NEXTera Energy- TO44 Enhanced 2

REVISION: 1

NEXTera Energy- TO44 Enhanced 2 -DIRECT COST		
Substation Direct Costs		***Total Each Segment***
Direct Labor, Material & Equipment Costs	1. Station 29 New Ruland Road 345/138 kV Substation	$ 71,756,341
Direct Labor, Material & Equipment Costs	2.Station 31 East Garden City 345/138 kV Substation Upgrades	$ 171,119,189
Direct Labor, Material & Equipment Costs	3.Station 48 Valley Stream 345/138 kV Substation Upgrades	$ 78,638,755
Direct Labor, Material & Equipment Costs	4.Barrett 138 kV Substation Upgrades	$ 41,509,967
Direct Labor, Material & Equipment Costs	5.Dunwoodie 345 kV GIS Substation	$ 38,003,264
Direct Labor, Material & Equipment Costs	6.Elwood 138 kV Substation Upgrades	$ 4,224,612
Direct Labor, Material & Equipment Costs	7.Jamaica 138 kV Substation Upgrades	$ 7,018,767
Direct Labor, Material & Equipment Costs	8.Newbridge 345/138 kV GIS Substation Upgrades	$ 53,527,289
Direct Labor, Material & Equipment Costs	9.Rainey 345kV GIS Substation Upgrades	$ 25,813,520
Direct Labor, Material & Equipment Costs	10.Shore Road 138kV Substation Upgrades	$ 7,453,423
Direct Labor, Material & Equipment Costs	11.Sprain Brook 345kV Substation Expansion	$ 327,109,351
Direct Labor, Material & Equipment Costs	12 - Station 36a Sprain Brook HVDC 1200MW Converter Station	$ 316,467,326
Direct Labor, Material & Equipment Costs	13- Station 30a New Northport HVDC 1200MW Converter Station	$ 316,424,093
Direct Labor, Material & Equipment Costs	14 - Northport 138kV GIS Substation	$ 25,174,983
Direct Labor, Material & Equipment Costs	15.Pilgrim 138kV Substation Upgrades	$ 2,004,218
Direct Labor, Material & Equipment Costs	16. - Comp 231 & 101 Buchanan 345kV GIS & HVDC Substation Upgrade	$ 735,386,604
Direct Labor, Material & Equipment Costs	17. Farragut 345kV Substation Expansion	$ 73,376,547
Direct Labor, Material & Equipment Costs	18- Corona 138kV Substation Upgrades	$ 11,811,757
Direct Labor, Material & Equipment Costs	19.Holbrook 138kV Substation Upgrades	$ 2,315,867
Direct Labor, Material & Equipment Costs	20- Ramapo 345kV Substation Upgrades	$ 6,739,802
Direct Labor, Material & Equipment Costs	21. Existing Ruland Road 138 kV Substation	$ 1,077,395
Direct Labor, Material & Equipment Costs	22. Existing East Garden City 138 kV Substation Upgrades	$ 15,046,417
	SUBTOTAL (Costs):	$ 2,331,999,487
	CONTRACTOR MARK-UP (OH&P)	$ 248,060,308
	SUBTOTAL (AFTER MU):	$ 2,580,059,795
	CONTINGENCY ON ENTIRE PROJECT	$ 516,011,959
	Substation TOTAL:	$ 3,096,071,754

Transmission Line Direct Costs		*Total Each Segment*
Direct Labor, Material & Equipment Costs	Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit (EGC To Dunwoodie 345 kV)	$ 106,106,649
Direct Labor, Material & Equipment Costs	Comp 4C - Sprain Brook To New Rochelle Landing Onshore 345kV UG Cables -Double circuits (EGC To Sprain Brook 345 kV / Ruland To Sprain Brook 345 kV)	$ 195,310,866
Direct Labor, Material & Equipment Costs	Comp 4C - Sprain Brook To New Rochelle Landing Onshore 320kV DC UG Cables - Single circuit (Northport To Sprain Brook 320 kV DC)	$ 89,348,530
Direct Labor, Material & Equipment Costs	Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables - Three circuits (three lines, single circuit each) EGC-Dunwoodie 345KV / EGC-Sprain Brook 345KV/ Ruland-Sprain Brook 345KV	$ 424,887,357
Direct Labor, Material & Equipment Costs	Comp 68. Northport to New Rochelle Landing 320kV DC Offshore Submarine Cables - One circuit Northport-Sprain Brook 320KV DC	$ 302,256,116
Direct Labor, Material & Equipment Costs	Comp 3A - East Garden City To Hempstead Harbor Landing 345kV Onshore UG Cables -Double circuits (EGC To Sprain Brook 345 kV / EGC To Dunwoodie 345 kV)	$ 217,033,473
Direct Labor, Material & Equipment Costs	Comp 5 - Ruland To Hempstead Harbor Landing (Shore Road) 345kV Onshore UG Cables -Single circuit (Ruland To Sprain Brook 345 kV)	$ 196,661,987
Direct Labor, Material & Equipment Costs	Comp 10A - East Garden City To Valley Stream 345kV Onshore UG Cables -Triple circuits	$ 222,396,395
Direct Labor, Material & Equipment Costs	Comp 8C - Rebuild: East Garden City - Newbridge 345kV Onshore UG Cables -Double circuits	$ 75,390,181
Direct Labor, Material & Equipment Costs	Comp 11 - Pilgram to Northport 138kV Onshore UG Cables -Single circuit (Pilgram to Northport kV)	$ 93,067,293
Direct Labor, Material & Equipment Costs	Comp 13A - Syosset - Oakwood 138 kV Onshore UG Cables -Single circuit	$ 14,061,400
Direct Labor, Material & Equipment Costs	Comp 13B - Syosset - Greenlawn 138 kV Onshore UG Cables -Single circuit	$ 14,061,400
Direct Labor, Material & Equipment Costs	Comp 249 (MODIFY) - Jamaica To Farragut (Farragut-Metropolitan Ave) 345kV Onshore UG Cables -Single circuit (EGC-Farragut 345kv)	$ 98,251,583
Direct Labor, Material & Equipment Costs	Comp 207 (Modify)- Corona to Jamaica (Corona-Metropolitan Ave) 138kV Onshore UG Cables -Single circuit (Corona to Jamaica 138kV)	$ 29,117,119
Direct Labor, Material & Equipment Costs	Comp 207&249 - Metropolitan Ave-JA 138 and 345kV Onshore UG Cables -Double circuits (Corona-Jamaica 138kv & EGC-Farragut 345kv)	$ 59,715,682
Direct Labor, Material & Equipment Costs	Comp 247 - Jamaica to East Garden City 138 and 345kV Onshore UG Cables -Double circuits (Corona-Jamaica 138kV& EGC-Jamaica 138kv & EGC-Farragut 345kv)	$ 236,771,169
Direct Labor, Material & Equipment Costs	Comp XX - Ruland Road - Newbridge138 kV #3 (567 Line) Onshore UG Cables -Single circuit	$ 2,624,365
Direct Labor, Material & Equipment Costs	Other Comp. 138kV Upgrades	$ 7,755,000
Direct Labor, Material & Equipment Costs	Comp 225&248 - Buchanan to Ramapo 345kV OH/UG Cables - Single circuit (New Buchanan - Ramapo 345 kV)	$ 154,423,598
Direct Labor, Material & Equipment Costs	Comp 226 & 227. Offshore Platform HSA to Buchanan Landing 320kV #1, #2 DC Offshore Submarine Cables - Double circuits (Hudson South OSW platform #1 & #2- Buchanan HVDC #1 &#2 320 kV)	$ 4,844,809,741
Direct Labor, Material & Equipment Costs	Comp 254 - Sprain Brook To New Rochelle Landing Onshore 320kV DC UG Cables - Double circuits (Hudson South OSW platform #1 & #2- Buchanan HVDC #1 &#2 320 kV)	$ 25,955,403
Direct Labor, Material & Equipment Costs	Comp 85 - Sprain Brook Sub to Sprain Brook Landing 345kV Onshore UG Cables -Single circuit - Single circuit Farragut-Sprain Brook 345KV	$ 40,719,017
Direct Labor, Material & Equipment Costs	Comp 87. Farragut to Sprain Brook Landing 345kV Offshore Submarine Cables - Single circuit Farragut-Sprain Brook 345KV	$ 333,202,969
Direct Labor, Material & Equipment Costs	Comp 210 - Holbrook -Pilgrim 138 kV Onshore UG Cables -Single circuit (Holbrook -Pilgrim 138kv)	$ 133,775,420
	SUBTOTAL (Costs):	$ 7,917,702,714
	CONTRACTOR MARK-UP (OH&P)	$ 1,425,186,489
	SUBTOTAL (AFTER MU):	$ 9,342,889,203
	CONTINGENCY ON ENTIRE PROJECT	$ 1,868,577,841
	Transmission Line TOTAL:	$ 11,211,467,043
	NEXTera Energy- TO44 Enhanced 2Total Direct Cost	$ 14,307,538,796.95

NEXTera Energy- TO44 Enhanced 2 -INDIRECT COST		
Substation Indirect Costs		***Total Each Segment***
Indirect Costs	1. Station 29 New Ruland Road 345/138 kV Substation	$ **21,452,240**
Indirect Costs	2.Station 31 East Garden City 345/138 kV Substation Upgrades	$ **80,189,183**
Indirect Costs	3.Station 48 Valley Stream 345/138 kV Substation Upgrades	$ **24,786,200**
Indirect Costs	4.Barrett 138 kV Substation Upgrades	$ **14,212,557**
Indirect Costs	5.Dunwoodie 345 kV GIS Substation	$ **9,740,565**
Indirect Costs	6.Elwood 138 kV Substation Upgrades	$ **1,387,563**
Indirect Costs	7.Jamaica 138 kV Substation Upgrades	$ **1,412,308**
Indirect Costs	8.Newbridge 345/138 kV GIS Substation Upgrades	$ **11,999,373**
Indirect Costs	9.Rainey 345kV GIS Substation Upgrades	$ **7,677,720**
Indirect Costs	10.Shore Road 138kV Substation Upgrades	$ **2,393,936**
Indirect Costs	11.Sprain Brook 345kV Substation Expansion	$ **100,658,159**
Indirect Costs	12 - Station 36a Sprain Brook HVDC 1200MW Converter Station	$ **35,329,140**
Indirect Costs	13- Station 30a New Northport HVDC 1200MW Converter Station	$ **30,991,771**
Indirect Costs	14 - Northport 138kV GIS Substation	$ **4,620,516**
Indirect Costs	15.Pilgrim 138kV Substation Upgrades	$ **630,946**
Indirect Costs	16. - Comp 231 & 101 Buchanan 345kV GIS & HVDC Substation Upgrade	$ **68,128,670**
Indirect Costs	17. Farragut 345kV Substation Expansion	$ **20,640,926**
Indirect Costs	18- Corona 138kV Substation Upgrades	$ **3,835,693**
Indirect Costs	19.Holbrook 138kV Substation Upgrades	$ **721,068**
Indirect Costs	20- Ramapo 345kV Substation Upgrades	$ **2,140,145**
Indirect Costs	21. Existing Ruland Road 138 kV Substation	$ **356,246**
Indirect Costs	22. Existing East Garden City 138 kV Substation Upgrades	$ **4,938,374**
	SUBTOTAL (Costs):	$ **448,243,300**
	CONTRACTOR MARK-UP (OH&P)	$ **80,683,794**
	SUBTOTAL (AFTER MU):	$ **528,927,094**
	CONTINGENCY ON ENTIRE PROJECT	$ **105,785,419**
	Substation TOTAL:	$ **634,712,513**

Transmission Line Indirect Costs		*Total Each Segment*
Indirect Costs	Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit (EGC To Dunwoodie 345 kV)	$ 27,103,560
Indirect Costs	Comp 4C - Sprain Brook To New Rochelle Landing Onshore 345kV UG Cables -Double circuits (EGC To Sprain Brook 345 kV / Ruland To Sprain Brook 345 kV)	$ 49,373,632
Indirect Costs	Comp 4C - Sprain Brook To New Rochelle Landing Onshore 320kV DC UG Cables - Single circuit (Northport To Sprain Brook 320 kV DC)	$ 23,027,188
Indirect Costs	Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables - Three circuits (three lines, single circuit each) EGC-Dunwoodie 345KV / EGC-Sprain Brook 345KV/ Ruland-Sprain Brook 345KV	$ 101,825,530
Indirect Costs	Comp 68. Northport to New Rochelle Landing 320kV DC Offshore Submarine Cables - One circuit Northport-Sprain Brook 320KV DC	$ 71,261,605
Indirect Costs	Comp 3A - East Garden City To Hempstead Harbor Landing 345kV Onshore UG Cables -Double circuits (EGC To Sprain Brook 345 kV / EGC To Dunwoodie 345 kV)	$ 55,307,165
Indirect Costs	Comp 5 - Ruland To Hempstead Harbor Landing (Shore Road) 345kV Onshore UG Cables -Single circuit (Ruland To Sprain Brook 345 kV)	$ 50,420,274
Indirect Costs	Comp 10A - East Garden City To Valley Stream 345kV Onshore UG Cables -Triple circuits	$ 56,015,535
Indirect Costs	Comp 8C - Rebuild: East Garden City - Newbridge 345kV Onshore UG Cables -Double circuits	$ 18,760,576
Indirect Costs	Comp 11 - Pilgram to Northport 138kV Onshore UG Cables -Single circuit (Pilgram to Northport kV)	$ 23,919,365
Indirect Costs	Comp 13A - Syosset - Oakwood 138 kV Onshore UG Cables -Single circuit	$ 3,945,883
Indirect Costs	Comp 13B - Syosset - Greenlawn 138 kV Onshore UG Cables -Single circuit	$ 3,945,883
Indirect Costs	Comp 249 (MODIFY) - Jamaica To Farragut (Farragut-Metropolitan Ave) 345kV Onshore UG Cables -Single circuit (EGC-Farragut 345kv)	$ 25,399,804
Indirect Costs	Comp 207 (Modify)- Corona to Jamaica (Corona-Metropolitan Ave) 138kV Onshore UG Cables -Single circuit (Corona to Jamaica 138kV)	$ 7,658,408
Indirect Costs	Comp 207&249 - Metropolitan Ave-JA 138 and 345kV Onshore UG Cables -Double circuits (Corona-Jamaica 138kv & EGC-Farragut 345kv)	$ 15,281,048
Indirect Costs	Comp 247 - Jamaica to East Garden City 138 and 345kV Onshore UG Cables -Double circuits (Corona-Jamaica 138kV& EGC-Jamaica 138kv & EGC-Farragut 345kv)	$ 60,047,685
Indirect Costs	Comp XX - Ruland Road - Newbridge138 kV #3 (567 Line) Onshore UG Cables -Single circuit	$ 1,157,351
Indirect Costs	Other Comp. 138kV Upgrades	$ 3,514,917
Indirect Costs	Comp 225&248 - Buchanan to Ramapo 345kV OH/UG Cables - Single circuit (New Buchanan - Ramapo 345 kV)	$ 39,731,171
Indirect Costs	Comp 226 & 227. Offshore Platform HSA to Buchanan Landing 320kV #1, #2 DC Offshore Submarine Cables - Double circuits (Hudson South OSW platform #1 & #2- Buchanan HVDC #1 &#2 320 kV)	$ 1,009,338,319
Indirect Costs	Comp 254 - Sprain Brook To New Rochelle Landing Onshore 320kV DC UG Cables - Double circuits (Hudson South OSW platform #1 & #2- Buchanan HVDC #1 &#2 320 kV)	$ 6,928,909
Indirect Costs	Comp 85 - Sprain Brook Sub to Sprain Brook Landing 345kV Onshore UG Cables -Single circuit - Single circuit Farragut-Sprain Brook 345KV	$ 10,573,404
Indirect Costs	Comp 87. Farragut to Sprain Brook Landing 345kV Offshore Submarine Cables - Single circuit Farragut-Sprain Brook 345KV	$ 82,714,345
Indirect Costs	Comp 210 - Holbrook -Pilgrim 138 kV Onshore UG Cables -Single circuit (Holbrook -Pilgrim 138kv)	$ 34,851,505
	SUBTOTAL (Costs):	**$ 1,782,103,059**
	CONTRACTOR MARK-UP (OH&P)	**$ 320,778,551**
	SUBTOTAL (AFTER MU):	**$ 2,102,881,610**
	CONTINGENCY ON ENTIRE PROJECT	**$ 420,576,322**
	Transmission Line TOTAL:	**$ 2,523,457,932**
	NEXTera Energy- TO44 Enhanced 2 Total Indirect Cost	**$ 3,158,170,445**

NEXTera Energy- TO44 Enhanced 2 Total	**$ 17,465,709,242**

NEXTera Energy- TO44 Enhanced 2

1. Station 29 New Ruland Road 345/138 kV Substation

Total: $ 130,328,792

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
1. Station 29 New Ruland Road 345/138 kV Substation				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 1,525,983	$ 1,300,112	$ 762,874	$ 3,588,968
2. SUBSTATION FOUNDATIONS	$ 2,268,952	$ 2,565,809	$ 1,604,887	$ 6,439,648
3. SUBSTATION STRUCTURES	$ 1,003,878	$ 883,987	$ 531,389	$ 2,419,254
4. MAJOR EQUIPTMENT	$ 33,974,138	$ 6,680,324	$ 4,252,876	$ 44,907,338
5. LOW VOLTAGE & CONTROL CABLE	$ 122,372	$ 33,091	$ 6,618	$ 162,081
6. CONDUIT & CABLE TRENCH	$ 3,830,653	$ 2,117,722	$ 1,141,383	$ 7,089,758
7. GROUND GRID	$ 197,725	$ 142,339	$ 33,060	$ 373,123
8. CONTROL ENCLOSURE	$ 3,191,085	$ 2,611,419	$ 973,666	$ 6,776,170
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 4,660,765	$ 12,690,935	$ 4,100,541	$ 21,452,240
Turnkey cost (HVDC, GIS)	$ 5,745,000	$ 3,447,000	$ 2,298,000	$ 11,490,000
Non-Turnkey cost	$ 45,030,551	$ 25,578,737	$ 11,109,293	$ 81,718,582
SUBTOTAL (Costs):	$ 50,775,551	$ 29,025,737	$ 13,407,293	$ 93,208,582
CONTRACTOR MARK-UP (OH&P)	$ 8,450,199	$ 4,810,993	$ 2,137,553	$ 15,398,745
SUBTOTAL:	$ 59,225,750	$ 33,836,730	$ 15,544,846	$ 108,607,326
CONTINGENCY ON ENTIRE PROJECT	$ 11,845,150	$ 6,767,346	$ 3,108,969	$ 21,721,465
TOTAL:	$ 71,070,900	$ 40,604,076	$ 18,653,815	$ 130,328,792

Description of Work: New greenfield 345 kV/138 kV Ruland Road Substation

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
1. Station 29 New Ruland Road 345/138 kV Substation										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	4.5	ACRE	-	10,800.00	7,200.00	$ -	$ 48,600	$ 32,400	**$ 81,000**
1.2	Demolition	0	ACRE	-	-	-	$ -	$ -	$ -	**$ -**
1.3	New Access Road - 20'	3,895	SY	4.85	7.20	4.80	$ 18,890	$ 28,042	$ 18,695	**$ 65,627**
1.4	Strip and Dispose Top Soil	7,260	CY		24.50	10.50	$ -	$ 177,870	$ 76,230	**$ 254,100**
1.5	Site Grading- Excavation for Substation Pad	21,780	CY		9.00	6.00	$ -	$ 196,020	$ 130,680	**$ 326,700**
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	11,761	CY		21.00	9.00	$ -	$ 246,985.20	$ 105,850.80	**$ 352,836.00**
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	17,642	CY		2.40	1.60	$ -	$ 42,340	$ 28,227	**$ 70,567**
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	11,761	CY	25.00	2.40	1.60	$ 294,030	$ 28,227	$ 18,818	**$ 341,075**
1.9	Blasting		EA				$ -	$ -	$ -	**$ -**
1.10	Install substation 8" pad base	21,780	SY	11.00	6.00	4.00	$ 239,580	$ 130,680	$ 87,120	**$ 457,380**
1.11	Site Surfacing - Aggregate 6" Thick	21,780	SY	16.50	4.50	3.00	$ 359,370	$ 98,010	$ 65,340	**$ 522,720**
1.12	7' Station Fence w/ Barbed Wire & Grounding	1,710	LF	13.85	13.85	6.92	$ 23,680	$ 23,680	$ 11,840	**$ 59,200**
1.13	20' Slide Gate & Grounding	1	EA	8,100.00	3,245.00	1,305.00	$ 8,100	$ 3,245	$ 1,305	**$ 12,650**
1.14	4' Pedestrian gate	1	EA	2,500.00	1,000.00	350.00	$ 2,500	$ 1,000	$ 350	**$ 3,850**
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	1	LS	446,976.00	115,200.00	76,104.00	$ 446,976	$ 115,200	$ 76,104	**$ 638,280**
1.16	Seeding	15,000	SF	1.50	1.50	1.00	$ 22,500	$ 22,500	$ 15,000	**$ 60,000**
1.17	Erosion Control-Silt fence install & remove	2,700	LF	2.41	3.16	0.72	$ 6,507	$ 8,532	$ 1,944	**$ 16,983**
1.18	Temporary fencing	1,800	LF	7.50	5.25	2.25	$ 13,500	$ 9,450	$ 4,050	**$ 27,000**
1.19	Substation entrance with asphalt	4,500	SY	19.50	26.00	19.50	$ 87,750	$ 117,000	$ 87,750	**$ 292,500**
1.20	Concrete curb	100	LF	26.00	27.30	11.70	$ 2,600	$ 2,730	$ 1,170	**$ 6,500**
1.21	Retaining Wall	0	LF	156.00	117.00	117.00	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 1,525,983	$ 1,300,112	$ 762,874	$ 3,588,968
2. SUBSTATION FOUNDATIONS										
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, Bus support-3 Ph	127	CY	703.89	804.44	502.78	$ 89,196	$ 101,939	$ 63,712	**$ 254,847**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-1 Ph	230	CY	703.89	804.44	502.78	$ 161,668	$ 184,764	$ 115,477	**$ 461,909**
2.6	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
=3*3	345kV, Cable sealing end	32	CY	703.89	804.44	502.78	$ 22,595	$ 25,823	$ 16,139	**$ 64,556**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
11	345kV, Disconnect Switch	253	CY	703.89	804.44	502.78	$ 178,393	$ 203,877	$ 127,423	**$ 509,693**
2.13	345/138KV, Power Transformer with oil containment	656	CY	703.89	804.44	502.78	$ 461,749	$ 527,713	$ 329,820	**$ 1,319,282**
2.14	345kV, Shunt Reactor with oil containment-275MVAR	305	CY	703.89	804.44	502.78	$ 214,685	$ 245,354	$ 153,346	**$ 613,386**
2.15	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.16	345kV, Phase Angle Regulator with oil containment	445	CY	703.89	804.44	502.78	$ 313,229	$ 357,976	$ 223,735	**$ 894,940**
2.17	345kV, Circuit Breaker (PASS)	40	CY	703.89	804.44	502.78	$ 28,155	$ 32,178	$ 20,111	**$ 80,444**
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345Kv, Control Enclosure-BLDG with generator pad	259	CY	703.89	804.44	502.78	$ 182,306	$ 208,350	$ 130,219	**$ 520,875**
2.20	345kV, Surge arrester	48	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.21	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.22	138kV, Circuit Breaker, Hybrid circuit breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.23	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.24	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.25	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.26	138kV, Cable sealing end	24	CY	703.89	804.44	502.78	$ 17,062	$ 19,500	$ 12,187	**$ 48,749**
2.27	138kV, Surge arrester	32	CY	703.89	804.44	502.78	$ 22,595	$ 25,823	$ 16,139	**$ 64,556**
2.28	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.29	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	Firewall Foundation	119	CY	703.89	804.44	502.78	$ 83,622	$ 95,567	$ 59,730	**$ 238,919**
2.31	Precast Firewall for transformer, PARs, reactors	2,010	SF	25.00	15.00	10.00	$ 50,250	$ 30,150	$ 20,100	**$ 100,500**
2.32	Precast Concrete Piles-12"X80'	-	EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.33	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.34	138kV, GIS Enclosure-BLDG & control room	630	CY	703.89	804.44	502.78	$ 443,448	$ 506,797	$ 316,748	**$ 1,266,993**
TOTAL - 345KV FOUNDATION							$ 2,268,952	$ 2,565,809	$ 1,604,887	**$ 6,439,648**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast	0	EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, Bus support-3 Ph	8	EA	8,346.00	5,758.74	3,839.16	$ 66,768	$ 46,070	$ 30,713	**$ 143,551**
3.4	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph	29	EA	4,810.00	2,886.00	1,924.00	$ 139,490	$ 83,694	$ 55,796	**$ 278,980**
3.6	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.7	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.8	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end	3	EA	8,346.00	5,758.74	3,839.16	$ 25,038	$ 17,276	$ 11,517	**$ 53,832**
3.11	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch	8	EA	19,240.00	11,544.00	7,696.00	$ 153,920	$ 92,352	$ 61,568	**$ 307,840**
3.13	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	**$ -**
3.14	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.15	138kV, Disconnect Switch	0	EA				$ -	$ -	$ -	**$ -**
3.16	138kV, Cable sealing end	2	EA	4,810.00	2,886.00	1,924.00	$ 9,620	$ 5,772	$ 3,848	**$ 19,240**
3.17	138kV, Surge arrester	6	EA	4,810.00	2,886.00	1,924.00	$ 28,860	$ 17,316	$ 11,544	**$ 57,720**
3.18	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.19	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.20	345kV Gas-Insulated Bus Conductor	0	LF	550.00	275.00	82.50	$ -	$ -	$ -	**$ -**
3.21	345kV Gas-Insulated Bus Conductor-elbow	0	EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	**$ -**
3.22	AL. Bus Tubing, 5" SCH 80	1,950	LF	25.00	184.94	123.29	$ 48,750	$ 360,629	$ 240,419	**$ 649,799**
3.23	AL. Bus fittings	1	LS	58,500.00	58,500.00	29,250.00	$ 58,500	$ 58,500	$ 29,250	**$ 146,250**
3.24	Steel grating and support beams-transformer moat	173,120	LB	2.73	1.17	0.50	$ 472,932	$ 202,377	$ 86,733	**$ 762,043**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 1,003,878	$ 883,987	$ 531,389	$ 2,419,254
4. MAJOR EQUIPTMENT										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.1	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	**$ -**
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$ -**
4.3	345kV, Cable sealing end	9	EA	17,400.00	5,460.00	2,340.00	$ 156,600	$ 49,140	$ 21,060	**$ 226,800**
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch	8	EA	57,720.00	34,632.00	23,088.00	$ 461,760	$ 277,056	$ 184,704	**$ 923,520**
4.6	345/138KV, Power Transformer with oil containment	2	EA	5,020,000.00	3,520.00	880.00	$ 10,040,000	$ 7,040	$ 1,760	**$ 10,048,800**
4.7	Transport & Testing- Transformer	2	EA		777,400.00	514,600.00	$ -	$ 1,554,800	$ 1,029,200	**$ 2,584,000**
4.8	345kV, Shunt Reactor with oil containment-275MVAR	1	EA	3,332,488.00	3,520.00	880.00	$ 3,332,488	$ 3,520	$ 880	**$ 3,336,888**
4.9	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.10	Transport & Testing- Shunt Reactor	1	EA		426,650.00	182,850.00	$ -	$ 426,650	$ 182,850	**$ 609,500**
4.11	345kV, Phase Angle Regulator with oil containment	1	EA	12,882,000.00	3,520.00	880.00	$ 12,882,000	$ 3,520	$ 880	**$ 12,886,400**
4.10	Transport & Testing- PAR	1	EA		615,400.00	406,600.00	$ -	$ 615,400	$ 406,600	**$ 1,022,000**
4.12	345kV, Circuit Breaker (PASS)	2	EA	350,000.00	57,239.00	24,531.00	$ 700,000	$ 114,478	$ 49,062	**$ 863,540**
4.13	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.15	345kV, surge Arrester	6	EA	6,669.00	5,460.00	2,340.00	$ 40,014	$ 32,760	$ 14,040	**$ 86,814**
4.16	138kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.17	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.18	138kV, Gas Insulated Switchgear, BAAH Arrangement	12	BKR	478,750.00	287,250.00	191,500.00	$ 5,745,000	$ 3,447,000	$ 2,298,000	**$ 11,490,000**
4.19	138kV, Circuit Breaker, Hybrid circuit breaker	0	EA	920,000.00	13,559.00	5,811.00	$ -	$ -	$ -	**$ -**
4.20	138kV, Disconnect Switch	0	EA		3,958.50	1,696.50	$ -	$ -	$ -	**$ -**
4.21	138kV, Cable sealing end	6	EA	11,600.00	5,460.00	2,340.00	$ 69,600	$ 32,760	$ 14,040	**$ 116,400**
4.21	138kV, Surge arrester	6	EA	4,446.00	4,200.00	1,800.00	$ 26,676	$ 25,200	$ 10,800	**$ 62,676**
4.22	138kV, CCVT	0	EA		7,970.08	3,415.75	$ -	$ -	$ -	**$ -**
4.24	Station service transformers- 120/208v-250VA	2	EA	260,000.00	45,500.00	19,500.00	$ 520,000	$ 91,000	$ 39,000	**$ 650,000**
TOTAL - MAJOR EQUIPMENT							$ 33,974,138	$ 6,680,324	$ 4,252,876	$ 44,907,338
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	23,100	LF	5.30	1.43	0.29	$ 122,372	$ 33,091	$ 6,618	**$ 162,081**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 122,372	$ 33,091	$ 6,618	**$ 162,081**
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	4,500	LF	11.15	10.80	5.40	$ 50,175	$ 48,600	$ 24,300	**$ 123,075**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench	1,275	LF	266.50	53.04	13.26	$ 339,788	$ 67,626	$ 16,907	**$ 424,320**
6.7										
6.8	138kV UG- Conduit	3,499	LF	266.73	202.15	100.00	$ 933,291	$ 707,311	$ 349,917	**$ 1,990,519**
6.9	138kV UG- Cable	11,022	LF	145.00	87.00	58.00	$ 1,598,168	$ 958,901	$ 639,267	**$ 3,196,337**
6.10	138kV UG- Termination	30	EA	27,805.00	9,846.48	2,813.28	$ 834,150	$ 295,394	$ 84,398	**$ 1,213,943**
6.11	Fiber Optic Cable	3,674	LF	7.40	3.33	2.22	$ 27,176	$ 12,236	$ 8,158	**$ 47,570**
6.12	Ground Continuity Conductor	3,674	LF	13.04	7.53	5.02	$ 47,905	$ 27,654	$ 18,436	**$ 93,994**
TOTAL - CONDUIT & CABLE TRENCH							$ 3,830,653	$ 2,117,722	$ 1,141,383	**$ 7,089,758**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	20,055	LF	2.09	3.42	1.46	$ 41,935	$ 68,494	$ 29,355	**$ 139,783**
7.2	Caweld, DSA, 4/0 , T, CROSS	540	EA	165.00	75.00		$ 89,100	$ 40,500	$ -	**$ 129,600**
7.3	Ground Rod, 3/4" x 15'	494	EA	135.00	67.50	7.50	$ 66,690	$ 33,345	$ 3,705	**$ 103,740**
TOTAL - GROUND GRID							$ 197,725	$ 142,339	$ 33,060	**$ 373,123**
8. CONTROL ENCLOSURE										
8.1	345kv Control Bldg	1	EA	407,211.00	285,047.70	122,163.30	$ 407,211	$ 285,048	$ 122,163	**$ 814,422**
8.2	138kv GIS/Control Bldg	1	EA	1,145,280.92	801,696.65	343,584.28	$ 1,145,281	$ 801,697	$ 343,584	**$ 2,290,562**
8.3	Primary Line Relays (87L): SEL-411L	7	EA	21,328.12	17,062.49	4,265.62	$ 149,297	$ 119,437	$ 29,859	**$ 298,594**
8.4	Backup Line Relays (87L): GE L90	7	EA	21,328.12	17,062.49	4,265.62	$ 149,297	$ 119,437	$ 29,859	**$ 298,594**
8.5	Primary Bay Control: SEL-451	5	EA	21,328.12	17,062.49	4,265.62	$ 106,641	$ 85,312	$ 21,328	**$ 213,281**
8.6	Backup Bay Control: SEL-451	5	EA	21,328.12	17,062.49	4,265.62	$ 106,641	$ 85,312	$ 21,328	**$ 213,281**
8.7	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.9	Primary Bus Differential Relays: SEL-487B	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.10	Backup Bus Differential Relays: GE B90	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.11	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Anr	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.12	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annnunciator	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.13	HMI Panel	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.14	Primary Line Relays (87L): SEL-411L	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.15	Backup Line Relays (87L): GE L90	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.16	Primary Bay Control: SEL-451	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.17	Backup Bay Control: SEL-451	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.18	Primary Bus Differential Relays: SEL-487B	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.19	Backup Bus Differential Relays: GE B90	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.20	125VDC Battery System	4	LS	25,000.00	22,750.00	9,750.00	$ 100,000	$ 91,000	$ 39,000	**$ 230,000**
8.21	Control house AC Panel	3	EA	65,000.00	91,000.00	39,000.00	$ 195,000	$ 273,000	$ 117,000	**$ 585,000**
8.22	Control House DC Panel	3	EA	65,000.00	91,000.00	39,000.00	$ 195,000	$ 273,000	$ 117,000	**$ 585,000**
8.23	Generator	1	EA	130,000.00	72,800.00	31,200.00	$ 130,000	$ 72,800	$ 31,200	**$ 234,000**
TOTAL - CONTROL ENCLOSURE							$ 3,191,085	$ 2,611,419	$ 973,666	$ 6,776,170
1. Station 29 New Ruland Road 345/138 kV Substation							$ 46,114,786	$ 16,334,802	$ 9,306,753	$ 71,756,341
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		696,379.43	298,448.33	$ -	$ 696,379	$ 298,448	**$ 994,828**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		602,663.41		$ -	$ 602,663	$ -	**$ 602,663**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		2,410,653.65		$ -	$ 2,410,654	$ -	**$ 2,410,654**
9.4	Utility PM and Project Oversite	1	LS		602,663.41		$ -	$ 602,663	$ -	**$ 602,663**
9.5	Site Accommodation, Facilities, Storage	1	LS	602,663.41			$ 602,663	$ -	$ -	**$ 602,663**
	Engineering									
9.6	Design Engineering	1.00	LS		4,821,307.30		$ -	$ 4,821,307	$ -	**$ 4,821,307**
9.7	LiDAR /GPR	1.00	LS		-		$ -	$ -	$ -	**$ -**
9.8	Geotech	5.00	EA		2,730.00	1,820.00	$ -	$ 13,650	$ 9,100	**$ 22,750**
9.9	Surveying/Staking	1.00	Site		421,864.39		$ -	$ 421,864	$ -	**$ 421,864**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		2,259,987.80		$ -	$ 2,259,988	$ -	**$ 2,259,988**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		6,546.96		$ -	$ 6,547	$ -	**$ 6,547**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		602,663.41		$ -	$ 602,663	$ -	**$ 602,663**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		180,799.02		$ -	$ 180,799	$ -	**$ 180,799**
9.15	Laydown Lease	-	LS				$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	1.00	LS		-	1,158,245.00	$ -	$ -	$ 1,158,245	**$ 1,158,245**
9.17	Legal Fees (Real estate)	1.00	LS		-	34,747.35	$ -	$ -	$ 34,747	**$ 34,747**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 2,600,000	$ -	$ -	$ 2,600,000	**$ 2,600,000**
9.20	Sales Tax on Materials	8.80%	LS	46,114,786.29			$ 4,058,101	$ -	$ -	**$ 4,058,101**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		71,756.34		$ -	$ 71,756	$ -	**$ 71,756**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 4,660,765	$ 12,690,935	$ 4,100,541	**$ 21,452,240**

