-						
284	196,793						
285	\$ 19,868,025						

	A	B	C	D	E	F	G	H	I	J	K
286											
287		Total E(m) - Project	21,729	906,536	9,812,865	15,520,606	25,857,113	35,342,660	34,734,842	34,152,200	33,603,907
288											
289											

	L	M	N	O	P	Q	R
286							
287	33,087,798						
288							
289							

	A	B	C	D	E	F	G	H	I	J	K
290						November					
291			2011	2012	2013	2014	2015	2016	2017	2018	2019
292		In-Service				1	2	3	4	5	6
293		Mill Creek 4NPC									
294	Project 26	Capital Expenditures - Project 26 - MC4 Baghouse, & SCR Upgrade & Mc	\$ 5,376,845	\$ 54,419,721	\$ 60,845,099	\$ 43,768,430	\$ 9,115,060	\$ -	\$ -	\$ -	\$ -
295	9	Accumulated Expenditures	\$ 5,376,845	\$ 59,796,566	\$ 120,641,665	\$ 164,410,095	\$ 173,525,155	\$ 173,525,155	\$ 173,525,155	\$ 173,525,155	\$ 173,525,155
296	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	3.850%	3.850%	3.850%	3.850%	3.850%	3.850%
297	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
298		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
299		Deferred Tax Balance	-	-	-	1,912,662	3,993,275	5,739,163	7,176,262	8,326,806	9,213,028
300		Book Accumulated Depreciation Balance	-	-	-	791,224	7,471,942	14,152,660	20,833,379	27,514,097	34,194,816
301		Unrecovered Investment -- Book	5,376,845	59,796,566	120,641,665	164,410,095	173,525,155	173,525,155	173,525,155	173,525,155	173,525,155
302		Book Depreciation	-	-	-	791,224	6,680,718	6,680,718	6,680,718	6,680,718	6,680,718
303		Unrecovered Investment -- Tax total	5,376,845	59,796,566	120,641,665	164,410,095	173,525,155	173,525,155	173,525,155	173,525,155	173,525,155
304		Tax Depreciation	-	-	-	6,165,379	12,526,781	11,586,275	10,718,649	9,913,492	9,170,804
305		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
306		Book Depreciation expense total	-	-	-	791,224	6,680,718	6,680,718	6,680,718	6,680,718	6,680,718
307		Tax Depreciation expense total	-	-	-	6,165,379	12,526,781	11,586,275	10,718,649	9,913,492	9,170,804
308		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
309		Deferred Tax Balance	-	-	-	1,912,662	2,080,614	1,745,887	1,437,099	1,150,544	886,222
310											
311		Revenue Recovery on Capital Expenditure to date									
312		Eligible Plant, cumulative capital expenditures	5,376,845	59,796,566	120,641,665	164,410,095	173,525,155	173,525,155	173,525,155	173,525,155	173,525,155
313	2002	Less: Retired Plant	-	-	-	-	-	-	-	-	-
314		Less: Accumulated Depreciation	-	-	-	(791,224)	(7,471,942)	(14,152,660)	(20,833,379)	(27,514,097)	(34,194,816)
315		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
316		Less: Deferred Tax Balance	-	-	-	(1,912,662)	(3,993,275)	(5,739,163)	(7,176,262)	(8,326,806)	(9,213,028)
317		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
318		Environmental Compliance Rate Base	5,376,845	59,796,566	120,641,665	161,706,210	162,059,937	153,633,331	145,515,513	137,684,251	130,117,311
319		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
320		Return on Environmental Compliance Rate Base	\$ 607,338	\$ 6,754,277	\$ 13,626,990	\$ 18,265,405	\$ 18,305,360	\$ 17,353,539	\$ 16,436,597	\$ 15,552,022	\$ 14,697,304
321											
322		Operating Expenses	-	-	-	7,145,168	14,639,284	14,932,070	15,230,712	15,535,326	15,846,032
323		Annual Depreciation expense	-	-	-	791,224	6,680,718	6,680,718	6,680,718	6,680,718	6,680,718
324		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
325		Annual Property Tax expense	-	8,065	89,695	180,962	245,428	249,080	239,059	229,038	219,017
326		Total OE	\$ -	\$ 8,065	\$ 89,695	\$ 8,117,354	\$ 21,565,431	\$ 21,861,868	\$ 22,150,489	\$ 22,445,082	\$ 22,745,767

