North-South 400 kV Interconnection Development

Application Form for Approval

Schedule 7

Existing and Proposed Tower Heights

Table 1: Tower Heights for the New 400 kV Line (CMSA Section)

Tower Number	Type of Tower	Tower Height (m)	Elevation (mAOD)	Overhead Line Span to next Tower (m)
103	Intermediate	31	128.382	363
104	Intermediate	42	131.138	445
105	Angle	34.2	131.32	395
106	Intermediate	37	138.878	184*
107	Intermediate	38	151.774	425
108	Intermediate	36	187.501	319
109	Angle	28.2	187.673	364
110	Intermediate	36	173.487	358
111	Intermediate	32	179.418	156
112	Angle	26.2	176.529	254
113	Intermediate	43	147.487	331
114	Intermediate	39	155.49	407
115	Intermediate	39	149.309	409
116	Angle	29.2	147.375	127
117	Intermediate	28	153.949	358
118	Angle	36.2	152.905	250
119	Transposition	45.98	148.858	200
120	Transposition	50.98	140.249	315
121	Angle	36.2	143.983	425
122	Intermediate	39	125.166	384
123	Intermediate	41	136.91	427
124	Intermediate	42	133.515	402
125	Intermediate	32	135.514	426
126	Angle	36.2	121.59	328
127	Intermediate	31	140.994	450
128	Intermediate	38	130.41	327

Tower Number	Type of Tower	Tower Height (m)	Elevation (mAOD)	Overhead Line Span to next Tower (m)
129	Intermediate	40	133.988	445
130	Angle	36.2	126.876	308
131	Intermediate	43	137.811	363
132	Angle	36.2	136.422	226
133	Intermediate	42	141.02	243
134	Intermediate	34	128.907	310
135	Intermediate	41	111.934	420
136	Angle	35.2	102.375	368
137	Intermediate	33	121.76	289
138	Intermediate	41	98.333	402
139	Intermediate	27	117.431	426
140	Angle	36.2	109.298	304
141	Intermediate	36	124.917	321
142	Angle	36.2	100.163	259
143	Intermediate	36	105.57	393
144	Intermediate	40	125.309	328
145	Intermediate	42	113.318	445
146	Intermediate	41	118.929	385
147	Intermediate	38	113.964	345
148	Intermediate	38	121.324	284
149	Angle	36.2	135.826	219
150	Intermediate	43	130.545	389
151	Intermediate	41	150.405	280
152	Intermediate	43	150.179	363
153	Intermediate	43	168.48	454
154	Angle	33.2	181.204	410

Tower Number	Type of Tower	Tower Height (m)	Elevation (mAOD)	Overhead Line Span to next Tower (m)
155	Intermediate	40	190.564	336
156	Intermediate	31	187.798	416
157	Angle	36.2	186.254	225
158	Intermediate	33	187.557	409
159	Intermediate	38	189.034	362
160	Intermediate	33	185.387	290
161	Angle	36.2	179.321	208
162	Intermediate	43	179.22	500
163	Intermediate	42	163.358	329
164	Intermediate	29	195.584	164
165	Intermediate	43	177.559	439
166	Angle	28.2	179.935	290
167	Intermediate	32	178.56	469
168	Intermediate	42	163.971	266
169	Angle	29.2	153.828	418
170	Intermediate	37	140.096	304
171	Intermediate	29	148.876	416
172	Intermediate	43	128.419	208
173	Intermediate	31	152.569	260
174	Intermediate	41	143.826	279
175	Intermediate	34	132.28	428
176	Angle	35.2	119.15	433
177	Intermediate	32	141.273	289
178	Intermediate	38	132.103	312
179	Intermediate	35	153.955	220
180	Intermediate	42	140.654	279