NEXTera Energy- TO44 Enhanced 2

2.Station 31 East Garden City 345/138 kV Substation Upgrades

Total: $ 350,780,975

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
2.Station 31 East Garden City 345/138 kV Substation Upgrades				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 1,520,689	$ 1,991,295	$ 1,238,557	$ 4,750,541
2. SUBSTATION FOUNDATIONS	$ 6,323,828	$ 6,833,118	$ 4,288,849	$ 17,445,796
3. SUBSTATION STRUCTURES	$ 2,258,419	$ 1,707,045	$ 978,475	$ 4,943,939
4. MAJOR EQUIPTMENT	$ 86,834,800	$ 16,960,872	$ 11,178,648	$ 114,974,320
5. LOW VOLTAGE & CONTROL CABLE	$ 146,211	$ 39,537	$ 7,907	$ 193,655
6. CONDUIT & CABLE TRENCH	$ 8,749,796	$ 4,973,297	$ 2,721,841	$ 16,444,934
7. GROUND GRID	$ 150,907	$ 108,737	$ 25,280	$ 284,924
8. CONTROL ENCLOSURE	$ 5,916,040	$ 4,481,372	$ 1,683,668	$ 12,081,080
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 11,206,253	$ 29,104,053	$ 39,878,877	$ 80,189,183
Turnkey cost (HVDC, GIS)	$ 17,610,000	$ 10,566,000	$ 7,044,000	$ 35,220,000
Non-Turnkey cost	$ 105,496,942	$ 55,633,327	$ 54,958,103	$ 216,088,372
SUBTOTAL (Costs):	$ 123,106,942	$ 66,199,327	$ 62,002,103	$ 251,308,372
CONTRACTOR MARK-UP (OH&P)	$ 20,046,050	$ 10,647,959	$ 10,315,099	$ 41,009,107
SUBTOTAL:	$ 143,152,991	$ 76,847,286	$ 72,317,202	$ 292,317,479
CONTINGENCY ON ENTIRE PROJECT	$ 28,630,598	$ 15,369,457	$ 14,463,440	$ 58,463,496
TOTAL:	$ 171,783,590	$ 92,216,743	$ 86,780,642	$ 350,780,975

Description of Work: New East Garden City 345 kV/138 kV GIS Substation, and modification at exisitng 138kv EGC station

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2.Station 31 East Garden City 345/138 kV Substation Upgrades										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	0.0	ACRE	-	10,800.00	7,200.00	$ -	$ -	$ -	$ -
1.2	Demolition	1	LS	-	900,000.00	600,000.00	$ -	$ 900,000	$ 600,000	$ 1,500,000
1.3	New Access Road - 20'	3,149	SY	4.85	7.20	4.80	$ 15,272	$ 22,672	$ 15,115	$ 53,059
1.4	Strip and Dispose Top Soil	0	CY		24.50	10.50	$ -	$ -	$ -	$ -
1.5	Site Grading- Excavation for Substation Pad	27,443	CY		9.00	6.00	$ -	$ 246,985	$ 164,657	$ 411,642
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	14,819	CY		21.00	9.00	$ -	$ 311,201.35	$ 133,372.01	$ 444,573.36
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	22,229	CY		2.40	1.60	$ -	$ 53,349	$ 35,566	$ 88,915
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	14,819	CY	25.00	2.40	1.60	$ 370,478	$ 35,566	$ 23,711	$ 429,754
1.9	Blasting		EA				$ -	$ -	$ -	$ -
1.10	Install substation 8" pad base	21,780	SY	11.00	6.00	4.00	$ 239,580	$ 130,680	$ 87,120	$ 457,380
1.11	Site Surfacing - Aggregate 6" Thick	21,780	SY	16.50	4.50	3.00	$ 359,370	$ 98,010	$ 65,340	$ 522,720
1.12	7' Station Fence w/ Barbed Wire & Grounding	2,094	LF	13.85	13.85	6.92	$ 28,998	$ 28,998	$ 14,499	$ 72,494
1.13	20' Slide Gate & Grounding	2	EA	8,100.00	3,245.00	1,305.00	$ 16,200	$ 6,490	$ 2,610	$ 25,300
1.14	4' Pedestrian gate	2	EA	2,500.00	1,000.00	350.00	$ 5,000	$ 2,000	$ 700	$ 7,700
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	1	LS	446,976.00	115,200.00	76,104.00	$ 446,976	$ 115,200	$ 76,104	$ 638,280
1.16	Seeding	0	SF	1.50	1.50	1.00	$ -	$ -	$ -	$ -
1.17	Erosion Control-Silt fence install & remove	3,285	LF	2.41	3.16	0.72	$ 7,917	$ 10,381	$ 2,365	$ 20,663
1.18	Temporary fencing	2,190	LF	7.50	5.25	2.25	$ 16,425	$ 11,498	$ 4,928	$ 32,850
1.19	Substation entrance with asphalt	556	SY	19.50	26.00	19.50	$ 10,833	$ 14,444	$ 10,833	$ 36,111
1.20	Concrete curb	140	LF	26.00	27.30	11.70	$ 3,640	$ 3,822	$ 1,638	$ 9,100
1.21	Retaining Wall	0	LF	156.00	117.00	117.00	$ -	$ -	$ -	$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 1,520,689	$ 1,991,295	$ 1,238,557	$ 4,750,541
2. SUBSTATION FOUNDATIONS										
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, Bus support-3 Ph	95	CY	703.89	804.44	502.78	$ 66,897	$ 76,454	$ 47,784	**$ 191,135**
2.4	345kV, Bus support-3 Ph, low	332	CY	703.89	804.44	502.78	$ 233,549	$ 266,913	$ 166,821	**$ 667,283**
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.6	345kV, GIS air terminal	277	CY	703.89	804.44	502.78	$ 195,117	$ 222,991	$ 139,369	**$ 557,477**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, Cable sealing end	107	CY	703.89	804.44	502.78	$ 75,316	$ 86,075	$ 53,797	**$ 215,188**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.12	345kV, Disconnect Switch	190	CY	703.89	804.44	502.78	$ 133,794	$ 152,908	$ 95,567	**$ 382,270**
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Shunt Reactor with oil containment-225MVAR	610	CY	703.89	804.44	502.78	$ 429,370	$ 490,708	$ 306,693	**$ 1,226,771**
2.14	345kV, Shunt Reactor with oil containment-150MVAR	200	CY	703.89	804.44	502.78	$ 140,777	$ 160,888	$ 100,555	**$ 402,220**
2.15	345kV, Shunt Reactor with oil containment-50MVAR	378	CY	703.89	804.44	502.78	$ 266,069	$ 304,078	$ 190,049	**$ 760,196**
2.16	345kV, Shunt Reactor with oil containment-25MVAR	200	CY	703.89	804.44	502.78	$ 140,777	$ 160,888	$ 100,555	**$ 402,220**
2.17	345kV, Phase Angle Regulator with oil containment	1,780	CY	703.89	804.44	502.78	$ 1,252,915	$ 1,431,903	$ 894,940	**$ 3,579,758**
2.18	345kV, Circuit Breaker (PASS)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.20	345Kv, GIS Enclosure-BLDG with generator pad	1,867	CY	703.89	804.44	502.78	$ 1,314,153	$ 1,501,889	$ 938,681	**$ 3,754,724**
2.21	345kV, Surge arrester	161	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.22	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.23	138kV, Circuit Breaker, Hybrid circuit breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.24	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.25	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.26	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.27	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.28	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.29	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	Firewall Foundation	1,917	CY	703.89	804.44	502.78	$ 1,349,094	$ 1,541,822	$ 963,639	**$ 3,854,555**
2.31	Precast Firewall for transformer, PARs, reactors	29,040	SF	25.00	15.00	10.00	$ 726,000	$ 435,600	$ 290,400	**$ 1,452,000**
2.32	Precast Concrete Piles-12"X80'	-	EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.33	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.34	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
TOTAL - 345KV FOUNDATION							$ 6,323,828	$ 6,833,118	$ 4,288,849	**$ 17,445,796**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast	0	EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, Bus support-3 Ph	6	EA	8,346.00	5,758.74	3,839.16	$ 50,076	$ 34,552	$ 23,035	**$ 107,663**
3.4	345kV, Bus support-3 Ph, low	30	EA	8,346.00	5,758.74	3,839.16	$ 250,380	$ 172,762	$ 115,175	**$ 538,317**
3.5	345kV, Bus support-1 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.6	345kV, GIS air terminal	21	EA	8,346.00	5,758.74	3,839.16	$ 175,266	$ 120,934	$ 80,622	**$ 376,822**
3.7	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.8	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end	10	EA	8,346.00	5,758.74	3,839.16	$ 83,460	$ 57,587	$ 38,392	**$ 179,439**
3.11	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch	6	EA	19,240.00	11,544.00	7,696.00	$ 115,440	$ 69,264	$ 46,176	**$ 230,880**
3.13	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	**$ -**
3.14	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.15	138kV, Disconnect Switch	0	EA				$ -	$ -	$ -	**$ -**
3.16	138kV, Cable sealing end	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.17	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.18	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.19	345kV Gas-Insulated Bus Conductor	0	LF	550.00	275.00	82.50	$ -	$ -	$ -	**$ -**
3.20	345kV Gas-Insulated Bus Conductor-elbow	0	EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	**$ -**
3.21	AL. Bus Tubing, 5" SCH 80	3,000	LF	25.00	184.94	123.29	$ 75,000	$ 554,814	$ 369,876	**$ 999,690**
3.22	AL. Bus fittings	1	LS	90,000.00	90,000.00	45,000.00	$ 90,000	$ 90,000	$ 45,000	**$ 225,000**
3.23	Steel grating and support beams-transformer moat	519,360	LB	2.73	1.17	0.50	$ 1,418,797	$ 607,132	$ 260,199	**$ 2,286,128**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 2,258,419	$ 1,707,045	$ 978,475	$ 4,943,939

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	21	EA				$ -	$ -	$ -	**$ -**
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$ -**
4.3	345kV, Cable sealing end	30	EA	17,400.00	5,460.00	2,340.00	$ 522,000	$ 163,800	$ 70,200	**$ 756,000**
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch	6	EA	57,720.00	34,632.00	23,088.00	$ 346,320	$ 207,792	$ 138,528	**$ 692,640**
4.6	345/138KV, Power Transformer with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.7	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.8	345kV, Shunt Reactor with oil containment-225MVAR	2	EA	3,026,425.00	3,520.00	880.00	$ 6,052,850	$ 7,040	$ 1,760	**$ 6,061,650**
4.9	345kV, Shunt Reactor with oil containment-150MVAR	1	EA	2,629,516.50	3,520.00	880.00				
4.10	345kV, Shunt Reactor with oil containment-50MVAR	3	EA	2,138,451.50	3,520.00	880.00	$ 6,415,355	$ 10,560	$ 2,640	**$ 6,428,555**
4.11	345kV, Shunt Reactor with oil containment-25MVAR	2	EA	1,900,130.50	3,520.00	880.00	$ 3,800,261	$ 7,040	$ 1,760	**$ 3,809,061**
4.12	Transport & Testing- Shunt Reactor	8	EA		424,900.00	279,600.00	$ -	$ 3,399,200	$ 2,236,800	**$ 5,636,000**
4.13	345kV, Phase Angle Regulator with oil containment	4	EA	12,882,000.00	3,520.00	880.00	$ 51,528,000	$ 14,080	$ 3,520	**$ 51,545,600**
4.14	Transport & Testing- PAR	4	EA		615,400.00	406,600.00	$ -	$ 2,461,600	$ 1,626,400	**$ 4,088,000**
4.15	345kV, Gas Insulated Switchgear, BAAH Arrangement	21	BKR	838,571.43	503,142.86	335,428.57	$ 17,610,000	$ 10,566,000	$ 7,044,000	**$ 35,220,000**
4.16	345kV, Circuit Breaker (PASS)	0	EA		57,239.00	24,531.00	$ -	$ -	$ -	**$ -**
4.17	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	**$ -**
4.18	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.19	345kV, surge Arrester	6	EA	6,669.00	5,460.00	2,340.00	$ 40,014	$ 32,760	$ 14,040	**$ 86,814**
4.20	138kV, Phase Angle Regulator with oil containment	0	EA	10,366,370.00	3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.21	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		336,400.00	220,600.00	$ -	$ -	$ -	**$ -**
4.22	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.23	138kV, Circuit Breaker, Hybrid circuit breaker	0	EA		13,559.00	5,811.00	$ -	$ -	$ -	**$ -**
4.24	138kV, Disconnect Switch	0	EA		3,958.50	1,696.50	$ -	$ -	$ -	**$ -**
4.25	138kV, Cable sealing end	0	EA	11,600.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.26	138kV, CCVT	0	EA		7,970.08	3,415.75	$ -	$ -	$ -	**$ -**
4.27	138kV, Surge arrester	0	EA	4,446.00	4,200.00	1,800.00	$ -	$ -	$ -	**$ -**
4.28	Station service transformers- 120/208v-250VA	2	EA	260,000.00	45,500.00	19,500.00	$ 520,000	$ 91,000	$ 39,000	**$ 650,000**
TOTAL - MAJOR EQUIPMENT							$ 86,834,800	$ 16,960,872	$ 11,178,648	$ 114,974,320
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	27,600	LF	5.30	1.43	0.29	$ 146,211	$ 39,537	$ 7,907	**$ 193,655**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 146,211	$ 39,537	$ 7,907	**$ 193,655**
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	5,700	LF	11.15	10.80	5.40	$ 63,555	$ 61,560	$ 30,780	**$ 155,895**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench	1,063	LF	266.50	53.04	13.26	$ 283,156	$ 56,355	$ 14,089	**$ 353,600**
6.7										
6.8	138kV UG- Conduit		LF	266.73	202.15	100.00	$ -	$ -	$ -	**$ -**
6.9	138kV UG- Cable		LF	145.00	87.00	58.00	$ -	$ -	$ -	**$ -**
6.10	138kV UG- Termination		EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.11	345kV UG- Conduit	8,016	LF	266.73	202.15	100.00	$ 2,138,035	$ 1,620,346	$ 801,609	**$ 4,559,990**
6.12	345kV UG- Cable	24,047	LF	167.00	100.20	66.80	$ 4,015,866	$ 2,409,519	$ 1,606,346	**$ 8,031,731**
6.13	345kV UG- Termination	75	EA	27,805.00	9,846.48	2,813.28	$ 2,085,375	$ 738,486	$ 210,996	**$ 3,034,857**
6.14	Fiber Optic Cable	8,016	LF	7.40	3.33	2.22	$ 59,292	$ 26,697	$ 17,798	**$ 103,787**
6.15	Ground Continuity Conductor	8,016	LF	13.04	7.53	5.02	$ 104,517	$ 60,334	$ 40,223	**$ 205,074**
TOTAL - CONDUIT & CABLE TRENCH							$ 8,749,796	$ 4,973,297	$ 2,721,841	**$ 16,444,934**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	15,355	LF	2.09	3.42	1.46	$ 32,107	$ 52,442	$ 22,475	**$ 107,024**
7.2	Caweld, DSA, 4/0 , T, CROSS	414	EA	165.00	75.00		$ 68,310	$ 31,050	$ -	**$ 99,360**
7.3	Ground Rod, 3/4" x 15'	374	EA	135.00	67.50	7.50	$ 50,490	$ 25,245	$ 2,805	**$ 78,540**
TOTAL - GROUND GRID							$ 150,907	$ 108,737	$ 25,280	**$ 284,924**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	1	EA	3,817,603.08	2,672,322.16	1,145,280.92	$ 3,817,603	$ 2,672,322	$ 1,145,281	**$ 7,635,206**
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	**$ -**
8.3	Primary Line Relays (87L): SEL-411L	12	EA	21,328.12	17,062.49	4,265.62	$ 255,937	$ 204,750	$ 51,187	**$ 511,875**
8.4	Backup Line Relays (87L): GE L90	12	EA	21,328.12	17,062.49	4,265.62	$ 255,937	$ 204,750	$ 51,187	**$ 511,875**
8.5	Primary Bay Control: SEL-451	7	EA	21,328.12	17,062.49	4,265.62	$ 149,297	$ 119,437	$ 29,859	**$ 298,594**
8.6	Backup Bay Control: SEL-451	7	EA	21,328.12	17,062.49	4,265.62	$ 149,297	$ 119,437	$ 29,859	**$ 298,594**
8.7	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	11	EA	21,328.12	17,062.49	4,265.62	$ 234,609	$ 187,687	$ 46,922	**$ 469,219**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60	11	EA	21,328.12	17,062.49	4,265.62	$ 234,609	$ 187,687	$ 46,922	**$ 469,219**
8.9	Primary Bus Differential Relays: SEL-487B	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.10	Backup Bus Differential Relays: GE B90	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.11	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Ann	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.12	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annnunciator	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.13	HMI Panel	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.14	Primary Line Relays (87L): SEL-411L	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.15	Backup Line Relays (87L): GE L90	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.16	Primary Line Relays (87L): SEL-411L		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.17	Backup Line Relays (87L): GE L90		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.18	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.19	Backup Transformer/Reactor/PAR Differential Relays: GE T60		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.20	Primary Bus Differential Relays: SEL-487B		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.21	Backup Bus Differential Relays: GE B90		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.22	125VDC Battery System	2	LS	25,000.00	22,750.00	9,750.00	$ 50,000	$ 45,500	$ 19,500	**$ 115,000**
8.23	Control house AC Panel	2	EA	65,000.00	91,000.00	39,000.00	$ 130,000	$ 182,000	$ 78,000	**$ 390,000**
8.24	Control House DC Panel	2	EA	65,000.00	91,000.00	39,000.00	$ 130,000	$ 182,000	$ 78,000	**$ 390,000**
8.25	Generator	1	EA	130,000.00	72,800.00	31,200.00	$ 130,000	$ 72,800	$ 31,200	**$ 234,000**
TOTAL - CONTROL ENCLOSURE							$ 5,916,040	$ 4,481,372	$ 1,683,668	$ 12,081,080
2.Station 31 East Garden City 345/138 kV Substation Upgrades							$ 111,900,689	$ 37,095,274	$ 22,123,226	$ 171,119,189
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		2,072,647.49	888,277.49	$ -	$ 2,072,647	$ 888,277	**$ 2,960,925**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		1,358,991.89		$ -	$ 1,358,992	$ -	**$ 1,358,992**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		5,435,967.56		$ -	$ 5,435,968	$ -	**$ 5,435,968**
9.4	Utility PM and Project Oversite	1	LS		1,358,991.89		$ -	$ 1,358,992	$ -	**$ 1,358,992**
9.5	Site Accommodation, Facilities, Storage	1	LS	1,358,991.89			$ 1,358,992	$ -	$ -	**$ 1,358,992**
	Engineering									
9.6	Design Engineering	1.00	LS		10,871,935.11		$ -	$ 10,871,935	$ -	**$ 10,871,935**
9.7	LiDAR /GPR	-	LS				$ -	$ -	$ -	**$ -**
9.8	Geotech	5.00	EA		2,730.00	1,820.00	$ -	$ 13,650	$ 9,100	**$ 22,750**
9.9	Surveying/Staking	1.00	Site		951,294.32		$ -	$ 951,294	$ -	**$ 951,294**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		5,096,219.58		$ -	$ 5,096,220	$ -	**$ 5,096,220**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		6,546.96		$ -	$ 6,547	$ -	**$ 6,547**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		1,358,991.89		$ -	$ 1,358,992	$ -	**$ 1,358,992**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		407,697.57		$ -	$ 407,698	$ -	**$ 407,698**
9.15	Laydown Lease	-	LS				$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	1.00	LS		-	31,050,000.00	$ -	$ -	$ 31,050,000	**$ 31,050,000**
9.17	Legal Fees (Real estate)	1.00	LS		-	931,500.00	$ -	$ -	$ 931,500	**$ 931,500**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 7,000,000	$ -	$ -	$ 7,000,000	**$ 7,000,000**
9.20	Sales Tax on Materials	8.80%	LS	111,900,689.28			$ 9,847,261	$ -	$ -	**$ 9,847,261**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		171,119.19		$ -	$ 171,119	$ -	**$ 171,119**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 11,206,253	$ 29,104,053	$ 39,878,877	**$ 80,189,183**

NEXTera Energy- TO44 Enhanced 2

3.Station 48 Valley Stream 345/138 kV Substation Upgrades

Total: $ 143,522,216

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
3.Station 48 Valley Stream 345/138 kV Substation Upgrades				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 903,828	$ 1,042,806	$ 681,014	$ 2,627,648
2. SUBSTATION FOUNDATIONS	$ 2,969,736	$ 3,393,984	$ 2,121,289	$ 8,485,009
3. SUBSTATION STRUCTURES	$ 1,692,012	$ 862,489	$ 392,825	$ 2,947,326
4. MAJOR EQUIPTMENT	$ 33,770,383	$ 9,893,022	$ 6,376,108	$ 50,039,513
5. LOW VOLTAGE & CONTROL CABLE	$ 98,534	$ 26,645	$ 5,329	$ 130,507
6. CONDUIT & CABLE TRENCH	$ 3,169,320	$ 1,626,898	$ 829,928	$ 5,626,146
7. GROUND GRID	$ 100,333	$ 72,239	$ 16,752	$ 189,324
8. CONTROL ENCLOSURE	$ 4,172,141	$ 3,175,330	$ 1,245,811	$ 8,593,282
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 4,708,201	$ 13,997,126	$ 6,080,873	$ 24,786,200
Turnkey cost (HVDC, GIS)	$ 10,165,000	$ 6,099,000	$ 4,066,000	$ 20,330,000
Non-Turnkey cost	$ 41,419,488	$ 27,991,539	$ 13,683,929	$ 83,094,955
SUBTOTAL (Costs):	$ 51,584,488	$ 34,090,539	$ 17,749,929	$ 103,424,955
CONTRACTOR MARK-UP (OH&P)	$ 8,065,408	$ 5,404,417	$ 2,707,067	$ 16,176,892
SUBTOTAL:	$ 59,649,895	$ 39,494,955	$ 20,456,996	$ 119,601,847
CONTINGENCY ON ENTIRE PROJECT	$ 11,929,979	$ 7,898,991	$ 4,091,399	$ 23,920,369
TOTAL:	$ 71,579,875	$ 47,393,947	$ 24,548,395	$ 143,522,216

Description of Work: New East Garden City 345 kV/138 kV GIS Substation, and modification at exisitng 138kv EGC station

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
3.Station 48 Valley Stream 345/138 kV Substation Upgrades										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	0.0	ACRE	-	10,800.00	7,200.00	$ -	$ -	$ -	**$ -**
1.2	Demolition	1	LS	-	620,000.00	415,000.00	$ -	$ 620,000	$ 415,000	**$ 1,035,000**
1.3	New Access Road - 20'	889	SY	4.85	7.20	4.80	$ 4,312	$ 6,401	$ 4,267	**$ 14,980**
1.4	Strip and Dispose Top Soil	0	CY		24.50	10.50	$ -	$ -	$ -	**$ -**
1.5	Site Grading- Excavation for Substation Pad	11,761	CY		9.00	6.00	$ -	$ 105,849	$ 70,566	**$ 176,415**
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal		CY		21.00	9.00	$ -	$ -	$ -	**$ -**
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	7,057	CY		2.40	1.60	$ -	$ 16,937	$ 11,291	**$ 28,228**
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	4,704	CY	25.00	2.40	1.60	$ 117,600	$ 11,290	$ 7,526	**$ 136,416**
1.9	Blasting		EA				$ -	$ -	$ -	**$ -**
1.10	Install substation 8" pad base	8,712	SY	11.00	6.00	4.00	$ 95,832	$ 52,272	$ 34,848	**$ 182,952**
1.11	Site Surfacing - Aggregate 6" Thick	8,712	SY	16.50	4.50	3.00	$ 143,748	$ 39,204	$ 26,136	**$ 209,088**
1.12	7' Station Fence w/ Barbed Wire & Grounding	2,222	LF	13.85	13.85	6.92	$ 30,770	$ 30,770	$ 15,385	**$ 76,926**
1.13	20' Slide Gate & Grounding	3	EA	8,100.00	3,245.00	1,305.00	$ 24,300	$ 9,735	$ 3,915	**$ 37,950**
1.14	4' Pedestrian gate	3	EA	2,500.00	1,000.00	350.00	$ 7,500	$ 3,000	$ 1,050	**$ 11,550**
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	1	LS	446,976.00	115,200.00	76,104.00	$ 446,976	$ 115,200	$ 76,104	**$ 638,280**
1.16	Seeding	0	SF	1.50	1.50	1.00	$ -	$ -	$ -	**$ -**
1.17	Erosion Control-Silt fence install & remove	2,583	LF	2.41	3.16	0.72	$ 6,225	$ 8,162	$ 1,860	**$ 16,247**
1.18	Temporary fencing	2,190	LF	7.50	5.25	2.25	$ 16,425	$ 11,498	$ 4,928	**$ 32,850**
1.19	Substation entrance with asphalt	333	SY	19.50	26.00	19.50	$ 6,500	$ 8,667	$ 6,500	**$ 21,667**
1.20	Concrete curb	140	LF	26.00	27.30	11.70	$ 3,640	$ 3,822	$ 1,638	**$ 9,100**
1.21	Retaining Wall	0	LF	156.00	117.00	117.00	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 903,828	$ 1,042,806	$ 681,014	$ 2,627,648
2. SUBSTATION FOUNDATIONS										
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.6	345kV, GIS air terminal	178	CY	703.89	804.44	502.78	$ 125,432	$ 143,351	$ 89,595	**$ 358,378**
2.7	345kV, GIS support-1 Ph	146	CY	703.89	804.44	502.78	$ 102,880	$ 117,577	$ 73,486	**$ 293,942**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, Cable sealing end	32	CY	703.89	804.44	502.78	$ 22,595	$ 25,823	$ 16,139	**$ 64,556**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.12	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.13	345/138KV, Power Transformer with oil containment	984	CY	703.89	804.44	502.78	$ 692,623	$ 791,569	$ 494,731	**$ 1,978,922**
2.14	345kV, Shunt Reactor with oil containment-150MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.15	345kV, Shunt Reactor with oil containment-50 MVAR	378	CY	703.89	804.44	502.78	$ 266,069	$ 304,078	$ 190,049	**$ 760,196**
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Circuit Breaker (PASS)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345Kv, GIS Enclosure-BLDG with generator pad	1,481	CY	703.89	804.44	502.78	$ 1,042,454	$ 1,191,376	$ 744,610	**$ 2,978,439**
2.20	345kV, Surge arrester	48	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.21	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.22	138kV, Circuit Breaker, Hybrid circuit breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.23	138kV, Circuit Breaker-relocation only	4.4	CY	703.89	804.44	502.78	$ 3,128	$ 3,575	$ 2,235	**$ 8,938**
2.24	138kV, Bus support-3 Ph, low	43	CY	703.89	804.44	502.78	$ 30,126	$ 34,430	$ 21,519	**$ 86,075**
2.25	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.26	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.27	138kV, Disconnect Switch- RELOCATION ONLY	48	CY	703.89	804.44	503.78	$ 34,124	$ 38,999	$ 24,423	**$ 97,547**
2.28	138kV, Cable sealing end	61	CY	703.89	804.44	502.78	$ 42,655	$ 48,749	$ 30,468	**$ 121,873**
2.29	138kV, Surge arrester	48	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.30	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.31	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.32	Firewall Foundation	863	CY	703.89	804.44	502.78	$ 607,650	$ 694,457	$ 434,036	**$ 1,736,142**
2.33	Precast Firewall for transformer, PARs, reactors	-	SF	25.00	15.00	10.00	$ -	$ -	$ -	**$ -**
2.34	Precast Concrete Piles-12"X80'	-	EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.35	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.36	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
TOTAL - 345KV FOUNDATION							$ 2,969,736	$ 3,393,984	$ 2,121,289	**$ 8,485,009**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast	0	EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, Bus support-3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.4	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.6	345kV, GIS air terminal	27	EA	8,346.00	5,758.74	3,839.16	$ 225,342	$ 155,486	$ 103,657	**$ 484,485**
3.7	345kV, GIS support-1 Ph	36	EA	8,346.00	5,758.74	3,839.16	$ 300,456	$ 207,315	$ 138,210	**$ 645,980**
3.8	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end	3	EA	8,346.00	5,758.74	3,839.16	$ 25,038	$ 17,276	$ 11,517	**$ 53,832**
3.11	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch	0	EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	**$ -**
3.13	138kV, Bus support-3 Ph, low	4	EA	4,173.00	2,879.76	1,919.84	$ 16,692	$ 11,519	$ 7,679	**$ 35,890**
3.14	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.15	138kV, Disconnect Switch	0	EA				$ -	$ -	$ -	**$ -**
3.16	138kV, Cable sealing end	3	EA	4,810.00	2,886.00	1,924.00	$ 14,430	$ 8,658	$ 5,772	**$ 28,860**
3.17	138kV, Surge arrester	9	EA	4,810.00	2,886.00	1,924.00	$ 43,290	$ 25,974	$ 17,316	**$ 86,580**
3.18	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.19	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.20	AL. Bus Tubing, 5" SCH 80	240	LF	25.00	184.94	123.29	$ 6,000	$ 44,385	$ 29,590	**$ 79,975**
3.21	AL. Bus fittings	1	LS	30,240.00	30,240.00	15,120.00	$ 30,240	$ 30,240	$ 15,120	**$ 75,600**
3.22	Steel grating and support beams-transformer moat	259,680	LB	2.73	1.17	0.50	$ 709,398	$ 303,566	$ 130,100	**$ 1,143,064**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 1,692,012	$ 862,489	$ 392,825	$ 2,947,326