	L	M	N	O	P	Q	R
290							
291	2020						
292	7	Difference				January	1
293						February	2
294	\$ -	\$ -				March	3
295	\$ 173,525,155					April	4
296	3.850%					May	5
297	4.888%					June	6
298	35.59%					July	7
299	9,854,072					August	8
300	40,875,534					September	9
301	173,525,155					October	10
302	6,680,718					November	11
303	173,525,155					December	12
304	8,481,910						
305	11.30%						
306	6,680,718						
307	8,481,910						
308	0.1500%						
309	641,044						
310							
311							
312	173,525,155						
313	-						
314	(40,875,534)						
315	-						
316	(9,854,072)						
317	-						
318	122,795,548						
319	11.30%						
320	\$ 13,870,280						
321							
322	16,162,953						
323	6,680,718						
324	-						
325	208,996						
326	\$ 23,052,667						

	A	B	C	D	E	F	G	H	I	J	K
327											
328		Total E(m) - Project	607,338	6,762,342	13,716,685	26,382,759	39,870,791	39,215,407	38,587,086	37,997,104	37,443,072

	L	M	N	O	P	Q	R
327							
328	36,922,947						

	A	B	C	D	E	F	G	H	I	J
1		Revenue Requirements								
2		Project 27 - LG&E								
3							November			
4			2011	2012	2013	2014	2015	2016	2017	2018
5		In-Service					1	2	3	4
6		TrimblePC								
7	Project 27	Capital Expenditures - Project 27 - TC1 Baghouse	\$ -	\$ -	\$ 23,479,869	\$ 37,849,548	\$ 57,140,608	\$ 5,282,332	\$ -	\$ -
8	10	Accumulated Expenditures	\$ -	\$ -	\$ 23,479,869	\$ 61,329,417	\$ 118,470,025	\$ 123,752,357	\$ 123,752,357	\$ 123,752,357
9	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.620%	3.620%	3.620%	3.620%
10	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%
11		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
12		Deferred Tax Balance	-	-	-	-	1,390,341	2,975,465	4,321,874	5,448,065
13		Book Accumulated Depreciation Balance	-	-	-	-	536,077	5,015,912	9,495,748	13,975,583
14		Unrecovered Investment -- Book	-	-	23,479,869	61,329,417	118,470,025	123,752,357	123,752,357	123,752,357
15		Book Depreciation	-	-	-	-	536,077	4,479,835	4,479,835	4,479,835
16		Unrecovered Investment -- Tax total	-	-	23,479,869	61,329,417	118,470,025	123,752,357	123,752,357	123,752,357
17		Tax Depreciation	-	-	-	-	4,442,626	8,933,683	8,262,945	7,644,183
18		Allowed Rate of Return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
19		Book Depreciation expense total	-	-	-	-	536,077	4,479,835	4,479,835	4,479,835
20		Tax Depreciation expense total	-	-	-	-	4,442,626	8,933,683	8,262,945	7,644,183
21		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
22		Deferred Tax Balance	-	-	-	-	1,390,341	1,585,124	1,346,409	1,126,191
23										
24		Revenue Recovery on Capital Expenditure to date								
25		Eligible Plant, cumulative capital expenditures	-	-	23,479,869	61,329,417	118,470,025	123,752,357	123,752,357	123,752,357
26	2002	Less: Retired Plant	-	-	-	-	-	-	-	-
27		Less: Accumulated Depreciation	-	-	-	-	(536,077)	(5,015,912)	(9,495,748)	(13,975,583)
28		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-
29		Less: Deferred Tax Balance	-	-	-	-	(1,390,341)	(2,975,465)	(4,321,874)	(5,448,065)
30		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-
31		Environmental Compliance Rate Base	-	-	23,479,869	61,329,417	116,543,608	115,760,980	109,934,736	104,328,709
32		Rate of return	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%
33			\$ -	\$ -	\$ 2,652,151	\$ 6,927,419	\$ 13,164,097	\$ 13,075,696	\$ 12,417,596	\$ 11,784,372
34										
35		Operating Expenses	-	-	-	-	3,732,365	7,614,024	7,766,305	7,921,631
36		Annual Depreciation expense	-	-	-	-	536,077	4,479,835	4,479,835	4,479,835
37		Less depreciation on retired plant	-	-	-	-	-	-	-	-