Tower Number	Type of Tower	Tower Height (m)	Elevation (mAOD)	Overhead Line Span to next Tower (m)
181	Angle	31.2	148.917	373
182	Intermediate	39	164.983	301
183	Intermediate	36	178.928	336
184	Angle	36.2	165.884	328
185	Intermediate	41	181.474	486
186	Angle	36.2	181.396	324
187	Intermediate	43	161.359	325
188	Angle	28.2	178.133	344
189	Intermediate	38	178.499	284
190	Intermediate	37	173.579	347
191	Intermediate	32	150.426	304
192	Intermediate	39	134.067	426
193	Intermediate	32	144.11	396
194	Intermediate	42	137.575	272
195	Intermediate	42	137.762	348
196	Intermediate	36	151.978	417
197	Angle	29.2	172.837	294
198	Intermediate	43	171.87	390
199	Intermediate	40	161.508	341
200	Intermediate	43	160.516	353
201	Intermediate	40	170.176	449
202	Intermediate	34	153.698	257
203	Angle	26.2	158.822	230
204	Intermediate	30	150.818	321
205	Intermediate	40	151.149	343
206	Intermediate	43	158.196	334

Tower Number	Type of Tower	Tower Height (m)	Elevation (mAOD)	Overhead Line Span to next Tower (m)
207	Angle	33.2	151.682	252
208	Intermediate	27	162.87	208
209	Intermediate	39	143.773	393
210	Intermediate	38	153.23	276
211	Intermediate	43	148.535	389
212	Angle	34.2	138.384	293
213	Intermediate	30	157.303	343
214	Intermediate	33	154.284	393
215	Intermediate	41	141.58	362
216	Intermediate	35	166.193	350
217	Angle	31.2	160.41	409
218	Intermediate	38	147.095	289
219	Intermediate	40	147.838	459
220	Intermediate	34	167.76	193
221	Intermediate	41	154.889	451
222	Intermediate	32	155.456	353
223	Intermediate	36	134.443	333
224	Angle	29.2	132.796	360
225	Intermediate	38	147.678	297
226	Intermediate	39	145.163	462
227	Intermediate	42	153.882	357
228	Angle	31.2	157.718	383
229	Intermediate	43	146.953	385
230	Intermediate	37	169.852	380
231	Intermediate	39	154.782	381
232	Intermediate	42	140.254	381

Tower Number	Type of Tower	Tower Height (m)	Elevation (mAOD)	Overhead Line Span to next Tower (m)
233	Intermediate	43	163.586	295
234	Intermediate	43	146.693	432
235	Intermediate	41	142.488	315
236	Intermediate	31	157.945	385 to MSA 237

***Note: a section of the span between Tower 106 and Tower 107 oversails Northern Ireland. The oversail section forms part of the SONI proposal**

Table 2: Tower Heights for the New 400 kV Line (MSA Section)

Tower Number	Type of Tower	Tower Height (m)	Elevation (mAOD)	Overhead Line Span to next Tower (m)
237	Angle	29.2	150.629	337
238	Intermediate	41	140.567	328
239	Intermediate	42	129.036	367
240	Intermediate	34	141.249	244
241	Intermediate	37	148.482	339
242	Angle	33.2	141.252	296
243	Intermediate	35	145.401	315
244	Intermediate	39	124.023	356
245	Angle	29.2	116.208	274
246	Intermediate	39	115.695	348
247	Intermediate	35	127.636	288
248	Angle	36.2	125.686	269
249	Intermediate	34	124.298	199
250	Intermediate	35	122.622	389
251	Intermediate	39	103.526	322
252	Angle	36.2	99.709	341

Tower Number	Type of Tower	Tower Height (m)	Elevation (mAOD)	Overhead Line Span to next Tower (m)
253	Intermediate	36	130.176	375
254	Intermediate	43	134.042	337
255	Intermediate	35	132.651	367
256	Intermediate	39	124.259	423
257	Intermediate	40	113.749	418
258	Intermediate	35	92.198	386
259	Intermediate	35	78.552	440
260	Intermediate	27	88.894	306
261	Intermediate	39	73.48	250
262	Angle	29.2	76.815	298
263	Intermediate	42	51.622	205
264	Intermediate	35	54.012	243
265	Angle	29.2	57.874	347
266	Angle	33.2	55.563	208
267	Intermediate	36	65.688	211
268	Angle	36.2	59.69	415
269	Intermediate	43	59.101	370
270	Intermediate	35	67.192	381
271	Angle	29.2	78.725	235
272	Intermediate	36	75.475	395
273	Intermediate	39	88.262	305
274	Intermediate	31	102.035	417
275	Intermediate	31	91.1	365
276	Intermediate	35	84.604	381
277	Intermediate	35	74.975	368
278	Intermediate	31	76.03	229

