

**PRELIMINARY TRANSMISSION EMF MANAGEMENT PLAN**  
**EGBERT SWITCHING STATION PROJECT**  
**230 kV Duct Bank Underground Transmission Line**

Spreadsheet 1

Distance from Center line (feet)	Magnetic Field Level Three Feet Above Ground (milliGauss)		
	Duct Bank Base Case	Duct Bank Lower Conductors 5 Feet	Percent Reduction
-100	0.9	0.9	1.2%
-99	1.0	1.0	1.1%
-98	1.0	1.0	1.2%
-97	1.0	1.0	1.2%
-96	1.0	1.0	1.3%
-95	1.0	1.0	1.2%
-94	1.1	1.1	1.3%
-93	1.1	1.1	1.4%
-92	1.1	1.1	1.3%
-91	1.1	1.1	1.4%
-90	1.2	1.1	1.5%
-89	1.2	1.2	1.5%
-88	1.2	1.2	1.5%
-87	1.2	1.2	1.5%
-86	1.3	1.3	1.6%
-85	1.3	1.3	1.6%
-84	1.3	1.3	1.6%
-83	1.4	1.3	1.7%
-82	1.4	1.4	1.6%
-81	1.4	1.4	1.8%
-80	1.5	1.4	1.8%
-79	1.5	1.5	1.8%
-78	1.5	1.5	1.9%
-77	1.6	1.6	2.0%
-76	1.6	1.6	2.0%
-75	1.7	1.6	2.0%
-74	1.7	1.7	2.1%
-73	1.8	1.7	2.2%
-72	1.8	1.8	2.2%
-71	1.9	1.8	2.3%
-70	1.9	1.9	2.3%
-69	2.0	1.9	2.4%
-68	2.0	2.0	2.5%
-67	2.1	2.0	2.6%
-66	2.1	2.1	2.6%
-65	2.2	2.1	2.7%
-64	2.3	2.2	2.7%
-63	2.3	2.3	2.9%
-62	2.4	2.3	2.9%
-61	2.5	2.4	3.0%
-60	2.6	2.5	3.1%
-59	2.7	2.6	3.2%
-58	2.7	2.7	3.3%

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Distance from Center line (feet)	Magnetic Field Level Three Feet Above Ground (milliGauss)		
	Duct Bank Base Case	Duct Bank Lower Conductors 5 Feet	Percent Reduction
-57	2.8	2.7	3.4%
-56	2.9	2.8	3.5%
-55	3.0	2.9	3.6%
-54	3.2	3.0	3.8%
-53	3.3	3.1	3.9%
-52	3.4	3.3	4.0%
-51	3.5	3.4	4.2%
-50	3.7	3.5	4.4%
-49	3.8	3.6	4.5%
-48	3.9	3.8	4.7%
-47	4.1	3.9	4.9%
-46	4.3	4.1	5.0%
-45	4.5	4.2	5.3%
-44	4.7	4.4	5.5%
-43	4.9	4.6	5.7%
-42	5.1	4.8	6.0%
-41	5.3	5.0	6.2%
-40	5.6	5.2	6.5%
-39	5.8	5.4	6.8%
-38	6.1	5.7	7.1%
-37	6.4	6.0	7.4%
-36	6.8	6.3	7.8%
-35	7.1	6.6	8.1%
-34	7.5	6.9	8.6%
-33	8.0	7.2	9.0%
-32	8.4	7.6	9.5%
-31	8.9	8.0	10.0%
-30	9.5	8.5	10.5%
-29	10.0	8.9	11.1%
-28	10.7	9.4	11.7%
-27	11.4	10.0	12.4%
-26	12.2	10.6	13.1%
-25	13.0	11.2	13.9%
-24	14.0	11.9	14.8%
-23	15.0	12.7	15.7%
-22	16.2	13.5	16.7%
-21	17.5	14.4	17.8%
-20	18.9	15.3	19.0%
-19	20.5	16.4	20.3%
-18	22.3	17.5	21.7%
-17	24.4	18.7	23.3%