	K	L	M	N	O	P	Q	R
1								
2								
3								
4	2019	2020						
5	5	6	Difference				January	1
6							February	2
7	\$ -	\$ -	\$ -				March	3
8	\$ 123,752,357	\$ 123,752,357					April	4
9	3.620%	3.620%					May	5
10	5.713%	5.285%					June	6
11	35.59%	35.59%					July	7
12	6,369,895	7,103,219					August	8
13	18,455,418	22,935,254					September	9
14	123,752,357	123,752,357					October	10
15	4,479,835	4,479,835					November	11
16	123,752,357	123,752,357					December	12
17	7,069,972	6,540,312						
18	11.30%	11.30%						
19	4,479,835	4,479,835						
20	7,069,972	6,540,312						
21	0.1500%	0.1500%						
22	921,830	733,324						
23								
24								
25	123,752,357	123,752,357						
26	-	-						
27	(18,455,418)	(22,935,254)						
28	-	-						
29	(6,369,895)	(7,103,219)						
30	-	-						
31	98,927,044	93,713,885						
32	11.30%	11.30%						
33	\$ 11,174,231	\$ 10,585,382						
34								
35	8,080,064	8,241,665						
36	4,479,835	4,479,835						
37	-	-						

	A	B	C	D	E	F	G	H	I	J
38		Annual Property Tax expense	-	-	-	35,220	91,994	176,901	178,105	171,385
39		Total OE	\$ -	\$ -	\$ -	\$ 35,220	\$ 4,360,436	\$ 12,270,761	\$ 12,424,245	\$ 12,572,851
40										
41		Total E(m) - Project	-	-	2,652,151	6,962,639	17,524,533	25,346,456	24,841,841	24,357,223

	K	L	M	N	O	P	Q	R
38	164,665	157,945						
39	\$ 12,724,564	\$ 12,879,446						
40								
41	23,898,795	23,464,828						

	A	B	C	D	E	F	G	H	I	J	K
1		Revenue Requirements Summary									
2		2011 Amended Plan - KU									
3											
4			2010	2011	2012	2013	2014	2015	2016	2017	2018
5	Project 29	Brown Landfill (Phase I)									
6		Revenue Requirement									
7		Eligible Plant	6,335,235	33,057,613	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920
8		Less: Retired Plant	-	-	-	-	-	-	-	-	-
9		Less: Accumulated Depreciation	-	-	-	(1,532,772)	(3,132,185)	(4,731,599)	(6,331,013)	(7,930,427)	(9,529,840)
10		Plus: Accumulated Depreciation on retired plant	-	-	-	-	-	-	-	-	-
11		Less: Deferred Tax Balance	-	-	-	(216,850)	(1,115,219)	(1,903,401)	(2,589,935)	(3,182,139)	(3,687,332)
12		Plus: Deferred Tax Balance on retired plant	-	-	-	-	-	-	-	-	-
13		Environmental Compliance Rate Base	6,335,235	33,057,613	57,121,920	55,372,298	52,874,516	50,486,920	48,200,972	46,009,355	43,904,748
14		Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
15			\$ 725,953	\$ 3,788,063	\$ 6,545,585	\$ 6,345,097	\$ 6,058,876	\$ 5,785,282	\$ 5,523,336	\$ 5,272,199	\$ 5,031,033
16											
17		Operating expenses	-	-	-	4,000,000	4,080,000	4,161,600	4,244,832	4,329,729	4,416,323
18		Annual Depreciation expense	-	-	-	1,532,772	1,599,414	1,599,414	1,599,414	1,599,414	1,599,414
19		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
20		Annual Property Tax expense	-	9,503	49,586	85,683	83,384	80,985	78,585	76,186	73,787
21		Total OE	\$ -	\$ 9,503	\$ 49,586	\$ 5,618,454	\$ 5,762,797	\$ 5,841,998	\$ 5,922,831	\$ 6,005,329	\$ 6,089,524
22											
23		Total E(m)	725,953	3,797,566	6,595,172	11,963,551	11,821,674	11,627,281	11,446,168	11,277,528	11,120,557
24											

