

Environmental Protection

There are two main factors that need to be addressed in order to make sure that the environment around a proposed facility is protected.

1) Significant effects to the environment.

EMF's proposed facility will be constructed on an existing tower, therefore it should have no adverse effect on the surrounding environment.

2) Human exposure to excess levels of radiofrequency radiation.

The proposed facility is to be built using a 3-bay circularly polarized full wave spaced antenna.

According to OET 65, "Applicants and licensees should be able to calculate, based on considerations of frequency, power and antenna characteristics the distance from their transmitter where their signal produces an RF field equal to, or greater than, the 5% threshold limit. The applicant or licensee then shares responsibility for compliance in any accessible area or areas within this 5% "contour" where the appropriate limits are found to be exceeded."

As can be seen in Exhibit 24-A, the proposed facility's maximum contribution to RF on the site is $9.367 \mu\text{W}/\text{cm}^2$ at a distance of 27 meters from the tower, which is 4.7% of the uncontrolled (public) exposure limit.

Therefore, because the proposed facility will not cause an RF field that is equal to or greater than 5% of the $200 \mu\text{W}/\text{cm}^2$ limit for uncontrolled exposure at any point, the proposed facility complies with the requirements of OET 65.

EMF will fully cooperate with other site users to temporarily reduce power or cease broadcasting, as necessary, to protect workers and others having access to the site from excessive levels of RF Radiation.

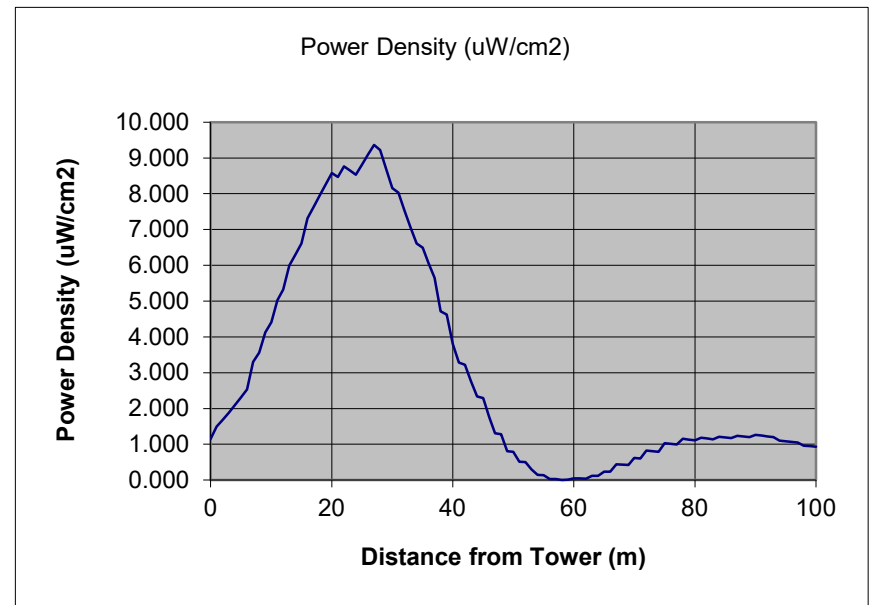
Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

Detailed Report

ERP	4.9 kW	% of OET-65
Height above ground	55.0 meters	4.7% Uncontrolled
Height above head	53.0 meters	0.9% Controlled
Antenna Brand ERI		
Antenna Model LPX-3C		

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm2)
0	90	53.0	0.14	686	1.142
1	89	53.0	0.16	784	1.491
2	88	53.0	0.17	833	1.681
3	87	53.1	0.18	882	1.882
4	86	53.2	0.19	931	2.091
5	85	53.2	0.2	980	2.310
6	84	53.3	0.21	1029	2.537
7	82	53.5	0.24	1176	3.298
8	81	53.6	0.25	1225	3.560
9	80	53.8	0.27	1323	4.128
10	79	53.9	0.28	1372	4.411
11	78	54.1	0.3	1470	5.027
12	77	54.3	0.31	1519	5.326
13	76	54.6	0.33	1617	5.985
14	75	54.8	0.34	1666	6.296
15	74	55.1	0.35	1715	6.608
16	73	55.4	0.37	1813	7.310
17	72	55.7	0.38	1862	7.628
18	71	56.0	0.39	1911	7.945
19	70	56.3	0.4	1960	8.260
20	69	56.6	0.41	2009	8.573
21	68	57.0	0.41	2009	8.465
22	67	57.4	0.42	2058	8.767
23	67	57.8	0.42	2058	8.649
24	66	58.2	0.42	2058	8.529
25	65	58.6	0.43	2107	8.812



