

Human exposure to excess levels of radiofrequency radiation

The proposed facility is to be built using a 1-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 17-A, the proposed facility's maximum contribution to RF on the site is $0.679 \mu\text{W}/\text{cm}^2$ at a distance of 45 meters from the tower, which is 0.34% 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.

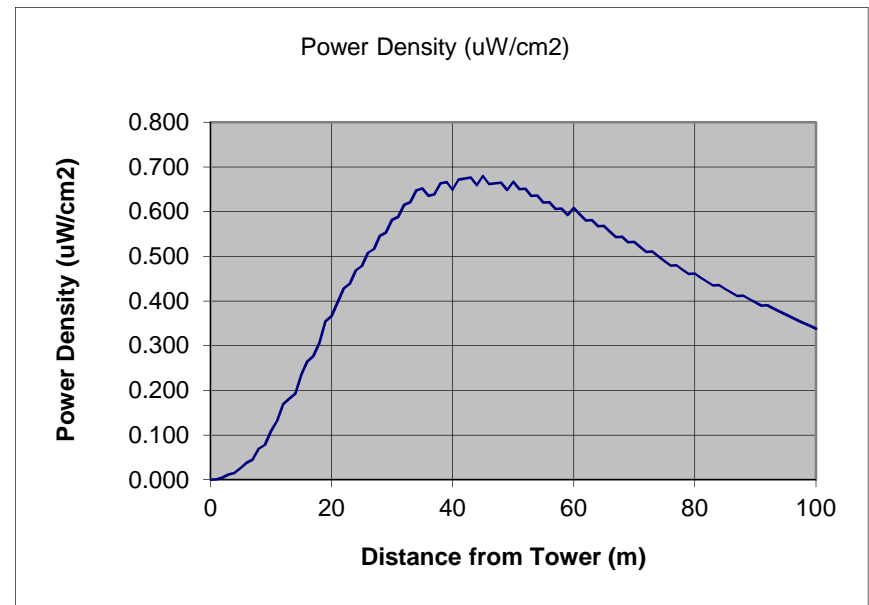
Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

Detailed Report

ERP 0.14 kW % of OET-65
Height above ground 40.0 meters 0.3% Uncontrolled
Height above head 38.0 meters 0.1% Controlled
Antenna Brand RFS
Antenna Model CPF500/1

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm ²)
0	90	38.0	0.001	0.14	0.000
1	88	38.0	0.02	2.8	0.001
2	87	38.1	0.04	5.6	0.005
3	85	38.1	0.06	8.4	0.012
4	84	38.2	0.07	9.8	0.016
5	83	38.3	0.09	12.6	0.026
6	81	38.5	0.11	15.4	0.038
7	80	38.6	0.12	16.8	0.045
8	78	38.8	0.15	21	0.070
9	77	39.1	0.16	22.4	0.078
10	75	39.3	0.19	26.6	0.109
11	74	39.6	0.21	29.4	0.132
12	72	39.8	0.24	33.6	0.170
13	71	40.2	0.25	35	0.181
14	70	40.5	0.26	36.4	0.193
15	68	40.9	0.29	40.6	0.236
16	67	41.2	0.31	43.4	0.264
17	66	41.6	0.32	44.8	0.276
18	65	42.0	0.34	47.6	0.306
19	63	42.5	0.37	51.8	0.355
20	62	42.9	0.38	53.2	0.366
21	61	43.4	0.4	56	0.397
22	60	43.9	0.42	58.8	0.428
23	59	44.4	0.43	60.2	0.438
24	58	44.9	0.45	63	0.469
25	57	45.5	0.46	64.4	0.478



26	56	46.0	0.48	67.2	0.508
27	55	46.6	0.49	68.6	0.517
28	54	47.2	0.51	71.4	0.546
29	53	47.8	0.52	72.8	0.553
30	52	48.4	0.54	75.6	0.582
31	51	49.0	0.55	77	0.588
32	50	49.7	0.57	79.8	0.616
33	49	50.3	0.58	81.2	0.621
34	48	51.0	0.6	84	0.647
35	47	51.7	0.61	85.4	0.652
36	47	52.3	0.61	85.4	0.635
37	46	53.0	0.62	86.8	0.639
38	45	53.7	0.64	89.6	0.663
39	44	54.5	0.65	91	0.666
40	44	55.2	0.65	91	0.649
41	43	55.9	0.67	93.8	0.672
42	42	56.6	0.68	95.2	0.674
43	41	57.4	0.69	96.6	0.676
44	41	58.1	0.69	96.6	0.659
45	40	58.9	0.71	99.4	0.679
46	40	59.7	0.71	99.4	0.662
47	39	60.4	0.72	100.8	0.664
48	38	61.2	0.73	102.2	0.665
49	38	62.0	0.73	102.2	0.648
50	37	62.8	0.75	105	0.667
51	37	63.6	0.75	105	0.650
52	36	64.4	0.76	106.4	0.651
53	36	65.2	0.76	106.4	0.635
54	35	66.0	0.77	107.8	0.636
55	35	66.9	0.77	107.8	0.620
56	34	67.7	0.78	109.2	0.621
57	34	68.5	0.78	109.2	0.606
58	33	69.3	0.79	110.6	0.607
59	33	70.2	0.79	110.6	0.593
60	32	71.0	0.81	113.4	0.608
61	32	71.9	0.81	113.4	0.594
62	32	72.7	0.81	113.4	0.580
63	31	73.6	0.82	114.8	0.581

64	31	74.4	0.82	114.8	0.568
65	30	75.3	0.83	116.2	0.568
66	30	76.2	0.83	116.2	0.555
67	30	77.0	0.83	116.2	0.543
68	29	77.9	0.84	117.6	0.544
69	29	78.8	0.84	117.6	0.532
70	28	79.6	0.85	119	0.533
71	28	80.5	0.85	119	0.521
72	28	81.4	0.85	119	0.510
73	27	82.3	0.86	120.4	0.511
74	27	83.2	0.86	120.4	0.500
75	27	84.1	0.86	120.4	0.489
76	27	85.0	0.86	120.4	0.479
77	26	85.9	0.87	121.8	0.480
78	26	86.8	0.87	121.8	0.470
79	26	87.7	0.87	121.8	0.461
80	25	88.6	0.88	123.2	0.462
81	25	89.5	0.88	123.2	0.452
82	25	90.4	0.88	123.2	0.443
83	25	91.3	0.88	123.2	0.435
84	24	92.2	0.89	124.6	0.436
85	24	93.1	0.89	124.6	0.427
86	24	94.0	0.89	124.6	0.419
87	24	94.9	0.89	124.6	0.411
88	23	95.9	0.9	126	0.412
89	23	96.8	0.9	126	0.404
90	23	97.7	0.9	126	0.397
91	23	98.6	0.9	126	0.389
92	22	99.5	0.91	127.4	0.391
93	22	100.5	0.91	127.4	0.384
94	22	101.4	0.91	127.4	0.377
95	22	102.3	0.91	127.4	0.370
96	22	103.2	0.91	127.4	0.363
97	21	104.2	0.91	127.4	0.357
98	21	105.1	0.91	127.4	0.350
99	21	106.0	0.91	127.4	0.344
100	21	107.0	0.91	127.4	0.338