Appendix I

Electric and Magnetic Fields

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Predicted Intensity of Electric Fields (kV/m) at Maximum Operating Voltage
Where Not Paralleling Existing Transmission Lines

Structure Type	Line Voltage	Distance from Project ROW Centerline										
		-300	-200	-100	-50	-25	0	25	50	100	200	300
500 kV Guyed-Delta	550 kV	0.080	0.215	1.330	5.137	6.414	3.071	6.413	5.136	1.329	0.214	0.079
500 kV Guyed-V	550 kV	0.096	0.321	2.325	7.027	5.284	4.907	5.278	7.021	2.320	0.319	0.096
500 kV Self-Supporting	550 kV	0.096	0.321	2.325	7.027	5.284	4.907	5.278	7.021	2.320	0.319	0.096

Predicted Intensity of Electric Fields (kV/m) at Maximum Operating Voltage
Where Parallel to Existing 500 kV Transmission Line (Self-Supporting Tower)

Structure Type	Line Voltage	Distance from Project ROW Centerline									
		-200	-100	-50	-25	0	25	50	100	200	300	400
Project: 500 kV Guyed-Delta Existing: 500 kV Self-Supporting	550 kV 550 kV	0.228	1.359	5.170	6.457	3.100	6.290	4.819	0.838	3.803	1.732	0.249
Project: 500 kV Guyed-V Existing: 500 kV Self-Supporting	550 kV 550 kV	0.342	2.358	7.060	5.322	4.888	5.114	6.702	1.487	3.754	1.756	0.264
Project: 500 kV Self-Supporting Existing: 500 kV Self-Supporting	550 kV 550 kV	0.342	2.358	7.060	5.322	4.888	5.114	6.702	1.487	3.754	1.756	0.264

Predicted Intensity of Electric Fields (kV/m) at Maximum Operating Voltage
Where Parallel to Existing 500 kV Transmission Line (Guyed-Delta Tower)

Structure Type	Line Voltage	Distance from Project ROW Centerline									
		-200	-100	-50	-25	0	25	50	100	200	300	400
Project: 500 kV Guyed-Delta Existing: 500 kV Guyed-Delta	550 kV 550 kV	0.237	1.347	5.149	6.429	3.049	6.287	4.856	0.415	3.842	1.080	0.213
Project: 500 kV Guyed-V Existing: 500 kV Guyed-Delta	550 kV 550 kV	0.327	2.335	7.041	5.319	4.935	5.177	6.760	1.442	3.896	1.092	0.200
Project: 500 kV Self-Supporting Existing: 500 kV Guyed-Delta	550 kV 550 kV	0.327	2.335	7.041	5.319	4.935	5.177	6.760	1.442	3.896	1.092	0.200

Predicted Intensity of Electric Fields (kV/m) at Maximum Operating Voltage
Where Parallel to Existing 230 kV Transmission Line (H-Frame Tower)

Structure Type	Line Voltage	Distance from Project ROW Centerline										
		-300	-200	-100	-50	-25	0	25	50	100	200	300
Project: 500 kV Guyed-Delta Existing: 230 kV H-Frame	550 kV 253 kV	0.080	0.218	1.337	5.146	6.426	3.079	6.377	5.035	0.818	2.495	0.190
Project: 500 kV Guyed-V Existing: 230 kV H-Frame	550 kV 253 kV	0.100	0.327	2.334	7.035	5.295	4.903	5.228	6.914	1.840	2.538	0.221
Project: 500 kV Self-Supporting Existing: 230 kV H-Frame	550 kV 253 kV	0.100	0.327	2.334	7.035	5.295	4.903	5.228	6.914	1.840	2.538	0.221

Predicted Intensity of Electric Fields (kV/m) at Maximum Operating Voltage
Where Parallel to Existing 115 kV Transmission Line (H-Frame Tower)