	L	M	N	O
1				
2				
3				
4	2019			
5				
6				
7	57,121,920			
8	-			
9	(11,129,254)			
10	-			
11	(4,111,816)			
12	-			
13	41,880,850			
14	11.46%			
15	\$ 4,799,115			
16				
17	4,504,650			
18	1,599,414			
19	-			
20	71,388			
21	\$ 6,175,452			
22				
23	10,974,567			
24				

	A	B	C	D	E	F	G	H	I	J	K
25	Project 34	BR Air Compliance - All Units - Baghouses									
26		Revenue Requirement									
27		Eligible Plant	1,997,488	28,033,301	87,732,905	148,493,367	173,587,165	173,587,165	173,587,165	173,587,165	173,587,165
28		Less: Retired Plant	-	-	-	-	-	-	-	-	-
29		Less: Accumulated Depreciation	-	-	-	(1,751,216)	(5,961,899)	(11,017,824)	(16,073,749)	(21,129,674)	(26,185,599)
30		Plus: Accumulated Depreciation on retired plant	-	-	-	-	-	-	-	-	-
31		Less: Deferred Tax Balance	-	-	-	(619,116)	(2,586,551)	(5,067,457)	(7,227,432)	(9,090,436)	(10,678,709)
32		Plus: Deferred Tax Balance on retired plant	-	-	-	-	-	-	-	-	-
33		Environmental Compliance Rate Base	1,997,488	28,033,301	87,732,905	146,123,034	165,038,715	157,501,883	150,285,983	143,367,055	136,722,857
34		Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
35			\$ 228,892	\$ 3,212,328	\$ 10,053,290	\$ 16,744,199	\$ 18,911,742	\$ 18,048,098	\$ 17,221,230	\$ 16,428,392	\$ 15,667,035
36											
37		Operating expenses	-	-	-	8,786,902	15,404,562	15,712,653	16,026,906	16,347,444	16,674,393
38		Annual Depreciation expense	-	-	-	1,751,216	4,210,683	5,055,925	5,055,925	5,055,925	5,055,925
39		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
40		Annual Property Tax expense	-	2,996	42,050	131,599	220,113	251,438	243,854	236,270	228,686
41		Total OE	\$ -	\$ 2,996	\$ 42,050	\$ 10,669,717	\$ 19,835,358	\$ 21,020,016	\$ 21,326,685	\$ 21,639,640	\$ 21,959,005
42											
43		Total E(m)	228,892	3,215,325	10,095,340	27,413,916	38,747,100	39,068,114	38,547,915	38,068,032	37,626,040
44											

	L	M	N	O
25				
26				
27	173,587,165			
28	-			
29	(31,241,525)			
30	-			
31	(12,012,834)			
32	-			
33	130,332,806			
34	11.46%			
35	\$ 14,934,801			
36				
37	17,007,881			
38	5,055,925			
39	-			
40	221,102			
41	\$ 22,284,909			
42				
43	37,219,709			
44				