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	27	EA				$ -	$ -	$ -	**$ -**
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$ -**
4.3	345kV, Cable sealing end	9	EA	17,400.00	5,460.00	2,340.00	$ 156,600	$ 49,140	$ 21,060	**$ 226,800**
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch	0	EA	57,720.00	34,632.00	23,088.00	$ -	$ -	$ -	**$ -**
4.6	345/138KV, Power Transformer with oil containment	3	EA	5,220,000.00	3,520.00	880.00	$ 15,660,000	$ 10,560	$ 2,640	**$ 15,673,200**
4.7	Transport & Testing- Transformer	3	EA		771,400.00	510,600.00	$ -	$ 2,314,200	$ 1,531,800	**$ 3,846,000**
4.8	345kV, Shunt Reactor with oil containment-150MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.9	345kV, Shunt Reactor with oil containment-50 MVAR	3	EA	2,138,451.50	3,520.00	880.00	$ 6,415,355	$ 10,560	$ 2,640	**$ 6,428,555**
4.10	Transport & Testing- Shunt Reactor	3	EA		240,400.00	156,600.00	$ -	$ 721,200	$ 469,800	**$ 1,191,000**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.12	345kV, Gas Insulated Switchgear, BAAH Arrangement	12	BKR	847,083.33	508,250.00	338,833.33	$ 10,165,000	$ 6,099,000	$ 4,066,000	**$ 20,330,000**
4.13	345kV, Circuit Breaker (PASS)	0	EA		57,239.00	24,531.00	$ -	$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	**$ -**
4.15	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.16	345kV, surge Arrester	6	EA	6,669.00	5,460.00	2,340.00	$ 40,014	$ 32,760	$ 14,040	**$ 86,814**
4.17	138kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.18	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.19	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR				$ -	$ -	$ -	**$ -**
4.20	138kV, Circuit Breaker, Hybrid circuit breaker	0	EA		13,559.00	5,811.00	$ -	$ -	$ -	**$ -**
4.21	138kV, Circuit Breaker-relocation only	1	EA		13,559.00	5,811.00	$ -	$ 13,559	$ 5,811	**$ 19,370**
4.22	138kV, Disconnect Switch-3 Ph	0	EA	37,700.00	11,875.50	5,089.50	$ -	$ -	$ -	**$ -**
4.23	138kV, Disconnect Switch- RELOCATION ONLY	2	EA		11,875.50	5,089.50	$ -	$ 23,751	$ 10,179	**$ 33,930**
4.24	138kV, Cable sealing end-3 Ph	15	EA	11,600.00	5,460.00	2,340.00	$ 174,000	$ 81,900	$ 35,100	**$ 291,000**
4.25	138kV, CCVT	0	EA		7,970.08	3,415.75	$ -	$ -	$ -	**$ -**
4.26	138kV, Surge arrester	9	EA	4,446.00	4,200.00	1,800.00	$ 40,014	$ 37,800	$ 16,200	**$ 94,014**
4.27	Station service transformers- 120/208v-250VA	2	EA	260,000.00	45,500.00	19,500.00	$ 520,000	$ 91,000	$ 39,000	**$ 650,000**
4.28	345kV Gas-Insulated Bus Conductor	1,008	LF	550.00	275.00	82.50	$ 554,400	$ 277,200	$ 83,160	**$ 914,760.00**
4.29	345kV Gas-Insulated Bus Conductor-elbow	18	EA	2,500.00	1,250.00	375.00	$ 45,000	$ 22,500	$ 6,750	**$ 74,250**
4.30	Transport & Testing- GIL	1	LS		107,892.00	71,928.00	$ -	$ 107,892	$ 71,928	**$ 179,820**
TOTAL - MAJOR EQUIPMENT							$ 33,770,383	$ 9,893,022	$ 6,376,108	$ 50,039,513
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	18,600	LF	5.30	1.43	0.29	$ 98,534	$ 26,645	$ 5,329	**$ 130,507**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 98,534	$ 26,645	$ 5,329	**$ 130,507**
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	-	-	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	3,600	LF	11.15	10.80	5.40	$ 40,140	$ 38,880	$ 19,440	**$ 98,460**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	-	-	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	-	-	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	-	-	$ -	$ -	$ -	**$ -**
6.6	Cable Trench	1,325	LF	266.50	53.04	13.26	$ 353,113	$ 70,278	$ 17,570	**$ 440,960**
6.7										
6.8	138kV UG- Conduit	1,919	LF	266.73	202.15	100.00	$ 511,963	$ 388,000	$ 191,949	**$ 1,091,913**
6.9	138kV UG- Cable	5,758	LF	145.00	87.00	58.00	$ 834,939	$ 500,963	$ 333,976	**$ 1,669,878**
6.10	138kV UG- Termination	18	EA	27,805.00	9,846.48	2,813.28	$ 500,490	$ 177,237	$ 50,639	**$ 728,366**
6.11	345kV UG- Conduit	494	LF	266.73	202.15	100.00	$ 131,632	$ 99,759	$ 49,352	**$ 280,743**
6.12	345kV UG- Cable	1,481	LF	167.00	100.20	66.80	$ 247,244	$ 148,346	$ 98,897	**$ 494,487**
6.13	345kV UG- Termination	18	EA	27,805.00	9,846.48	2,813.28	$ 500,490	$ 177,237	$ 50,639	**$ 728,366**
6.14	Fiber Optic Cable	2,413	LF	7.40	3.33	2.22	$ 17,848	$ 8,036	$ 5,358	**$ 31,242**
6.15	Ground Continuity Conductor	2,413	LF	13.04	7.53	5.02	$ 31,462	$ 18,162	$ 12,108	**$ 61,732**
TOTAL - CONDUIT & CABLE TRENCH							$ 3,169,320	$ 1,626,898	$ 829,928	**$ 5,626,146**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	10,200	LF	2.09	3.42	1.46	$ 21,328	$ 34,836	$ 14,930	**$ 71,094**
7.2	Caweld, DSA, 4/0 , T, CROSS	280	EA	165.00	75.00		$ 46,200	$ 21,000	$ -	**$ 67,200**
7.3	Ground Rod, 3/4" x 15'	243	EA	135.00	67.50	7.50	$ 32,805	$ 16,403	$ 1,823	**$ 51,030**
TOTAL - GROUND GRID							$ 100,333	$ 72,239	$ 16,752	**$ 189,324**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	1	EA	2,926,829.03	2,048,780.32	878,048.71	$ 2,926,829	$ 2,048,780	$ 878,049	**$ 5,853,658**
8.2	138kv GIS/Control Bldg	0	EA	-	-	-	$ -	$ -	$ -	**$ -**
8.3	Primary Line Relays (87L): SEL-411L	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.4	Backup Line Relays (87L): GE L90	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.5	Primary Bay Control: SEL-451	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.6	Backup Bay Control: SEL-451	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.7	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	6	EA	21,328.12	17,062.49	4,265.62	$ 127,969	$ 102,375	$ 25,594	**$ 255,937**
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60	6	EA	21,328.12	17,062.49	4,265.62	$ 127,969	$ 102,375	$ 25,594	**$ 255,937**
8.9	Primary Bus Differential Relays: SEL-487B	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.10	Backup Bus Differential Relays: GE B90	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.11	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Ann	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.12	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annnunciator	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.13	HMI Panel	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.14	Primary Line Relays (87L): SEL-411L	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.15	Backup Line Relays (87L): GE L90	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.16	125VDC Battery System	2	LS	25,000.00	22,750.00	9,750.00	$ 50,000	$ 45,500	$ 19,500	**$ 115,000**
8.17	Control house AC Panel	2	EA	65,000.00	91,000.00	39,000.00	$ 130,000	$ 182,000	$ 78,000	**$ 390,000**
8.18	Control House DC Panel	2	EA	65,000.00	91,000.00	39,000.00	$ 130,000	$ 182,000	$ 78,000	**$ 390,000**
8.19	Generator	1	EA	130,000.00	72,800.00	31,200.00	$ 130,000	$ 72,800	$ 31,200	**$ 234,000**
TOTAL - CONTROL ENCLOSURE							$ 4,172,141	$ 3,175,330	$ 1,245,811	$ 8,593,282
3.Station 48 Valley Stream 345/138 kV Substation Upgrades							$ 46,876,287	$ 20,093,412	$ 11,669,056	**$ 78,638,755**
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		755,911.39	323,962.02	$ -	$ 755,911	$ 323,962	**$ 1,079,873**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		583,087.55		$ -	$ 583,088	$ -	**$ 583,088**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		2,332,350.20		$ -	$ 2,332,350	$ -	**$ 2,332,350**
9.4	Utility PM and Project Oversite	1	LS		583,087.55		$ -	$ 583,088	$ -	**$ 583,088**
9.5	Site Accommodation, Facilities, Storage	1	LS	583,087.55			$ 583,088	$ -	$ -	**$ 583,088**
	Engineering									
9.6	Design Engineering	1.00	LS		6,291,100.41		$ -	$ 6,291,100	$ -	**$ 6,291,100**
9.7	LiDAR /GPR	-	LS		-		$ -	$ -	$ -	**$ -**
9.8	Geotech	5.00	EA		2,730.00	1,820.00	$ -	$ 13,650	$ 9,100	**$ 22,750**
9.9	Surveying/Staking	1.00	Site		408,161.29		$ -	$ 408,161	$ -	**$ 408,161**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		2,186,578.32		$ -	$ 2,186,578	$ -	**$ 2,186,578**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		6,546.96		$ -	$ 6,547	$ -	**$ 6,547**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		583,087.55		$ -	$ 583,088	$ -	**$ 583,088**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		174,926.27		$ -	$ 174,926	$ -	**$ 174,926**
9.15	Laydown Lease	-	LS				$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	1.00	LS		-	2,803,700.00	$ -	$ -	$ 2,803,700	**$ 2,803,700**
9.17	Legal Fees (Real estate)	1.00	LS		-	84,111.00	$ -	$ -	$ 84,111	**$ 84,111**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 2,860,000	$ -	$ -	$ 2,860,000	**$ 2,860,000**
9.20	Sales Tax on Materials	8.80%	LS	46,876,286.85			$ 4,125,113	$ -	$ -	**$ 4,125,113**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		78,638.76		$ -	$ 78,639	$ -	**$ 78,639**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 4,708,201	$ 13,997,126	$ 6,080,873	**$ 24,786,200**

NEXTera Energy- TO44 Enhanced 2

4.Barrett 138 kV Substation Upgrades

Total: $ 77,248,534

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
4.Barrett 138 kV Substation Upgrades				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 944,373	$ 647,031	$ 373,996	$ 1,965,400
2. SUBSTATION FOUNDATIONS	$ 710,473	$ 811,970	$ 507,481	$ 2,029,924
3. SUBSTATION STRUCTURES	$ 309,543	$ 377,952	$ 233,921	$ 921,416
4. MAJOR EQUIPTMENT	$ 17,187,548	$ 4,238,507	$ 2,776,589	$ 24,202,643
5. LOW VOLTAGE & CONTROL CABLE	$ 25,428	$ 6,876	$ 1,375	$ 33,679
6. CONDUIT & CABLE TRENCH	$ 3,912,346	$ 2,183,727	$ 1,172,833	$ 7,268,907
7. GROUND GRID	$ 75,572	$ 54,743	$ 12,811	$ 143,125
8. CONTROL ENCLOSURE	$ 2,347,937	$ 1,894,121	$ 702,815	$ 4,944,874
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 2,545,363	$ 6,349,462	$ 5,317,732	$ 14,212,557
Turnkey cost (HVDC, GIS)	$ 5,745,000	$ 3,447,000	$ 2,298,000	$ 11,490,000
Non-Turnkey cost	$ 22,313,583	$ 13,117,388	$ 8,801,554	$ 44,232,524
SUBTOTAL (Costs):	$ 28,058,583	$ 16,564,388	$ 11,099,554	$ 55,722,524
CONTRACTOR MARK-UP (OH&P)	$ 4,361,145	$ 2,567,950	$ 1,722,160	$ 8,651,254
SUBTOTAL:	$ 32,419,728	$ 19,132,338	$ 12,821,713	$ 64,373,779
CONTINGENCY ON ENTIRE PROJECT	$ 6,483,946	$ 3,826,468	$ 2,564,343	$ 12,874,756
TOTAL:	$ 38,903,673	$ 22,958,805	$ 15,386,056	$ 77,248,534

Description of Work: Construct a new Barrett 138kV GIS substation adjacent to the existing Barrett 138kV substation.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.Barrett 138 kV Substation Upgrades										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	2.2	ACRE	-	10,800.00	7,200.00	$ -	$ 23,760	$ 15,840	**$ 39,600**
1.2	Demolition	0	LS	-	600,000.00	400,000.00	$ -	$ -	$ -	**$ -**
1.3	New Access Road - 20'	2,115	SY	4.85	7.20	4.80	$ 10,257	$ 15,227	$ 10,151	**$ 35,636**
1.4	Strip and Dispose Top Soil	3,549	CY		24.50	10.50	$ -	$ 86,959	$ 37,268	**$ 124,227**
1.5	Site Grading- Excavation for Substation Pad	10,648	CY		9.00	6.00	$ -	$ 95,832	$ 63,888	**$ 159,720**
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	5,750	CY		21.00	9.00	$ -	$ 120,748.32	$ 51,749.28	**$ 172,497.60**
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	8,625	CY		2.40	1.60	$ -	$ 20,700	$ 13,800	**$ 34,500**
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	5,750	CY	25.00	2.40	1.60	$ 143,748	$ 13,800	$ 9,200	**$ 166,748**
1.9	Blasting		EA				$ -	$ -	$ -	**$ -**
1.10	Install substation 8" pad base	10,648	SY	11.00	6.00	4.00	$ 117,128	$ 63,888	$ 42,592	**$ 223,608**
1.11	Site Surfacing - Aggregate 6" Thick	10,648	SY	16.50	4.50	3.00	$ 175,692	$ 47,916	$ 31,944	**$ 255,552**
1.12	7' Station Fence w/ Barbed Wire & Grounding	1,056	LF	13.85	13.85	6.92	$ 14,623	$ 14,623	$ 7,312	**$ 36,559**
1.13	20' Slide Gate & Grounding	1	EA	8,100.00	3,245.00	1,305.00	$ 8,100	$ 3,245	$ 1,305	**$ 12,650**
1.14	4' Pedestrian gate	1	EA	2,500.00	1,000.00	350.00	$ 2,500	$ 1,000	$ 350	**$ 3,850**
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	1	LS	446,976.00	115,200.00	76,104.00	$ 446,976	$ 115,200	$ 76,104	**$ 638,280**
1.16	Seeding	8,896	SF	1.50	1.50	1.00	$ 13,344	$ 13,344	$ 8,896	**$ 35,584**
1.17	Erosion Control-Silt fence install & remove	1,620	LF	2.41	3.16	0.72	$ 3,904	$ 5,119	$ 1,166	**$ 10,190**
1.18	Temporary fencing	1,080	LF	7.50	5.25	2.25	$ 8,100	$ 5,670	$ 2,430	**$ 16,200**
1.19	Substation entrance with asphalt	0	SY	19.50	26.00	19.50	$ -	$ -	$ -	**$ -**
1.20	Concrete curb	0	LF	26.00	27.30	11.70	$ -	$ -	$ -	**$ -**
1.21	Retaining Wall	0	LF	156.00	117.00	117.00	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 944,373	$ 647,031	$ 373,996	$ 1,965,400
2. SUBSTATION FOUNDATIONS										
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.6	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.12	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Shunt Reactor with oil containment-150MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.15	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Circuit Breaker (PASS)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345Kv, GIS Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.20	345kV, Surge arrester	-	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.21	138kV, Phase Angle Regulator with oil containment	154	CY	703.89	804.44	502.78	$ 108,398	$ 123,884	$ 77,427	**$ 309,709**
2.22	138kV, Circuit Breaker, Hybrid circuit breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.23	138kV, Bus support-3 Ph, low	128	CY	703.89	804.44	502.78	$ 90,379	$ 103,290	$ 64,556	**$ 258,225**
2.24	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.25	138kV, Disconnect Switch	73	CY	703.89	804.44	502.78	$ 51,187	$ 58,499	$ 36,562	**$ 146,247**
2.26	138kV, Cable sealing end	24	CY	703.89	804.44	502.78	$ 17,062	$ 19,500	$ 12,187	**$ 48,749**
2.27	138kV, Surge arrester	32	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.28	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.29	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	Firewall Foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.31	Precast Firewall for transformer, PARs, reactors	-	SF	25.00	15.00	10.00	$ -	$ -	$ -	**$ -**
2.32	Precast Concrete Piles-12"X80'	-	EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.33	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.34	138kV, GIS Enclosure-BLDG & control room	630	CY	703.89	804.44	502.78	$ 443,448	$ 506,797	$ 316,748	**$ 1,266,993**
TOTAL - 345KV FOUNDATION							$ 710,473	$ 811,970	$ 507,481	$ 2,029,924
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast	0	EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, Bus support-3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.4	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.6	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.7	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.8	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.11	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch	0	EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	**$ -**
3.13	138kV, Bus support-3 Ph, low	12	EA	4,173.00	2,879.76	1,919.84	$ 50,076	$ 34,557	$ 23,038	**$ 107,671**
3.14	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.15	138kV, Disconnect Switch	3	EA	12,251.20	3,928.86	2,619.24	$ 36,754	$ 11,787	$ 7,858	**$ 56,398**
3.16	138kV, Cable sealing end	2	EA	4,810.00	2,886.00	1,924.00	$ 9,620	$ 5,772	$ 3,848	**$ 19,240**
3.17	138kV, Surge arrester	6	EA	4,810.00	2,886.00	1,924.00	$ 28,860	$ 17,316	$ 11,544	**$ 57,720**
3.18	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.19	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.20	AL. Bus Tubing, 5" SCH 80	1,200	LF	25.00	184.94	123.29	$ 30,000	$ 221,926	$ 147,950	**$ 399,876**
3.21	AL. Bus fittings	1	LS	36,000.00	36,000.00	18,000.00	$ 36,000	$ 36,000	$ 18,000	**$ 90,000**
3.22	Steel grating and support beams-transformer moat	43,280	LB	2.73	1.17	0.50	$ 118,233	$ 50,594	$ 21,683	**$ 190,511**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 309,543	$ 377,952	$ 233,921	**$ 921,416**
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$ -**
4.3	345kV, Cable sealing end	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch	0	EA		7,234.50	3,100.50	$ -	$ -	$ -	**$ -**
4.6	345/138KV, Power Transformer with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.7	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.8	345kV, Shunt Reactor with oil containment-150MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.9	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.10	Transport & Testing- Shunt Reactor	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.12	345kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.13	345kV, Circuit Breaker (PASS)	0	EA		57,239.00	24,531.00	$ -	$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	**$ -**
4.15	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.16	345kV, surge Arrester	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.17	138kV, Phase Angle Regulator with oil containment	1	EA	10,713,172.00	3,520.00	880.00	$ 10,713,172	$ 3,520	$ 880	**$ 10,717,572**
4.18	Transport & Testing- Phase Angle Regulating Transformer, 138kV	1	EA		603,400.00	398,600.00	$ -	$ 603,400	$ 398,600	**$ 1,002,000**
4.19	138kV, Gas Insulated Switchgear, BAAH Arrangement	12	BKR	478,750.00	287,250.00	191,500.00	$ 5,745,000	$ 3,447,000	$ 2,298,000	**$ 11,490,000**
4.20	138kV, Circuit Breaker, Hybrid circuit breaker	0	EA		13,559.00	5,811.00	$ -	$ -	$ -	**$ -**
4.21	138kV, Disconnect Switch	3	EA	37,700.00	11,875.50	5,089.50	$ 113,100	$ 35,627	$ 15,269	**$ 163,995**
4.22	138kV, Cable sealing end	6	EA	11,600.00	5,460.00	2,340.00	$ 69,600	$ 32,760	$ 14,040	**$ 116,400**
4.23	138kV, CCVT	0	EA		7,970.08	3,415.75	$ -	$ -	$ -	**$ -**
4.24	138kV, Surge arrester	6	EA	4,446.00	4,200.00	1,800.00	$ 26,676	$ 25,200	$ 10,800	**$ 62,676**
4.25	Station service transformers- 120/208v-250VA	2	EA	260,000.00	45,500.00	19,500.00	$ 520,000	$ 91,000	$ 39,000	**$ 650,000**
4.26	345kV Gas-Insulated Bus Conductor	0	LF	550.00	275.00	82.50	$ -	$ -	$ -	**$ -**
4.27	345kV Gas-Insulated Bus Conductor-elbow	0	EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	**$ -**
4.28	Transport & Testing- GIL	0	LS		-	-	$ -	$ -	$ -	**$ -**
TOTAL - MAJOR EQUIPMENT							$ 17,187,548	$ 4,238,507	$ 2,776,589	$ 24,202,643
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	4,800	LF	5.30	1.43	0.29	$ 25,428	$ 6,876	$ 1,375	**$ 33,679**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 25,428	$ 6,876	$ 1,375	$ 33,679
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	1,050	LF	11.15	10.80	5.40	$ 11,708	$ 11,340	$ 5,670	**$ 28,718**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench	700	LF	266.50	53.04	13.26	$ 186,550	$ 37,128	$ 9,282	**$ 232,960**
6.7							$ -	$ -	$ -	**$ -**
6.8	138kV UG- Conduit	3,757	LF	266.73	202.15	100.00	$ 1,002,081	$ 759,444	$ 375,708	**$ 2,137,234**
6.9	138kV UG- Cable	11,271	LF	145.00	87.00	58.00	$ 1,634,252	$ 980,551	$ 653,701	**$ 3,268,503**
6.10	138kV UG- Termination	36	EA	27,805.00	9,846.48	2,813.28	$ 1,000,980	$ 354,473	$ 101,278	**$ 1,456,731**
6.11	345kV UG- Conduit		LF	266.73	202.15	100.00	$ -	$ -	$ -	**$ -**
6.12	345kV UG- Cable		LF	167.00	100.20	66.80	$ -	$ -	$ -	**$ -**
6.13	345kV UG- Termination		EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.14	Fiber Optic Cable	3,757	LF	7.40	3.33	2.22	$ 27,790	$ 12,513	$ 8,342	**$ 48,644**
6.15	Ground Continuity Conductor	3,757	LF	13.04	7.53	5.02	$ 48,986	$ 28,278	$ 18,852	**$ 96,117**
TOTAL - CONDUIT & CABLE TRENCH							$ 3,912,346	$ 2,183,727	$ 1,172,833	**$ 7,268,907**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	7,820	LF	2.09	3.42	1.46	$ 16,352	$ 26,708	$ 11,446	**$ 54,505**
7.2	Caweld, DSA, 4/0 , T, CROSS	210	EA	165.00	75.00		$ 34,650	$ 15,750	$ -	**$ 50,400**
7.3	Ground Rod, 3/4" x 15'	182	EA	135.00	67.50	7.50	$ 24,570	$ 12,285	$ 1,365	**$ 38,220**
TOTAL - GROUND GRID							$ 75,572	$ 54,743	$ 12,811	**$ 143,125**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	0	EA	2,926,829.03	2,048,780.32	878,048.71	$ -	$ -	$ -	**$ -**
8.2	138kv GIS/Control Bldg	1	EA	1,145,280.92	801,696.65	343,584.28	$ 1,145,281	$ 801,697	$ 343,584	**$ 2,290,562**
8.3	Primary Line Relays (87L): SEL-411L	5	EA	21,328.12	17,062.49	4,265.62	$ 106,641	$ 85,312	$ 21,328	**$ 213,281**
8.4	Backup Line Relays (87L): GE L90	5	EA	21,328.12	17,062.49	4,265.62	$ 106,641	$ 85,312	$ 21,328	**$ 213,281**
8.5	Primary Bay Control: SEL-451	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.6	Backup Bay Control: SEL-451	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.7	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.9	Primary Bus Differential Relays: SEL-487B	5	EA	21,328.12	17,062.49	4,265.62	$ 106,641	$ 85,312	$ 21,328	**$ 213,281**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.10	Backup Bus Differential Relays: GE B90	5	EA	21,328.12	17,062.49	4,265.62	$ 106,641	$ 85,312	$ 21,328	**$ 213,281**
8.11	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Ann	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.12	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annnunciator	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.13	HMI Panel	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.14	Primary Line Relays (87L): SEL-411L	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.15	Backup Line Relays (87L): GE L90	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.16	125VDC Battery System	2	LS	25,000.00	22,750.00	9,750.00	$ 50,000	$ 45,500	$ 19,500	**$ 115,000**
8.17	Control house AC Panel	2	EA	65,000.00	91,000.00	39,000.00	$ 130,000	$ 182,000	$ 78,000	**$ 390,000**
8.18	Control House DC Panel	2	EA	65,000.00	91,000.00	39,000.00	$ 130,000	$ 182,000	$ 78,000	**$ 390,000**
8.19	Generator	1	EA	130,000.00	72,800.00	31,200.00	$ 130,000	$ 72,800	$ 31,200	**$ 234,000**
TOTAL - CONTROL ENCLOSURE							$ 2,347,937	$ 1,894,121	$ 702,815	$ 4,944,874
4.Barrett 138 kV Substation Upgrades							$ 25,513,220	$ 10,214,926	$ 5,781,821	**$ 41,509,967**
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		358,811.17	153,776.22	$ -	$ 358,811	$ 153,776	**$ 512,587**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		300,199.67		$ -	$ 300,200	$ -	**$ 300,200**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		1,200,798.69		$ -	$ 1,200,799	$ -	**$ 1,200,799**
9.4	Utility PM and Project Oversite	1	LS		300,199.67		$ -	$ 300,200	$ -	**$ 300,200**
9.5	Site Accommodation, Facilities, Storage	1	LS	300,199.67			$ 300,200	$ -	$ -	**$ 300,200**
	Engineering									
9.6	Design Engineering	1.00	LS		2,401,597.39		$ -	$ 2,401,597	$ -	**$ 2,401,597**
9.7	LiDAR /GPR	-	LS		-		$ -	$ -	$ -	**$ -**
9.8	Geotech	5.00	EA		2,730.00	1,820.00	$ -	$ 13,650	$ 9,100	**$ 22,750**
9.9	Surveying/Staking	1.00	Site		210,139.77		$ -	$ 210,140	$ -	**$ 210,140**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		1,125,748.78		$ -	$ 1,125,749	$ -	**$ 1,125,749**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		6,546.96		$ -	$ 6,547	$ -	**$ 6,547**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		300,199.67		$ -	$ 300,200	$ -	**$ 300,200**
9.13	Environmental-special studies/investigation	1.00	LS		-	1,600,000.00	$ -	$ -	$ 1,600,000	**$ 1,600,000**
9.14	Warranties / LOC's	1.00	LS		90,059.90		$ -	$ 90,060	$ -	**$ 90,060**
9.15	Laydown Lease	-	LS				$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	1.00	LS		-	1,956,171.00	$ -	$ -	$ 1,956,171	**$ 1,956,171**
9.17	Legal Fees (Real estate)	1.00	LS		-	58,685.13	$ -	$ -	$ 58,685	**$ 58,685**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 1,540,000	$ -	$ -	$ 1,540,000	**$ 1,540,000**
9.20	Sales Tax on Materials	8.80%	LS	25,513,219.69			$ 2,245,163	$ -	$ -	**$ 2,245,163**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		41,509.97		$ -	$ 41,510	$ -	**$ 41,510**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 2,545,363	$ 6,349,462	$ 5,317,732	**$ 14,212,557**

NEXTera Energy- TO44 Enhanced 2

5.Dunwoodie 345 kV GIS Substation

Total: $ 64,677,743

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
5.Dunwoodie 345 kV GIS Substation				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 715,227	$ 492,489	$ 284,198	$ 1,491,913
2. SUBSTATION FOUNDATIONS	$ 1,502,773	$ 1,654,755	$ 1,037,109	$ 4,194,637
3. SUBSTATION STRUCTURES	$ 118,233	$ 50,594	$ 21,683	$ 190,511
4. MAJOR EQUIPTMENT	$ 13,711,425	$ 6,531,420	$ 4,327,480	$ 24,570,325
5. LOW VOLTAGE & CONTROL CABLE	$ 7,946	$ 2,149	$ 430	$ 10,525
6. CONDUIT & CABLE TRENCH	$ 193,893	$ 41,164	$ 11,101	$ 246,157
7. GROUND GRID	$ 38,496	$ 27,323	$ 6,181	$ 72,001
8. CONTROL ENCLOSURE	$ 3,554,098	$ 2,647,434	$ 1,025,664	$ 7,227,196
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 1,922,837	$ 3,828,536	$ 3,989,193	$ 9,740,565
Turnkey cost (HVDC, GIS)	$ 10,165,000	$ 6,099,000	$ 4,066,000	$ 20,330,000
Non-Turnkey cost	$ 11,599,927	$ 9,176,864	$ 6,637,039	$ 27,413,830
SUBTOTAL (Costs):	$ 21,764,927	$ 15,275,864	$ 10,703,039	$ 47,743,830
CONTRACTOR MARK-UP (OH&P)	$ 2,697,887	$ 2,017,775	$ 1,438,627	$ 6,154,289
SUBTOTAL:	$ 24,462,814	$ 17,293,639	$ 12,141,665	$ 53,898,119
CONTINGENCY ON ENTIRE PROJECT	$ 4,892,563	$ 3,458,728	$ 2,428,333	$ 10,779,624
TOTAL:	$ 29,355,377	$ 20,752,367	$ 14,569,999	$ 64,677,743