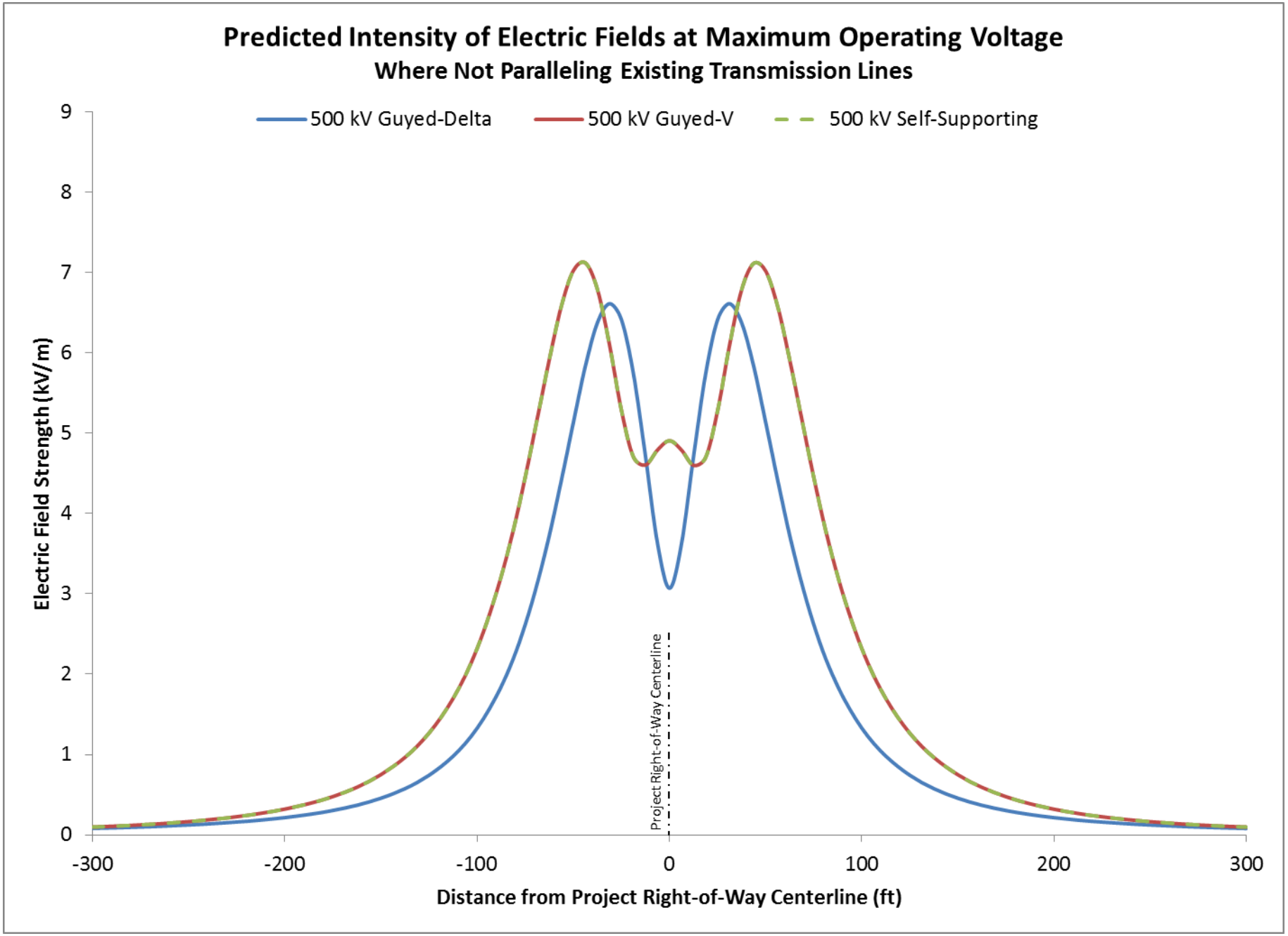
Structure Type	Line Voltage	Distance from Project ROW Centerline										
		-300	-200	-100	-50	-25	0	25	50	100	200	300
Project: 500 kV Guyed-Delta Existing: 115 kV H-Frame	550 kV 127 kV	0.079	0.214	1.329	5.136	6.413	3.073	6.421	5.152	1.388	0.359	0.029
Project: 500 kV Guyed-V Existing: 115 kV H-Frame	550 kV 127 kV	0.096	0.320	2.321	7.021	5.277	4.906	5.287	7.036	2.375	0.369	0.055
Project: 500 kV Self-Supporting Existing: 115 kV H-Frame	550 kV 127 kV	0.096	0.320	2.321	7.021	5.277	4.906	5.287	7.036	2.375	0.369	0.055