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Distance from Center line (feet)	Magnetic Field Level Three Feet Above Ground (milliGauss)		
	Duct Bank Base Case	Duct Bank Lower Conductors 5 Feet	Percent Reduction
-16	26.7	20.0	24.9%
-15	29.3	21.5	26.7%
-14	32.2	23.0	28.6%
-13	35.5	24.6	30.6%
-12	39.3	26.4	32.8%
-11	43.5	28.2	35.1%
-10	48.3	30.2	37.6%
-9	53.7	32.2	40.1%
-8	59.7	34.3	42.6%
-7	66.3	36.3	45.2%
-6	73.3	38.3	47.7%
-5	80.7	40.2	50.1%
-4	88.0	42.0	52.3%
-3	94.8	43.5	54.2%
-2	100.7	44.7	55.6%
-1	104.9	45.5	56.6%
0	107.1	45.9	57.1%
1	106.9	45.9	57.1%
2	104.4	45.4	56.5%
3	99.9	44.6	55.4%
4	93.9	43.3	53.9%
5	87.0	41.8	52.0%
6	79.8	40.1	49.8%
7	72.5	38.1	47.4%
8	65.6	36.1	44.9%
9	59.2	34.1	42.4%
10	53.3	32.0	39.9%
11	48.0	30.0	37.4%
12	43.2	28.1	35.0%
13	39.0	26.3	32.7%
14	35.3	24.5	30.5%
15	32.0	22.9	28.5%
16	29.1	21.4	26.6%
17	26.6	20.0	24.9%
18	24.3	18.7	23.2%
19	22.3	17.4	21.7%
20	20.5	16.3	20.3%
21	18.9	15.3	19.0%
22	17.4	14.3	17.9%
23	16.2	13.5	16.8%
24	15.0	12.6	15.7%

**PRELIMINARY TRANSMISSION EMF MANAGEMENT PLAN**  
**EGBERT SWITCHING STATION PROJECT**  
**230 kV Duct Bank Underground Transmission Line**

Spreadsheet 1

Distance from Center line (feet)	Magnetic Field Level Three Feet Above Ground (milliGauss)		
	Duct Bank Base Case	Duct Bank Lower Conductors 5 Feet	Percent Reduction
25	14.0	11.9	14.8%
26	13.0	11.2	14.0%
27	12.2	10.6	13.2%
28	11.4	10.0	12.4%
29	10.7	9.4	11.7%
30	10.0	8.9	11.1%
31	9.4	8.5	10.5%
32	8.9	8.0	10.0%
33	8.4	7.6	9.5%
34	8.0	7.2	9.0%
35	7.5	6.9	8.6%
36	7.1	6.6	8.2%
37	6.8	6.3	7.8%
38	6.4	6.0	7.4%
39	6.1	5.7	7.1%
40	5.8	5.4	6.8%
41	5.6	5.2	6.5%
42	5.3	5.0	6.2%
43	5.1	4.8	6.0%
44	4.9	4.6	5.7%
45	4.7	4.4	5.5%
46	4.5	4.2	5.3%
47	4.3	4.1	5.1%
48	4.1	3.9	4.9%
49	3.9	3.8	4.7%
50	3.8	3.6	4.5%
51	3.7	3.5	4.4%
52	3.5	3.4	4.2%
53	3.4	3.3	4.0%
54	3.3	3.1	3.9%
55	3.2	3.0	3.8%
56	3.0	2.9	3.6%
57	2.9	2.8	3.5%
58	2.8	2.7	3.4%
59	2.7	2.7	3.3%
60	2.7	2.6	3.2%
61	2.6	2.5	3.1%
62	2.5	2.4	3.0%
63	2.4	2.3	2.9%
64	2.3	2.3	2.8%
65	2.3	2.2	2.8%
66	2.2	2.1	2.6%
67	2.1	2.1	2.6%