Description of Work: Construct a new Dunwoodie 345kV GIS substation. Loop in the Pleasantville (2) and Sprain Brook lines and connect back to the existing Dunwoodie 345kV substation.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
5.Dunwoodie 345 kV GIS Substation										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	1.6	ACRE	-	10,800.00	7,200.00	$ -	$ 17,137	$ 11,425	**$ 28,562**
1.2	Demolition	0	LS	-	600,000.00	400,000.00	$ -	$ -	$ -	**$ -**
1.3	New Access Road - 20'	1,263	SY	4.85	7.20	4.80	$ 6,124	$ 9,092	$ 6,061	**$ 21,278**
1.4	Strip and Dispose Top Soil	2,560	CY		24.50	10.50	$ -	$ 62,720	$ 26,880	**$ 89,600**
1.5	Site Grading- Excavation for Substation Pad	7,680	CY		9.00	6.00	$ -	$ 69,120	$ 46,080	**$ 115,200**
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	4,147	CY		21.00	9.00	$ -	$ 87,091.20	$ 37,324.80	**$ 124,416.00**
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	6,221	CY		2.40	1.60	$ -	$ 14,930	$ 9,953	**$ 24,883**
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	4,147	CY	25.00	2.40	1.60	$ 103,680	$ 9,953	$ 6,636	**$ 120,269**
1.9	Blasting		EA				$ -	$ -	$ -	**$ -**
1.10	Install substation 8" pad base	7,680	SY	11.00	6.00	4.00	$ 84,480	$ 46,080	$ 30,720	**$ 161,280**
1.11	Site Surfacing - Aggregate 6" Thick	7,680	SY	16.50	4.50	3.00	$ 126,720	$ 34,560	$ 23,040	**$ 184,320**
1.12	7' Station Fence w/ Barbed Wire & Grounding	864	LF	13.85	13.85	6.92	$ 11,965	$ 11,965	$ 5,982	**$ 29,912**
1.13	20' Slide Gate & Grounding	2	EA	8,100.00	3,245.00	1,305.00	$ 16,200	$ 6,490	$ 2,610	**$ 25,300**
1.14	4' Pedestrian gate	2	EA	2,500.00	1,000.00	350.00	$ 5,000	$ 2,000	$ 700	**$ 7,700**
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	1	LS	325,073.45	83,781.82	55,348.36	$ 325,073	$ 83,782	$ 55,348	**$ 464,204**
1.16	Seeding	7,296	SF	1.50	1.50	1.00	$ 10,944	$ 10,944	$ 7,296	**$ 29,184**
1.17	Erosion Control-Silt fence install & remove	2,100	LF	2.41	3.16	0.72	$ 5,061	$ 6,636	$ 1,512	**$ 13,209**
1.18	Temporary fencing	1,400	LF	7.50	5.25	2.25	$ 10,500	$ 7,350	$ 3,150	**$ 21,000**
1.19	Substation entrance with asphalt	486	SY	19.50	26.00	19.50	$ 9,479	$ 12,639	$ 9,479	**$ 31,597**
1.20	Concrete curb	0	LF	26.00	27.30	11.70	$ -	$ -	$ -	**$ -**
1.21	Retaining Wall	0	LF	156.00	117.00	117.00	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 715,227	$ 492,489	$ 284,198	$ 1,491,913
2. SUBSTATION FOUNDATIONS										
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.6	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.12	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Shunt Reactor with oil containment-225MVAR	305	CY	703.89	804.44	502.78	$ 214,685	$ 245,354	$ 153,346	**$ 613,386**
2.15	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Circuit Breaker (PASS)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345Kv, GIS Enclosure-BLDG with generator pad	1,357	CY	703.89	804.44	502.78	$ 955,172	$ 1,091,625	$ 682,266	**$ 2,729,063**
2.20	345kV, Surge arrester	48	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.21	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.22	138kV, Circuit Breaker, Hybrid circuit breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.23	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.24	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.25	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.26	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.27	138kV, Surge arrester	-	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.28	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.29	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	Firewall Foundation	309	CY	703.89	804.44	502.78	$ 217,416	$ 248,475	$ 155,297	**$ 621,189**
2.31	Precast Firewall for transformer, PARs, reactors	4,620	SF	25.00	15.00	10.00	$ 115,500	$ 69,300	$ 46,200	**$ 231,000**
2.32	Precast Concrete Piles-12"X80'	-	EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.33	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.34	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
TOTAL - 345KV FOUNDATION							$ 1,502,773	$ 1,654,755	$ 1,037,109	**$ 4,194,637**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast	0	EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, Bus support-3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.4	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.6	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.7	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16				**$ -**
3.8	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.11	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch	0	EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	**$ -**
3.13	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	**$ -**
3.14	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.15	138kV, Disconnect Switch	0	EA				$ -	$ -	$ -	
3.16	138kV, Cable sealing end	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.17	138kV, Surge arrester	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.18	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.19	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.20	AL. Bus Tubing, 5" SCH 80	0	LF	25.00	184.94	123.29	$ -	$ -	$ -	**$ -**
3.21	AL. Bus fittings	0	LS	-	-	-	$ -	$ -	$ -	**$ -**
3.22	Steel grating and support beams-transformer moat	43,280	LB	2.73	1.17	0.50	$ 118,233	$ 50,594	$ 21,683	**$ 190,511**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 118,233	$ 50,594	$ 21,683	$ 190,511
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$ -**
4.3	345kV, Cable sealing end	0	EA	17,400.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch	0	EA	57,720.00	34,632.00	23,088.00	$ -	$ -	$ -	**$ -**
4.6	345/138KV, Power Transformer with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.7	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.8	345kV, Shunt Reactor with oil containment-225MVAR	1	EA	3,026,425.00	3,520.00	880.00	$ 3,026,425	$ 3,520	$ 880	**$ 3,030,825**
4.9	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.10	Transport & Testing- Shunt Reactor	1	EA		337,900.00	221,600.00	$ -	$ 337,900	$ 221,600	**$ 559,500**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.12	345kV, Gas Insulated Switchgear, BAAH Arrangement	12	BKR	847,083.33	508,250.00	338,833.33	$ 10,165,000	$ 6,099,000	$ 4,066,000	**$ 20,330,000**
4.13	345kV, Circuit Breaker (PASS)	0	EA		57,239.00	24,531.00	$ -	$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	**$ -**
4.15	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.16	345kV, surge Arrester	0	EA	6,669.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.17	138kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.18	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.19	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.20	138kV, Circuit Breaker, Hybrid circuit breaker	0	EA		13,559.00	5,811.00	$ -	$ -	$ -	**$ -**
4.21	138kV, Disconnect Switch	0	EA	37,700.00	11,875.50	5,089.50	$ -	$ -	$ -	**$ -**
4.22	138kV, Cable sealing end	0	EA	11,600.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.23	138kV, CCVT	0	EA		7,970.08	3,415.75	$ -	$ -	$ -	**$ -**
4.24	138kV, Surge arrester	0	EA		4,200.00	1,800.00	$ -	$ -	$ -	**$ -**
4.25	Station service transformers- 120/208v-250VA	2	EA	260,000.00	45,500.00	19,500.00	$ 520,000	$ 91,000	$ 39,000	**$ 650,000**
4.26	345kV Gas-Insulated Bus Conductor	0	LF	550.00	275.00	82.50				**$ -**
4.27	345kV Gas-Insulated Bus Conductor-elbow	0	EA	2,500.00	1,250.00	375.00				**$ -**
4.28	Transport & Testing- GIL	0	LS		-	-				**$ -**
TOTAL - MAJOR EQUIPMENT							$ 13,711,425	$ 6,531,420	$ 4,327,480	**$ 24,570,325**
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	1,500	LF	5.30	1.43	0.29	$ 7,946	$ 2,149	$ 430	**$ 10,525**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 7,946	$ 2,149	$ 430	**$ 10,525**
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	300	LF	11.15	10.80	5.40	$ 3,345	$ 3,240	$ 1,620	**$ 8,205**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench	715	LF	266.50	53.04	13.26	$ 190,548	$ 37,924	$ 9,481	**$ 237,952**
6.7										
6.8	138kV UG- Conduit		LF	266.73	202.15	100.00	$ -	$ -	$ -	**$ -**
6.9	138kV UG- Cable		LF	145.00	87.00	58.00	$ -	$ -	$ -	**$ -**
6.10	138kV UG- Termination		EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.11	345kV UG- Conduit		LF	266.73	202.15	100.00	$ -	$ -	$ -	**$ -**
6.12	345kV UG- Cable		LF	167.00	100.20	66.80	$ -	$ -	$ -	**$ -**
6.13	345kV UG- Termination		EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.14	Fiber Optic Cable			7.40	3.33	2.22				
6.15	Ground Continuity Conductor			13.04	7.53	5.02	$ -	$ -	$ -	**$ -**
TOTAL - CONDUIT & CABLE TRENCH							$ 193,893	$ 41,164	$ 11,101	**$ 246,157**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	3,762	LF	2.09	3.42	1.46	$ 7,866	$ 12,848	$ 5,506	**$ 26,221**
7.2	Caweld, DSA, 4/0 , T, CROSS	112	EA	165.00	75.00		$ 18,480	$ 8,400	$ -	**$ 26,880**
7.3	Ground Rod, 3/4" x 15'	90	EA	135.00	67.50	7.50	$ 12,150	$ 6,075	$ 675	**$ 18,900**
TOTAL - GROUND GRID							$ 38,496	$ 27,323	$ 6,181	**$ 72,001**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	1	EA	2,481,442.00	1,737,009.40	744,432.60	$ 2,481,442	$ 1,737,009	$ 744,433	**$ 4,962,884**
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	**$ -**
8.3	Primary Line Relays (87L): SEL-411L	7	EA	21,328.12	17,062.49	4,265.62	$ 149,297	$ 119,437	$ 29,859	**$ 298,594**
8.4	Backup Line Relays (87L): GE L90	7	EA	21,328.12	17,062.49	4,265.62	$ 149,297	$ 119,437	$ 29,859	**$ 298,594**
8.5	Primary Bay Control: SEL-451	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.6	Backup Bay Control: SEL-451	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.7	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.9	Primary Bus Differential Relays: SEL-487B	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.10	Backup Bus Differential Relays: GE B90	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.11	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Ann	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.12	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annnunciator	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.13	HMI Panel	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.14	Primary Line Relays (87L): SEL-411L	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.15	Backup Line Relays (87L): GE L90	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.14	125VDC Battery System	2	LS	25,000.00	22,750.00	9,750.00	$ 50,000	$ 45,500	$ 19,500	**$ 115,000**
8.15	Control house AC Panel	1	EA	65,000.00	91,000.00	39,000.00	$ 65,000	$ 91,000	$ 39,000	**$ 195,000**
8.16	Control House DC Panel	1	EA	65,000.00	91,000.00	39,000.00	$ 65,000	$ 91,000	$ 39,000	**$ 195,000**
8.17	Generator	1	EA	130,000.00	72,800.00	31,200.00	$ 130,000	$ 72,800	$ 31,200	**$ 234,000**
TOTAL - CONTROL ENCLOSURE							$ 3,554,098	$ 2,647,434	$ 1,025,664	$ 7,227,196
5.Dunwoodie 345 kV GIS Substation							$ 19,842,091	$ 11,447,328	$ 6,713,846	$ 38,003,264
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		279,866.08	119,942.61	$ -	$ 279,866	$ 119,943	**$ 399,809**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		176,732.64		$ -	$ 176,733	$ -	**$ 176,733**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		706,930.58		$ -	$ 706,931	$ -	**$ 706,931**
9.4	Utility PM and Project Oversite	1	LS		176,732.64		$ -	$ 176,733	$ -	**$ 176,733**
9.5	Site Accommodation, Facilities, Storage	1	LS	176,732.64			$ 176,733	$ -	$ -	**$ 176,733**
	Engineering									
9.6	Design Engineering	1.00	LS		1,413,861.16		$ -	$ 1,413,861	$ -	**$ 1,413,861**
9.7	LiDAR /GPR	-	LS		-		$ -	$ -	$ -	**$ -**
9.8	Geotech	5.00	EA		2,730.00	1,820.00	$ -	$ 13,650	$ 9,100	**$ 22,750**
9.9	Surveying/Staking	1.00	Site		123,712.85		$ -	$ 123,713	$ -	**$ 123,713**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		662,747.42		$ -	$ 662,747	$ -	**$ 662,747**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		6,546.96		$ -	$ 6,547	$ -	**$ 6,547**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		176,732.64		$ -	$ 176,733	$ -	**$ 176,733**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		53,019.79		$ -	$ 53,020	$ -	**$ 53,020**
9.15	Laydown Lease	-	LS				$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	1.00	LS			2,505,000.00	$ -	$ -	$ 2,505,000	**$ 2,505,000**
9.17	Legal Fees (Real estate)	1.00	LS		-	75,150.00	$ -	$ -	$ 75,150	**$ 75,150**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 1,280,000	$ -	$ -	$ 1,280,000	**$ 1,280,000**
9.20	Sales Tax on Materials	8.80%	LS	19,842,090.70			$ 1,746,104	$ -	$ -	**$ 1,746,104**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		38,003.26		$ -	$ 38,003	$ -	**$ 38,003**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 1,922,837	$ 3,828,536	$ 3,989,193	**$ 9,740,565**

NEXTera Energy- TO44 Enhanced 2

6.Elwood 138 kV Substation Upgrades

Total: $ 7,946,839

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
6.Elwood 138 kV Substation Upgrades				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ -	$ 60,000	$ 40,000	$ 100,000
2. SUBSTATION FOUNDATIONS	$ 88,690	$ 101,359	$ 63,350	$ 253,399
3. SUBSTATION STRUCTURES	$ 118,233	$ 50,594	$ 21,683	$ 190,511
4. MAJOR EQUIPTMENT	$ 3,226,531	$ 201,920	$ 129,480	$ 3,557,931
5. LOW VOLTAGE & CONTROL CABLE	$ 15,893	$ 4,298	$ 860	$ 21,050
6. CONDUIT & CABLE TRENCH	$ 6,690	$ 6,480	$ 3,240	$ 16,410
7. GROUND GRID	$ -	$ -	$ -	$ -
8. CONTROL ENCLOSURE	$ 42,656	$ 34,125	$ 8,531	$ 85,312
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 350,131	$ 866,723	$ 170,709	$ 1,387,563
SUBTOTAL (Costs):	$ 3,848,823	$ 1,325,499	$ 437,852	$ 5,612,175
CONTRACTOR MARK-UP (OH&P)	$ 692,788	$ 238,590	$ 78,813	$ 1,010,191
SUBTOTAL:	$ 4,541,612	$ 1,564,089	$ 516,666	$ 6,622,366
CONTINGENCY ON ENTIRE PROJECT	$ 908,322	$ 312,818	$ 103,333	$ 1,324,473
TOTAL:	$ 5,449,934	$ 1,876,907	$ 619,999	$ 7,946,839

Description of Work: Replace the existing 80MVAr reactor (1 block) at the exisitng elwood 138kv station with an 80 MVAR reactor (2 blocks of 40 MVAr)

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
6.Elwood 138 kV Substation Upgrades										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing		ACRE	-	10,800.00	7,200.00	$ -	$ -	$ -	$ -
1.2	Demolition	1	LS	-	60,000.00	40,000.00	$ -	$ 60,000	$ 40,000	$ 100,000
1.3	New Access Road - 20'		SY	4.85	7.20	4.80	$ -	$ -	$ -	$ -
1.4	Strip and Dispose Top Soil	0	CY		24.50	10.50	$ -	$ -	$ -	$ -
1.5	Site Grading- Excavation for Substation Pad	0	CY		9.00	6.00	$ -	$ -	$ -	$ -
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	0	CY		21.00	9.00	$ -	$ -	$ -	$ -
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	0	CY		2.40	1.60	$ -	$ -	$ -	$ -
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	0	CY	25.00	2.40	1.60	$ -	$ -	$ -	$ -
1.9	Blasting		EA				$ -	$ -	$ -	$ -
1.10	Install substation 8" pad base	0	SY	11.00	6.00	4.00	$ -	$ -	$ -	$ -
1.11	Site Surfacing - Aggregate 6" Thick	0	SY	16.50	4.50	3.00	$ -	$ -	$ -	$ -
1.12	7' Station Fence w/ Barbed Wire & Grounding		LF	13.85	13.85	6.92	$ -	$ -	$ -	$ -
1.13	20' Slide Gate & Grounding		EA	8,100.00	3,245.00	1,305.00	$ -	$ -	$ -	$ -
1.14	4' Pedestrian gate		EA	2,500.00	1,000.00	350.00	$ -	$ -	$ -	$ -
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator		LS	446,976.00	-	-	$ -	$ -	$ -	$ -
1.16	Seeding		SF	1.50	1.50	1.00	$ -	$ -	$ -	$ -
1.17	Erosion Control-Silt fence install & remove		LF	2.41	3.16	0.72	$ -	$ -	$ -	$ -
1.18	Temporary fencing		LF	7.50	5.25	2.25	$ -	$ -	$ -	$ -
1.19	Substation entrance with asphalt		SY	19.50	26.00	19.50	$ -	$ -	$ -	$ -
1.20	Concrete curb	0	LF	26.00	27.30	11.70	$ -	$ -	$ -	$ -
1.21	Retaining Wall	0	LF	156.00	117.00	117.00	$ -	$ -	$ -	$ -
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ -	$ 60,000	$ 40,000	$ 100,000
2. SUBSTATION FOUNDATIONS										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.6	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.10	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.12	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.14	345kV, Shunt Reactor with oil containment-150MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.15	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.17	345kV, Circuit Breaker (PASS)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.19	345Kv, GIS Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.20	345kV, Surge arrester	-	CY	-	-	-	$ -	$ -	$ -	$ -
2.21	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.22	138kV, Shunt Reactor with oil containment-80MVAR	126	CY	703.89	804.44	502.78	$ 88,690	$ 101,359	$ 63,350	**$ 253,399**
2.23	138kV, Circuit Breaker, Hybrid circuit breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.24	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.25	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.26	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.27	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.28	138kV, Surge arrester	-	CY	-	-	-	$ -	$ -	$ -	$ -
2.29	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.30	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.31	Firewall Foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.32	Precast Firewall for transformer, PARs, reactors		SF	25.00	15.00	10.00	$ -	$ -	$ -	$ -
2.33	Precast Concrete Piles-12"X80'	-	EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	$ -
2.34	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.35	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
TOTAL - 345KV FOUNDATION							$ 88,690	$ 101,359	$ 63,350	**$ 253,399**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast	0	EA				$ -	$ -	$ -	$ -
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	$ -
3.3	345kV, Bus support-3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.4	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.5	345kV, Bus support-1 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.6	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.7	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.8	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.9	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.10	345kV, Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.11	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.12	345kV, Disconnect Switch	0	EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	$ -
3.13	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	$ -
3.14	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	$ -
3.15	138kV, Disconnect Switch	0	EA				$ -	$ -	$ -	
3.16	138kV, Cable sealing end	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.17	138kV, Surge arrester	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.18	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	$ -
3.19	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	$ -
3.20	AL. Bus Tubing, 5" SCH 80	0	LF	25.00	184.94	123.29	$ -	$ -	$ -	$ -
3.21	AL. Bus fittings	0	LS	-	-	-	$ -	$ -	$ -	$ -
3.22	Steel grating and support beams-transformer moat	43,280	LB	2.73	1.17	0.50	$ 118,233	$ 50,594	$ 21,683	**$ 190,511**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 118,233	$ 50,594	$ 21,683	**$ 190,511**
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	$ -
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	$ -
4.3	345kV, Cable sealing end	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	$ -
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.5	345kV, Disconnect Switch	0	EA		7,234.50	3,100.50	$ -	$ -	$ -	**$ -**
4.6	345/138KV, Power Transformer with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.7	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.8	345kV, Shunt Reactor with oil containment-150MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.9	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.10	Transport & Testing- Shunt Reactor	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.12	345kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.13	345kV, Circuit Breaker (PASS)	0	EA		57,239.00	24,531.00	$ -	$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	**$ -**
4.15	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.16	345kV, surge Arrester	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.17	138kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.18	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.19	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.20	138kV, Shunt Reactor with oil containment-80MVAR	1	EA	3,226,531.00	3,520.00	880.00	$ 3,226,531	$ 3,520	$ 880	**$ 3,230,931**
4.21	Transport & Testing- Shunt Reactor	1	EA		198,400.00	128,600.00	$ -	$ 198,400	$ 128,600	**$ 327,000**
4.22	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.23	138kV, Circuit Breaker, Hybrid circuit breaker	0	EA		13,559.00	5,811.00	$ -	$ -	$ -	**$ -**
4.24	138kV, Disconnect Switch	0	EA	37,700.00	11,875.50	5,089.50	$ -	$ -	$ -	**$ -**
4.25	138kV, Cable sealing end	0	EA	11,600.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.26	138kV, CCVT	0	EA		7,970.08	3,415.75	$ -	$ -	$ -	**$ -**
4.27	138kV, Surge arrester	0	EA		4,200.00	1,800.00	$ -	$ -	$ -	**$ -**
4.28	Station service transformers- 120/208v-250VA	0	EA		45,500.00	19,500.00	$ -	$ -	$ -	**$ -**
4.29	345kV Gas-Insulated Bus Conductor	0	LF	550.00	275.00	82.50	$ -	$ -	$ -	**$ -**
4.30	345kV Gas-Insulated Bus Conductor-elbow	0	EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	**$ -**
TOTAL - MAJOR EQUIPMENT							$ 3,226,531	$ 201,920	$ 129,480	**$ 3,557,931**
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	3,000	LF	5.30	1.43	0.29	$ 15,893	$ 4,298	$ 860	**$ 21,050**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 15,893	$ 4,298	$ 860	**$ 21,050**
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	600	LF	11.15	10.80	5.40	$ 6,690	$ 6,480	$ 3,240	**$ 16,410**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench		LF	266.50	53.04	13.26	$ -	$ -	$ -	**$ -**
6.7										
6.8	138kV UG- Conduit		LF	266.73	202.15	100.00	$ -	$ -	$ -	**$ -**
6.9	138kV UG- Cable		LF	145.00	87.00	58.00	$ -	$ -	$ -	**$ -**
6.10	138kV UG- Termination		EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.11	345kV UG- Conduit		LF	266.73	202.15	100.00	$ -	$ -	$ -	**$ -**
6.12	345kV UG- Cable		LF	167.00	100.20	66.80	$ -	$ -	$ -	**$ -**
6.13	345kV UG- Termination		EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.14	Fiber Optic Cable			7.40	3.33	2.22				
6.15	Ground Continuity Conductor			13.04	7.53	5.02	$ -	$ -	$ -	**$ -**
TOTAL - CONDUIT & CABLE TRENCH							$ 6,690	$ 6,480	$ 3,240	**$ 16,410**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	0	LF	2.09	3.42	1.46	$ -	$ -	$ -	**$ -**
7.2	Caweld, DSA, 4/0 , T, CROSS	0	EA	165.00	75.00		$ -	$ -	$ -	**$ -**
7.3	Ground Rod, 3/4" x 15'	0	EA	135.00	67.50	7.50	$ -	$ -	$ -	**$ -**
TOTAL - GROUND GRID							$ -	$ -	$ -	**$ -**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	0	EA	2,481,442.00	1,737,009.40	744,432.60	$ -	$ -	$ -	**$ -**
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	**$ -**
8.3	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.4	Backup Transformer/Reactor/PAR Differential Relays: GE T60	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.5	125VDC Battery System		LS	25,000.00	22,750.00	9,750.00	$ -	$ -	$ -	**$ -**
8.6	Control house AC Panel		EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.7	Control House DC Panel		EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.8	Generator		EA	130,000.00	72,800.00	31,200.00	$ -	$ -	$ -	**$ -**
TOTAL - CONTROL ENCLOSURE							$ 42,656	$ 34,125	$ 8,531	$ 85,312

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
6.Elwood 138 kV Substation Upgrades							$ 3,498,692	$ 458,776	$ 267,144	$ 4,224,612
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		25,407.20	10,888.80	$ -	$ 25,407	$ 10,889	**$ 36,296**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		42,246.12		$ -	$ 42,246	$ -	**$ 42,246**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		168,984.49		$ -	$ 168,984	$ -	**$ 168,984**
9.4	Utility PM and Project Oversite	1	LS		42,246.12		$ -	$ 42,246	$ -	**$ 42,246**
9.5	Site Accommodation, Facilities, Storage	1	LS	42,246.12			$ 42,246	$ -	$ -	**$ 42,246**
	Engineering									
9.6	Design Engineering	1.00	LS		337,968.98		$ -	$ 337,969	$ -	**$ 337,969**
9.7	LiDAR /GPR	1.00	LS		-		$ -	$ -	$ -	**$ -**
9.8	Geotech	1.00	EA		2,730.00	1,820.00	$ -	$ 2,730	$ 1,820	**$ 4,550**
9.9	Surveying/Staking	1.00	Site		29,572.29		$ -	$ 29,572	$ -	**$ 29,572**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		158,422.96		$ -	$ 158,423	$ -	**$ 158,423**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		-		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		42,246.12		$ -	$ 42,246	$ -	**$ 42,246**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		12,673.84		$ -	$ 12,674	$ -	**$ 12,674**
9.15	Laydown Lease	-	LS				$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	-	LS				$ -	$ -	$ -	**$ -**
9.17	Legal Fees (Real estate)	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 158,000	$ -	$ -	$ 158,000	**$ 158,000**
9.20	Sales Tax on Materials	8.80%	LS	3,498,692.30			$ 307,885	$ -	$ -	**$ 307,885**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		4,224.61		$ -	$ 4,225	$ -	**$ 4,225**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 350,131	$ 866,723	$ 170,709	**$ 1,387,563**

NEXTera Energy- TO44 Enhanced 2

7.Jamaica 138 kV Substation Upgrades

Total: $ 11,938,401

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
7.Jamaica 138 kV Substation Upgrades				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ -	$ 30,000	$ 20,000	$ 50,000
2. SUBSTATION FOUNDATIONS	$ 22,215	$ 25,388	$ 15,868	$ 63,470
3. SUBSTATION STRUCTURES	$ 45,726	$ 32,857	$ 20,272	$ 98,855
4. MAJOR EQUIPTMENT	$ 2,502,588	$ 1,455,977	$ 860,076	$ 4,818,641
5. LOW VOLTAGE & CONTROL CABLE	$ 74,695	$ 20,198	$ 4,040	$ 98,933
6. CONDUIT & CABLE TRENCH	$ 809,758	$ 432,740	$ 219,808	$ 1,462,306
7. GROUND GRID	$ -	$ -	$ -	$ -
8. CONTROL ENCLOSURE	$ 213,281	$ 170,625	$ 42,656	$ 426,562
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 357,995	$ 784,055	$ 270,258	$ 1,412,308
SUBTOTAL (Costs):	$ 4,026,257	$ 2,951,841	$ 1,452,976	$ 8,431,074
CONTRACTOR MARK-UP (OH&P)	$ 724,726	$ 531,331	$ 261,536	$ 1,517,593
SUBTOTAL:	$ 4,750,984	$ 3,483,172	$ 1,714,512	$ 9,948,668
CONTINGENCY ON ENTIRE PROJECT	$ 950,197	$ 696,634	$ 342,902	$ 1,989,734
TOTAL:	$ 5,701,181	$ 4,179,806	$ 2,057,414	$ 11,938,401

Description of Work: Add an additional terminal and two GIB CB at the existing Jamaica 138kV substation

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
7.Jamaica 138 kV Substation Upgrades										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing		ACRE	-	10,800.00	7,200.00	$ -	$ -	$ -	$ -
1.2	Demolition	1	LS	-	30,000.00	20,000.00	$ -	$ 30,000	$ 20,000	$ 50,000
1.3	New Access Road - 20'		SY	4.85	7.20	4.80	$ -	$ -	$ -	$ -
1.4	Strip and Dispose Top Soil	0	CY		24.50	10.50	$ -	$ -	$ -	$ -
1.5	Site Grading- Excavation for Substation Pad	0	CY		9.00	6.00	$ -	$ -	$ -	$ -
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	0	CY		21.00	9.00	$ -	$ -	$ -	$ -
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	0	CY		2.40	1.60	$ -	$ -	$ -	$ -
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	0	CY	25.00	2.40	1.60	$ -	$ -	$ -	$ -
1.9	Blasting		EA				$ -	$ -	$ -	$ -
1.10	Install substation 8" pad base	0	SY	11.00	6.00	4.00	$ -	$ -	$ -	$ -
1.11	Site Surfacing - Aggregate 6" Thick	0	SY	16.50	4.50	3.00	$ -	$ -	$ -	$ -
1.12	7' Station Fence w/ Barbed Wire & Grounding		LF	13.85	13.85	6.92	$ -	$ -	$ -	$ -
1.13	20' Slide Gate & Grounding		EA	8,100.00	3,245.00	1,305.00	$ -	$ -	$ -	$ -
1.14	4' Pedestrian gate		EA	2,500.00	1,000.00	350.00	$ -	$ -	$ -	$ -
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator		LS	446,976.00	-	-	$ -	$ -	$ -	$ -
1.16	Seeding		SF	1.50	1.50	1.00	$ -	$ -	$ -	$ -
1.17	Erosion Control-Silt fence install & remove		LF	2.41	3.16	0.72	$ -	$ -	$ -	$ -
1.18	Temporary fencing		LF	7.50	5.25	2.25	$ -	$ -	$ -	$ -
1.19	Substation entrance with asphalt		SY	19.50	26.00	19.50	$ -	$ -	$ -	$ -
1.20	Concrete curb	0	LF	26.00	27.30	11.70	$ -	$ -	$ -	$ -
1.21	Retaining Wall	0	LF	156.00	117.00	117.00	$ -	$ -	$ -	$ -
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ -	$ 30,000	$ 20,000	$ 50,000
2. SUBSTATION FOUNDATIONS										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.6	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.12	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Shunt Reactor with oil containment-150MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.15	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Circuit Breaker (PASS)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345Kv, GIS Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.20	345kV, Surge arrester	-	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.21	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.22	138kV, Shunt Reactor with oil containment-80MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.18	138kV, Circuit Breaker (GIS), outdoor rated	20	CY	703.89	804.44	502.78	$ 14,078	$ 16,089	$ 10,056	**$ 40,222**
2.23	138kV, Circuit Breaker, AIS breaker	4	CY	703.89	804.44	502.78	$ 3,132	$ 3,580	$ 2,237	**$ 8,949**
2.24	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.25	138kV, GIS Bus support-1 Ph, low	2	CY	703.89	804.44	502.78	$ 1,647	$ 1,882	$ 1,176	**$ 4,706**
2.26	138kV, Disconnect Switch	2	CY	703.89	804.44	502.78	$ 1,492	$ 1,705	$ 1,066	**$ 4,264**
2.27	138kV, Cable sealing end	1	CY	703.89	804.44	502.78	$ 746	$ 853	$ 533	**$ 2,132**
2.28	138kV, Surge arrester	2	CY	703.89	804.44	502.78	$ 1,119	$ 1,279	$ 799	**$ 3,198**
2.29	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.31	Firewall Foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.32	Precast Firewall for transformer, PARs, reactors	-	SF	25.00	15.00	10.00	$ -	$ -	$ -	**$ -**
2.33	Precast Concrete Piles-12"X80'	-	EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.34	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.35	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
TOTAL - 345KV FOUNDATION							$ 22,215	$ 25,388	$ 15,868	**$ 63,470**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast	0	EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, Bus support-3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.4	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.6	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.7	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.8	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.11	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch	0	EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	**$ -**
3.13	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	**$ -**
3.14	138kV, GIL Bus support-1 Ph, low	6	EA	2,782.00	1,919.84	1,279.89	$ 16,692	$ 11,519	$ 7,679	**$ 35,890**
3.15	138kV, Disconnect Switch	2	EA	4,896.84	4,896.84	2,448.42	$ 9,794	$ 9,794	$ 4,897	**$ 24,484**
3.16	138kV, Cable sealing end	1	EA	4,810.00	2,886.00	1,924.00	$ 4,810	$ 2,886	$ 1,924	**$ 9,620**
3.17	138kV, Surge arrester	3	EA	4,810.00	2,886.00	1,924.00	$ 14,430	$ 8,658	$ 5,772	**$ 28,860**
3.18	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.19	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.20	AL. Bus Tubing, 5" SCH 80		LF	25.00	184.94	123.29	$ -	$ -	$ -	**$ -**
3.21	AL. Bus fittings	0	LS	-	-	-	$ -	$ -	$ -	**$ -**
3.22	Steel grating and support beams-transformer moat	0	LB	2.73	1.17	0.50	$ -	$ -	$ -	**$ -**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 45,726	$ 32,857	$ 20,272	**$ 98,855**
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	0	EA							
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$ -**
4.3	345kV, Cable sealing end	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch	0	EA		7,234.50	3,100.50	$ -	$ -	$ -	**$ -**
4.6	345/138KV, Power Transformer with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.7	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.8	345kV, Shunt Reactor with oil containment-150MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.9	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.10	Transport & Testing- Shunt Reactor	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.12	345kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.13	345kV, Circuit Breaker (PASS)	0	EA		57,239.00	24,531.00	$ -	$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	**$ -**
4.15	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.16	345kV, surge Arrester	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.17	138kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.18	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.19	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.20	138kV, Shunt Reactor with oil containment-80MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.21	Transport & Testing- Shunt Reactor	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.22	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.23	138kV, Circuit Breaker (GIS), outdoor rated	2	EA	875,000.00	525,000.00	350,000.00	$ 1,750,000	$ 1,050,000	$ 700,000	**$ 3,500,000**
4.24	138kV, Circuit Breaker, AIS breaker	1	EA	112,000.00	13,559.00	5,811.00	$ 112,000	$ 13,559	$ 5,811	**$ 131,370**
4.25	138kV, Disconnect Switch	2	EA	37,700.00	11,875.50	5,089.50	$ 75,400	$ 23,751	$ 10,179	**$ 109,330**
4.26	138kV, Cable sealing end	3	EA	11,600.00	5,460.00	2,340.00	$ 34,800	$ 16,380	$ 7,020	**$ 58,200**
4.27	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
4.28	138kV, Surge arrester	3	EA	4,446.00	4,200.00	1,800.00	$ 13,338	$ 12,600	$ 5,400	**$ 31,338**
4.29	Station service transformers- 120/208v-250VA	0	EA		45,500.00	19,500.00	$ -	$ -	$ -	**$ -**
4.30	345/138kV Gas-Insulated Bus Conductor	831	LF	550.00	275.00	82.50	$ 457,050	$ 228,525	$ 68,558	**$ 754,133**
4.31	345/138kV Gas-Insulated Bus Conductor-elbow	24	EA	2,500.00	1,250.00	375.00	$ 60,000	$ 30,000	$ 9,000	**$ 99,000**
4.32	Transport & Testing- GIL	1	LS		81,162.00	54,108.00	$ -	$ 81,162	$ 54,108	**$ 135,270**
TOTAL - MAJOR EQUIPMENT							$ 2,502,588	$ 1,455,977	$ 860,076	**$ 4,818,641**
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	14,100	LF	5.30	1.43	0.29	$ 74,695	$ 20,198	$ 4,040	**$ 98,933**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 74,695	$ 20,198	$ 4,040	**$ 98,933**
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	600	LF	11.15	10.80	5.40	$ 6,690	$ 6,480	$ 3,240	**$ 16,410**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench		LF	266.50	53.04	13.26	$ -	$ -	$ -	**$ -**
6.7										
6.8	138kV UG- Conduit	650	LF	266.73	202.15	100.00	$ 173,375	$ 131,395	$ 65,003	**$ 369,773**
6.9	138kV UG- Cable	1,950	LF	145.00	87.00	58.00	$ 282,750	$ 169,650	$ 113,100	**$ 565,500**
6.10	138kV UG- Termination	12	EA	27,805.00	9,846.48	2,813.28	$ 333,660	$ 118,158	$ 33,759	**$ 485,577**
6.11	345kV UG- Conduit		LF	266.73	202.15	100.00	$ -	$ -	$ -	**$ -**
6.12	345kV UG- Cable		LF	167.00	100.20	66.80	$ -	$ -	$ -	**$ -**
6.13	345kV UG- Termination		EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.14	Fiber Optic Cable	650	LF	7.40	3.33	2.22	$ 4,808	$ 2,165	$ 1,443	**$ 8,416**
6.15	Ground Continuity Conductor	650	LF	13.04	7.53	5.02	$ 8,475	$ 4,893	$ 3,262	**$ 16,630**
TOTAL - CONDUIT & CABLE TRENCH							$ 809,758	$ 432,740	$ 219,808	**$ 1,462,306**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	0	LF	2.09	3.42	1.46	$ -	$ -	$ -	**$ -**
7.2	Caweld, DSA, 4/0 , T, CROSS	0	EA	165.00	75.00		$ -	$ -	$ -	**$ -**
7.3	Ground Rod, 3/4" x 15'	0	EA	135.00	67.50	7.50	$ -	$ -	$ -	**$ -**
TOTAL - GROUND GRID							$ -	$ -	$ -	**$ -**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	0	EA	2,481,442.00	1,737,009.40	744,432.60	$ -	$ -	$ -	**$ -**
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	**$ -**
8.3	Primary Line Relays (87L): SEL-411L	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.4	Backup Line Relays (87L): GE L90	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.5	Primary Bay Control: SEL-451	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.6	Backup Bay Control: SEL-451	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.7	Primary Bus Differential Relays: SEL-487B	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.8	Backup Bus Differential Relays: GE B90	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.14	125VDC Battery System		LS	25,000.00	22,750.00	9,750.00	$ -	$ -	$ -	**$ -**
8.15	Control house AC Panel		EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.16	Control House DC Panel		EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.17	Generator		EA	130,000.00	72,800.00	31,200.00	$ -	$ -	$ -	**$ -**
TOTAL - CONTROL ENCLOSURE							$ 213,281	$ 170,625	$ 42,656	**$ 426,562**
7.Jamaica 138 kV Substation Upgrades							$ 3,668,263	$ 2,167,785	$ 1,182,719	**$ 7,018,767**
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		117,267.64	50,257.56	$ -	$ 117,268	$ 50,258	**$ 167,525**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		35,187.67		$ -	$ 35,188	$ -	**$ 35,188**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		140,750.67		$ -	$ 140,751	$ -	**$ 140,751**
9.4	Utility PM and Project Oversite	1	LS		35,187.67		$ -	$ 35,188	$ -	**$ 35,188**
9.5	Site Accommodation, Facilities, Storage	1	LS	35,187.67			$ 35,188	$ -	$ -	**$ 35,188**
	Engineering									
9.6	Design Engineering	1.00	LS		281,501.34		$ -	$ 281,501	$ -	**$ 281,501**
9.7	LiDAR /GPR	1.00	LS				$ -	$ -	$ -	**$ -**
9.8	Geotech	-	EA		2,730.00	1,820.00	$ -	$ -	$ -	**$ -**
9.9	Surveying/Staking	1.00	Site		24,631.37		$ -	$ 24,631	$ -	**$ 24,631**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		131,953.75		$ -	$ 131,954	$ -	**$ 131,954**
	Permitting and Additional Costs									
9.11	Physical Security	-	LS		6,546.96		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	-	LS		35,187.67		$ -	$ -	$ -	**$ -**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		10,556.30		$ -	$ 10,556	$ -	**$ 10,556**
9.15	Laydown Lease	-	LS				$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	-	LS		-		$ -	$ -	$ -	**$ -**
9.17	Legal Fees (Real estate)	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 220,000	$ -	$ -	$ 220,000	**$ 220,000**
9.20	Sales Tax on Materials	8.80%	LS	3,668,262.67			$ 322,807	$ -	$ -	**$ 322,807**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		7,018.77		$ -	$ 7,019	$ -	**$ 7,019**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 357,995	$ 784,055	$ 270,258	**$ 1,412,308**