	A	B	C	D	E	F	G	H	I	J	K
45	Project 35	GH Air Compliance - All Units - Baghouses									
46		Revenue Requirement									
47		Eligible Plant	5,094,166	101,828,630	299,923,984	530,338,048	698,652,348	711,534,820	711,534,820	711,534,820	711,534,820
48		Less: Retired Plant	-	-	-	-	-	-	-	-	-
49		Less: Accumulated Depreciation	-	-	-	(4,400,802)	(15,808,453)	(36,310,719)	(56,812,985)	(77,315,251)	(97,817,517)
50		Plus: Accumulated Depreciation on retired plant	-	-	-	-	-	-	-	-	-
51		Less: Deferred Tax Balance	-	-	-	(2,732,168)	(12,055,530)	(22,405,651)	(31,432,379)	(39,235,053)	(45,904,838)
52		Plus: Deferred Tax Balance on retired plant	-	-	-	-	-	-	-	-	-
53		Environmental Compliance Rate Base	5,094,166	101,828,630	299,923,984	523,205,078	670,788,365	652,818,450	623,289,456	594,984,516	567,812,465
54		Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
55			\$ 583,739	\$ 11,668,515	\$ 34,368,208	\$ 59,953,928	\$ 76,865,457	\$ 74,806,290	\$ 71,422,570	\$ 68,179,115	\$ 65,065,477
56											
57		Operating expenses	-	329,460	16,317,795	36,443,513	54,597,105	67,962,562	69,321,813	70,708,249	72,122,414
58		Annual Depreciation expense	-	-	-	4,400,802	11,407,651	20,502,266	20,502,266	20,502,266	20,502,266
59		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-
60		Annual Property Tax expense	-	7,641	152,743	449,886	788,906	1,024,266	1,012,836	982,083	951,329
61		Total OE	\$ -	\$ 337,101	\$ 16,470,538	\$ 41,294,201	\$ 66,793,662	\$ 89,489,093	\$ 90,836,915	\$ 92,192,598	\$ 93,576,009
62											
63		Total E(m)	583,739	12,005,616	50,838,746	101,248,129	143,659,120	164,295,383	162,259,485	160,371,713	158,641,486
64											

	L	M	N	O
45				
46				
47	711,534,820			
48	-			
49	(118,319,783)			
50	-			
51	(51,527,048)			
52	-			
53	541,687,989			
54	11.46%			
55	\$ 62,071,880			
56				
57	73,564,862			
58	20,502,266			
59	-			
60	920,576			
61	\$ 94,987,704			
62				
63	157,059,584			
64				

	A	B	C	D	E	F	G	H	I	J	K
65		Total E(m) - All KU Projects	1,538,584	19,018,507	67,529,257	140,625,596	194,227,893	214,990,778	212,253,568	209,717,272	207,388,083
66			1,538,584	19,018,507	67,529,257	140,625,596	194,227,893	214,990,778	212,253,568	209,717,272	207,388,083
67		Total Revenue Requirements									
68		Project 29	725,953	3,797,566	6,595,172	11,963,551	11,821,674	11,627,281	11,446,168	11,277,526	11,120,557
69		Project 34	228,892	3,215,325	10,095,340	27,413,916	38,747,100	39,068,114	38,547,915	38,068,032	37,626,040
70		Project 35	583,739	12,005,616	50,838,746	101,248,129	143,659,120	164,295,383	162,259,485	160,371,713	158,641,486
71		Total	1,538,584	19,018,507	67,529,257	140,625,596	194,227,893	214,990,778	212,253,568	209,717,272	207,388,083
72			-	-	-	-	-	-	-	-	-
73		12 Month Average Jurisdictional Ratio	86.99%	86.99%	86.99%	86.99%	86.99%	86.99%	86.99%	86.99%	86.99%
74											
75		Jurisdictional Allocation	1,338,388	16,543,882	58,742,576	122,327,862	168,955,607	187,016,895	184,635,841	182,429,560	180,403,437
76											
77		Forecasted 12-Month Retail Revenue	1,251,944,184	1,364,734,889	1,442,298,068	1,505,216,494	1,559,590,578	1,654,718,522	1,721,201,709	1,811,131,354	1,963,765,781
78											
79		Billing Factor	0.11%	1.21%	4.07%	8.13%	10.83%	11.30%	10.73%	10.07%	9.19%
80											
81		KU Residential Bill Impact									
82		Customer Charge	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50
83		Energy - 1,000 Kwh @ \$0.06805	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05
84		FAC billings (12/1/201 factor - \$-0.0016/kWh)	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60
85		DSM billings (12/1/201 factor - \$0.00243/kWh)	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43
86		ECR billings (12/1/201 factor: 2.55%)	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97
87		Additional ECR factor	\$0.06	\$0.94	\$3.15	\$6.29	\$8.36	\$8.75	\$8.30	\$7.79	\$7.11
88				47.54%			424.84%				
89											
90			2010	2011	2012	2013	2014	2015	2016	2017	2018
91	Project 29	Eligible Plant	6,335,235	33,057,613	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920
92	Project 34	Eligible Plant	1,997,488	28,033,301	87,732,905	148,493,367	173,587,165	173,587,165	173,587,165	173,587,165	173,587,165
93	Project 35	Eligible Plant	5,094,166	101,828,630	299,923,984	530,338,048	698,652,348	711,534,820	711,534,820	711,534,820	711,534,820
94		Total-KU	13,426,889	162,919,545	444,778,808	735,953,335	929,361,433	942,243,905	942,243,905	942,243,905	942,243,905