**PRELIMINARY TRANSMISSION EMF MANAGEMENT PLAN  
 EGBERT SWITCHING STATION PROJECT  
 230 kV Duct Bank Underground Transmission Line**

Spreadsheet 1

Distance from Center line (feet)	Magnetic Field Level Three Feet Above Ground (milliGauss)		
	Duct Bank Base Case	Duct Bank Lower Conductors 5 Feet	Percent Reduction
68	2.1	2.0	2.5%
69	2.0	2.0	2.4%
70	2.0	1.9	2.4%
71	1.9	1.9	2.4%
72	1.9	1.8	2.3%
73	1.8	1.8	2.2%
74	1.8	1.7	2.2%
75	1.7	1.7	2.1%
76	1.7	1.6	2.0%
77	1.6	1.6	2.0%
78	1.6	1.6	2.0%
79	1.5	1.5	1.9%
80	1.5	1.5	1.8%
81	1.5	1.4	1.8%
82	1.4	1.4	1.7%
83	1.4	1.4	1.7%
84	1.4	1.3	1.6%
85	1.3	1.3	1.6%
86	1.3	1.3	1.6%
87	1.3	1.3	1.6%
88	1.2	1.2	1.5%
89	1.2	1.2	1.5%
90	1.2	1.2	1.4%
91	1.2	1.1	1.5%
92	1.1	1.1	1.4%
93	1.1	1.1	1.3%
94	1.1	1.1	1.4%
95	1.1	1.1	1.3%
96	1.0	1.0	1.2%
97	1.0	1.0	1.3%
98	1.0	1.0	1.3%
99	1.0	1.0	1.2%
100	1.0	1.0	1.1%

**PRELIMINARY TRANSMISSION EMF MANAGEMENT PLAN  
 EGBERT SWITCHING STATION PROJECT  
 230 kV Pipe Type Underground Transmission Line**

Spreadsheet 2

Distance from Center line (feet)	Magnetic Field Level Three Feet Above Ground (milliGauss)		
	Pipe Type Base Case	Pipe Type Lower Conductors 5 Feet	Percent Reduction
-100	0.2	0.2	1.2%
-99	0.2	0.2	1.1%
-98	0.2	0.2	1.1%
-97	0.2	0.2	1.6%
-96	0.2	0.2	1.1%
-95	0.2	0.2	1.0%
-94	0.2	0.2	1.0%
-93	0.2	0.2	1.5%
-92	0.2	0.2	1.5%
-91	0.2	0.2	1.4%
-90	0.2	0.2	1.4%
-89	0.2	0.2	1.4%
-88	0.2	0.2	1.8%
-87	0.2	0.2	1.8%
-86	0.2	0.2	1.7%
-85	0.2	0.2	1.3%
-84	0.2	0.2	1.6%
-83	0.3	0.2	1.6%
-82	0.3	0.3	1.6%
-81	0.3	0.3	1.5%
-80	0.3	0.3	1.9%
-79	0.3	0.3	2.2%
-78	0.3	0.3	2.1%
-77	0.3	0.3	2.1%
-76	0.3	0.3	1.7%
-75	0.3	0.3	2.0%
-74	0.3	0.3	1.9%
-73	0.3	0.3	2.2%
-72	0.3	0.3	2.1%
-71	0.3	0.3	2.4%
-70	0.4	0.3	2.3%
-69	0.4	0.4	2.5%
-68	0.4	0.4	2.4%
-67	0.4	0.4	2.4%
-66	0.4	0.4	2.6%
-65	0.4	0.4	2.5%
-64	0.4	0.4	2.6%
-63	0.4	0.4	2.8%
-62	0.4	0.4	2.9%
-61	0.5	0.4	3.1%
-60	0.5	0.5	3.2%
-59	0.5	0.5	3.3%
-58	0.5	0.5	3.2%

**PRELIMINARY TRANSMISSION EMF MANAGEMENT PLAN  
 EGBERT SWITCHING STATION PROJECT  
 230 kV Pipe Type Underground Transmission Line**