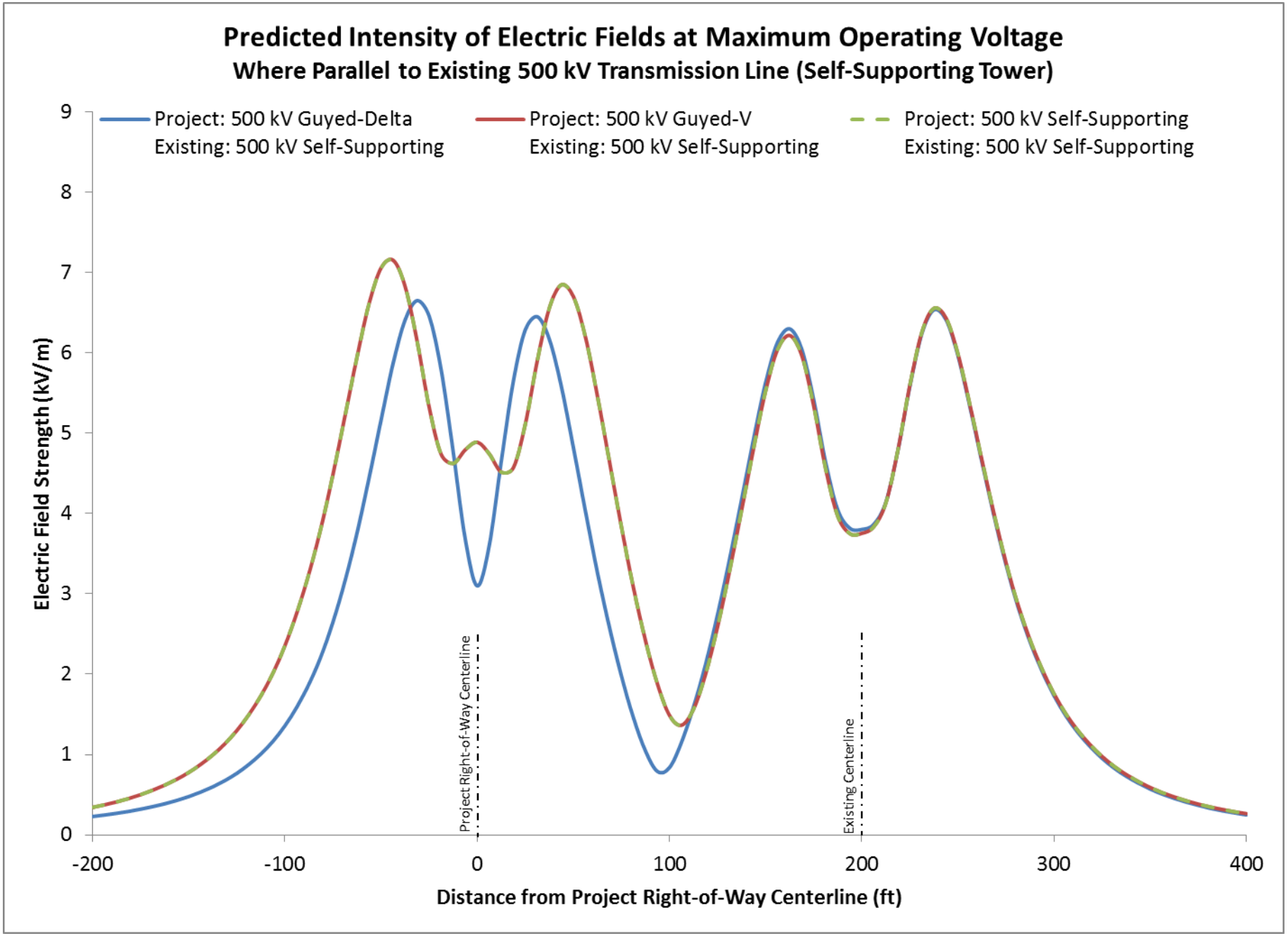
Predicted Intensity of Electric Fields (kV/m) at Maximum Operating Voltage
Where Parallel to Two Existing 115 kV Transmission Lines (H-Frame Towers)