Tower Number	Type of Tower	Tower Height (m)	Elevation (mAOD)	Overhead Line Span to next Tower (m)
279	Intermediate	39	72.062	349
280	Angle	31.2	72.675	399
281	Intermediate	39	67.395	343
282	Angle	31.2	60.515	370
283	Intermediate	43	61.007	404
284	Angle	36.2	58.37	437
285	Intermediate	38	66.809	446
286	Intermediate	43	52.649	362
287	Intermediate	35	51.216	261
288	Intermediate	32	53.469	354
289	Intermediate	39	54.993	360
290	Angle	33.2	53.588	259
291	Intermediate	35	54.626	366
292	Intermediate	43	54.686	412
293	Intermediate	37	56.999	306
294	Intermediate	36	55.73	397
295	Angle	36.2	51.907	315
296	Intermediate	40	52.904	448
297	Intermediate	40	52.008	370
298	Intermediate	43	58.806	363
299	Angle	36.2	61.748	340
300	Intermediate	33	62.49	280
301	Intermediate	35	63.323	382
302	Intermediate	43	72.917	317
303	Angle	29.2	81.093	395
304	Intermediate	39	71.618	335

Tower Number	Type of Tower	Tower Height (m)	Elevation (mAOD)	Overhead Line Span to next Tower (m)
305	Intermediate	31	65.79	268
306	Intermediate	31	63.459	286
307	Angle	33.2	56.396	267
308	Intermediate	39	44.701	285
309	Angle	33.2	40.833	379
310	Intermediate	39	41.669	404
311	Intermediate	39	46.172	300
312	Angle	33.2	53.491	367
313	Intermediate	42	51.007	456
314	Angle	33.2	51.147	286
315	Intermediate	31	51.88	300
316	Angle	29.2	56.177	334
317	Angle	33.2	60.027	308
318	Angle	33.2	61.772	314
319	Angle	29.2	62.723	305
320	Intermediate	35	62.029	274
321	Intermediate	35	64.31	316
322	Angle	29.2	68.691	259
323	Intermediate	35	71.133	299
324	Angle	29.2	69.288	344
325	Intermediate	35	69.098	296
326	Intermediate	39	70.912	323
327	Angle	29.2	74.561	308
328	Intermediate	43	71.316	413
329	Intermediate	39	74.959	357
330	Angle	29.2	74.667	269

Tower Number	Type of Tower	Tower Height (m)	Elevation (mAOD)	Overhead Line Span to next Tower (m)
331	Intermediate	35	73.839	397
332	Intermediate	39	73.104	344
333	Intermediate	33	74.542	207
334	Angle	30.2	77.772	400
335	Intermediate	43	74.498	471
336	Angle	36.2	71.7	275
337	Intermediate	37	72.007	224
338	Intermediate	35	70.994	326
339	Intermediate	36	67.575	368
340	Intermediate	36	66.275	355
341	Angle	33.2	63.57	347
342	Angle	34.2	61.32	424
343	Intermediate	43	59.292	422
344	Intermediate	35	61.066	398
345	Intermediate	39	58.806	297
346	Angle	33.2	59.666	390
347	Intermediate	39	55.937	337
348	Intermediate	39	56.638	367
349	Intermediate	40	55.807	395
350	Intermediate	43	55.234	399
351	Intermediate	35	56.314	326
352	Angle	29.2	57.684	212
353	Intermediate	31	57.888	290
354	Angle	33.2	59.884	232
355	Intermediate	35	58.216	287
356	Intermediate	35	57.432	280