Spreadsheet 2

Magnetic Field Level Three Feet Above Ground (milliGauss)			
Distance from Center line (feet)	Pipe Type Base Case	Pipe Type Lower Conductors 5 Feet	Percent Reduction
-57	0.5	0.5	3.4%
-56	0.5	0.5	3.5%
-55	0.6	0.5	3.7%
-54	0.6	0.6	3.8%
-53	0.6	0.6	3.8%
-52	0.6	0.6	4.0%
-51	0.6	0.6	4.2%
-50	0.7	0.6	4.3%
-49	0.7	0.7	4.4%
-48	0.7	0.7	4.7%
-47	0.8	0.7	4.9%
-46	0.8	0.8	5.1%
-45	0.8	0.8	5.2%
-44	0.9	0.8	5.6%
-43	0.9	0.9	5.8%
-42	0.9	0.9	5.9%
-41	1.0	0.9	6.3%
-40	1.0	1.0	6.5%
-39	1.1	1.0	6.8%
-38	1.1	1.1	7.2%
-37	1.2	1.1	7.5%
-36	1.3	1.2	7.8%
-35	1.3	1.2	8.3%
-34	1.4	1.3	8.7%
-33	1.5	1.4	9.1%
-32	1.6	1.4	9.6%
-31	1.7	1.5	10.1%
-30	1.8	1.6	10.7%
-29	1.9	1.7	11.2%
-28	2.0	1.8	11.9%
-27	2.1	1.9	12.6%
-26	2.3	2.0	13.4%
-25	2.5	2.1	14.2%
-24	2.6	2.2	15.1%
-23	2.8	2.4	16.1%
-22	3.1	2.5	17.2%
-21	3.3	2.7	18.3%
-20	3.6	2.9	19.5%
-19	3.9	3.1	20.9%
-18	4.3	3.3	22.4%
-17	4.7	3.6	24.0%

**PRELIMINARY TRANSMISSION EMF MANAGEMENT PLAN**  
**EGBERT SWITCHING STATION PROJECT**  
**230 kV Pipe Type Underground Transmission Line**

Spreadsheet 2

Distance from Center line (feet)	Magnetic Field Level Three Feet Above Ground (milliGauss)		
	Pipe Type Base Case	Pipe Type Lower Conductors 5 Feet	Percent Reduction
-16	5.1	3.8	25.7%
-15	5.7	4.1	27.6%
-14	6.2	4.4	29.6%
-13	6.9	4.7	31.7%
-12	7.7	5.1	34.0%
-11	8.5	5.4	36.5%
-10	9.5	5.8	39.0%
-9	10.6	6.2	41.6%
-8	11.8	6.6	44.3%
-7	13.2	7.0	47.0%
-6	14.6	7.4	49.5%
-5	16.1	7.7	51.9%
-4	17.5	8.0	54.1%
-3	18.8	8.3	55.9%
-2	19.9	8.5	57.3%
-1	20.6	8.6	58.1%
0	20.9	8.7	58.4%
1	20.6	8.6	58.1%
2	19.9	8.5	57.3%
3	18.8	8.3	55.9%
4	17.5	8.0	54.1%
5	16.1	7.7	51.9%
6	14.6	7.4	49.5%
7	13.2	7.0	47.0%
8	11.8	6.6	44.3%
9	10.6	6.2	41.6%
10	9.5	5.8	39.0%
11	8.5	5.4	36.5%
12	7.7	5.1	34.0%
13	6.9	4.7	31.7%
14	6.2	4.4	29.6%
15	5.7	4.1	27.6%
16	5.1	3.8	25.7%
17	4.7	3.6	24.0%
18	4.3	3.3	22.4%
19	3.9	3.1	20.9%
20	3.6	2.9	19.5%
21	3.3	2.7	18.3%
22	3.1	2.5	17.2%
23	2.8	2.4	16.1%
24	2.6	2.2	15.1%