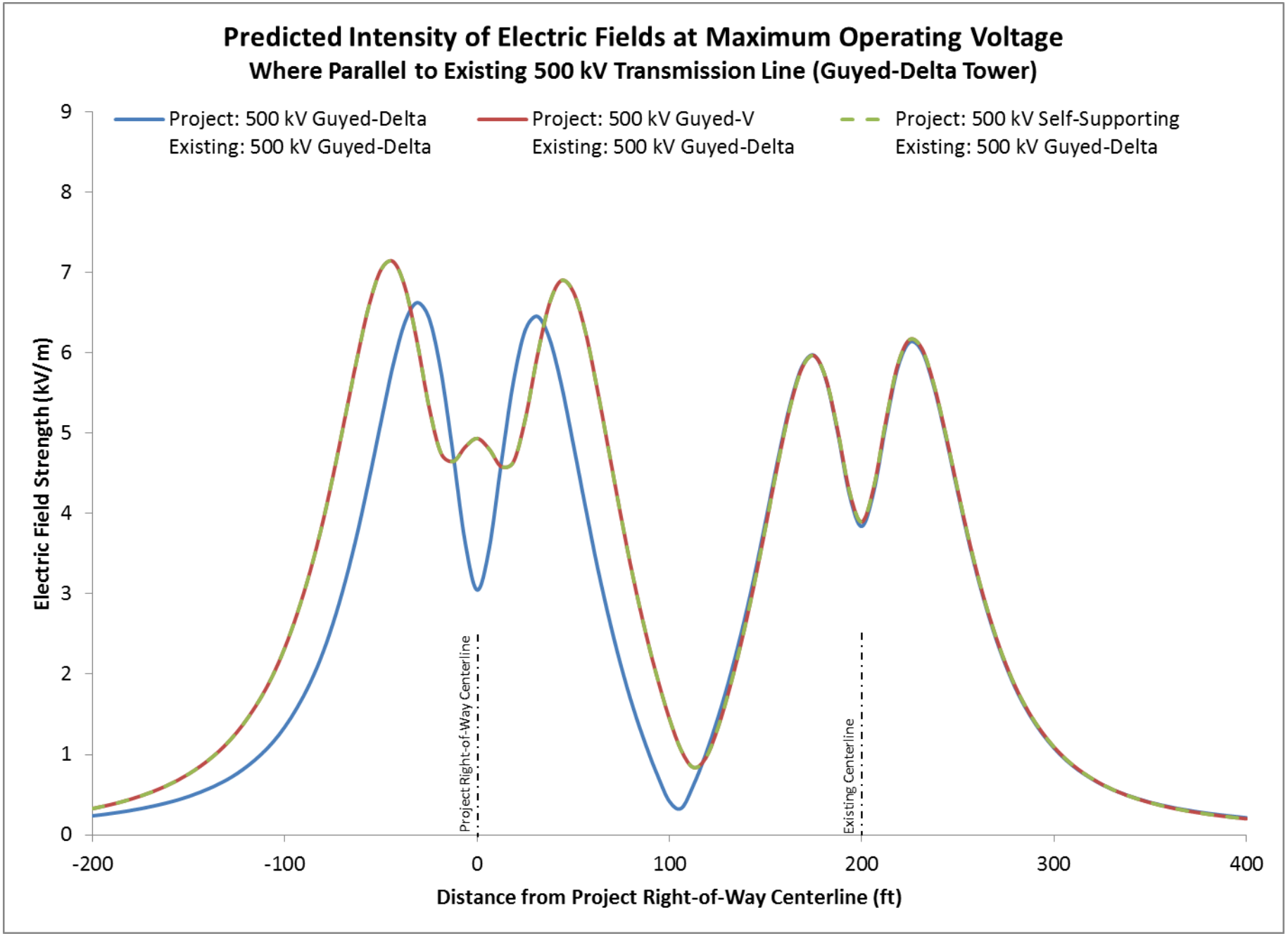
Structure Type	Line Voltage	Distance from Project ROW Centerline										
		-300	-200	-100	-50	-25	0	25	50	100	200	300
Project: 500 kV Guyed-Delta	550 kV											
Existing: 115 kV H-Frame	127 kV	0.079	0.214	1.330	5.137	6.414	3.076	6.432	5.184	1.652	0.846	0.062
Existing: 115 kV H-Frame	127 kV											
Project: 500 kV Guyed-V	550 kV											
Existing: 115 kV H-Frame	127 kV	0.097	0.321	2.322	7.022	5.278	4.906	5.290	7.052	2.582	0.873	0.075
Existing: 115 kV H-Frame	127 kV											
Project: 500 kV Self-Supporting	550 kV											
Existing: 115 kV H-Frame	127 kV	0.097	0.321	2.322	7.022	5.278	4.906	5.290	7.052	2.582	0.873	0.075
Existing: 115 kV H-Frame	127 kV											