Tower Number	Type of Tower	Tower Height (m)	Elevation (mAOD)	Overhead Line Span to next Tower (m)
357	Angle	33.2	60.255	405
358	Intermediate	39	56.035	425
359	Angle	36.2	60.124	190
360	Intermediate	35	62.726	318
361	Intermediate	31	65.143	226
362	Angle	29.2	63.684	211
363	Intermediate	35	62.996	335
364	Intermediate	35	61.482	258
365	Intermediate	31	62.683	274
366	Angle	29.2	63.914	342
367	Intermediate	35	66.195	345
368	Intermediate	31	68.532	330
369	Angle	33.2	66.003	350
370	Intermediate	35	71.156	367
371	Angle	29.2	69.696	340
372	Intermediate	35	70.654	335
373	Angle	29.2	75.664	262
374	Intermediate	31	76.94	283
375	Angle	29.2	73.054	242
376	Intermediate	32	70.853	388
377	Intermediate	32	74.452	297
378	Intermediate	31	75.321	355
379	Intermediate	35	73.006	193
380	Angle	33.2	74.505	351
381	Intermediate	35	80.242	416
382	Intermediate	37	71.914	330

Tower Number	Type of Tower	Tower Height (m)	Elevation (mAOD)	Overhead Line Span to next Tower (m)
383	Intermediate	39	73.072	396
384	Intermediate	35	73.718	265
385	Intermediate	31	77.033	353
386	Intermediate	35	73.655	230
387	Intermediate	39	75.11	412
388	Intermediate	38	84.342	415
389	Intermediate	39	78.974	335
390	Intermediate	43	76.391	297
391	Intermediate	43	76.878	354
392	Angle	29.2	83.285	248
393	Intermediate	31	88.5	281
394	Intermediate	31	89.979	362
395	Intermediate	39	98.195	366
396	Intermediate	31	121.979	249
397	Intermediate	31	127.16	278
398	Intermediate	35	122.316	413
399	Intermediate	43	124.903	376
400	Intermediate	39	132.238	322
401	Angle	35.2	131.098	278

Table 3: Tower Heights for the Existing Oldstreet to Woodland Line

Existing Tower Number	Existing Type of Tower	Existing Tower Height (m)	Elevation (mAOD)	Overhead Line Span to next Tower (m)
402	Double Circuit	52.5	138.208	312
403	Double Circuit	60.8	125.942	420
404	Double Circuit	60.8	114.371	388
405	Double Circuit	56.8	114.100	352
406	Double Circuit	56.8	119.499	342
407	Double Circuit	56.8	108.142	340
408	Double Circuit	57.8	101.279	372
409	Double Circuit	56.8	100.638	254
410	Double Circuit	52.5	97.523	68m to substation

Table 4: Poleset Heights for 110 kV Modifications

Structure Number	Structure Type	Existing	New Structure Height above ground (m)	Elevation (mAOD)	Overhead Line Span to next Structure (m)
Lisdrum – Louth 110 kV Line					
55	Existing Poleset	18.7	N/A	124.431	141
55a	New Poleset	N/A	15.7	130.490	115
56	New Poleset	17.7	11.7	137.821	95
56a	New Poleset	N/A	13.7	132.615	145
57	Existing Poleset	19.7	N/A	124.461	246
Louth - Rathrussan 110 kV Line					
99	Existing Tower	19.6	N/A	145.361	273
100	New Poleset	19.7	18.7	143.961	210
101	New Poleset	19.6	18.7	142.849	239

Structure Number	Structure Type	Existing	New Structure Height above ground (m)	Elevation (mAOD)	Overhead Line Span to next Structure (m)
102	Existing Poleset	18.7	N/A	152.585	231
Arva – Navan 110 kV Line					
313	Existing Poleset	14.7	N/A	44.146	278
314	New Poleset	14.7	13.7	47.595	155
315	New Poleset	15.7	13.7	53.815	207
316	Existing Poleset	16.7	N/A	57.205	142