**PRELIMINARY TRANSMISSION EMF MANAGEMENT PLAN**  
**EGBERT SWITCHING STATION PROJECT**  
**230 kV Pipe Type Underground Transmission Line**

**Spreadsheet 2**

<b>Magnetic Field Level Three Feet Above Ground (milliGauss)</b>			
<b>Distance from Center line (feet)</b>	<b>Pipe Type Base Case</b>	<b>Pipe Type Lower Conductors 5 Feet</b>	<b>Percent Reduction</b>
25	2.5	2.1	14.2%
26	2.3	2.0	13.4%
27	2.1	1.9	12.6%
28	2.0	1.8	11.9%
29	1.9	1.7	11.2%
30	1.8	1.6	10.7%
31	1.7	1.5	10.1%
32	1.6	1.4	9.6%
33	1.5	1.4	9.1%
34	1.4	1.3	8.7%
35	1.3	1.2	8.3%
36	1.3	1.2	7.8%
37	1.2	1.1	7.5%
38	1.1	1.1	7.2%
39	1.1	1.0	6.8%
40	1.0	1.0	6.5%
41	1.0	0.9	6.3%
42	0.9	0.9	5.9%
43	0.9	0.9	5.8%
44	0.9	0.8	5.6%
45	0.8	0.8	5.2%
46	0.8	0.8	5.1%
47	0.8	0.7	4.9%
48	0.7	0.7	4.7%
49	0.7	0.7	4.4%
50	0.7	0.6	4.3%
51	0.6	0.6	4.2%
52	0.6	0.6	4.0%
53	0.6	0.6	3.8%
54	0.6	0.6	3.8%
55	0.6	0.5	3.7%
56	0.5	0.5	3.5%
57	0.5	0.5	3.4%
58	0.5	0.5	3.2%
59	0.5	0.5	3.3%
60	0.5	0.5	3.2%
61	0.5	0.4	3.1%
62	0.4	0.4	2.9%
63	0.4	0.4	2.8%
64	0.4	0.4	2.6%
65	0.4	0.4	2.5%
66	0.4	0.4	2.6%
67	0.4	0.4	2.4%

**PRELIMINARY TRANSMISSION EMF MANAGEMENT PLAN**  
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**230 kV Pipe Type Underground Transmission Line**

Spreadsheet 2

Distance from Center line (feet)	Magnetic Field Level Three Feet Above Ground (milliGauss)		
	Pipe Type Base Case	Pipe Type Lower Conductors 5 Feet	Percent Reduction
68	0.4	0.4	2.4%
69	0.4	0.4	2.5%
70	0.4	0.3	2.3%
71	0.3	0.3	2.4%
72	0.3	0.3	2.1%
73	0.3	0.3	2.2%
74	0.3	0.3	1.9%
75	0.3	0.3	2.0%
76	0.3	0.3	1.7%
77	0.3	0.3	2.1%
78	0.3	0.3	2.1%
79	0.3	0.3	2.2%
80	0.3	0.3	1.9%
81	0.3	0.3	1.5%
82	0.3	0.3	1.6%
83	0.3	0.2	1.6%
84	0.2	0.2	1.6%
85	0.2	0.2	1.3%
86	0.2	0.2	1.7%
87	0.2	0.2	1.8%
88	0.2	0.2	1.8%
89	0.2	0.2	1.4%
90	0.2	0.2	1.4%
91	0.2	0.2	1.4%
92	0.2	0.2	1.5%
93	0.2	0.2	1.5%
94	0.2	0.2	1.0%
95	0.2	0.2	1.0%
96	0.2	0.2	1.1%
97	0.2	0.2	1.6%
98	0.2	0.2	1.1%
99	0.2	0.2	1.1%
100	0.2	0.2	1.2%

Graph 1

PRELIMINARY TRANSMISSION EMF MANAGEMENT PLAN  
EGBERT SWITCHING STATION PROJECT  
230 kV Underground Transmission Line