	L	M	N	O
65	205,253,861			
66	205,253,861			
67				
68	10,974,567			
69	37,219,709			
70	157,059,584			
71	205,253,861		6,339,502	#####
72	-			
73	86.99%			
74				
75	178,546,913		5,514,627	#####
76				
77	2,028,216,792			
78				
79	8.80%			
80				
81				
82	\$8.50			
83	\$68.05			
84	-\$1.60			
85	\$2.43			
86	\$1.97			
87	\$6.81			
88				
89				
90	2019			
91	57,121,920			
92	173,587,165			
93	711,534,820			
94	942,243,905			

	A	B	C	D	E	F	G	H	I	J	K
1	Summary Cash Flow										
2	Cash Flow for 2011 thru 2020										
3	2011 KU Amended ECR Plan										
4											
5											
6		¹	²	³	⁴	⁵	⁶	⁷	⁸	⁹	
7		Date	Landfill	(Pro)ance - BR1 & B	ompliance - BR3 (P	ompliance - GH1 (P	ompliance - GH2 (P	ompliance - GH3	ompliance - GH4	(Project 35)	Total
8	2010	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	2011	\$ 6,335,235	\$ 1,997,488	\$ -	\$ 2,178,929	\$ 148,784	\$ 1,307,716	\$ 1,458,737	\$ -	\$ 7,091,654	
10	2012	\$ 26,722,378	\$ 24,548,593	\$ 1,487,220	\$ 50,248,800	\$ 37,354,857	\$ 4,809,001	\$ 4,321,807	\$ -	\$ 122,770,278	
11	2013	\$ 24,064,307	\$ 40,365,747	\$ 19,333,856	\$ 66,924,592	\$ 48,163,861	\$ 47,890,171	\$ 35,116,729	\$ -	\$ 257,794,957	
12	2014	\$ -	\$ 26,176,061	\$ 34,584,401	\$ 44,857,567	\$ 72,191,638	\$ 56,057,325	\$ 57,307,535	\$ -	\$ 291,174,527	
13	2015	\$ -	\$ -	\$ 25,093,798	\$ -	\$ 6,693,304	\$ 84,049,087	\$ 77,571,909	\$ -	\$ 193,408,098	
14	2016	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,898,032	\$ 8,984,440	\$ -	\$ 12,882,472	
15	2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
16	2018	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
17											\$ -
18		\$ 57,121,920	\$ 93,087,890	\$ 80,499,275	\$ 164,209,888	\$ 164,552,444	\$ 198,011,331	\$ 184,761,157	\$ -	\$ 885,121,985	