NEXTera Energy- TO44 Enhanced 2

8.Newbridge 345/138 kV GIS Substation Upgrades

Total: $ 89,858,233

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
8.Newbridge 345/138 kV GIS Substation Upgrades				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ -	$ 180,000	$ 120,000	$ 300,000
2. SUBSTATION FOUNDATIONS	$ 2,041,415	$ 2,221,489	$ 1,393,568	$ 5,656,472
3. SUBSTATION STRUCTURES	$ 429,813	$ 203,612	$ 99,602	$ 733,027
4. MAJOR EQUIPTMENT	$ 18,401,761	$ 7,318,980	$ 4,860,895	$ 30,581,636
5. LOW VOLTAGE & CONTROL CABLE	$ 31,785	$ 8,595	$ 1,719	$ 42,099
6. CONDUIT & CABLE TRENCH	$ 4,064,400	$ 2,260,091	$ 1,200,974	$ 7,525,466
7. GROUND GRID	$ 50,624	$ 36,318	$ 8,365	$ 95,307
8. CONTROL ENCLOSURE	$ 4,172,141	$ 3,175,330	$ 1,245,811	$ 8,593,282
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 2,900,864	$ 7,105,954	$ 1,992,555	$ 11,999,373
Turnkey cost (HVDC, GIS)	$ 10,165,000	$ 6,099,000	$ 4,066,000	$ 20,330,000
Non-Turnkey cost	$ 21,927,804	$ 16,411,369	$ 6,857,489	$ 45,196,662
SUBTOTAL (Costs):	$ 32,092,804	$ 22,510,369	$ 10,923,489	$ 65,526,662
CONTRACTOR MARK-UP (OH&P)	$ 4,556,905	$ 3,319,986	$ 1,478,308	$ 9,355,199
SUBTOTAL:	$ 36,649,708	$ 25,830,355	$ 12,401,797	$ 74,881,861
CONTINGENCY ON ENTIRE PROJECT	$ 7,329,942	$ 5,166,071	$ 2,480,359	$ 14,976,372
TOTAL:	$ 43,979,650	$ 30,996,426	$ 14,882,157	$ 89,858,233

Description of Work: Remove the northern bay at the existing Newbridge Road 138kV station for the construction of the new 345/138kV GIS.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.Newbridge 345/138 kV GIS Substation Upgrades										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing		ACRE	-	10,800.00	7,200.00	$ -	$ -	$ -	$ -
1.2	Demolition	1	LS	-	180,000.00	120,000.00	$ -	$ 180,000	$ 120,000	**$ 300,000**
1.3	New Access Road - 20'		SY	4.85	7.20	4.80	$ -	$ -	$ -	$ -
1.4	Strip and Dispose Top Soil	0	CY		24.50	10.50	$ -	$ -	$ -	$ -
1.5	Site Grading- Excavation for Substation Pad	0	CY		9.00	6.00	$ -	$ -	$ -	$ -
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	0	CY		21.00	9.00	$ -	$ -	$ -	$ -
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	0	CY		2.40	1.60	$ -	$ -	$ -	$ -
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	0	CY	25.00	2.40	1.60	$ -	$ -	$ -	$ -
1.9	Blasting		EA				$ -	$ -	$ -	$ -
1.10	Install substation 8" pad base	0	SY	11.00	6.00	4.00	$ -	$ -	$ -	$ -
1.11	Site Surfacing - Aggregate 6" Thick	0	SY	16.50	4.50	3.00	$ -	$ -	$ -	$ -
1.12	7' Station Fence w/ Barbed Wire & Grounding		LF	13.85	13.85	6.92	$ -	$ -	$ -	$ -
1.13	20' Slide Gate & Grounding		EA	8,100.00	3,245.00	1,305.00	$ -	$ -	$ -	$ -
1.14	4' Pedestrian gate		EA	2,500.00	1,000.00	350.00	$ -	$ -	$ -	$ -
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator		LS	446,976.00	-	-	$ -	$ -	$ -	$ -
1.16	Seeding		SF	1.50	1.50	1.00	$ -	$ -	$ -	$ -
1.17	Erosion Control-Silt fence install & remove		LF	2.41	3.16	0.72	$ -	$ -	$ -	$ -
1.18	Temporary fencing		LF	7.50	5.25	2.25	$ -	$ -	$ -	$ -
1.19	Substation entrance with asphalt		SY	19.50	26.00	19.50	$ -	$ -	$ -	$ -
1.20	Concrete curb	0	LF	26.00	27.30	11.70	$ -	$ -	$ -	$ -
1.21	Retaining Wall	0	LF	156.00	117.00	117.00	$ -	$ -	$ -	$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ -	$ 180,000	$ 120,000	$ 300,000
2. SUBSTATION FOUNDATIONS										
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.6	345kV, GIS air terminal	40	CY	703.89	804.44	502.78	$ 27,874	$ 31,856	$ 19,910	**$ 79,640**
2.7	345kV, GIS support-1 Ph	12	CY	703.89	804.44	502.78	$ 8,573	$ 9,798	$ 6,124	**$ 24,495**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.12	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.13	345/138KV, Power Transformer with oil containment	328	CY	703.89	804.44	502.78	$ 230,874	$ 263,856	$ 164,910	**$ 659,641**
2.14	345kV, Shunt Reactor with oil containment-25MVAR	200	CY	703.89	804.44	502.78	$ 140,777	$ 160,888	$ 100,555	**$ 402,220**
2.15	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Circuit Breaker (PASS)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345Kv, GIS Enclosure-BLDG with generator pad	1,482	CY	703.89	804.44	502.78	$ 1,043,158	$ 1,192,180	$ 745,113	**$ 2,980,450**
2.20	345kV, Surge arrester	16	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.21	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.22	138kV, Shunt Reactor with oil containment-80MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.23	138kV, Circuit Breaker, AIS breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.24	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.25	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.26	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.27	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.28	138kV, Surge arrester	-	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.29	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.31	Firewall Foundation	546	CY	703.89	804.44	502.78	$ 384,659	$ 439,610	$ 274,756	**$ 1,099,026**
2.32	Precast Firewall for transformer, PARs, reactors	8,220	SF	25.00	15.00	10.00	$ 205,500	$ 123,300	$ 82,200	**$ 411,000**
2.33	Precast Concrete Piles-12"X80'	-	EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.34	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.35	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
TOTAL - 345KV FOUNDATION							$ 2,041,415	$ 2,221,489	$ 1,393,568	**$ 5,656,472**
3. SUBSTATION	**#REF!**									
3.1	345kV, Lightning mast	0	EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, Bus support-3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.4	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.6	345kV, GIS air terminal	6	EA	8,346.00	5,758.74	3,839.16	$ 50,076	$ 34,552	$ 23,035	**$ 107,663**
3.7	345kV, GIS support-1 Ph	3	EA	8,346.00	5,758.74	3,839.16	$ 25,038	$ 17,276	$ 11,517	**$ 53,832**
3.8	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.11	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch	0	EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	**$ -**
3.13	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	**$ -**
3.14	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.15	138kV, Disconnect Switch	0	EA				$ -	$ -	$ -	
3.16	138kV, Cable sealing end	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.18	138kV, Surge arrester	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.17	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.18	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.21	AL. Bus Tubing, 5" SCH 80	0	LF	25.00	184.94	123.29	$ -	$ -	$ -	**$ -**
3.22	AL. Bus fittings	0	LS	-	-	-	$ -	$ -	$ -	**$ -**
3.23	Steel grating and support beams-transformer moat	129,840	LB	2.73	1.17	0.50	$ 354,699	$ 151,783	$ 65,050	**$ 571,532**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 429,813	$ 203,612	$ 99,602	$ 733,027
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	6	EA							

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$ -**
4.3	345kV, Cable sealing end	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch	0	EA	57,720.00	34,632.00	23,088.00	$ -	$ -	$ -	**$ -**
4.6	345/138KV, Power Transformer with oil containment	1	EA	4,420,000.00	3,520.00	880.00	$ 4,420,000	$ 3,520	$ 880	**$ 4,424,400**
4.7	Transport & Testing- Transformer	1	EA		717,400.00	474,600.00	$ -	$ 717,400	$ 474,600	**$ 1,192,000**
4.8	345kV, Shunt Reactor with oil containment-25MVAR	2	EA	1,900,130.50	3,520.00	880.00	$ 3,800,261	$ 7,040	$ 1,760	**$ 3,809,061**
4.9	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.10	Transport & Testing- Shunt Reactor	2	EA		240,400.00	156,600.00	$ -	$ 480,800	$ 313,200	**$ 794,000**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.12	345kV, Gas Insulated Switchgear, BAAH Arrangement	12	BKR	847,083.33	508,250.00	338,833.33	$ 10,165,000	$ 6,099,000	$ 4,066,000	**$ 20,330,000**
4.13	345kV, Circuit Breaker (PASS)	0	EA		57,239.00	24,531.00	$ -	$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	**$ -**
4.15	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.16	345kV, surge Arrester	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.17	138kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.18	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.19	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.20	138kV, Shunt Reactor with oil containment-80MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.21	Transport & Testing- Shunt Reactor	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.22	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.23	138kV, Circuit Breaker, AIS breaker	0	EA		13,559.00	5,811.00	$ -	$ -	$ -	**$ -**
4.24	138kV, Disconnect Switch	0	EA	37,700.00	11,875.50	5,089.50	$ -	$ -	$ -	**$ -**
4.25	138kV, Cable sealing end	0	EA	11,600.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.26	138kV, CCVT	0	EA		7,970.08	3,415.75	$ -	$ -	$ -	**$ -**
4.27	138kV, Surge arrester	0	EA		4,200.00	1,800.00	$ -	$ -	$ -	**$ -**
4.28	Station service transformers- 120/208v-250VA	0	EA		45,500.00	19,500.00	$ -	$ -	$ -	**$ -**
4.29	345kV Gas-Insulated Bus Conductor	30	LF	550.00	275.00	82.50	$ 16,500	$ 8,250	$ 2,475	**$ 27,225.00**
4.30	345kV Gas-Insulated Bus Conductor-elbow	0	EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	**$ -**
4.31	Transport & Testing- GIL	1	LS		2,970.00	1,980.00	$ -	$ 2,970	$ 1,980	**$ 4,950.00**
TOTAL - MAJOR EQUIPMENT							$ 18,401,761	$ 7,318,980	$ 4,860,895	$ 30,581,636
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	6,000	LF	5.30	1.43	0.29	$ 31,785	$ 8,595	$ 1,719	**$ 42,099**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 31,785	$ 8,595	$ 1,719	**$ 42,099**
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	1,200	LF	11.15	10.80	5.40	$ 13,380	$ 12,960	$ 6,480	**$ 32,820**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench		LF	266.50	53.04	13.26	$ -	$ -	$ -	**$ -**
6.7										
6.8	138kV UG- Conduit	1,287	LF	266.73	202.15	100.00	$ 343,363	$ 260,223	$ 128,736	**$ 732,322**
6.9	138kV UG- Cable	3,862	LF	145.00	87.00	58.00	$ 559,976	$ 335,985	$ 223,990	**$ 1,119,951**
6.10	138kV UG- Termination	24	EA	27,805.00	9,846.48	2,813.28	$ 667,320	$ 236,316	$ 67,519	**$ 971,154**
6.11	345kV UG- Conduit	2,267	LF	266.73	202.15	100.00	$ 604,666	$ 458,256	$ 226,706	**$ 1,289,628**
6.12	345kV UG- Cable	6,801	LF	167.00	100.20	66.80	$ 1,135,742	$ 681,445	$ 454,297	**$ 2,271,484**
6.13	345kV UG- Termination	24	EA	27,805.00	9,846.48	2,813.28	$ 667,320	$ 236,316	$ 67,519	**$ 971,154**
6.14	Fiber Optic Cable	3,554	LF	7.40	3.33	2.22	$ 26,291	$ 11,838	$ 7,892	**$ 46,020**
6.15	Ground Continuity Conductor	3,554	LF	13.04	7.53	5.02	$ 46,344	$ 26,753	$ 17,835	**$ 90,932**
TOTAL - CONDUIT & CABLE TRENCH							$ 4,064,400	$ 2,260,091	$ 1,200,974	**$ 7,525,466**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	5,100	LF	2.09	3.42	1.46	$ 10,664	$ 17,418	$ 7,465	**$ 35,547**
7.2	Caweld, DSA, 4/0 , T, CROSS	144	EA	165.00	75.00		$ 23,760	$ 10,800	$ -	**$ 34,560**
7.3	Ground Rod, 3/4" x 15'	120	EA	135.00	67.50	7.50	$ 16,200	$ 8,100	$ 900	**$ 25,200**
TOTAL - GROUND GRID							$ 50,624	$ 36,318	$ 8,365	**$ 95,307**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	1	EA	2,926,829.03	2,048,780.32	878,048.71	$ 2,926,829	$ 2,048,780	$ 878,049	**$ 5,853,658**
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	**$ -**
8.3	Primary Line Relays (87L): SEL-411L	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.4	Backup Line Relays (87L): GE L90	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.5	Primary Bay Control: SEL-451	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.6	Backup Bay Control: SEL-451	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.7	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.9	Primary Bus Differential Relays: SEL-487B	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.10	Backup Bus Differential Relays: GE B90	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.11	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Ann	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.12	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annnunciator	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.13	HMI Panel	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.14	Primary Line Relays (87L): SEL-411L	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.15	Backup Line Relays (87L): GE L90	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.16	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.17	Backup Transformer/Reactor/PAR Differential Relays: GE T60	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.18	125VDC Battery System	2	LS	25,000.00	22,750.00	9,750.00	$ 50,000	$ 45,500	$ 19,500	**$ 115,000**
8.19	Control house AC Panel	2	EA	65,000.00	91,000.00	39,000.00	$ 130,000	$ 182,000	$ 78,000	**$ 390,000**
8.20	Control House DC Panel	2	EA	65,000.00	91,000.00	39,000.00	$ 130,000	$ 182,000	$ 78,000	**$ 390,000**
8.21	Generator	1	EA	130,000.00	72,800.00	31,200.00	$ 130,000	$ 72,800	$ 31,200	**$ 234,000**
TOTAL - CONTROL ENCLOSURE							$ 4,172,141	$ 3,175,330	$ 1,245,811	$ 8,593,282
8.Newbridge 345/138 kV GIS Substation Upgrades							$ 29,191,940	$ 15,404,415	$ 8,930,934	$ 53,527,289
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		495,962.21	212,555.23	$ -	$ 495,962	$ 212,555	**$ 708,517**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		331,972.89		$ -	$ 331,973	$ -	**$ 331,973**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		1,327,891.55		$ -	$ 1,327,892	$ -	**$ 1,327,892**
9.4	Utility PM and Project Oversite	1	LS		331,972.89		$ -	$ 331,973	$ -	**$ 331,973**
9.5	Site Accommodation, Facilities, Storage	1	LS	331,972.89			$ 331,973	$ -	$ -	**$ 331,973**
	Engineering									
9.6	Design Engineering	1.00	LS		2,655,783.10		$ -	$ 2,655,783	$ -	**$ 2,655,783**
9.7	LiDAR /GPR	1.00	LS		-		$ -	$ -	$ -	**$ -**
9.8	Geotech	-	EA		2,730.00	1,820.00	$ -	$ -	$ -	**$ -**
9.9	Surveying/Staking	1.00	Site		232,381.02		$ -	$ 232,381	$ -	**$ 232,381**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		1,244,898.33		$ -	$ 1,244,898	$ -	**$ 1,244,898**
	Permitting and Additional Costs									
9.11	Physical Security	-	LS		62,196.12		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		331,972.89		$ -	$ 331,973	$ -	**$ 331,973**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		99,591.87		$ -	$ 99,592	$ -	**$ 99,592**
9.15	Laydown Lease	-	LS				$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	-	LS			649,844.00	$ -	$ -	$ -	**$ -**
9.17	Legal Fees (Real estate)	-	LS		-	19,495.32	$ -	$ -	$ -	**$ -**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 1,780,000	$ -	$ -	$ 1,780,000	**$ 1,780,000**
9.20	Sales Tax on Materials	8.80%	LS	29,191,939.93			$ 2,568,891	$ -	$ -	**$ 2,568,891**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		53,527.29		$ -	$ 53,527	$ -	**$ 53,527**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 2,900,864	$ 7,105,954	$ 1,992,555	**$ 11,999,373**

NEXTera Energy- TO44 Enhanced 2

9.Rainey 345kV GIS Substation Upgrades

Total: $ 45,946,157

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
9.Rainey 345kV GIS Substation Upgrades				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 311,324	$ 248,835	$ 141,711	$ 701,870
2. SUBSTATION FOUNDATIONS	$ 802,429	$ 917,062	$ 573,164	$ 2,292,654
3. SUBSTATION STRUCTURES	$ -	$ -	$ -	$ -
4. MAJOR EQUIPTMENT	$ 5,130,000	$ 3,078,000	$ 2,052,000	$ 10,260,000
5. LOW VOLTAGE & CONTROL CABLE	$ -	$ -	$ -	$ -
6. CONDUIT & CABLE TRENCH	$ 3,027,905	$ 1,824,211	$ 1,037,159	$ 5,889,274
7. GROUND GRID	$ 41,114	$ 27,100	$ 5,201	$ 73,415
8. CONTROL ENCLOSURE	$ 3,173,654	$ 2,446,529	$ 976,124	$ 6,596,307
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 1,254,341	$ 3,460,378	$ 2,963,002	$ 7,677,720
Turnkey cost (HVDC, GIS)	$ 5,130,000	$ 3,078,000	$ 2,052,000	$ 10,260,000
Non-Turnkey cost	$ 8,610,766	$ 8,924,115	$ 5,696,359	$ 23,231,241
SUBTOTAL (Costs):	$ 13,740,766	$ 12,002,115	$ 7,748,359	$ 33,491,241
CONTRACTOR MARK-UP (OH&P)	$ 1,857,738	$ 1,791,021	$ 1,148,465	$ 4,797,223
SUBTOTAL:	$ 15,598,504	$ 13,793,136	$ 8,896,824	$ 38,288,464
CONTINGENCY ON ENTIRE PROJECT	$ 3,119,701	$ 2,758,627	$ 1,779,365	$ 7,657,693
TOTAL:	$ 18,718,205	$ 16,551,763	$ 10,676,189	$ 45,946,157

Description of Work: Construct a new Rainey 345 kV GIS substation and connect back to the existing Rainey 345kV, further interconnecting the Rainey East and West ring buses.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
9.Rainey 345kV GIS Substation Upgrades										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	0.8	ACRE	-	10,800.00	7,200.00	$ -	$ 8,856	$ 5,904	**$ 14,760**
1.2	Demolition	0	LS	-	-	-	$ -	$ -	$ -	**$ -**
1.3	New Access Road - 20'	989	SY	4.85	7.20	4.80	$ 4,796	$ 7,120	$ 4,747	**$ 16,663**
1.4	Strip and Dispose Top Soil	1,323	CY		24.50	10.50	$ -	$ 32,412	$ 13,891	**$ 46,303**
1.5	Site Grading- Excavation for Substation Pad	3,969	CY		9.00	6.00	$ -	$ 35,719	$ 23,813	**$ 59,532**
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	2,143	CY		21.00	9.00	$ -	$ 45,006.19	$ 19,288.37	**$ 64,294.56**
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	3,215	CY		2.40	1.60	$ -	$ 7,715	$ 5,144	**$ 12,859**
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	2,143	CY	25.00	2.40	1.60	$ 53,579	$ 5,144	$ 3,429	**$ 62,151**
1.9	Blasting		EA				$ -	$ -	$ -	**$ -**
1.10	Install substation 8" pad base	3,969	SY	11.00	6.00	4.00	$ 43,657	$ 23,813	$ 15,875	**$ 83,345**
1.11	Site Surfacing - Aggregate 6" Thick	3,969	SY	16.50	4.50	3.00	$ 65,485	$ 17,860	$ 11,906	**$ 95,251**
1.12	7' Station Fence w/ Barbed Wire & Grounding	726	LF	13.85	13.85	6.92	$ 10,054	$ 10,054	$ 5,027	**$ 25,134**
1.13	20' Slide Gate & Grounding	1	EA	8,100.00	3,245.00	1,305.00	$ 8,100	$ 3,245	$ 1,305	**$ 12,650**
1.14	4' Pedestrian gate	1	EA	2,500.00	1,000.00	350.00	$ 2,500	$ 1,000	$ 350	**$ 3,850**
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	1	LS	109,761.60	38,400.00	25,368.00	$ 109,762	$ 38,400	$ 25,368	**$ 173,530**
1.16	Seeding	3,000	SF	1.50	1.50	1.00	$ 4,500	$ 4,500	$ 3,000	**$ 12,000**
1.17	Erosion Control-Silt fence install & remove	1,200	LF	2.41	3.16	0.72	$ 2,892	$ 3,792	$ 864	**$ 7,548**
1.18	Temporary fencing	800	LF	7.50	5.25	2.25	$ 6,000	$ 4,200	$ 1,800	**$ 12,000**
1.19	Substation entrance with asphalt	0	SY	19.50	26.00	19.50	$ -	$ -	$ -	**$ -**
1.20	Concrete curb	0	LF	26.00	27.30	11.70	$ -	$ -	$ -	**$ -**
1.21	Retaining Wall	0	LF	156.00	117.00	117.00	$ -	$ -	$ -	**$ -**
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 311,324	$ 248,835	$ 141,711	**$ 701,870**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2. SUBSTATION FOUNDATIONS										
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.6	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.12	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Shunt Reactor with oil containment-150MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.15	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Circuit Breaker (PASS)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345Kv, GIS Enclosure-BLDG with generator pad	1,140	CY	703.89	804.44	502.78	$ 802,429	$ 917,062	$ 573,164	**$ 2,292,654**
2.20	345kV, Surge arrester	-	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.21	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.22	138kV, Shunt Reactor with oil containment-80MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.23	138kV, Circuit Breaker, AIS breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.24	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.25	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.26	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.27	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.28	138kV, Surge arrester	-	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.29	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.31	Firewall Foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.32	Precast Firewall for transformer, PARs, reactors		SF	25.00	15.00	10.00	$ -	$ -	$ -	**$ -**
2.33	Precast Concrete Piles-12"X80'	-	EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.34	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.35	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
TOTAL - 345KV FOUNDATION							$ 802,429	$ 917,062	$ 573,164	**$ 2,292,654**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast	0	EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, Bus support-3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.4	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.6	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.7	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.8	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.11	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch	0	EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	**$ -**
3.13	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	**$ -**
3.14	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.15	138kV, Disconnect Switch	0	EA				$ -	$ -	$ -	
3.16	138kV, Cable sealing end	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.18	138kV, Surge arrester	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.17	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.18	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.19	345kV Gas-Insulated Bus Conductor	0	LF	550.00	275.00	82.50	$ -	$ -	$ -	**$ -**
3.20	345kV Gas-Insulated Bus Conductor-elbow	0	EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	**$ -**
3.21	AL. Bus Tubing, 5" SCH 80	0	LF	25.00	184.94	123.29	$ -	$ -	$ -	**$ -**
3.22	AL. Bus fittings	0	LS	-	-	-	$ -	$ -	$ -	**$ -**
3.23	Steel grating and support beams-transformer moat	0	LB	2.73	1.17	0.50	$ -	$ -	$ -	**$ -**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ -	$ -	$ -	$ -
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	$ -
4.3	345kV, Cable sealing end	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	$ -
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	$ -
4.5	345kV, Disconnect Switch	0	EA	57,720.00	34,632.00	23,088.00	$ -	$ -	$ -	$ -
4.6	345/138KV, Power Transformer with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	$ -
4.7	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	$ -
4.8	345kV, Shunt Reactor with oil containment-150MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	$ -
4.9	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	$ -
4.10	Transport & Testing- Shunt Reactor	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	$ -
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	$ -
4.12	345kV, Gas Insulated Switchgear, BAAH Arrangement	6	BKR	855,000.00	513,000.00	342,000.00	$ 5,130,000	$ 3,078,000	$ 2,052,000	**$ 10,260,000**
4.13	345kV, Circuit Breaker (PASS)	0	EA		57,239.00	24,531.00	$ -	$ -	$ -	$ -
4.14	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	$ -
4.15	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	$ -
4.16	345kV, surge Arrester	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	$ -
4.17	138kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	$ -
4.18	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	$ -
4.19	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	$ -
4.20	138kV, Shunt Reactor with oil containment-80MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	$ -
4.21	Transport & Testing- Shunt Reactor	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	$ -
4.22	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	$ -
4.23	138kV, Circuit Breaker, AIS breaker	0	EA		13,559.00	5,811.00	$ -	$ -	$ -	$ -
4.24	138kV, Disconnect Switch	0	EA	37,700.00	11,875.50	5,089.50	$ -	$ -	$ -	$ -
4.25	138kV, Cable sealing end	0	EA	11,600.00	5,460.00	2,340.00	$ -	$ -	$ -	$ -
4.26	138kV, CCVT	0	EA		7,970.08	3,415.75	$ -	$ -	$ -	$ -
4.27	138kV, Surge arrester	0	EA		4,200.00	1,800.00	$ -	$ -	$ -	$ -
4.28	Station service transformers- 120/208v-250VA	0	EA		45,500.00	19,500.00	$ -	$ -	$ -	$ -
TOTAL - MAJOR EQUIPMENT							$ 5,130,000	$ 3,078,000	$ 2,052,000	**$ 10,260,000**
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables		LF	5.30	1.43	0.29	$ -	$ -	$ -	$ -
5.2			LF		-	-	$ -	$ -	$ -	$ -
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ -	$ -	$ -	$ -
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	$ -
6.2	Conduit, PVC, 4", SCH 40		LF	11.15	10.80	5.40	$ -	$ -	$ -	$ -
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	$ -
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	$ -
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	$ -
6.6	Cable Trench		LF	266.50	53.04	13.26	$ -	$ -	$ -	$ -
6.7							$ -	$ -	$ -	$ -
6.8	138kV UG- Conduit	0	LF	266.73	202.15	100.00	$ -	$ -	$ -	$ -
6.9	138kV UG- Cable		LF	145.00	87.00	58.00	$ -	$ -	$ -	$ -
6.10	138kV UG- Termination	0	EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	$ -
6.11	345kV UG- Conduit	3,207	LF	266.73	202.15	100.00	$ 855,326	$ 648,223	$ 320,686	**$ 1,824,235**
6.12	345kV UG- Cable	9,620	LF	167.00	100.20	66.80	$ 1,606,557	$ 963,934	$ 642,623	**$ 3,213,113**
6.13	345kV UG- Termination	18	EA	27,805.00	9,846.48	2,813.28	$ 500,490	$ 177,237	$ 50,639	**$ 728,366**
6.14	Fiber Optic Cable	3,207	LF	7.40	3.33	2.22	$ 23,720	$ 10,680	$ 7,120	**$ 41,520**
6.15	Ground Continuity Conductor	3,207	LF	13.04	7.53	5.02	$ 41,812	$ 24,137	$ 16,091	**$ 82,040**
TOTAL - CONDUIT & CABLE TRENCH							$ 3,027,905	$ 1,824,211	$ 1,037,159	**$ 5,889,274**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	3,280	LF	2.09	3.42	1.46	$ 6,858	$ 11,202	$ 4,801	**$ 22,862**
7.2	Caweld, DSA, 4/0 , T, CROSS	164	EA	165.00	75.00		$ 27,060	$ 12,300	$ -	**$ 39,360**
7.3	Ground Rod, 3/4" x 15'	53	EA	135.00	67.50	7.50	$ 7,196	$ 3,598	$ 400	**$ 11,193**
TOTAL - GROUND GRID							$ 41,114	$ 27,100	$ 5,201	**$ 73,415**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	1	EA	2,226,935.13	1,558,854.59	668,080.54	$ 2,226,935	$ 1,558,855	$ 668,081	**$ 4,453,870**
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	$ -
8.3	Primary Line Relays (87L): SEL-411L	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.4	Backup Line Relays (87L): GE L90	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.5	Primary Bay Control: SEL-451	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.6	Backup Bay Control: SEL-451	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.7	Primary Bus Differential Relays: SEL-487B	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.8	Backup Bus Differential Relays: GE B90	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.9	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Annunciator, JMUX	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.10	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annnunciator	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.11	HMI Panel	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.12	Primary Line Relays (87L): SEL-411L	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.13	Backup Line Relays (87L): GE L90	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.14	125VDC Battery System	2	LS	25,000.00	22,750.00	9,750.00	$ 50,000	$ 45,500	$ 19,500	**$ 115,000**
8.15	Control house AC Panel	2	EA	65,000.00	91,000.00	39,000.00	$ 130,000	$ 182,000	$ 78,000	**$ 390,000**
8.16	Control House DC Panel	2	EA	65,000.00	91,000.00	39,000.00	$ 130,000	$ 182,000	$ 78,000	**$ 390,000**
8.17	Generator	1	EA	130,000.00	72,800.00	31,200.00	$ 130,000	$ 72,800	$ 31,200	**$ 234,000**
TOTAL - CONTROL ENCLOSURE							$ 3,173,654	$ 2,446,529	$ 976,124	**$ 6,596,307**
9.Rainey 345kV GIS Substation Upgrades							$ 12,486,425	$ 8,541,737	$ 4,785,358	**$ 25,813,520**
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		286,898.32	122,956.42	$ -	$ 286,898	$ 122,956	**$ 409,855**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		155,535.20		$ -	$ 155,535	$ -	**$ 155,535**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		622,140.82		$ -	$ 622,141	$ -	**$ 622,141**
9.4	Utility PM and Project Oversite	1	LS		155,535.20		$ -	$ 155,535	$ -	**$ 155,535**
9.5	Site Accommodation, Facilities, Storage	1	LS	155,535.20			$ 155,535	$ -	$ -	**$ 155,535**
	Engineering									
9.6	Design Engineering	1.00	LS		1,244,281.63		$ -	$ 1,244,282	$ -	**$ 1,244,282**
9.7	LiDAR /GPR	1.00	LS		-		$ -	$ -	$ -	**$ -**
9.8	Geotech	5.00	EA		2,730.00	1,820.00	$ -	$ 13,650	$ 9,100	**$ 22,750**
9.9	Surveying/Staking	1.00	Site		108,874.64		$ -	$ 108,875	$ -	**$ 108,875**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		583,257.02		$ -	$ 583,257	$ -	**$ 583,257**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		62,196.12		$ -	$ 62,196	$ -	**$ 62,196**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		155,535.20		$ -	$ 155,535	$ -	**$ 155,535**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		46,660.56		$ -	$ 46,661	$ -	**$ 46,661**
9.15	Laydown Lease		LS				$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	1.00	LS			1,874,704.00	$ -	$ -	$ 1,874,704	**$ 1,874,704**
9.17	Legal Fees (Real estate)	1.00	LS		-	56,241.12	$ -	$ -	$ 56,241	**$ 56,241**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 900,000	$ -	$ -	$ 900,000	**$ 900,000**
9.20	Sales Tax on Materials	8.80%	LS	12,486,425.49			$ 1,098,805	$ -	$ -	**$ 1,098,805**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		25,813.52		$ -	$ 25,814	$ -	**$ 25,814**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 1,254,341	$ 3,460,378	$ 2,963,002	**$ 7,677,720**