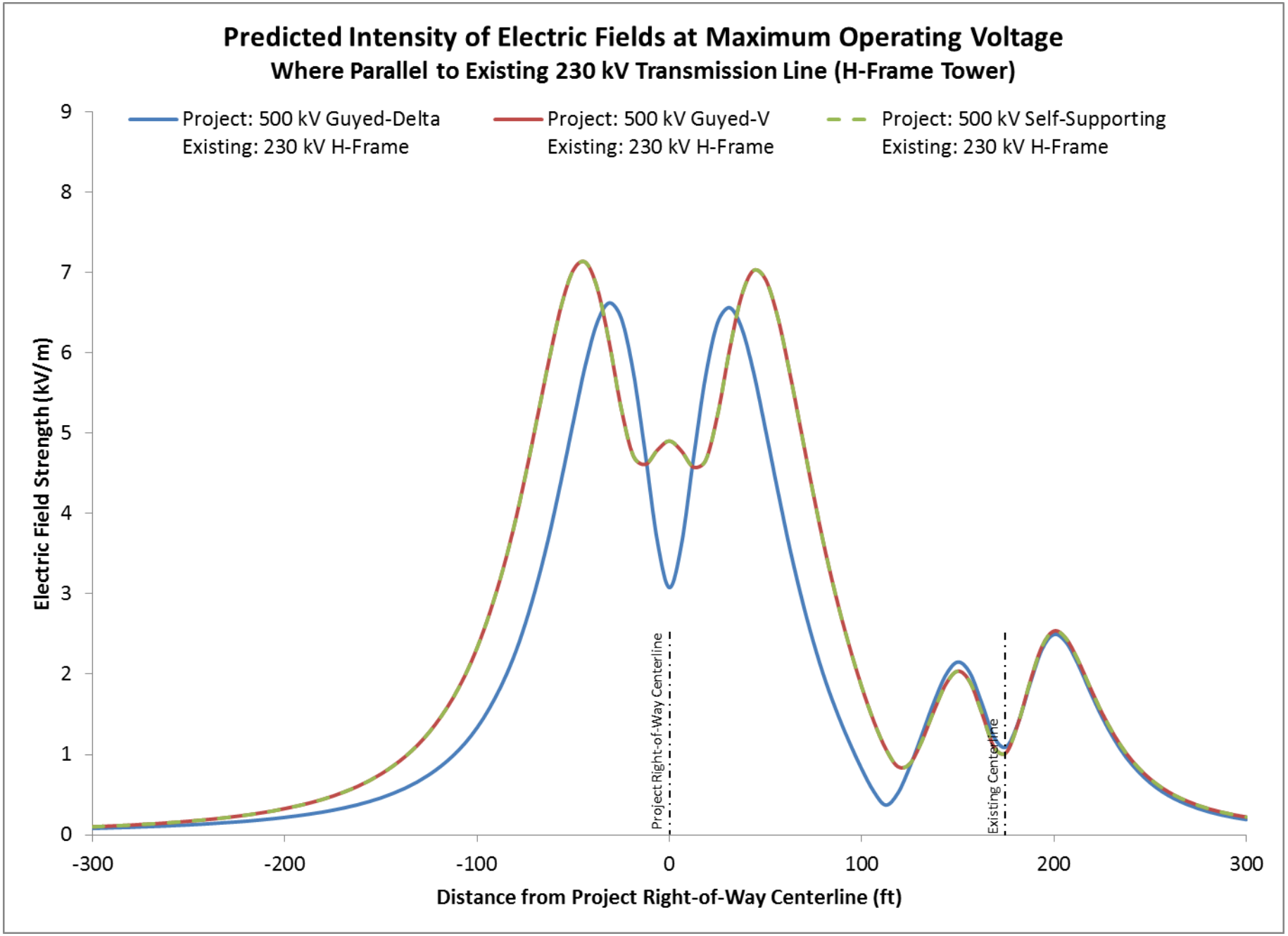
Predicted Intensity of Electric Fields (kV/m) at Maximum Operating Voltage
Where Parallel to Existing 115 kV & 230 kV Transmission Lines (H-Frame Towers)

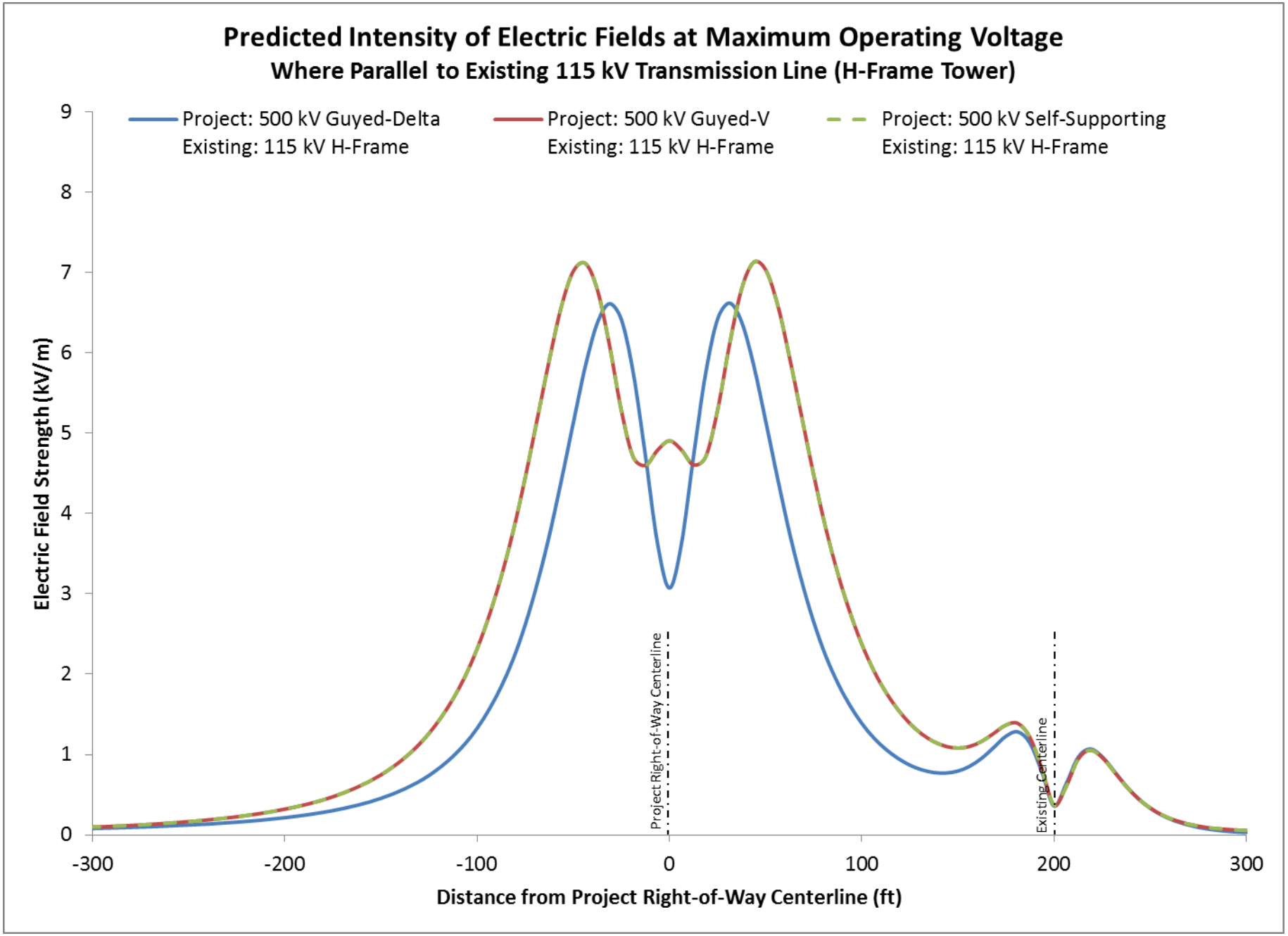
Structure Type	Line Voltage	Distance from Project ROW Centerline										
		-300	-200	-100	-50	-25	0	25	50	100	200	300
Project: 500 kV Guyed-Delta	550 kV											
Existing: 115 kV H-Frame	127 kV	0.080	0.217	1.338	5.147	6.427	3.080	6.375	5.032	0.812	0.292	0.422
Existing: 230 kV H-Frame	253 kV											
Project: 500 kV Guyed-V	550 kV											
Existing: 115 kV H-Frame	127 kV	0.100	0.327	2.332	7.032	5.291	4.904	5.230	6.907	1.785	0.278	0.447
Existing: 230 kV H-Frame	253 kV											
Project: 500 kV Self-Supporting	550 kV											
Existing: 115 kV H-Frame	127 kV	0.100	0.327	2.332	7.032	5.291	4.904	5.230	6.907	1.785	0.278	0.447
Existing: 230 kV H-Frame	253 kV											