	A	B	C	D	E	F	G	H	I	J	K
1		Revenue Requirements									
2		Project 29 - KU									
3						January					
4		2011	2012	2013	2014	2015	2016	2017	2018	2019	
5		In-Service				1	2	3	4	5	6
6		Brown 3									
7	Project 29	Capital Expenditures - Project 29 - Brown Landfill - Phase II	\$ 6,335,235	\$ 26,722,378	\$ 24,064,307	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	2	Accumulated Expenditures	\$ 6,335,235	\$ 33,057,613	\$ 57,121,920	\$ 57,121,920	\$ 57,121,920	\$ 57,121,920	\$ 57,121,920	\$ 57,121,920	\$ 57,121,920
9	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	2.800%	2.800%	2.800%	2.800%	2.800%	2.800%
10	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
11		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
12		Deferred Tax Balance	-	-	-	216,850	1,115,219	1,903,401	2,589,935	3,182,139	3,687,332
13		Book Accumulated Depreciation Balance	-	-	-	1,532,772	3,132,185	4,731,599	6,331,013	7,930,427	9,529,840
14		Unrecovered Investment -- Book	6,335,235	33,057,613	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920
15		Book Depreciation	-	-	-	1,532,772	1,599,414	1,599,414	1,599,414	1,599,414	1,599,414
16		Unrecovered Investment -- Tax total	6,335,235	33,057,613	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920
17		Tax Depreciation	-	-	-	2,142,072	4,123,631	3,814,031	3,528,421	3,263,375	3,018,893
18		Allowed Rate of Return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
19		Book Depreciation expense total	-	-	-	1,532,772	1,599,414	1,599,414	1,599,414	1,599,414	1,599,414
20		Tax Depreciation expense total	-	-	-	2,142,072	4,123,631	3,814,031	3,528,421	3,263,375	3,018,893
21		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
22		Deferred Tax Balance	-	-	-	216,850	898,369	788,182	666,534	592,204	505,193
23											
24		Revenue Recovery on Capital Expenditure to date									
25		Eligible Plant, cumulative capital expenditures	6,335,235	33,057,613	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920	57,121,920
26	2002	Less: Retired Plant	-	-	-	-	-	-	-	-	-
27		Less: Accumulated Depreciation	-	-	-	(1,532,772)	(3,132,185)	(4,731,599)	(6,331,013)	(7,930,427)	(9,529,840)
28		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-
29		Less: Deferred Tax Balance	-	-	-	(216,850)	(1,115,219)	(1,903,401)	(2,589,935)	(3,182,139)	(3,687,332)
30		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-
31		Environmental Compliance Rate Base	6,335,235	33,057,613	57,121,920	55,372,298	52,874,516	50,486,920	48,200,972	46,009,355	43,904,746
32		Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
33		Return on Environmental Compliance Rate Base	\$ 725,953	\$ 3,788,063	\$ 6,545,585	\$ 6,345,097	\$ 6,058,876	\$ 5,785,282	\$ 5,523,336	\$ 5,272,199	\$ 5,031,033
34											
35		Operating Expenses	-	-	-	4,000,000	4,080,000	4,161,600	4,244,832	4,329,729	4,416,323
36		Annual Depreciation expense	-	-	-	1,532,772	1,599,414	1,599,414	1,599,414	1,599,414	1,599,414
37		Less depreciation on retired plant	-	-	-	-	-	-	-	-	-

	L	M	N	O	P	Q	R
1							
2							
3							
4	2020						
5	7	Difference				January	1
6						February	2
7	\$ -	\$ -				March	3
8	\$ 57,121,920					April	4
9	2.800%					May	5
10	4.888%					June	6
11	35.59%					July	7
12	4,111,816					August	8
13	11,129,254					September	9
14	57,121,920					October	10
15	1,599,414					November	11
16	57,121,920					December	12
17	2,792,119						
18	11.46%						
19	1,599,414						
20	2,792,119						
21	0.1500%						
22	424,484						
23							
24							
25	57,121,920						
26	-						
27	(11,129,254)						
28	-						
29	(4,111,816)						
30	-						
31	41,880,850						
32	11.46%						
33	\$ 4,799,115						
34							
35	4,504,650						
36	1,599,414						
37	-						

	A	B	C	D	E	F	G	H	I	J	K
38		Annual Property Tax expense	-	9,503	49,566	85,683	83,384	80,985	78,585	76,186	73,787
39		Total OE	\$ -	\$ 9,503	\$ 49,566	\$ 5,618,454	\$ 5,762,797	\$ 5,841,998	\$ 5,922,831	\$ 6,005,329	\$ 6,089,524
40											
41		Total E(m) - Project	725,953	3,797,566	6,595,172	11,963,551	11,821,674	11,627,281	11,446,168	11,277,528	11,120,557