NEXTera Energy- TO44 Enhanced 2

10.Shore Road 138kV Substation Upgrades

Total: $ 13,943,860

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
10.Shore Road 138kV Substation Upgrades				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 9,922	$ 10,764	$ 6,052	$ 26,737.53
2. SUBSTATION FOUNDATIONS	$ 241,411	$ 275,899	$ 172,437	$ 689,746.97
3. SUBSTATION STRUCTURES	$ 135,326	$ 72,142	$ 35,749	$ 243,217.06
4. MAJOR EQUIPTMENT	$ 5,681,973	$ 251,002	$ 153,318	$ 6,086,293.00
5. LOW VOLTAGE & CONTROL CABLE	$ 61,981	$ 16,760	$ 3,352	$ 82,093.05
6. CONDUIT & CABLE TRENCH	$ 93,385	$ 39,180	$ 16,275	$ 148,840.00
7. GROUND GRID	$ 2,925	$ 2,335	$ 610	$ 5,870.50
8. CONTROL ENCLOSURE	$ 85,312	$ 68,250	$ 17,062	$ 170,624.92
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 630,011	$ 1,483,167	$ 280,758	$ 2,393,935.65
SUBTOTAL (Costs):	$ 6,942,247	$ 2,219,499	$ 685,612	$ 9,847,359
CONTRACTOR MARK-UP (OH&P)	$ 1,249,604	$ 399,510	$ 123,410	$ 1,772,525
SUBTOTAL:	$ 8,191,851	$ 2,619,009	$ 809,023	$ 11,619,883
CONTINGENCY ON ENTIRE PROJECT	$ 1,638,370	$ 523,802	$ 161,805	$ 2,323,976.6
TOTAL:	$ 9,830,222	$ 3,142,811	$ 970,827	$ 13,943,860

Description of Work: Add a new 250 MVAr reactor at the existing Shore Road 138kV station (5 block of 50 MVAr)

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
10.Shore Road 138kV Substation Upgrades										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	0.1	ACRE	-	10,800.00	7,200.00	$ -	$ 540	$ 360	**$ 900**
1.2	Demolition	0	LS	-	-	-	$ -	$ -	$ -	**$ -**
1.3	New Access Road - 20'	0	SY	4.85	7.20	4.80	$ -	$ -	$ -	**$ -**
1.4	Strip and Dispose Top Soil	81	CY		24.50	10.50	$ -	$ 1,976	$ 847	**$ 2,823**
1.5	Site Grading- Excavation for Substation Pad	242	CY		9.00	6.00	$ -	$ 2,178	$ 1,452	**$ 3,630**
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	131	CY		21.00	9.00	$ -	$ 2,744.28	$ 1,176.12	**$ 3,920.40**
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	196	CY		2.40	1.60	$ -	$ 470	$ 314	**$ 784**
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	131	CY	25.00	2.40	1.60	$ 3,267	$ 314	$ 209	**$ 3,790**
1.9	Blasting		EA				$ -	$ -	$ -	**$ -**
1.10	Install substation 8" pad base	242	SY	11.00	6.00	4.00	$ 2,662	$ 1,452	$ 968	**$ 5,082**
1.11	Site Surfacing - Aggregate 6" Thick	242	SY	16.50	4.50	3.00	$ 3,993	$ 1,089	$ 726	**$ 5,808**
1.12	7' Station Fence w/ Barbed Wire & Grounding	0	LF	13.85	13.85	6.92	$ -	$ -	$ -	**$ -**
1.13	20' Slide Gate & Grounding	0	EA	8,100.00	3,245.00	1,305.00	$ -	$ -	$ -	**$ -**
1.14	4' Pedestrian gate	0	EA	2,500.00	1,000.00	350.00	$ -	$ -	$ -	**$ -**
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	0	LS	109,761.60	-	-	$ -	$ -	$ -	**$ -**
1.16	Seeding	0	SF	1.50	1.50	1.00	$ -	$ -	$ -	**$ -**
1.17	Erosion Control-Silt fence install & remove	0	LF	2.41	3.16	0.72	$ -	$ -	$ -	**$ -**
1.18	Temporary fencing	0	LF	7.50	5.25	2.25	$ -	$ -	$ -	**$ -**
1.19	Substation entrance with asphalt	0	SY	19.50	26.00	19.50	$ -	$ -	$ -	**$ -**
1.20	Concrete curb	0	LF	26.00	27.30	11.70	$ -	$ -	$ -	**$ -**
1.21	Retaining Wall	0	LF	156.00	117.00	117.00	$ -	$ -	$ -	**$ -**
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 9,922	$ 10,764	$ 6,052	**$ 26,738**
2. SUBSTATION FOUNDATIONS										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.6	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.12	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Shunt Reactor with oil containment-250MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.15	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Circuit Breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345Kv, GIS Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.20	345kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.21	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.22	138kV, Shunt Reactor with oil containment-250MVAR	305	CY	703.89	804.44	502.78	$ 214,685	$ 245,354	$ 153,346	**$ 613,386**
2.23	138kV, Circuit Breaker, AIS breaker	4	CY	703.89	804.44	502.78	$ 3,132	$ 3,580	$ 2,237	**$ 8,949**
2.24	138kV, Bus support-3 Ph, low	5	CY	703.89	804.44	502.78	$ 3,766	$ 4,304	$ 2,690	**$ 10,759**
2.25	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.26	138kV, Disconnect Switch	12	CY	703.89	804.44	502.78	$ 8,531	$ 9,750	$ 6,094	**$ 24,375**
2.27	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.28	138kV, Surge arrester	-	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.29	138kV, CCVT	16	CY	703.89	804.44	502.78	$ 11,297	$ 12,911	$ 8,070	**$ 32,278**
2.30	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.31	Firewall Foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.32	Precast Firewall for transformer, PARs, reactors		SF	25.00	15.00	10.00	$ -	$ -	$ -	**$ -**
2.33	Precast Concrete Piles-12"X80'		EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.34	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.35	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
TOTAL - 345KV FOUNDATION							$ 241,411	$ 275,899	$ 172,437	**$ 689,747**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast		EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'		EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, Bus support-3 Ph		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.4	345kV, Bus support-3 Ph, low		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.6	345kV, GIS air terminal		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.7	345kV, GIS support-1 Ph		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.8	345kV, GIS support-3 Ph		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.11	345kV, CCVT		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch		EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	**$ -**
3.13	138kV, Bus support-3 Ph, low	1	EA	4,173.00	2,879.76	1,919.84	$ 4,173	$ 2,880	$ 1,920	**$ 8,973**
3.14	138kV, Bus support-1 Ph, low		EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.15	138kV, Disconnect Switch	2	EA				$ -	$ -	$ -	**$ -**
3.16	138kV, Cable sealing end		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.18	138kV, Surge arrester		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.17	138kV, CCVT	3	EA	3,206.67	1,924.00	1,282.67	$ 9,620	$ 5,772	$ 3,848	**$ 19,240**
3.18	138kV, A Frame 50'		EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.19	345kV Gas-Insulated Bus Conductor		LF	550.00	275.00	82.50	$ -	$ -	$ -	**$ -**
3.20	345kV Gas-Insulated Bus Conductor-elbow		EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	**$ -**
3.21	AL. Bus Tubing, 5" SCH 80	60	LF	25.00	184.94	123.29	$ 1,500	$ 11,096	$ 7,398	**$ 19,994**
3.22	AL. Bus fittings	1	LS	1,800.00	1,800.00	900.00	$ 1,800	$ 1,800	$ 900	**$ 4,500**
3.23	Steel grating and support beams-transformer moat	43,280	LB	2.73	1.17	0.50	$ 118,233	$ 50,594	$ 21,683	**$ 190,511**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 135,326	$ 72,142	$ 35,749	**$ 243,217**
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	**$ -**
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.3	345kV, Cable sealing end	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.4	345kV, CCVT		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch		EA	57,720.00	34,632.00	23,088.00	$ -	$ -	$ -	**$ -**
4.6	345/138KV, Power Transformer with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.7	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.8	345kV, Shunt Reactor with oil containment-250MVAR		EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.9	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.10	Transport & Testing- Shunt Reactor		EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.12	345kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.13	345kV, Circuit Breaker		EA		57,239.00	24,531.00	$ -	$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	**$ -**
4.15	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.16	345kV, surge Arrester	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.17	138kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.18	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.19	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.20	138kV, Shunt Reactor with oil containment-250MVAR	1	EA	5,484,953.00	3,520.00	880.00	$ 5,484,953	$ 3,520	$ 880	**$ 5,489,353**
4.21	Transport & Testing- Shunt Reactor	1	EA		204,400.00	132,600.00	$ -	$ 204,400	$ 132,600	**$ 337,000**
4.22	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.23	138kV, Circuit Breaker,	1	EA	112,000.00	13,559.00	5,811.00	$ 112,000	$ 13,559	$ 5,811	**$ 131,370**
4.24	138kV, Disconnect Switch	2	EA	37,700.00	11,875.50	5,089.50	$ 75,400	$ 23,751	$ 10,179	**$ 109,330**
4.25	138kV, Cable sealing end	0	EA	11,600.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.26	138kV, CCVT	3	EA	3,206.67	1,924.00	1,282.67	$ 9,620	$ 5,772	$ 3,848	**$ 19,240**
4.27	138kV, Surge arrester	0	EA		4,200.00	1,800.00	$ -	$ -	$ -	**$ -**
4.28	Station service transformers- 120/208v-250VA	0	EA		45,500.00	19,500.00	$ -	$ -	$ -	**$ -**
TOTAL - MAJOR EQUIPMENT							$ 5,681,973	$ 251,002	$ 153,318	$ 6,086,293
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	11,700	LF	5.30	1.43	0.29	$ 61,981	$ 16,760	$ 3,352	**$ 82,093**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 61,981	$ 16,760	$ 3,352	$ 82,093
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	2,400	LF	11.15	10.80	5.40	$ 26,760	$ 25,920	$ 12,960	**$ 65,640**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench	250	LF	266.50	53.04	13.26	$ 66,625	$ 13,260	$ 3,315	**$ 83,200**
6.7							$ -	$ -	$ -	**$ -**
6.8	138kV UG- Conduit	0	LF	266.73	202.15	100.00	$ -	$ -	$ -	**$ -**
6.9	138kV UG- Cable	0	LF	145.00	87.00	58.00	$ -	$ -	$ -	**$ -**
6.10	138kV UG- Termination	0	EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.11	345kV UG- Conduit	0	LF	266.73	202.15	100.00	$ -	$ -	$ -	**$ -**
6.12	345kV UG- Cable	0	LF	167.00	100.20	66.80	$ -	$ -	$ -	**$ -**
6.13	345kV UG- Termination	0	EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.14							$ -	$ -	$ -	**$ -**
6.15							$ -	$ -	$ -	**$ -**
TOTAL - CONDUIT & CABLE TRENCH							$ 93,385	$ 39,180	$ 16,275	$ 148,840
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	400	LF	2.09	3.42	1.46	$ 836	$ 1,366	$ 585	**$ 2,788**
7.2	Caweld, DSA, 4/0 , T, CROSS	10	EA	165.00	75.00		$ 1,650	$ 750	$ -	**$ 2,400**
7.3	Ground Rod, 3/4" x 15'	3	EA	135.00	67.50	7.50	$ 439	$ 219	$ 24	**$ 683**
TOTAL - GROUND GRID							$ 2,925	$ 2,335	$ 610	**$ 5,871**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	0	EA	2,226,935.13	1,558,854.59	668,080.54	$ -	$ -	$ -	**$ -**
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	**$ -**
8.3	Primary Bay Control: SEL-451	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.4	Backup Bay Control: SEL-451	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.5	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.6	Backup Transformer/Reactor/PAR Differential Relays: GE T60	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.14	125VDC Battery System	0	LS	25,000.00	22,750.00	9,750.00	$ -	$ -	$ -	**$ -**
8.15	Control house AC Panel	0	EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.16	Control House DC Panel	0	EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.17	Generator	0	EA	130,000.00	72,800.00	31,200.00	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
TOTAL - CONTROL ENCLOSURE							$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
10.Shore Road 138kV Substation Upgrades							$ 6,312,236	$ 736,333	$ 404,855	**$ 7,453,423**
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		39,941.55	17,117.81	$ -	$ 39,942	$ 17,118	**$ 57,059**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		74,534.23		$ -	$ 74,534	$ -	**$ 74,534**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		298,136.92		$ -	$ 298,137	$ -	**$ 298,137**
9.4	Utility PM and Project Oversite	1	LS		74,534.23		$ -	$ 74,534	$ -	**$ 74,534**
9.5	Site Accommodation, Facilities, Storage	1	LS	74,534.23			$ 74,534	$ -	$ -	**$ 74,534**
	Engineering									
9.6	Design Engineering	1.00	LS		596,273.84		$ -	$ 596,274	$ -	**$ 596,274**
9.7	LiDAR /GPR	1.00	LS				$ -	$ -	$ -	**$ -**
9.8	Geotech	2.00	EA		2,730.00	1,820.00	$ -	$ 5,460	$ 3,640	**$ 9,100**
9.9	Surveying/Staking	0.20	Site		52,173.96		$ -	$ 10,435	$ -	**$ 10,435**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		279,503.36		$ -	$ 279,503	$ -	**$ 279,503**
	Permitting and Additional Costs									
9.11	Physical Security	-	LS		-		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		74,534.23		$ -	$ 74,534	$ -	**$ 74,534**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		22,360.27		$ -	$ 22,360	$ -	**$ 22,360**
9.15	Laydown Lease	-	LS		-		$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	-	LS		-	704,727.00	$ -	$ -	$ -	**$ -**
9.17	Legal Fees (Real estate)	-	LS		-	21,141.81	$ -	$ -	$ -	**$ -**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 260,000	$ -	$ -	$ 260,000	**$ 260,000**
9.20	Sales Tax on Materials	8.80%	LS	6,312,235.86			$ 555,477	$ -	$ -	**$ 555,477**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		7,453.42		$ -	$ 7,453	$ -	**$ 7,453**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 630,011	$ 1,483,167	$ 280,758	**$ 2,393,936**

NEXTera Energy- TO44 Enhanced 2

11.Sprain Brook 345kV Substation Expansion

Total: $ 605,718,794

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
11.Sprain Brook 345kV Substation Expansion				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 29,886,197	$ 124,478,741	$ 142,056,673	$ 296,421,611
2. SUBSTATION FOUNDATIONS	$ 2,055,398	$ 2,320,526	$ 1,451,641	$ 5,827,565
3. SUBSTATION STRUCTURES	$ 1,194,199	$ 952,276	$ 590,762	$ 2,737,237
4. MAJOR EQUIPTMENT	$ 14,085,266	$ 2,251,804	$ 1,339,748	$ 17,676,818
5. LOW VOLTAGE & CONTROL CABLE	$ 252,691	$ 68,330	$ 13,666	$ 334,687
6. CONDUIT & CABLE TRENCH	$ 638,014	$ 204,208	$ 75,352	$ 917,574
7. GROUND GRID	$ 167,706	$ 121,331	$ 28,363	$ 317,401
8. CONTROL ENCLOSURE	$ 1,382,479	$ 1,101,238	$ 392,741	$ 2,876,458
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 7,641,345	$ 74,655,515	$ 18,361,299	$ 100,658,159
SUBTOTAL (Costs):	$ 57,303,295	$ 206,153,970	$ 164,310,245	$ 427,767,510
CONTRACTOR MARK-UP (OH&P)	$ 10,314,593	$ 37,107,715	$ 29,575,844	$ 76,998,152
SUBTOTAL:	$ 67,617,888	$ 243,261,684	$ 193,886,089	$ 504,765,661
CONTINGENCY ON ENTIRE PROJECT	$ 13,523,578	$ 48,652,337	$ 38,777,218	$ 100,953,132
TOTAL:	$ 81,141,465	$ 291,914,021	$ 232,663,307	$ 605,718,794

Description of Work: Expand the existing Sprain Brook 345kV substation with additional GIS bay.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
11.Sprain Brook 345kV Substation Expansion										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	5.4	ACRE	-	42,000.00	28,000.00	$ -	$ 224,902	$ 149,935	**$ 374,837**
1.2	Demolition	1	LS	-	120,000.00	80,000.00	$ -	$ 120,000	$ 80,000	**$ 200,000**
1.3	New Access Road - 20'	3,631	SY	4.85	7.20	4.80	$ 17,611	$ 26,144	$ 17,429	**$ 61,184**
1.4	Strip and Dispose Top Soil	8,639	CY		24.50	10.50	$ -	$ 211,658	$ 90,711	**$ 302,369**
1.5	Site Grading- Excavation for Substation Pad- Soil excavation	56,901	CY		9.00	6.00	$ -	$ 512,110	$ 341,407	**$ 853,517**
1.6	Site Grading- Excavation for Substation Pad-Rock excavaton	227,604	CY		120.00	180.00	$ -	$ 27,312,533	$ 40,968,800	**$ 68,281,333**
1.7	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	384,083	CY		21.00	9.00	$ -	$ 8,065,732.50	$ 3,456,742.50	**$ 11,522,475**
1.8	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	0	CY		2.40	1.60	$ -	$ -	$ -	**$ -**
1.9	Site Grading -Fill for Substation Pad (import, compacted in place)	0	CY	25.00	2.40	1.60	$ -	$ -	$ -	**$ -**
1.10	Blasting		EA				$ -	$ -	$ -	**$ -**
1.11	Install substation 8" pad base	11,380	SY	11.00	6.00	4.00	$ 125,182	$ 68,281	$ 45,521	**$ 238,985**
1.12	Site Surfacing - Aggregate 6" Thick	11,380	SY	16.50	4.50	3.00	$ 187,774	$ 51,211	$ 34,141	**$ 273,125**
1.13	7' Station Fence w/ Barbed Wire & Grounding	1,300	LF	13.85	13.85	6.92	$ 18,002	$ 18,002	$ 9,001	**$ 45,006**
1.14	20' Slide Gate & Grounding	0	EA	8,100.00	3,245.00	1,305.00	$ -	$ -	$ -	**$ -**
1.15	4' Pedestrian gate	0	EA	2,500.00	1,000.00	350.00	$ -	$ -	$ -	**$ -**
1.16	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	1	LS	219,523.20	76,800.00	50,736.00	$ 219,523	$ 76,800	$ 50,736	**$ 347,059**
1.17	Seeding	130,834	SF	1.50	1.50	1.00	$ 196,251	$ 196,251	$ 130,834	**$ 523,336**
1.18	Erosion Control-Silt fence install & remove	3,900	LF	2.41	3.16	0.72	$ 9,399	$ 12,324	$ 2,808	**$ 24,531**
1.19	Temporary fencing	1,430	LF	7.50	5.25	2.25	$ 10,725	$ 7,508	$ 3,218	**$ 21,450**
1.20	Substation entrance with asphalt	0	SY	19.50	26.00	19.50	$ -	$ -	$ -	**$ -**
1.21	Concrete curb	0	LF	26.00	27.30	11.70	$ -	$ -	$ -	**$ -**
1.22	Concrete Retaining Wall- Soil excavation	99,073	CY		9.00	6.00	$ -	$ 891,661	$ 594,440	**$ 1,486,101**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
1.23	Concrete Retaining Wall- Rock excavation	396,294	CY		120.00	180.00	$ -	$ 47,555,232	$ 71,332,848	**$ 118,888,080**
1.24	Concrete Retaining Wall-Rock excavation-Hauling and disposal	267,498	CY		21.00	9.00	$ -	$ 5,617,461.78	$ 2,407,483.62	**$ 8,024,945**
1.25	Concrete Retaining Wall- Backfill & compaction	668,745	CY	10.00	30.00	20.00	$ 6,687,455	$ 20,062,364	$ 13,374,909	**$ 40,124,727**
1.26	Concrete Retaining Walll- Foundaiton and Wall	68,967	CY	325.00	195.00	130.00	$ 22,414,275	$ 13,448,565	$ 8,965,710	**$ 44,828,550**
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 29,886,197	$ 124,478,741	$ 142,056,673	**$ 296,421,611**
2. SUBSTATION FOUNDATIONS										
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	880	CY	703.89	804.44	502.78	$ 619,306	$ 707,778	$ 442,362	**$ 1,769,446**
2.3	345kV, Bus support-3 Ph	111	CY	703.89	804.44	502.78	$ 78,047	$ 89,196	$ 55,748	**$ 222,991**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-1 Ph	48	CY	703.89	804.44	502.78	$ 33,449	$ 38,227	$ 23,892	**$ 95,567**
2.6	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, Cable sealing end	32	CY	703.89	804.44	502.78	$ 22,595	$ 25,823	$ 16,139	**$ 64,556**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.12	345kV, Disconnect Switch	253	CY	703.89	804.44	502.78	$ 178,393	$ 203,877	$ 127,423	**$ 509,693**
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Shunt Reactor with oil containment-275MVAR	700	CY	703.89	804.44	502.78	$ 492,720	$ 563,108	$ 351,943	**$ 1,407,770**
2.15	345kV, Shunt Reactor with oil containment-225MVAR	126	CY	703.89	804.44	502.78	$ 88,690	$ 101,359	$ 63,350	**$ 253,399**
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Circuit Breaker	180	CY	703.89	804.44	502.78	$ 126,699	$ 144,799	$ 90,500	**$ 361,998**
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345Kv, Control Enclosure-BLDG with generator pad	325	CY	703.89	804.44	502.78	$ 228,763	$ 261,443	$ 163,402	**$ 653,608**
2.20	345kV, Surge arrester	48	CY	703.89	804.44	502.78	$ 33,892	$ 38,734	$ 24,209	**$ 96,834**
2.21	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.22	138kV, Shunt Reactor with oil containment-80MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.23	138kV, Circuit Breaker, AIS breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.24	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.25	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.26	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.27	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.28	138kV, Surge arrester	-	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.29	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.31	Firewall Foundation	143	CY	703.89	804.44	502.78	$ 100,346	$ 114,681	$ 71,676	**$ 286,702**
2.32	Precast Firewall for transformer, PARs, reactors	2,100	SF	25.00	15.00	10.00	$ 52,500	$ 31,500	$ 21,000	**$ 105,000**
2.33	Precast Concrete Piles-12"X80'	-	EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.34	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.35	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
TOTAL - 345KV FOUNDATION							$ 2,055,398	$ 2,320,526	$ 1,451,641	**$ 5,827,565**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast	0	EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	6	EA	48,100.00	28,860.00	19,240.00	$ 288,600	$ 173,160	$ 115,440	**$ 577,200**
3.3	345kV, Bus support-3 Ph	7	EA	8,346.00	5,758.74	3,839.16	$ 58,422	$ 40,311	$ 26,874	**$ 125,607**
3.4	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph	6	EA	4,810.00	2,886.00	1,924.00	$ 28,860	$ 17,316	$ 11,544	**$ 57,720**
3.6	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.7	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.8	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end	3	EA	8,346.00	5,758.74	3,839.16	$ 25,038	$ 17,276	$ 11,517	**$ 53,832**
3.11	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch	16	EA	19,240.00	11,544.00	7,696.00	$ 307,840	$ 184,704	$ 123,136	**$ 615,680**
3.13	345kV, Surge arrester	9	EA	4,810.00	2,886.00	1,924.00	$ 43,290	$ 25,974	$ 17,316	**$ 86,580**
3.14	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	**$ -**
3.15	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.16	138kV, Disconnect Switch	0	EA				$ -	$ -	$ -	**$ -**
3.17	138kV, Cable sealing end	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.18	138kV, Surge arrester	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
3.19	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.20	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.21	AL. Bus Tubing, 5" SCH 80	1,590	LF	25.00	184.94	123.29	$ 39,750	$ 294,051	$ 196,034	**$ 529,836**
3.22	AL. Bus fittings	1	LS	47,700.00	47,700.00	23,850.00	$ 47,700	$ 47,700	$ 23,850	**$ 119,250**
3.23	Steel grating and support beams-transformer moat	129,840	LB	2.73	1.17	0.50	$ 354,699	$ 151,783	$ 65,050	**$ 571,532**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 1,194,199	$ 952,276	$ 590,762	**$ 2,737,237**
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	**$ -**
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$ -**
4.3	345kV, Cable sealing end	9	EA	27,144.00	5,460.00	2,340.00	$ 244,296	$ 49,140	$ 21,060	**$ 314,496**
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch	16	EA	57,720.00	34,632.00	23,088.00	$ 923,520	$ 554,112	$ 369,408	**$ 1,847,040**
4.6	345/138KV, Power Transformer with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.7	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.8	345kV, Shunt Reactor with oil containment-275MVAR	2	EA	3,332,487.50	3,520.00	880.00	$ 6,664,975	$ 7,040	$ 1,760	**$ 6,673,775**
4.9	345kV, Shunt Reactor with oil containment-225MVAR	1	EA	3,026,425.00	3,520.00	880.00	$ 3,026,425	$ 3,520	$ 880	**$ 3,030,825**
4.10	Transport & Testing- Shunt Reactor	3	EA		357,900.40	234,933.60	$ -	$ 1,073,701	$ 704,801	**$ 1,778,502**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.12	345kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR	641,250.00	384,750.00	256,500.00	$ -	$ -	$ -	**$ -**
4.13	345kV, Circuit Breaker	9	EA	350,000.00	57,239.00	24,531.00	$ 3,150,000	$ 515,151	$ 220,779	**$ 3,885,930**
4.14	345kV, Circuit Breaker (GIS), outdoor rated	0	EA	1,194,419.50	716,651.70	477,767.80	$ -	$ -	$ -	**$ -**
4.15	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.16	345kV, surge Arrester	9	EA	8,450.00	5,460.00	2,340.00	$ 76,050	$ 49,140	$ 21,060	**$ 146,250**
4.17	138kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.18	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.19	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.20	138kV, Shunt Reactor with oil containment-80MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.21	Transport & Testing- Shunt Reactor	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.22	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.23	138kV, Circuit Breaker, AIS breaker	0	EA		13,559.00	5,811.00	$ -	$ -	$ -	**$ -**
4.24	138kV, Disconnect Switch	0	EA	37,700.00	11,875.50	5,089.50	$ -	$ -	$ -	**$ -**
4.25	138kV, Cable sealing end	0	EA	11,600.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.26	138kV, CCVT	0	EA		7,970.08	3,415.75	$ -	$ -	$ -	**$ -**
4.27	138kV, Surge arrester	0	EA		4,200.00	1,800.00	$ -	$ -	$ -	**$ -**
4.28	Station service transformers- 120/208v-250VA	0	EA		45,500.00	19,500.00	$ -	$ -	$ -	**$ -**
4.29	345kV Gas-Insulated Bus Conductor	0	LF	550.00	275.00	82.50	$ -	$ -	$ -	**$ -**
4.30	345kV Gas-Insulated Bus Conductor-elbow	0	EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	**$ -**
TOTAL - MAJOR EQUIPMENT							$ 14,085,266	$ 2,251,804	$ 1,339,748	**$ 17,676,818**
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	47,700	LF	5.30	1.43	0.29	$ 252,691	$ 68,330	$ 13,666	**$ 334,687**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 252,691	$ 68,330	$ 13,666	**$ 334,687**
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	9,000	LF	11.15	10.80	5.40	$ 100,350	$ 97,200	$ 48,600	**$ 246,150**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench	2,018	LF	266.50	53.04	13.26	$ 537,664	$ 107,008	$ 26,752	**$ 671,424**
6.7							$ -	$ -	$ -	**$ -**
6.8	138kV UG- Conduit	0	LF	266.73	202.15	100.00				**$ -**
6.9	138kV UG- Cable		LF	145.00	87.00	58.00				**$ -**
6.10	138kV UG- Termination	0	EA	27,805.00	9,846.48	2,813.28				**$ -**
6.11	345kV UG- Conduit	466	LF	266.73	202.15	100.00				**$ -**
6.12	345kV UG- Cable	1,398	LF	167.00	100.20	66.80				**$ -**
6.13	345kV UG- Termination	6	EA	27,805.00	9,846.48	2,813.28				**$ -**
6.14	Fiber Optic Cable	466	LF	7.40	3.33	2.22				**$ -**
6.15	Ground Continuity Conductor	466	LF	13.04	7.53	5.02				**$ -**
TOTAL - CONDUIT & CABLE TRENCH							$ 638,014	$ 204,208	$ 75,352	**$ 917,574**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	17,277	LF	2.09	3.42	1.46	$ 36,126	$ 59,006	$ 25,288	**$ 120,421**
7.2	Caweld, DSA, 4/0 , T, CROSS	462	EA	165.00	75.00		$ 76,230	$ 34,650	$ -	**$ 110,880**
7.3	Ground Rod, 3/4" x 15'	410	EA	135.00	67.50	7.50	$ 55,350	$ 27,675	$ 3,075	**$ 86,100**
TOTAL - GROUND GRID							$ 167,706	$ 121,331	$ 28,363	**$ 317,401**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	1	EA	542,947.99	380,063.60	162,884.40	$ 542,948	$ 380,064	$ 162,884	**$ 1,085,896**
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	**$ -**
8.3	Primary Line Relays (87L): SEL-411L	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.4	Backup Line Relays (87L): GE L90	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.5	Primary Bay Control: SEL-451	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.6	Backup Bay Control: SEL-451	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.7	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.9	Primary Bus Differential Relays: SEL-487B	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.10	Backup Bus Differential Relays: GE B90	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.14	125VDC Battery System	1	LS	25,000.00	22,750.00	9,750.00	$ 25,000	$ 22,750	$ 9,750	**$ 57,500**
8.15	Control house AC Panel	1	EA	65,000.00	91,000.00	39,000.00	$ 65,000	$ 91,000	$ 39,000	**$ 195,000**
8.16	Control House DC Panel	1	EA	65,000.00	91,000.00	39,000.00	$ 65,000	$ 91,000	$ 39,000	**$ 195,000**
8.17	Generator	1	EA	130,000.00	72,800.00	31,200.00	$ 130,000	$ 72,800	$ 31,200	**$ 234,000**
TOTAL - CONTROL ENCLOSURE							$ 1,382,479	$ 1,101,238	$ 392,741	**$ 2,876,458**
11.Sprain Brook 345kV Substation Expansion							$ 49,661,950	$ 131,498,455	$ 145,948,946	**$ 327,109,351**
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		9,710,659.03	4,161,711.01	$ -	$ 9,710,659	$ 4,161,711	**$ 13,872,370**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		3,271,093.51		$ -	$ 3,271,094	$ -	**$ 3,271,094**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1.00	LS		13,084,374.02		$ -	$ 13,084,374	$ -	**$ 13,084,374**
9.4	Utility PM and Project Oversite	1.00	LS		3,271,093.51		$ -	$ 3,271,094	$ -	**$ 3,271,094**
9.5	Site Accommodation, Facilities, Storage	1.00	LS	3,271,093.51			$ 3,271,094	$ -	$ -	**$ 3,271,094**
	Engineering									
9.6	Design Engineering	1.00	LS		26,168,748.04		$ -	$ 26,168,748	$ -	**$ 26,168,748**
9.7	LiDAR /GPR	-	LS				$ -	$ -	$ -	**$ -**
9.8	Geotech	5.00	EA		2,730.00	1,820.00	$ -	$ 13,650	$ 9,100	**$ 22,750**
9.9	Surveying/Staking	1.00	Site		2,289,765.45		$ -	$ 2,289,765	$ -	**$ 2,289,765**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		12,266,600.64		$ -	$ 12,266,601	$ -	**$ 12,266,601**
	Permitting and Additional Costs									
9.11	Physical Security	-	LS		6,546.96		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		3,271,093.51		$ -	$ 3,271,094	$ -	**$ 3,271,094**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		981,328.05		$ -	$ 981,328	$ -	**$ 981,328**
9.15	Laydown Lease	-	LS				$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	1.00	LS		-	2,029,600.00	$ -	$ -	$ 2,029,600	**$ 2,029,600**
9.17	Legal Fees (Real estate)	1.00	LS		-	60,888.00	$ -	$ -	$ 60,888	**$ 60,888**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 12,100,000	$ -	$ -	$ 12,100,000	**$ 12,100,000**
9.20	Sales Tax on Materials	8.80%	LS	49,661,949.70			$ 4,370,252	$ -	$ -	**$ 4,370,252**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		327,109.35		$ -	$ 327,109	$ -	**$ 327,109**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 7,641,345	$ 74,655,515	$ 18,361,299	**$ 100,658,159**