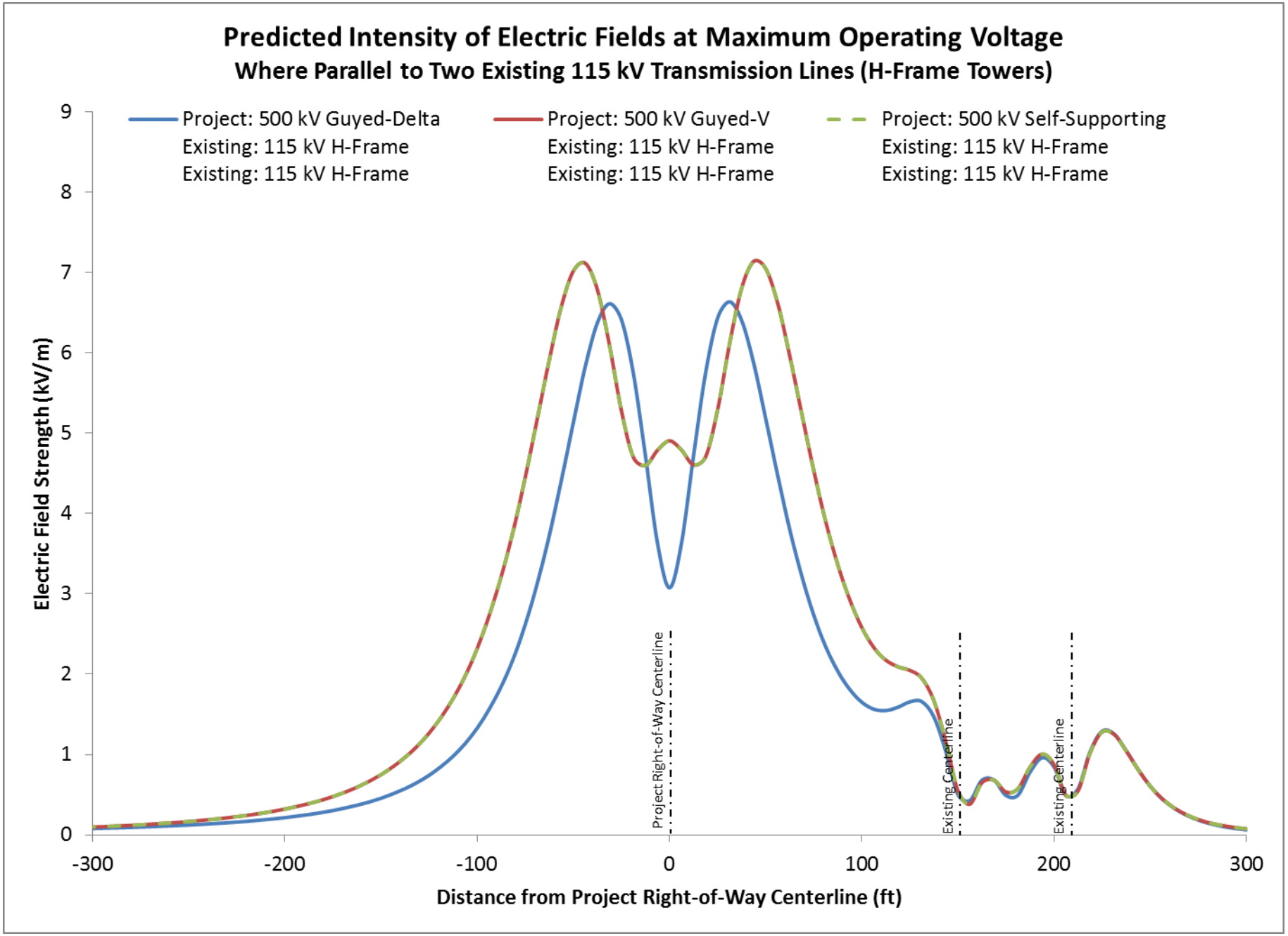

Predicted Intensity of Electric Fields at Maximum Operating Voltage
Where Not Paralleling Existing Transmission Lines
500 kV Guyed-Delta
500 kV Guyed-V
500 kV Self-Supporting
Electric Field Strength (kV/m)
9
8
7
6
5
4
3
2
1
0
-300
-200
-100
0
100
200
300
Project Right-of-Way Centerline
Distance from Project Right-of-Way Centerline (ft)