	L	M	N	O	P	Q	R
38	71,388						
39	\$ 6,175,452						
40							
41	10,974,567						

	A	B	C	D	E	F	G	H	I	J
1	Revenue Requirements									
2	Project 34 - KU									
3						May				
4			2011	2012	2013	2014	2015	2016	2017	2018
5		In-Service				1	2	3	4	5
6		Brown 2								
7	Project 34	Capital Expenditures - Project 34 - BR1-BR2 Shared Baghouse	\$ 1,997,488	\$ 24,548,593	\$ 40,365,747	\$ 26,176,061	\$ -	\$ -	\$ -	\$ -
8	3	Accumulated Expenditures	\$ 1,997,488	\$ 26,546,082	\$ 66,911,829	\$ 93,087,890	\$ 93,087,890	\$ 93,087,890	\$ 93,087,890	\$ 93,087,890
9	2	Book Depreciation rate, per year	0.000%	0.000%	0.000%	3.010%	3.010%	3.010%	3.010%	3.010%
10	2	Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%
11		Income tax rate	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
12		Deferred Tax Balance	-	-	-	619,116	2,013,557	3,228,434	4,277,660	5,173,164
13		Book Accumulated Depreciation Balance	-	-	-	1,751,216	4,553,161	7,355,107	10,157,052	12,958,998
14		Unrecovered Investment -- Book	1,997,488	26,546,082	66,911,829	93,087,890	93,087,890	93,087,890	93,087,890	93,087,890
15		Book Depreciation	-	-	-	1,751,216	2,801,945	2,801,945	2,801,945	2,801,945
16		Unrecovered Investment -- Tax total	1,997,488	26,546,082	66,911,829	93,087,890	93,087,890	93,087,890	93,087,890	93,087,890
17		Tax Depreciation	-	-	-	3,490,796	6,720,015	6,215,478	5,750,039	5,318,111
18		Allowed Rate of Return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
19		Book Depreciation expense total	-	-	-	1,751,216	2,801,945	2,801,945	2,801,945	2,801,945
20		Tax Depreciation expense total	-	-	-	3,490,796	6,720,015	6,215,478	5,750,039	5,318,111
21		Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
22		Deferred Tax Balance	-	-	-	619,116	1,394,441	1,214,876	1,049,226	895,503
23										
24		Revenue Recovery on Capital Expenditure to date								
25		Eligible Plant, cumulative capital expenditures	1,997,488	26,546,082	66,911,829	93,087,890	93,087,890	93,087,890	93,087,890	93,087,890
26	2002	Less: Retired Plant	-	-	-	-	-	-	-	-
27		Less: Accumulated Depreciation	-	-	-	(1,751,216)	(4,553,161)	(7,355,107)	(10,157,052)	(12,958,998)
28		Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-
29		Less: Deferred Tax Balance	-	-	-	(619,116)	(2,013,557)	(3,228,434)	(4,277,660)	(5,173,164)
30		Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-
31		Environmental Compliance Rate Base	1,997,488	26,546,082	66,911,829	90,717,557	86,521,171	82,504,349	78,653,177	74,955,728
32		Rate of return	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%	11.46%
33		Return on Environmental Compliance Rate Base	\$ 228,892	\$ 3,041,908	\$ 7,667,408	\$ 10,395,300	\$ 9,914,438	\$ 9,454,151	\$ 9,012,846	\$ 8,589,157
34										
35		Operating Expenses	-	-	-	8,786,902	9,970,752	10,170,167	10,373,571	10,581,042
36		Annual Depreciation expense	-	-	-	1,751,216	2,801,945	2,801,945	2,801,945	2,801,945
37		Less depreciation on retired plant	-	-	-	-	-	-	-	-

	K	L	M	N	O	P	Q	R
1								
2								
3								
4	2019	2020						
5	6	7	Difference				January	1
6							February	2
7	\$ -	\$ -	\$ -				March	3
8	\$ 93,087,890	\$ 93,087,890					April	4
9	3.010%	3.010%					May	5
10	5.285%	4.888%					June	6
11	35.59%	35.59%					July	7
12	5,926,871	6,549,052					August	8
13	15,760,943	18,562,889					September	9
14	93,087,890	93,087,890					October	10
15	2,801,945	2,801,945					November	11
16	93,087,890	93,087,890					December	12
17	4,919,695	4,550,136						
18	11.46%	11.46%						
19	2,801,945	2,801,945						
20	4,919,695	4,550,136						
21	0.1500%	0.1500%						
22	753,707	622,181						
23								
24								
25	93,087,890	93,087,890						
26	-	-						
27	(15,760,943)	(18,562,889)						
28	-	-						
29	(5,926,871)	(6,549,052)						
30	-	-						
31	71,400,076	67,975,949						
32	11.46%	11.46%						
33	\$ 8,181,715	\$ 7,789,346						
34								
35	10,792,663	11,008,516						
36	2,801,945	2,801,945						
37	-	-						