NEXTera Energy- TO44 Enhanced 2

12 - Station 36a Sprain Brook HVDC 1200MW Converter Station

Total: $ 454,943,796

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
12 - Station 36a Sprain Brook HVDC 1200MW Converter Station				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 2,265,365	$ 6,143,166	$ 7,447,195	$ 15,855,727
2. SUBSTATION FOUNDATIONS	$ -	$ -	$ -	$ -
3. SUBSTATION STRUCTURES	$ -	$ -	$ -	$ -
4. MAJOR EQUIPTMENT	$ 180,000,000	$ 60,000,000	$ 60,000,000	$ 300,000,000
5. LOW VOLTAGE & CONTROL CABLE	$ -	$ -	$ -	$ -
6. CONDUIT & CABLE TRENCH	$ -	$ -	$ -	$ -
7. GROUND GRID	$ 238,706	$ 172,356	$ 40,224	$ 451,286
8. CONTROL ENCLOSURE	$ 80,156	$ 64,125	$ 16,031	$ 160,312
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 16,232,085	$ 4,074,870	$ 15,022,185	$ 35,329,140
Turnkey cost (HVDC, GIS)	$ 180,000,000	$ 60,000,000	$ 60,000,000	$ 300,000,000
Non-Turnkey cost	$ 18,816,313	$ 10,454,517	$ 22,525,636	$ 51,796,466
SUBTOTAL (Costs):	$ 198,816,313	$ 70,454,517	$ 82,525,636	$ 351,796,466
CONTRACTOR MARK-UP (OH&P)	$ 14,186,936	$ 5,481,813	$ 7,654,615	$ 27,323,364
SUBTOTAL:	$ 213,003,249	$ 75,936,330	$ 90,180,251	$ 379,119,830
CONTINGENCY ON ENTIRE PROJECT	$ 42,600,650	$ 15,187,266	$ 18,036,050	$ 75,823,966
TOTAL:	$ 255,603,899	$ 91,123,596	$ 108,216,301	$ 454,943,796

Description of Work: Construct a new Sprain Brook 1200MW converter station, with a transition from 320kV DC to 345kV AC and tie into the expanded Sprain Brook 345kV GIS station and the Northport-Sprain Brook HVDC cable.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
12 - Station 36a Sprain Brook HVDC 1200MW Converter Station										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	5.0	ACRE	-	21,000.00	14,000.00	$ -	$ 105,000	$ 70,000	**$ 175,000**
1.2	Demolition	0	ACRE	-	-	-	$ -	$ -	$ -	**$ -**
1.3	New Access Road - 20'	1,002	SY	4.85	7.20	4.80	$ 4,861	$ 7,216	$ 4,811	**$ 16,887**
1.4	Strip and Dispose Top Soil	8,067	CY		24.50	10.50	$ -	$ 197,633	$ 84,700	**$ 282,333**
1.5	Site Grading- Excavation for Substation Pad- Soil excavation	4,033	CY		9.00	6.00	$ -	$ 36,300	$ 24,200	**$ 60,500**
1.6	Site Grading- Excavation for Substation Pad-Rock excavaton	36,300	CY		120.00	180.00	$ -	$ 4,356,000.00	$ 6,534,000.00	**$ 10,890,000**
1.7	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	43,560	CY		21.00	9.00	$ -	$ 914,760.00	$ 392,040.00	**$ 1,306,800**
1.8	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	1,089	CY		2.40	1.60	$ -	$ 2,614	$ 1,742	**$ 4,356**
1.9	Site Grading -Fill for Substation Pad (import, compacted in place)	43,560	CY	25.00	2.40	1.60	$ 1,089,000	$ 104,544	$ 69,696	**$ 1,263,240**
1.10	Install substation 8" pad base	12,100	SY	11.00	6.00	4.00	$ 133,100	$ 72,600	$ 48,400	**$ 254,100**
1.11	Site Surfacing - Aggregate 6" Thick	18,150	SY	16.50	4.50	3.00	$ 299,475	$ 81,675	$ 54,450	**$ 435,600**
1.12	7' Station Fence w/ Barbed Wire & Grounding	1,872	LF	13.85	13.85	6.92	$ 25,923	$ 25,923	$ 12,962	**$ 64,809**
1.13	25' Slide Gate & Grounding	2	EA	8,100.00	3,245.00	1,305.00	$ 16,200	$ 6,490	$ 2,610	**$ 25,300**
1.14	4' Pedestrian gate	2	EA	2,500.00	1,000.00	350.00	$ 5,000	$ 2,000	$ 700	**$ 7,700**
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	1	LS	625,766.40	161,280.00	106,545.60	$ 625,766	$ 161,280	$ 106,546	**$ 893,592**
1.16	Seeding	16,480	SF	1.50	1.50	1.00	$ 24,720	$ 24,720	$ 16,480	**$ 65,920**
1.17	Erosion Control-Silt fence install & remove	3,089	LF	2.41	3.16	0.72	$ 7,444	$ 9,761	$ 2,224	**$ 19,429**
1.18	Temporary fencing	2,059	LF	7.50	5.25	2.25	$ 15,444	$ 10,811	$ 4,633	**$ 30,888**
1.19	Substation entrance with asphalt	812	SY	19.50	26.00	19.50	$ 15,832	$ 21,109	$ 15,832	**$ 52,773**
1.20	Concrete curb	100	LF	26.00	27.30	11.70	$ 2,600	$ 2,730	$ 1,170	**$ 6,500**
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 2,265,365	$ 6,143,166	$ 7,447,195	**$ 15,855,727**
2. SUBSTATION FOUNDATIONS										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2.1	345kV, Lightning mast foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.3	345kV, H Frame -SHARED COLUMN (3 BAY)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.4	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.5	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.6	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.7	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.8	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.9	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.10	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.11	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.12	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.13	345kV, SSVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.14	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.15	345/138KV, Single-Phase 720/900/1200MVA Power Transformer with oil containmenet	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.16	345kV, Shunt Reactor with oil containment-150MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.17	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.18	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.19	345kV, Circuit Breaker (PASS)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.20	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.21	345kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.22	345/138 Kv, Control Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.23	345kV, GIS Enclosure-BLDG		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.24	HVDC VSC Converter Station -DC Converter Hall		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.25	HVDC VSC Converter Station -Control Building		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.26	HVDC VSC Converter Station -Cooler Bank		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.27	HVDC VSC Converter Station -Storage Buiilding		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.28	HVDC VSC Converter Station-Network AC harmonic filters		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.29	HVDC VSC Converter Station -AC PLC filter area		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.30	HVDC VSC Converter Station-Transformer area		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.31	HVDC VSC Converter Station- AIS equipment		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.32	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.33	138kV, Dead-Tank Breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.34	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.35	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.36	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.37	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.38	138kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.39	138kV, H Frame H Frame -SHARED COLUMN (3 BAY)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.40	Steel grating and support beams-transformer moat	0	LB	2.73	1.17	0.50	$ -	$ -	$ -	$ -
TOTAL - 345KV FOUNDATION							$ -	$ -	$ -	$ -
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast foundation	0	EA	23,400.00	14,040.00	9,360.00	$ -	$ -	$ -	$ -
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	$ -
3.3	345kV, H Frame -SHARED COLUMN (3 BAY)	0	EA	64,350.00	38,610.00	25,740.00	$ -	$ -	$ -	$ -
3.4	345kV, Bus support-3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.5	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.6	345kV, Bus support-1 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.7	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.8	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.9	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.10	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.11	345kV, Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.12	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.13	345kV, SSVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.14	345kV, Disconnect Switch	0	EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	$ -
3.15	345kV, Surge arrester	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.16	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	$ -
3.17	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	$ -
3.18	138kV, Disconnect Switch	0	EA							
3.19	138kV, Cable sealing end	0	EA	4,066.40	1,443.00	962.00	$ -	$ -	$ -	$ -
3.20	138kV, Surge arrester	0	EA	4,066.40	1,443.00	962.00	$ -	$ -	$ -	$ -
3.21	138kV, H Frame H Frame -SHARED COLUMN (3 BAY)	0	EA	45,045.00	27,027.00	18,018.00	$ -	$ -	$ -	$ -
3.22	AL. Bus Tubing, 5" SCH 80		LF	25.00	184.94	123.29	$ -	$ -	$ -	$ -
3.23	AL. Bus fittings		LS	36,300.00	36,300.00	18,150.00	$ -	$ -	$ -	$ -
3.24	HVDC VSC Converter Station -DC Equipment stands		EA				$ -	$ -	$ -	$ -
3.25	HVDC VSC Converter Station-AC Switch Yard Equipment stands		EA				$ -	$ -	$ -	$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ -	$ -	$ -	$ -
4. MAJOR EQUIPTMENT										
4.1	345Kv, GIS indoor	0	EA	852,222.22	511,333.33	340,888.89	$ -	$ -	$ -	**$** -
4.2	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	**$** -
4.3	345kV, GIS- Cable sealing end	0	EA	27,144.00	5,460.00	2,340.00	$ -	$ -	$ -	**$** -
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	**$** -
4.5	345kV, SSVT	0	EA				$ -	$ -	$ -	**$** -
4.6	345kV, Disconnect Switch	0	EA	57,720.00	34,632.00	23,088.00	$ -	$ -	$ -	**$** -
4.7	345/138KV, Single-Phase 720/900/1200MVA Power Transformer with oil containmenet	0	EA	9,980,000.00	3,520.00	880.00	$ -	$ -	$ -	**$** -
4.8	Transport & Testing- Transformer	0	EA		1,170,400.00	501,600.00	$ -	$ -	$ -	**$** -
4.9	345kV, Shunt Reactor with oil containment-150MVAR	0	EA	2,629,516.50	3,520.00	880.00	$ -	$ -	$ -	**$** -
4.10	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$** -
4.11	Transport & Testing- Shunt Reactor	0	EA		339,150.00	145,350.00	$ -	$ -	$ -	**$** -
4.12	345kV, Phase Angle Regulator	0	EA	16,120,693.00	3,520.00	880.00	$ -	$ -	$ -	**$** -
4.13	Transport & Testing- Phase Angle Regulating Transformer, 345kV	0	EA		715,400.00	306,600.00	$ -	$ -	$ -	**$** -
4.14	345kV, Circuit Breaker (PASS)	0	EA		57,239.00	24,531.00	$ -	$ -	$ -	**$** -
4.15	345kV, Circuit Breaker (GIS), outdoor rated	0	EA	1,341,857.17	805,114.30	536,742.87	$ -	$ -	$ -	**$** -
4.16	345kV, surge Arrester	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$** -
4.17	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$** -
4.18	138kV, Phase Angle Regulator	0	EA	11,902,178.00	3,520.00	880.00	$ -	$ -	$ -	**$** -
4.19	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		701,400.00	300,600.00	$ -	$ -	$ -	**$** -
4.20	138kV, Dead-Tank Breaker	0	EA	183,000.00	13,559.00	5,811.00	$ -	$ -	$ -	**$** -
4.21	138kV, Disconnect Switch	0	EA				$ -	$ -	$ -	**$** -
4.22	138kV, Cable sealing end	0	EA	37,700.00	11,875.50	5,089.50	$ -	$ -	$ -	**$** -
4.23	138kV, Surge arrester	0	EA	4,446.00	4,200.00	1,800.00	$ -	$ -	$ -	**$** -
4.24	Station service transformers- 120/208v-250VA	0	EA	260,000.00	45,500.00	19,500.00	$ -	$ -	$ -	**$** -
4.25	HVDC 1200MW Monopoles	1.0	EA	180,000,000.00	60,000,000.00	60,000,000.00	$ 180,000,000.00	$ 60,000,000.00	$ 60,000,000.00	**$ 300,000,000**
4.26	HVDC VSC Converter Station -DC transducer		EA				$ -	$ -	$ -	**$** -
4.27	HVDC VSC Converter Station -Converter phase reactor		EA				$ -	$ -	$ -	**$** -
4.28	HVDC VSC Converter Station -Cooling fans		EA				$ -	$ -	$ -	**$** -
4.29	HVDC VSC Converter Station- Converter Transformer		EA				$ -	$ -	$ -	**$** -
4.30	HVDC VSC Converter Station -Converter enclosure		EA				$ -	$ -	$ -	**$** -
4.31	HVDC VSC Converter Station -Control enclosure		EA				$ -	$ -	$ -	**$** -
4.32	HVDC VSC Converter Station -Storage building									
4.32	345kV Gas-Insulated Bus Conductor (Ourdoor)		LF	550.00	275.00	82.50	$ -	$ -	$ -	-
4.33	345kV Gas-Insulated Bus Conductor-elbow (Ourdoor)		EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	-
4.28	Transport & Testing- GIL		LS		-	-	$ -	$ -	$ -	**$** -
TOTAL - MAJOR EQUIPMENT							$ 180,000,000	$ 60,000,000	$ 60,000,000	**$ 300,000,000**
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables		LF	5.30	1.43	0.29	$ -	$ -	$ -	**$** -
5.2			LF	5.30	1.43	0.29	$ -	$ -	$ -	**$** -
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ -	$ -	$ -	**$** -
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$** -
6.2	Conduit, PVC, 4", SCH 40	0	LF	11.15	10.80	5.40	$ -	$ -	$ -	**$** -
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$** -
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$** -
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$** -
6.6	Cable Trench		LF	266.50	53.04	13.26	$ -	$ -	$ -	**$** -
6.8	345kV UG- Conduit	1,001	LF	266.73	202.15	100.00				
6.9	345kV UG- Cable	3,153	LF	167.00	100.20	66.80				
6.10	345kV UG- Termination	6	EA	27,805.00	9,846.48	2,813.28				
6.13	Fiber Optic Cable	1,051	LF	7.40	3.33	2.22				
6.14	Ground Continuity Conductor	1,051	LF	13.04	7.53	5.02				
TOTAL - CONDUIT & CABLE TRENCH							$ -	$ -	$ -	**$** -
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	24,417	LF	2.09	3.42	1.46	$ 51,056	$ 83,391	$ 35,739	**$ 170,186**
7.2	Caweld, DSA, 4/0 , T, CROSS	648	EA	165.00	75.00		$ 106,920	$ 48,600	$ -	**$ 155,520**
7.3	Ground Rod, 3/4" x 15'	598	EA	135.00	67.50	7.50	$ 80,730	$ 40,365	$ 4,485	**$ 125,580**
TOTAL - GROUND GRID							$ 238,706	$ 172,356	$ 40,224	**$ 451,286**
8. CONTROL ENCLOSURE										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.1	345/138 Kv, Control Enclosure-BLDG with generator pad	0	EA	964,411.37	675,087.96	289,323.41	$ -	$ -	$ -	**$ -**
8.2	345kV, GIS Enclosure-BLDG	0	EA	2,211,495.05	1,548,046.53	663,448.51	$ -	$ -	$ -	**$ -**
8.3	Primary Line Relays (87L): SEL-411L	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.4	Backup Line Relays (87L): GE L90	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.5	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Annunci	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.6	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annnunciator	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.7	HMI Panel	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.14	125VDC Battery System		LS	25,000.00	22,750.00	9,750.00	$ -	$ -	$ -	**$ -**
8.15	Control house AC Panel		EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.16	Control House DC Panel		EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.17	Generator		EA	130,000.00	72,800.00	31,200.00	$ -	$ -	$ -	**$ -**
TOTAL - CONTROL ENCLOSURE							$ 80,156	$ 64,125	$ 16,031	**$ 160,312**
12 - Station 36a Sprain Brook HVDC 1200MW Converter Station							$ 182,584,228	$ 66,379,647	$ 67,503,451	$ 316,467,326
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		485,908.43	208,246.47	$ -	$ 485,908	$ 208,246	**$ 694,155**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		164,673.26		$ -	$ 164,673	$ -	**$ 164,673**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		658,693.03		$ -	$ 658,693	$ -	**$ 658,693**
9.4	Utility PM and Project Oversite	1	LS		164,673.26		$ -	$ 164,673	$ -	**$ 164,673**
9.5	Site Accommodation, Facilities, Storage	1	LS	164,673.26			$ 164,673	$ -	$ -	**$ 164,673**
	Engineering									
9.6	Design Engineering	1.00	LS		1,317,386.06		$ -	$ 1,317,386	$ -	**$ 1,317,386**
9.7	LiDAR /GPR	1.00	LS		-		$ -	$ -	$ -	**$ -**
9.8	Geotech	5.00	EA		2,730.00	1,820.00	$ -	$ 13,650	$ 9,100	**$ 22,750**
9.9	Surveying/Staking	1.00	Site		115,271.28		$ -	$ 115,271	$ -	**$ 115,271**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		617,524.71		$ -	$ 617,525	$ -	**$ 617,525**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		6,546.96		$ -	$ 6,547	$ -	**$ 6,547**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		164,673.26		$ -	$ 164,673	$ -	**$ 164,673**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		49,401.98		$ -	$ 49,402	$ -	**$ 49,402**
9.15	Laydown Lease	-	LS		-		$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	1.00	LS			5,558,096.00	$ -	$ -	$ 5,558,096	**$ 5,558,096**
9.17	Legal Fees (Real estate)	1.00	LS		-	166,742.88	$ -	$ -	$ 166,743	**$ 166,743**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 9,080,000	$ -	$ -	$ 9,080,000	**$ 9,080,000**
9.20	Sales Tax on Materials	8.80%	LS	182,584,227.65			$ 16,067,412	$ -	$ -	**$ 16,067,412**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		316,467.33		$ -	$ 316,467	$ -	**$ 316,467**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 16,232,085	$ 4,074,870	$ 15,022,185	**$ 35,329,140**

NEXTera Energy- TO44 Enhanced 2

13- Station 30a New Northport HVDC 1200MW Converter Station

Total: $ 448,740,863

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
13- Station 30a New Northport HVDC 1200MW Converter Station				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 1,491,747	$ 1,285,611	$ 729,878	$ 3,507,235
2. SUBSTATION FOUNDATIONS	$ -	$ -	$ -	$ -
3. SUBSTATION STRUCTURES	$ -	$ -	$ -	$ -
4. MAJOR EQUIPTMENT	$ 180,000,000	$ 60,000,000	$ 60,000,000	$ 300,000,000
5. LOW VOLTAGE & CONTROL CABLE	$ -	$ -	$ -	$ -
6. CONDUIT & CABLE TRENCH	$ 6,063,620	$ 3,718,325	$ 2,122,341	$ 11,904,286
7. GROUND GRID	$ 225,017	$ 162,661	$ 38,019	$ 425,697
8. CONTROL ENCLOSURE	$ 293,437	$ 234,750	$ 58,687	$ 586,875
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 16,714,737	$ 3,872,639	$ 10,404,395	$ 30,991,771
Turnkey cost (HVDC, GIS)	$ 180,000,000	$ 60,000,000	$ 60,000,000	$ 300,000,000
Non-Turnkey cost	$ 24,788,558	$ 9,273,986	$ 13,353,320	$ 47,415,864
SUBTOTAL (Costs):	$ 204,788,558	$ 69,273,986	$ 73,353,320	$ 347,415,864
CONTRACTOR MARK-UP (OH&P)	$ 15,261,940	$ 5,269,317	$ 6,003,598	$ 26,534,855
SUBTOTAL:	$ 220,050,498	$ 74,543,303	$ 79,356,918	$ 373,950,719
CONTINGENCY ON ENTIRE PROJECT	$ 44,010,100	$ 14,908,661	$ 15,871,384	$ 74,790,144
TOTAL:	$ 264,060,598	$ 89,451,964	$ 95,228,301	$ 448,740,863

Description of Work: Construct a new Northport 1200MW converter station, with a transition from 320kV DC to 138kV AC and tie into the new Northport 138kV GIS with three 138kV lines.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
13- Station 30a New Northport HVDC 1200MW Converter Station										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	5.0	ACRE	-	21,000.00	14,000.00	$ -	$ 105,000	$ 70,000	**$ 175,000**
1.2	Demolition	0	ACRE	-	-	-	$ -	$ -	$ -	**$ -**
1.3	New Access Road - 20'	2,200	SY	4.85	7.20	4.80	$ 10,670	$ 15,840	$ 10,560	**$ 37,070**
1.4	Strip and Dispose Top Soil	8,067	CY		24.50	10.50	$ -	$ 197,633	$ 84,700	**$ 282,333**
1.5	Site Grading- Excavation for Substation Pad	24,200	CY		9.00	6.00	$ -	$ 217,800	$ 145,200	**$ 363,000**
1.6	Site Grading- Excavation for Substation Pad-Hauling and disposal	13,068	CY		21.00	9.00	$ -	$ 274,428.00	$ 117,612.00	**$ 392,040.00**
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	19,602	CY		2.40	1.60	$ -	$ 47,045	$ 31,363	**$ 78,408**
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	13,068	CY	25.00	2.40	1.60	$ 326,700	$ 31,363	$ 20,909	**$ 378,972**
1.9	Install substation 8" pad base	12,100	SY	11.00	6.00	4.00	$ 133,100	$ 72,600	$ 48,400	**$ 254,100**
1.10	Site Surfacing - Aggregate 6" Thick	18,150	SY	16.50	4.50	3.00	$ 299,475	$ 81,675	$ 54,450	**$ 435,600**
1.11	7' Station Fence w/ Barbed Wire & Grounding	1,922	LF	13.85	13.85	6.92	$ 26,616	$ 26,616	$ 13,308	**$ 66,540**
1.12	25' Slide Gate & Grounding	2	EA	8,100.00	3,245.00	1,305.00	$ 16,200	$ 6,490	$ 2,610	**$ 25,300**
1.13	4' Pedestrian gate	2	EA	2,500.00	1,000.00	350.00	$ 5,000	$ 2,000	$ 700	**$ 7,700**
1.14	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	1	LS	625,766.40	161,280.00	106,545.60	$ 625,766	$ 161,280	$ 106,546	**$ 893,592**
1.15	Seeding	16,480	SF	1.50	1.50	1.00	$ 24,720	$ 24,720	$ 16,480	**$ 65,920**
1.16	Erosion Control-Silt fence install & remove	3,171	LF	2.41	3.16	0.72	$ 7,643	$ 10,021	$ 2,283	**$ 19,947**
1.17	Temporary fencing	2,114	LF	7.50	5.25	2.25	$ 15,857	$ 11,100	$ 4,757	**$ 31,713**
1.18	Substation entrance with asphalt		SY	19.50	26.00	19.50	$ -	$ -	$ -	**$ -**
1.19	Concrete curb		LF	26.00	27.30	11.70	$ -	$ -	$ -	**$ -**
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 1,491,747	$ 1,285,611	$ 729,878	$ 3,507,235
2. SUBSTATION FOUNDATIONS										
2.1	345kV, Lightning mast foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.3	345kV, H Frame -SHARED COLUMN (3 BAY)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.4	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.5	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.6	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.7	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.8	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.9	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.10	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.11	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.12	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.13	345kV, SSVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.14	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.15	345/138KV, Single-Phase 720/900/1200MVA Power Transformer with oil containmenet	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.16	345kV, Shunt Reactor with oil containment-150MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.17	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.18	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.19	345kV, Circuit Breaker (PASS)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.20	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.21	345kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.22	345/138 Kv, Control Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.23	345kV, GIS Enclosure-BLDG		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.24	HVDC VSC Converter Station -DC Converter Hall		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.25	HVDC VSC Converter Station -Control Building		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.26	HVDC VSC Converter Station -Cooler Bank		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.27	HVDC VSC Converter Station -Storage Buiilding		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.28	HVDC VSC Converter Station-Network AC harmonic filters		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.29	HVDC VSC Converter Station -AC PLC filter area		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.30	HVDC VSC Converter Station-Transformer area		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.31	HVDC VSC Converter Station- AIS equipment		CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.32	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.33	138kV, Dead-Tank Breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.34	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.35	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.36	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.37	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.38	138kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.39	138kV, H Frame H Frame -SHARED COLUMN (3 BAY)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.40	Steel grating and support beams-transformer moat	0	LB	2.73	1.17	0.50	$ -	$ -	$ -	$ -
TOTAL - 345KV FOUNDATION							$ -	$ -	$ -	$ -
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast foundation	0	EA	23,400.00	14,040.00	9,360.00	$ -	$ -	$ -	$ -
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	$ -
3.3	345kV, H Frame -SHARED COLUMN (3 BAY)	0	EA	64,350.00	38,610.00	25,740.00	$ -	$ -	$ -	$ -
3.4	345kV, Bus support-3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.5	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.6	345kV, Bus support-1 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.7	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.8	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.9	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.10	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.11	345kV, Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.12	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.13	345kV, SSVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.14	345kV, Disconnect Switch	0	EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	$ -
3.15	345kV, Surge arrester	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.16	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	$ -
3.17	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	$ -
3.18	138kV, Disconnect Switch	0	EA							
3.19	138kV, Cable sealing end	0	EA	4,066.40	1,443.00	962.00	$ -	$ -	$ -	$ -
3.20	138kV, Surge arrester	0	EA	4,066.40	1,443.00	962.00	$ -	$ -	$ -	$ -
3.21	138kV, H Frame H Frame -SHARED COLUMN (3 BAY)	0	EA	45,045.00	27,027.00	18,018.00	$ -	$ -	$ -	$ -
3.22	AL. Bus Tubing, 5" SCH 80		LF	25.00	184.94	123.29	$ -	$ -	$ -	$ -
3.23	AL. Bus fittings		LS	36,300.00	36,300.00	18,150.00	$ -	$ -	$ -	$ -
3.24	HVDC VSC Converter Station -DC Equipment stands		EA				$ -	$ -	$ -	$ -
3.25	HVDC VSC Converter Station-AC Switch Yard Equipment stands		EA				$ -	$ -	$ -	$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ -	$ -	$ -	$ -
4. MAJOR EQUIPTMENT										
4.1	345Kv, GIS indoor	0	EA				$ -	$ -	$ -	**$** -
4.2	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	**$** -
4.3	345kV, GIS- Cable sealing end	0	EA	27,144.00	5,460.00	2,340.00	$ -	$ -	$ -	**$** -
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	**$** -
4.5	345kV, SSVT	0	EA				$ -	$ -	$ -	**$** -
4.6	345kV, Disconnect Switch	0	EA	57,720.00	34,632.00	23,088.00	$ -	$ -	$ -	**$** -
4.7	345/138KV, Single-Phase 720/900/1200MVA Power Transformer with oil containmenet	0	EA	9,980,000.00	3,520.00	880.00	$ -	$ -	$ -	**$** -
4.8	Transport & Testing- Transformer	0	EA		1,170,400.00	501,600.00	$ -	$ -	$ -	**$** -
4.9	345kV, Shunt Reactor with oil containment-150MVAR	0	EA	2,629,516.50	3,520.00	880.00	$ -	$ -	$ -	**$** -
4.10	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$** -
4.11	Transport & Testing- Shunt Reactor	0	EA		339,150.00	145,350.00	$ -	$ -	$ -	**$** -
4.12	345kV, Phase Angle Regulator	0	EA	16,120,693.00	3,520.00	880.00	$ -	$ -	$ -	**$** -
4.13	Transport & Testing- Phase Angle Regulating Transformer, 345kV	0	EA		715,400.00	306,600.00	$ -	$ -	$ -	**$** -
4.14	345kV, Circuit Breaker (PASS)	0	EA		57,239.00	24,531.00	$ -	$ -	$ -	**$** -
4.15	345kV, Circuit Breaker (GIS), outdoor rated	0	EA	1,341,857.17	805,114.30	536,742.87	$ -	$ -	$ -	**$** -
4.16	345kV, surge Arrester	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$** -
4.17	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$** -
4.18	138kV, Phase Angle Regulator	0	EA	11,902,178.00	3,520.00	880.00	$ -	$ -	$ -	**$** -
4.19	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		701,400.00	300,600.00	$ -	$ -	$ -	**$** -
4.20	138kV, Dead-Tank Breaker	0	EA	183,000.00	13,559.00	5,811.00	$ -	$ -	$ -	**$** -
4.21	138kV, Disconnect Switch	0	EA				$ -	$ -	$ -	**$** -
4.22	138kV, Cable sealing end	0	EA	11,600.00	5,460.00	2,340.00	$ -	$ -	$ -	**$** -
4.23	138kV, Surge arrester	0	EA	4,446.00	4,200.00	1,800.00	$ -	$ -	$ -	**$** -
4.24	Station service transformers- 120/208v-250VA	0	EA	260,000.00	45,500.00	19,500.00	$ -	$ -	$ -	**$** -
4.25	HVDC 1200MW Monopoles	1.0	EA	180,000,000.00	60,000,000.00	60,000,000.00	$ 180,000,000.00	$ 60,000,000.00	$ 60,000,000.00	**$ 300,000,000**
4.26	HVDC VSC Converter Station -DC transducer		EA				$ -	$ -	$ -	**$** -
4.27	HVDC VSC Converter Station -Converter phase reactor		EA				$ -	$ -	$ -	**$** -
4.28	HVDC VSC Converter Station -Cooling fans		EA				$ -	$ -	$ -	**$** -
4.29	HVDC VSC Converter Station- Converter Transformer		EA				$ -	$ -	$ -	**$** -
4.30	HVDC VSC Converter Station -Converter enclosure		EA				$ -	$ -	$ -	**$** -
4.31	HVDC VSC Converter Station -Control enclosure		EA				$ -	$ -	$ -	**$** -
4.32	HVDC VSC Converter Station -Storage building									
4.32	345kV Gas-Insulated Bus Conductor (Ourdoor)		LF	550.00	275.00	82.50	$ -	$ -	$ -	-
4.33	345kV Gas-Insulated Bus Conductor-elbow (Ourdoor)		EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	-
4.28	Transport & Testing- GIL		LS		-	-	$ -	$ -	$ -	**$** -
TOTAL - MAJOR EQUIPMENT							$ 180,000,000	$ 60,000,000	$ 60,000,000	**$ 300,000,000**
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables		LF	5.30	1.43	0.29	$ -	$ -	$ -	**$** -
5.2			LF	5.30	1.43	0.29	$ -	$ -	$ -	**$** -
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ -	$ -	$ -	**$** -
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$** -
6.2	Conduit, PVC, 4", SCH 40	0	LF	11.15	10.80	5.40	$ -	$ -	$ -	**$** -
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$** -
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$** -
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$** -
6.6	Cable Trench		LF	266.50	53.04	13.26	$ -	$ -	$ -	**$** -
6.8	138kV UG- Conduit	7,020	LF	266.73	202.15	100.00	$ 1,872,451	$ 1,419,068	$ 702,034	**$ 3,993,554**
6.9	138kV UG- Cable	22,113	LF	145.00	87.00	58.00	$ 3,206,385	$ 1,923,831	$ 1,282,554	**$ 6,412,770**
6.10	138kV UG- Termination	30	EA	27,805.00	9,846.48	2,813.28	$ 834,150	$ 295,394	$ 84,398	**$ 1,213,943**
6.13	Fiber Optic Cable	7,371	LF	7.40	3.33	2.22	$ 54,523	$ 24,550	$ 16,367	**$ 95,440**
6.14	Ground Continuity Conductor	7,371	LF	13.04	7.53	5.02	$ 96,110	$ 55,482	$ 36,988	**$ 188,580**
TOTAL - CONDUIT & CABLE TRENCH							$ 6,063,620	$ 3,718,325	$ 2,122,341	**$ 11,904,286**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	23,100	LF	2.09	3.42	1.46	$ 48,302	$ 78,893	$ 33,811	**$ 161,007**
7.2	Caweld, DSA, 4/0 , T, CROSS	612	EA	165.00	75.00		$ 100,980	$ 45,900	$ -	**$ 146,880**
7.3	Ground Rod, 3/4" x 15'	561	EA	135.00	67.50	7.50	$ 75,735	$ 37,868	$ 4,208	**$ 117,810**
TOTAL - GROUND GRID							$ 225,017	$ 162,661	$ 38,019	**$ 425,697**
8. CONTROL ENCLOSURE										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.1	345/138 Kv, Control Enclosure-BLDG with generator pad	0	EA	964,411.37	675,087.96	289,323.41	$ -	$ -	$ -	**$ -**
8.2	345kV, GIS Enclosure-BLDG	0	EA	2,211,495.05	1,548,046.53	663,448.51	$ -	$ -	$ -	**$ -**
8.3	Primary Line Relays (87L): SEL-411L	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.4	Backup Line Relays (87L): GE L90	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.5	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Annunci	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.6	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annnunciator	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.7	HMI Panel	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.8	Primary Line Relays (87L): SEL-411L	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.9	Backup Line Relays (87L): GE L90	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.10	Primary Bus Differential Relays: SEL-487B	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.11	Backup Bus Differential Relays: GE B90	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.14	125VDC Battery System		LS	25,000.00	22,750.00	9,750.00	$ -	$ -	$ -	**$ -**
8.15	Control house AC Panel		EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.16	Control House DC Panel		EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.17	Generator		EA	130,000.00	72,800.00	31,200.00	$ -	$ -	$ -	**$ -**
TOTAL - CONTROL ENCLOSURE							$ 293,437	$ 234,750	$ 58,687	**$ 586,875**
13- Station 30a New Northport HVDC 1200MW Converter Station							$ 188,073,821	$ 65,401,347	$ 62,948,925	$ 316,424,093
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		292,259.53	125,254.08	$ -	$ 292,260	$ 125,254	**$ 417,514**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		164,240.93		$ -	$ 164,241	$ -	**$ 164,241**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		656,963.72		$ -	$ 656,964	$ -	**$ 656,964**
9.4	Utility PM and Project Oversite	1	LS		164,240.93		$ -	$ 164,241	$ -	**$ 164,241**
9.5	Site Accommodation, Facilities, Storage	1	LS	164,240.93			$ 164,241	$ -	$ -	**$ 164,241**
	Engineering									
9.6	Design Engineering	1.00	LS		1,313,927.44		$ -	$ 1,313,927	$ -	**$ 1,313,927**
9.7	LiDAR /GPR	1.00	LS		-		$ -	$ -	$ -	**$ -**
9.8	Geotech	5.00	EA		2,730.00	1,820.00	$ -	$ 13,650	$ 9,100	**$ 22,750**
9.9	Surveying/Staking	1.00	Site		114,968.65		$ -	$ 114,969	$ -	**$ 114,969**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		615,903.49		$ -	$ 615,903	$ -	**$ 615,903**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		6,546.96		$ -	$ 6,547	$ -	**$ 6,547**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		164,240.93		$ -	$ 164,241	$ -	**$ 164,241**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		49,272.28		$ -	$ 49,272	$ -	**$ 49,272**
9.15	Laydown Lease	-	LS		-		$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	1.00	LS		-	1,271,884.00	$ -	$ -	$ 1,271,884	**$ 1,271,884**
9.17	Legal Fees (Real estate)	1.00	LS		-	38,156.52	$ -	$ -	$ 38,157	**$ 38,157**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 8,960,000	$ -	$ -	$ 8,960,000	**$ 8,960,000**
9.20	Sales Tax on Materials	8.80%	LS	188,073,820.71			$ 16,550,496	$ -	$ -	**$ 16,550,496**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		316,424.09		$ -	$ 316,424	$ -	**$ 316,424**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 16,714,737	$ 3,872,639	$ 10,404,395	**$ 30,991,771**