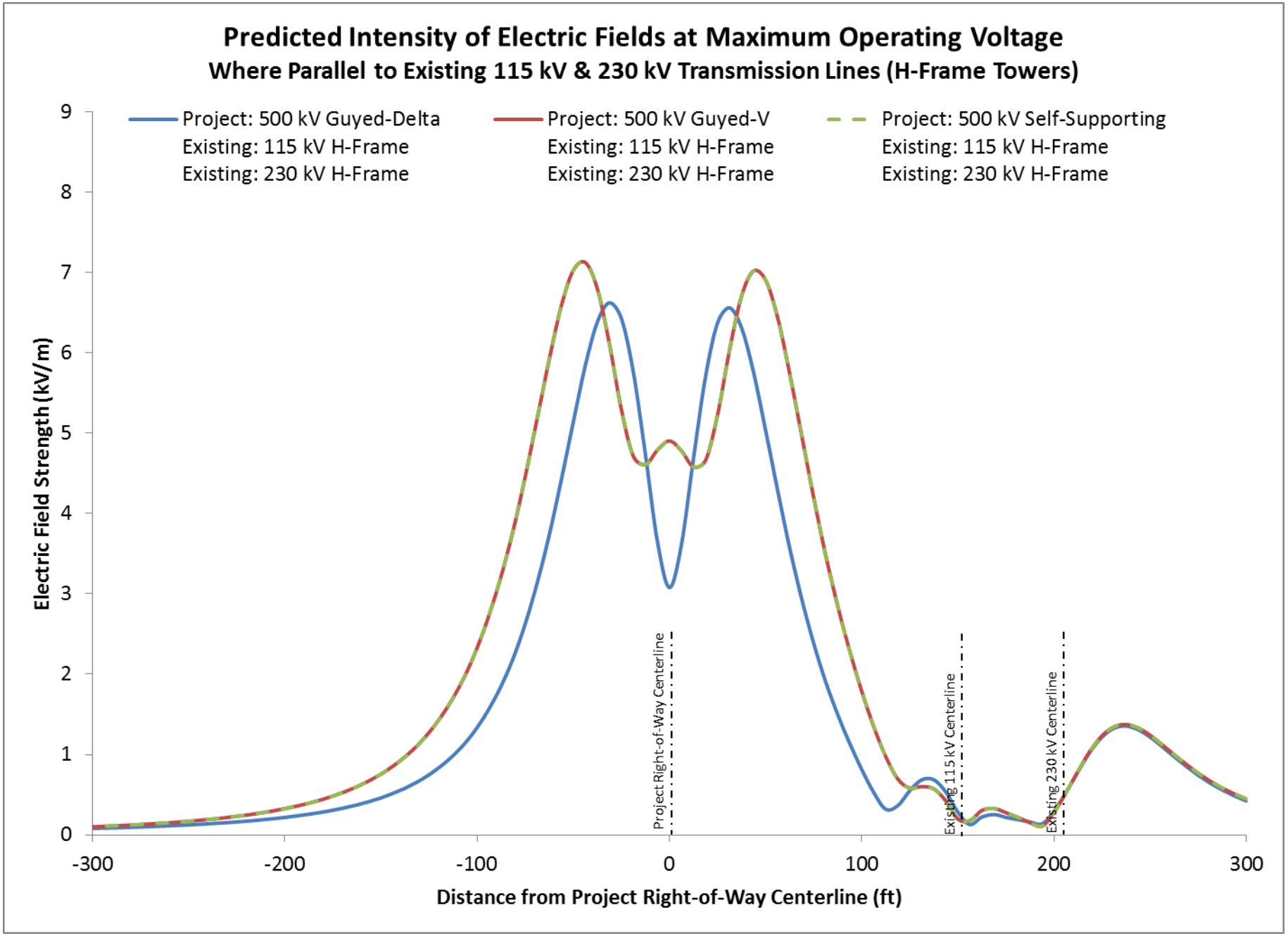

Predicted Intensity of Electric Fields at Maximum Operating Voltage
Where Parallel to Existing 500 kV Transmission Line (Self-Supporting Tower)
Project: 500 kV Guyed-Delta
Existing: 500 kV Self-Supporting
Project: 500 kV Guyed-V
Existing: 500 kV Self-Supporting
Project: 500 kV Self-Supporting
Existing: 500 kV Self-Supporting
Electric Field Strength (kV/m)
0
1
2
3
4
5
6
7
8
9
-200
-100
0
100
200
300
400
Project Right-of-Way Centerline
Existing Centerline
Distance from Project Right-of-Way Centerline (ft)


Predicted Intensity of Electric Fields at Maximum Operating Voltage
Where Parallel to Existing 500 kV Transmission Line (Guyed-Delta Tower)
Project: 500 kV Guyed-Delta
Existing: 500 kV Guyed-Delta
Project: 500 kV Guyed-V
Existing: 500 kV Guyed-Delta
Project: 500 kV Self-Supporting
Existing: 500 kV Guyed-Delta
Electric Field Strength (kV/m)
0
1
2
3
4
5
6
7
8
9
-200
-100
0
100
200
300
400
Project Right-of-Way Centerline
Existing Centerline
Distance from Project Right-of-Way Centerline (ft)


Predicted Intensity of Electric Fields at Maximum Operating Voltage
Where Parallel to Existing 230 kV Transmission Line (H-Frame Tower)
Project: 500 kV Guyed-Delta
Existing: 230 kV H-Frame
Project: 500 kV Guyed-V
Existing: 230 kV H-Frame
Project: 500 kV Self-Supporting
Existing: 230 kV H-Frame
Electric Field Strength (kV/m)
0
1
2
3
4
5
6
7
8
9
-300
-200
-100
0
100
200
300
Distance from Project Right-of-Way Centerline (ft)
Project Right-of-Way Centerline
Existing Centerline


Predicted Intensity of Electric Fields at Maximum Operating Voltage
Where Parallel to Existing 115 kV Transmission Line (H-Frame Tower)
Project: 500 kV Guyed-Delta
Existing: 115 kV H-Frame
Project: 500 kV Guyed-V
Existing: 115 kV H-Frame
Project: 500 kV Self-Supporting
Existing: 115 kV H-Frame
Electric Field Strength (kV/m)
0
1
2
3
4
5
6
7
8
9
-300
-200
-100
0
100
200
300
Distance from Project Right-of-Way Centerline (ft)
Project Right-of-Way Centerline
Existing Centerline


Predicted Intensity of Electric Fields at Maximum Operating Voltage
Where Parallel to Two Existing 115 kV Transmission Lines (H-Frame Towers)
Project: 500 kV Guyed-Delta
Existing: 115 kV H-Frame
Existing: 115 kV H-Frame
Project: 500 kV Guyed-V
Existing: 115 kV H-Frame
Existing: 115 kV H-Frame
Project: 500 kV Self-Supporting
Existing: 115 kV H-Frame
Existing: 115 kV H-Frame
Electric Field Strength (kV/m)
0
1
2
3
4
5
6
7
8
9
-300
-200
-100
0
100
200
300
Distance from Project Right-of-Way Centerline (ft)
Project Right-of-Way Centerline
Existing Centerline
Existing Centerline


Predicted Intensity of Electric Fields at Maximum Operating Voltage
Where Parallel to Existing 115 kV & 230 kV Transmission Lines (H-Frame Towers)
Project: 500 kV Guyed-Delta
Existing: 115 kV H-Frame
Existing: 230 kV H-Frame
Project: 500 kV Guyed-V
Existing: 115 kV H-Frame
Existing: 230 kV H-Frame
Project: 500 kV Self-Supporting
Existing: 115 kV H-Frame
Existing: 230 kV H-Frame
Electric Field Strength (kV/m)
0
1
2
3
4
5
6
7
8
9
-300
-200
-100
0
100
200
300
Distance from Project Right-of-Way Centerline (ft)
Project Right-of-Way Centerline
Existing 115 kV Centerline
Existing 230 kV Centerline