26	64	59.0	0.44	2156	9.092
27	63	59.5	0.45	2205	9.367
28	62	59.9	0.45	2205	9.224
29	61	60.4	0.44	2156	8.681
30	60	60.9	0.43	2107	8.159
31	60	61.4	0.43	2107	8.027
32	59	61.9	0.42	2058	7.532
33	58	62.4	0.41	2009	7.058
34	57	63.0	0.4	1960	6.604
35	57	63.5	0.4	1960	6.491
36	56	64.1	0.39	1911	6.064
37	55	64.6	0.38	1862	5.656
38	54	65.2	0.35	1715	4.714
39	54	65.8	0.35	1715	4.630
40	53	66.4	0.32	1568	3.801
41	52	67.0	0.3	1470	3.280
42	52	67.6	0.3	1470	3.221
43	51	68.2	0.28	1372	2.755
44	50	68.9	0.26	1274	2.332
45	50	69.5	0.26	1274	2.289
46	49	70.2	0.23	1127	1.758
47	48	70.8	0.2	980	1.305
48	48	71.5	0.2	980	1.280
49	47	72.2	0.16	784	0.804
50	47	72.9	0.16	784	0.789
51	46	73.6	0.13	637	0.511
52	46	74.2	0.13	637	0.502
53	45	75.0	0.1	490	0.291
54	44	75.7	0.07	343	0.140
55	44	76.4	0.07	343	0.137
56	43	77.1	0.03	147	0.025
57	43	77.8	0.03	147	0.024
58	42	78.6	0.01	49	0.003
59	42	79.3	0.01	49	0.003
60	41	80.1	0.04	196	0.041
61	41	80.8	0.04	196	0.040
62	41	81.6	0.04	196	0.039
63	40	82.3	0.07	343	0.118

64	40	83.1	0.07	343	0.116
65	39	83.9	0.1	490	0.233
66	39	84.6	0.1	490	0.228
67	38	85.4	0.14	686	0.440
68	38	86.2	0.14	686	0.432
69	38	87.0	0.14	686	0.424
70	37	87.8	0.17	833	0.614
71	37	88.6	0.17	833	0.603
72	36	89.4	0.2	980	0.819
73	36	90.2	0.2	980	0.804
74	36	91.0	0.2	980	0.790
75	35	91.8	0.23	1127	1.027
76	35	92.7	0.23	1127	1.008
77	35	93.5	0.23	1127	0.991
78	34	94.3	0.25	1225	1.150
79	34	95.1	0.25	1225	1.130
80	34	96.0	0.25	1225	1.111
81	33	96.8	0.26	1274	1.181
82	33	97.6	0.26	1274	1.161
83	33	98.5	0.26	1274	1.141
84	32	99.3	0.27	1323	1.209
85	32	100.2	0.27	1323	1.189
86	32	101.0	0.27	1323	1.169
87	31	101.9	0.28	1372	1.236
88	31	102.7	0.28	1372	1.216
89	31	103.6	0.28	1372	1.196
90	30	104.4	0.29	1421	1.262
91	30	105.3	0.29	1421	1.241
92	30	106.2	0.29	1421	1.221
93	30	107.0	0.29	1421	1.201
94	29	107.9	0.28	1372	1.102
95	29	108.8	0.28	1372	1.084
96	29	109.7	0.28	1372	1.067
97	29	110.5	0.28	1372	1.050
98	28	111.4	0.27	1323	0.961
99	28	112.3	0.27	1323	0.946
100	28	113.2	0.27	1323	0.931