NEXTera Energy- TO44 Enhanced 2

14 - Northport 138kV GIS Substation

Total: $ 40,126,906

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
14 - Northport 138kV GIS Substation				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 423,784	$ 299,491	$ 171,133	$ 894,409
2. SUBSTATION FOUNDATIONS	$ 344,904	$ 394,176	$ 246,360	$ 985,439
3. SUBSTATION STRUCTURES	$ -	$ -	$ -	$ -
4. MAJOR EQUIPTMENT	$ 7,165,000	$ 4,299,000	$ 2,866,000	$ 14,330,000
5. LOW VOLTAGE & CONTROL CABLE	$ -	$ -	$ -	$ -
6. CONDUIT & CABLE TRENCH	$ 2,658,505	$ 1,489,519	$ 795,356	$ 4,943,380
7. GROUND GRID	$ 31,301	$ 22,409	$ 5,136	$ 58,846
8. CONTROL ENCLOSURE	$ 1,925,705	$ 1,502,309	$ 534,896	$ 3,962,909
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 1,212,779	$ 2,378,384	$ 1,029,353	$ 4,620,516
Turnkey cost (HVDC, GIS)	$ 7,165,000	$ 4,299,000	$ 2,866,000	$ 14,330,000
Non-Turnkey cost	$ 6,596,977	$ 6,086,288	$ 2,782,234	$ 15,465,499
SUBTOTAL (Costs):	$ 13,761,977	$ 10,385,288	$ 5,648,234	$ 29,795,499
CONTRACTOR MARK-UP (OH&P)	$ 1,617,356	$ 1,353,472	$ 672,762	$ 3,643,590
SUBTOTAL:	$ 15,379,333	$ 11,738,760	$ 6,320,996	$ 33,439,088
CONTINGENCY ON ENTIRE PROJECT	$ 3,075,867	$ 2,347,752	$ 1,264,199	$ 6,687,818
TOTAL:	$ 18,455,200	$ 14,086,511	$ 7,585,195	$ 40,126,906

Description of Work: Construct a new Northport 138kV GIS substation adjecent to the existing Northport 138kV substation. Tie the existing Pilgrim-Northport 138kV lines, the new 138kV lines to Northport HVDC station, and the existing Northport 138kV substation into the 138kV breaker-and-a-half bus configuration.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
14 - Northport 138kV GIS Substation										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	1.0	ACRE	-	21,000.00	14,000.00	$ -	$ 20,549	$ 13,699	**$ 34,249**
1.2	Demolition	0	ACRE	-	-	-	$ -	$ -	$ -	**$ -**
1.3	New Access Road - 20'	1,105	SY	4.85	7.20	4.80	$ 5,361	$ 7,958	$ 5,306	**$ 18,625**
1.4	Strip and Dispose Top Soil	1,579	CY		24.50	10.50	$ -	$ 38,678	$ 16,576	**$ 55,255**
1.5	Site Grading- Excavation for Substation Pad	4,736	CY		9.00	6.00	$ -	$ 42,625	$ 28,417	**$ 71,042**
1.6	Site Grading- Excavation for Substation Pad-Hauling and disposal	2,558	CY		21.00	9.00	$ -	$ 53,707.50	$ 23,017.50	**$ 76,725.00**
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	3,836	CY		2.40	1.60	$ -	$ 9,207	$ 6,138	**$ 15,345**
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	2,558	CY	25.00	2.40	1.60	$ 63,938	$ 6,138	$ 4,092	**$ 74,168**
1.9	Install substation 8" pad base	2,368	SY	11.00	6.00	4.00	$ 26,049	$ 14,208	$ 9,472	**$ 49,729**
1.10	Site Surfacing - Aggregate 6" Thick	3,552	SY	16.50	4.50	3.00	$ 58,609	$ 15,984	$ 10,656	**$ 85,250**
1.11	7' Station Fence w/ Barbed Wire & Grounding	642	LF	13.85	13.85	6.92	$ 8,890	$ 8,890	$ 4,445	**$ 22,226**
1.12	25' Slide Gate & Grounding	2	EA	8,100.00	3,245.00	1,305.00	$ 16,200	$ 6,490	$ 2,610	**$ 25,300**
1.13	4' Pedestrian gate	2	EA	2,500.00	1,000.00	350.00	$ 5,000	$ 2,000	$ 700	**$ 7,700**
1.14	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	1	LS	223,488.00	57,600.00	38,052.00	$ 223,488	$ 57,600	$ 38,052	**$ 319,140**
1.15	Seeding	5,600	SF	1.50	1.50	1.00	$ 8,400	$ 8,400	$ 5,600	**$ 22,400**
1.16	Erosion Control-Silt fence install & remove	1,059	LF	2.41	3.16	0.72	$ 2,553	$ 3,347	$ 763	**$ 6,663**
1.17	Temporary fencing	706	LF	7.50	5.25	2.25	$ 5,297	$ 3,708	$ 1,589	**$ 10,593**
1.18	Substation entrance with asphalt		SY	19.50	26.00	19.50	$ -	$ -	$ -	**$ -**
1.19	Concrete curb		LF	26.00	27.30	11.70	$ -	$ -	$ -	**$ -**
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 423,784	$ 299,491	$ 171,133	$ 894,409
2. SUBSTATION FOUNDATIONS										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2.1	345kV, Lightning mast foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.3	345kV, H Frame -SHARED COLUMN (3 BAY)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.4	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.5	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.6	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.7	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.8	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.9	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.10	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.11	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.12	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.13	345kV, SSVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.14	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.15	345/138KV, Single-Phase 720/900/1200MVA Power Transformer with oil containmenet	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.16	345kV, Shunt Reactor with oil containment-150MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.17	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.18	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.19	345kV, Circuit Breaker (PASS)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.20	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.21	345kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.22	345/138 Kv, Control Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.23	345kV, GIS Enclosure-BLDG	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.24	138kV, GIS Enclosure-BLDG	490	CY	703.89	804.44	502.78	$ 344,904	$ 394,176	$ 246,360	**$ 985,439**
2.25	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.26	138kV, Dead-Tank Breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.27	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.28	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.29	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.30	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.31	138kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.32	138kV, H Frame H Frame -SHARED COLUMN (3 BAY)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.33	Steel grating and support beams-transformer moat	0	LB	2.73	1.17	0.50	$ -	$ -	$ -	$ -
TOTAL - 345KV FOUNDATION							$ 344,904	$ 394,176	$ 246,360	**$ 985,439**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast foundation	0	EA	23,400.00	14,040.00	9,360.00	$ -	$ -	$ -	$ -
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	$ -
3.3	345kV, H Frame -SHARED COLUMN (3 BAY)	0	EA	64,350.00	38,610.00	25,740.00	$ -	$ -	$ -	$ -
3.4	345kV, Bus support-3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.5	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.6	345kV, Bus support-1 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.7	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.8	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.9	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.10	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.11	345kV, Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.12	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.13	345kV, SSVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.14	345kV, Disconnect Switch	0	EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	$ -
3.15	345kV, Surge arrester	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.16	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	$ -
3.17	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	$ -
3.18	138kV, Disconnect Switch	0	EA							
3.19	138kV, Cable sealing end	0	EA	4,066.40	1,443.00	962.00	$ -	$ -	$ -	$ -
3.20	138kV, Surge arrester	0	EA	4,066.40	1,443.00	962.00	$ -	$ -	$ -	$ -
3.21	138kV, H Frame H Frame -SHARED COLUMN (3 BAY)	0	EA	45,045.00	27,027.00	18,018.00	$ -	$ -	$ -	$ -
3.22	AL. Bus Tubing, 5" SCH 80		LF	25.00	184.94	123.29	$ -	$ -	$ -	$ -
3.23	AL. Bus fittings		LS	36,300.00	36,300.00	18,150.00	$ -	$ -	$ -	$ -
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ -	$ -	$ -	$ -
4. MAJOR EQUIPTMENT										
4.1	345Kv, GIS indoor	0	EA				$ -	$ -	$ -	$ -
4.2	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	$ -
4.3	345kV, GIS- Cable sealing end	0	EA				$ -	$ -	$ -	$ -
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.5	345kV, SSVT	0	EA				$ -	$ -	$ -	$ -
4.6	345kV, Disconnect Switch	0	EA	57,720.00	34,632.00	23,088.00	$ -	$ -	$ -	$ -
4.7	345/138KV, Single-Phase 720/900/1200MVA Power Transformer with oil containmenet	0	EA	9,980,000.00	3,520.00	880.00	$ -	$ -	$ -	$ -
4.8	Transport & Testing- Transformer	0	EA		1,170,400.00	501,600.00	$ -	$ -	$ -	$ -
4.9	345kV, Shunt Reactor with oil containment-150MVAR	0	EA	2,629,516.50	3,520.00	880.00	$ -	$ -	$ -	$ -
4.10	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	$ -
4.11	Transport & Testing- Shunt Reactor	0	EA		339,150.00	145,350.00	$ -	$ -	$ -	$ -
4.12	345kV, Phase Angle Regulator	0	EA	16,120,693.00	3,520.00	880.00	$ -	$ -	$ -	$ -
4.13	Transport & Testing- Phase Angle Regulating Transformer, 345kV	0	EA		715,400.00	306,600.00	$ -	$ -	$ -	$ -
4.14	345kV, Circuit Breaker (PASS)	0	EA		57,239.00	24,531.00	$ -	$ -	$ -	$ -
4.15	345kV, Circuit Breaker (GIS), outdoor rated	0	EA	1,341,857.17	805,114.30	536,742.87	$ -	$ -	$ -	$ -
4.16	345kV, surge Arrester	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	$ -
4.17	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	$ -
4.18	138Kv, GIS indoor	15	EA	477,666.67	286,600.00	191,066.67	$ 7,165,000	$ 4,299,000	$ 2,866,000	**$ 14,330,000**
4.19	138kV, Phase Angle Regulator	0	EA	11,902,178.00	3,520.00	880.00	$ -	$ -	$ -	$ -
4.20	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		701,400.00	300,600.00	$ -	$ -	$ -	$ -
4.21	138kV, Dead-Tank Breaker	0	EA	183,000.00	13,559.00	5,811.00	$ -	$ -	$ -	$ -
4.22	138kV, Disconnect Switch	0	EA				$ -	$ -	$ -	$ -
4.23	138kV, Cable sealing end	0	EA	11,600.00	5,460.00	2,340.00	$ -	$ -	$ -	$ -
4.24	138kV, Surge arrester	0	EA	4,446.00	4,200.00	1,800.00	$ -	$ -	$ -	$ -
4.25	Station service transformers- 120/208v-250VA	0	EA	260,000.00	45,500.00	19,500.00	$ -	$ -	$ -	$ -
4.26	345kV Gas-Insulated Bus Conductor (Ourdoor)		LF	550.00	275.00	82.50	$ -	$ -	$ -	-
4.27	345kV Gas-Insulated Bus Conductor-elbow (Ourdoor)		EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	-
4.28	Transport & Testing- GIL		LS		-	-	$ -	$ -	$ -	$ -
TOTAL - MAJOR EQUIPMENT							$ 7,165,000	$ 4,299,000	$ 2,866,000	**$ 14,330,000**
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables		LF	5.30	1.43	0.29	$ -	$ -	$ -	$ -
5.2			LF	5.30	1.43	0.29	$ -	$ -	$ -	$ -
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ -	$ -	$ -	$ -
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	$ -
6.2	Conduit, PVC, 4", SCH 40	0	LF	11.15	10.80	5.40	$ -	$ -	$ -	$ -
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	$ -
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	$ -
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	$ -
6.6	Cable Trench		LF	266.50	53.04	13.26	$ -	$ -	$ -	$ -
6.8	138kV UG- Conduit	2,449	LF	266.73	202.15	100.00	$ 653,224	$ 495,057	$ 244,912	**$ 1,393,193**
6.9	138kV UG- Cable	7,714	LF	145.00	87.00	58.00	$ 1,118,581	$ 671,148	$ 447,432	**$ 2,237,162**
6.10	138kV UG- Termination	30	EA	27,805.00	9,846.48	2,813.28	$ 834,150	$ 295,394	$ 84,398	**$ 1,213,943**
6.13	Fiber Optic Cable	2,571	LF	7.40	3.33	2.22	$ 19,021	$ 8,564	$ 5,710	**$ 33,295**
6.14	Ground Continuity Conductor	2,571	LF	13.04	7.53	5.02	$ 33,529	$ 19,355	$ 12,904	**$ 65,788**
TOTAL - CONDUIT & CABLE TRENCH							$ 2,658,505	$ 1,489,519	$ 795,356	**$ 4,943,380**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	3,140	LF	2.09	3.42	1.46	$ 6,566	$ 10,724	$ 4,596	**$ 21,886**
7.2	Caweld, DSA, 4/0 , T, CROSS	91	EA	165.00	75.00		$ 15,015	$ 6,825	$ -	**$ 21,840**
7.3	Ground Rod, 3/4" x 15'	72	EA	135.00	67.50	7.50	$ 9,720	$ 4,860	$ 540	**$ 15,120**
TOTAL - GROUND GRID							$ 31,301	$ 22,409	$ 5,136	**$ 58,846**
8. CONTROL ENCLOSURE										
8.1	345/138 Kv, Control Enclosure-BLDG with generator pad	0	EA				$ -	$ -	$ -	$ -
8.2	345kV, GIS Enclosure-BLDG	1	EA	878,048.71	614,634.10	263,414.61	$ 878,049	$ 614,634	$ 263,415	**$ 1,756,097**
8.3	Primary Line Relays (87L): SEL-411L	9	EA	21,328.12	17,062.49	4,265.62	$ 191,953	$ 153,562	$ 38,391	**$ 383,906**
8.4	Backup Line Relays (87L): GE L90	9	EA	21,328.12	17,062.49	4,265.62	$ 191,953	$ 153,562	$ 38,391	**$ 383,906**
8.5	Primary Bay Control: SEL-451	5	EA	21,328.12	17,062.49	4,265.62	$ 106,641	$ 85,312	$ 21,328	**$ 213,281**
8.6	Backup Bay Control: SEL-451	5	EA	21,328.12	17,062.49	4,265.62	$ 106,641	$ 85,312	$ 21,328	**$ 213,281**
8.7	Primary Bus Differential Relays: SEL-487B	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.8	Backup Bus Differential Relays: GE B90	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.9	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Annunci	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.10	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annnunciator	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.11	HMI Panel	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.14	125VDC Battery System	1	LS	25,000.00	22,750.00	9,750.00	$ 25,000	$ 22,750	$ 9,750	**$ 57,500**
8.15	Control house AC Panel	1	EA	65,000.00	91,000.00	39,000.00	$ 65,000	$ 91,000	$ 39,000	**$ 195,000**
8.16	Control House DC Panel	1	EA	65,000.00	91,000.00	39,000.00	$ 65,000	$ 91,000	$ 39,000	**$ 195,000**
8.17	Generator	1	EA	130,000.00	72,800.00	31,200.00	$ 130,000	$ 72,800	$ 31,200	**$ 234,000**
TOTAL - CONTROL ENCLOSURE							$ 1,925,705	$ 1,502,309	$ 534,896	**$ 3,962,909**
14 - Northport 138kV GIS Substation							$ 12,549,198	$ 8,006,904	$ 4,618,880	$ 25,174,983

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		191,127.46	81,911.77	$ -	$ 191,127	$ 81,912	**$ 273,039**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		108,449.83		$ -	$ 108,450	$ -	**$ 108,450**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		433,799.31		$ -	$ 433,799	$ -	**$ 433,799**
9.4	Utility PM and Project Oversite	1	LS		108,449.83		$ -	$ 108,450	$ -	**$ 108,450**
9.5	Site Accommodation, Facilities, Storage	1	LS	108,449.83			$ 108,450	$ -	$ -	**$ 108,450**
	Engineering									
9.6	Design Engineering	1.00	LS		867,598.62		$ -	$ 867,599	$ -	**$ 867,599**
9.7	LiDAR /GPR	1.00	LS		-		$ -	$ -	$ -	**$ -**
9.8	Geotech	5.00	EA		2,730.00	1,820.00	$ -	$ 13,650	$ 9,100	**$ 22,750**
9.9	Surveying/Staking	1.00	Site		75,914.88		$ -	$ 75,915	$ -	**$ 75,915**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		406,686.85		$ -	$ 406,687	$ -	**$ 406,687**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		6,546.96		$ -	$ 6,547	$ -	**$ 6,547**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		108,449.83		$ -	$ 108,450	$ -	**$ 108,450**
9.13	Environmental-special studies/investigation		LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		32,534.95		$ -	$ 32,535	$ -	**$ 32,535**
9.15	Laydown Lease		LS		-		$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	1.00	LS		-	134,312.00	$ -	$ -	$ 134,312	**$ 134,312**
9.17	Legal Fees (Real estate)	1.00	LS		-	4,029.36	$ -	$ -	$ 4,029	**$ 4,029**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 800,000	$ -	$ -	$ 800,000	**$ 800,000**
9.20	Sales Tax on Materials	8.80%	LS	12,549,198.06			$ 1,104,329	$ -	$ -	**$ 1,104,329**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		25,174.98		$ -	$ 25,175	$ -	**$ 25,175**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 1,212,779	$ 2,378,384	$ 1,029,353	**$ 4,620,516**

NEXTera Energy- TO44 Enhanced 2

15.Pilgrim 138kV Substation Upgrades

Total: $ 3,731,393

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
15.Pilgrim 138kV Substation Upgrades				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 112,392	$ 133,871	$ 75,747	$ 322,010
2. SUBSTATION FOUNDATIONS	$ 61,984	$ 70,839	$ 44,274	$ 177,097
3. SUBSTATION STRUCTURES	$ 78,293	$ 94,861	$ 58,896	$ 232,051
4. MAJOR EQUIPTMENT	$ 468,798	$ 116,038	$ 51,792	$ 636,628
5. LOW VOLTAGE & CONTROL CABLE	$ 54,035	$ 14,612	$ 2,922	$ 71,568
6. CONDUIT & CABLE TRENCH	$ 86,695	$ 32,700	$ 13,035	$ 132,430
7. GROUND GRID	$ 2,925	$ 2,335	$ 610	$ 5,871
8. CONTROL ENCLOSURE	$ 213,281	$ 170,625	$ 42,656	$ 426,562
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 114,942	$ 424,477	$ 91,527	$ 630,946
SUBTOTAL (Costs):	$ 1,193,346	$ 1,060,359	$ 381,460	$ 2,635,164
CONTRACTOR MARK-UP (OH&P)	$ 214,802	$ 190,865	$ 68,663	$ 474,330
SUBTOTAL:	$ 1,408,148	$ 1,251,223	$ 450,123	$ 3,109,494
CONTINGENCY ON ENTIRE PROJECT	$ 281,630	$ 250,245	$ 90,025	$ 621,899
TOTAL:	$ 1,689,777	$ 1,501,468	$ 540,148	$ 3,731,393

Description of Work: Add 2 terminals to Pilgrim 138kV substation to accommodate the new transmission lines

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
10.Shore Road 138kV Substation Upgrades										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	0.5	ACRE	-	10,800.00	7,200.00	$ -	$ 5,400	$ 3,600	**$ 9,000**
1.2	Demolition	1	LS		12,000.00	8,000.00	$ -	$ 12,000	$ 8,000	**$ 20,000**
1.3	New Access Road - 20'	711	SY	4.85	7.20	4.80	$ 3,449	$ 5,120	$ 3,413	**$ 11,982**
1.4	Strip and Dispose Top Soil	807	CY		24.50	10.50	$ -	$ 19,763	$ 8,470	**$ 28,233**
1.5	Site Grading- Excavation for Substation Pad	2,420	CY		9.00	6.00	$ -	$ 21,780	$ 14,520	**$ 36,300**
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	1,307	CY		21.00	9.00	$ -	$ 27,442.80	$ 11,761.20	**$ 39,204.00**
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	1,960	CY		2.40	1.60	$ -	$ 4,704	$ 3,136	**$ 7,841**
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	1,307	CY	25.00	2.40	1.60	$ 32,670	$ 3,136	$ 2,091	**$ 37,897**
1.9	Blasting		EA				$ -	$ -	$ -	**$ -**
1.10	Install substation 8" pad base	2,420	SY	11.00	6.00	4.00	$ 26,620	$ 14,520	$ 9,680	**$ 50,820**
1.11	Site Surfacing - Aggregate 6" Thick	2,420	SY	16.50	4.50	3.00	$ 39,930	$ 10,890	$ 7,260	**$ 58,080**
1.12	7' Station Fence w/ Barbed Wire & Grounding	325	LF	13.85	13.85	6.92	$ 4,501	$ 4,501	$ 2,250	**$ 11,252**
1.13	20' Slide Gate & Grounding	0	EA	8,100.00	3,245.00	1,305.00	$ -	$ -	$ -	**$ -**
1.14	4' Pedestrian gate	0	EA	2,500.00	1,000.00	350.00	$ -	$ -	$ -	**$ -**
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	0	LS	109,761.60	-	-	$ -	$ -	$ -	**$ -**
1.16	Seeding	0	SF	1.50	1.50	1.00	$ -	$ -	$ -	**$ -**
1.17	Erosion Control-Silt fence install & remove	650	LF	2.41	3.16	0.72	$ 1,567	$ 2,054	$ 468	**$ 4,089**
1.18	Temporary fencing	488	LF	7.50	5.25	2.25	$ 3,656	$ 2,559	$ 1,097	**$ 7,313**
1.19	Substation entrance with asphalt	0	SY	19.50	26.00	19.50	$ -	$ -	$ -	**$ -**
1.20	Concrete curb	0	LF	26.00	27.30	11.70	$ -	$ -	$ -	**$ -**
1.21	Retaining Wall	0	LF	156.00	117.00	117.00	$ -	$ -	$ -	**$ -**
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 112,392	$ 133,871	$ 75,747	**$ 322,010**
2. SUBSTATION FOUNDATIONS										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.6	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.12	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Shunt Reactor with oil containment-250MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.15	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Circuit Breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345Kv, GIS Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.20	345kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.21	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.22	138kV, Shunt Reactor with oil containment-250MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.23	138kV, Circuit Breaker,	9	CY	703.89	804.44	502.78	$ 6,265	$ 7,160	$ 4,475	**$ 17,899**
2.24	138kV, Bus support-3 Ph, low	11	CY	703.89	804.44	502.78	$ 7,532	$ 8,608	$ 5,380	**$ 21,519**
2.25	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.26	138kV, Disconnect Switch	24	CY	703.89	804.44	502.78	$ 17,062	$ 19,500	$ 12,187	**$ 48,749**
2.27	138kV, Cable sealing end	12	CY	703.89	804.44	502.78	$ 8,531	$ 9,750	$ 6,094	**$ 24,375**
2.28	138kV, Surge arrester	32	CY	703.89	804.44	502.78	$ 22,595	$ 25,823	$ 16,139	**$ 64,556**
2.29	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.31	Firewall Foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.32	Precast Firewall for transformer, PARs, reactors		SF	25.00	15.00	10.00	$ -	$ -	$ -	**$ -**
2.33	Precast Concrete Piles-12"X80'		EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.34	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.35	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
TOTAL - 345KV FOUNDATION							$ 61,984	$ 70,839	$ 44,274	**$ 177,097**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast		EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'		EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, Bus support-3 Ph		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.4	345kV, Bus support-3 Ph, low		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.6	345kV, GIS air terminal		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.7	345kV, GIS support-1 Ph		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.8	345kV, GIS support-3 Ph		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.11	345kV, CCVT		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch		EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	**$ -**
3.13	138kV, Bus support-3 Ph, low	2	EA	4,173.00	2,879.76	1,919.84	$ 8,346	$ 5,760	$ 3,840	**$ 17,945**
3.14	138kV, Bus support-1 Ph, low		EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.15	138kV, Disconnect Switch	4	EA	4,896.84	4,896.84	2,448.42	$ 19,587	$ 19,587	$ 9,794	**$ 48,968**
3.16	138kV, Cable sealing end	2	EA	4,810.00	2,886.00	1,924.00	$ 9,620	$ 5,772	$ 3,848	**$ 19,240**
3.18	138kV, Surge arrester	6	EA	4,810.00	2,886.00	1,924.00	$ 28,860	$ 17,316	$ 11,544	**$ 57,720**
3.17	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.18	138kV, A Frame 50'		EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.19	345kV Gas-Insulated Bus Conductor		LF	550.00	275.00	82.50	$ -	$ -	$ -	**$ -**
3.20	345kV Gas-Insulated Bus Conductor-elbow		EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	**$ -**
3.21	AL. Bus Tubing, 5" SCH 80	216	LF	25.00	184.94	123.29	$ 5,400	$ 39,947	$ 26,631	**$ 71,978**
3.22	AL. Bus fittings	1	LS	6,480.00	6,480.00	3,240.00	$ 6,480	$ 6,480	$ 3,240	**$ 16,200**
3.23	Steel grating and support beams-transformer moat	0	LB	2.73	1.17	0.50	$ -	$ -	$ -	**$ -**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 78,293	$ 94,861	$ 58,896	**$ 232,051**
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	**$ -**
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.3	345kV, Cable sealing end	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.4	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch		EA				$ -	$ -	$ -	**$ -**
4.6	345/138KV, Power Transformer with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.7	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.8	345kV, Shunt Reactor with oil containment-250MVAR		EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.9	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.10	Transport & Testing- Shunt Reactor		EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.12	345kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.13	345kV, Circuit Breaker		EA		57,239.00	24,531.00	$ -	$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	**$ -**
4.15	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.16	345kV, surge Arrester	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.17	138kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.18	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.19	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.20	138kV, Shunt Reactor with oil containment-250MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.21	Transport & Testing- Shunt Reactor	0	EA		204,400.00	132,600.00	$ -	$ -	$ -	**$ -**
4.22	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.23	138kV, Circuit Breaker,	2	EA	112,000.00	13,559.00	5,811.00	$ 224,000	$ 27,118	$ 11,622	**$ 262,740**
4.24	138kV, Disconnect Switch	4	EA	37,700.00	11,875.50	5,089.50	$ 150,800	$ 47,502	$ 20,358	**$ 218,660**
4.25	138kV, Cable sealing end	6	EA	11,600.00	5,460.00	2,340.00	$ 69,600	$ 32,760	$ 14,040	**$ 116,400**
4.26	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
4.27	138kV, Surge arrester	6	EA	4,066.40	1,443.00	962.00	$ 24,398	$ 8,658	$ 5,772	**$ 38,828**
4.28	Station service transformers- 120/208v-250VA	0	EA		45,500.00	19,500.00	$ -	$ -	$ -	**$ -**
TOTAL - MAJOR EQUIPMENT							$ 468,798	$ 116,038	$ 51,792	$ 636,628
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	10,200	LF	5.30	1.43	0.29	$ 54,035	$ 14,612	$ 2,922	**$ 71,568**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 54,035	$ 14,612	$ 2,922	$ 71,568
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	1,800	LF	11.15	10.80	5.40	$ 20,070	$ 19,440	$ 9,720	**$ 49,230**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench	250	LF	266.50	53.04	13.26	$ 66,625	$ 13,260	$ 3,315	**$ 83,200**
6.7							$ -	$ -	$ -	**$ -**
6.8	138kV UG- Conduit	0	LF	266.73	202.15	100.00	$ -	$ -	$ -	**$ -**
6.9	138kV UG- Cable	0	LF	145.00	87.00	58.00	$ -	$ -	$ -	**$ -**
6.10	138kV UG- Termination	0	EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.11	345kV UG- Conduit	0	LF	266.73	202.15	100.00	$ -	$ -	$ -	**$ -**
6.12	345kV UG- Cable	0	LF	167.00	100.20	66.80	$ -	$ -	$ -	**$ -**
6.13	345kV UG- Termination	0	EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.14							$ -	$ -	$ -	**$ -**
6.15							$ -	$ -	$ -	**$ -**
TOTAL - CONDUIT & CABLE TRENCH							$ 86,695	$ 32,700	$ 13,035	$ 132,430
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	400	LF	2.09	3.42	1.46	$ 836	$ 1,366	$ 585	**$ 2,788**
7.2	Caweld, DSA, 4/0 , T, CROSS	10	EA	165.00	75.00		$ 1,650	$ 750	$ -	**$ 2,400**
7.3	Ground Rod, 3/4" x 15'	3	EA	135.00	67.50	7.50	$ 439	$ 219	$ 24	**$ 683**
TOTAL - GROUND GRID							$ 2,925	$ 2,335	$ 610	**$ 5,871**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	0	EA	2,226,935.13	1,558,854.59	668,080.54	$ -	$ -	$ -	**$ -**
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	**$ -**
8.3	Primary Line Relays (87L): SEL-411L	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.4	Backup Line Relays (87L): GE L90	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.5	Primary Bay Control: SEL-451	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.6	Backup Bay Control: SEL-451	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.7	Primary Bus Differential Relays: SEL-487B	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.8	Backup Bus Differential Relays: GE B90	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.9	125VDC Battery System	0	LS	25,000.00	22,750.00	9,750.00	$ -	$ -	$ -	**$ -**
8.10	Control house AC Panel	0	EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.11	Control House DC Panel	0	EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.12	Generator	0	EA	130,000.00	72,800.00	31,200.00	$ -	$ -	$ -	**$ -**
TOTAL - CONTROL ENCLOSURE							$ 213,281	$ 170,625	$ 42,656	**$ 426,562**
10.Shore Road 138kV Substation Upgrades							$ 1,078,404	$ 635,881	$ 289,933	**$ 2,004,218**
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		32,403.50	13,887.22	$ -	$ 32,404	$ 13,887	**$ 46,291**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		20,042.18		$ -	$ 20,042	$ -	**$ 20,042**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		80,168.73		$ -	$ 80,169	$ -	**$ 80,169**
9.4	Utility PM and Project Oversite	1	LS		20,042.18		$ -	$ 20,042	$ -	**$ 20,042**
9.5	Site Accommodation, Facilities, Storage	1	LS	20,042.18			$ 20,042	$ -	$ -	**$ 20,042**
	Engineering									
9.6	Design Engineering	1.00	LS		160,337.46		$ -	$ 160,337	$ -	**$ 160,337**
9.7	LiDAR /GPR	1.00	LS				$ -	$ -	$ -	**$ -**
9.8	Geotech	2.00	EA		2,730.00	1,820.00	$ -	$ 5,460	$ 3,640	**$ 9,100**
9.9	Surveying/Staking	0.20	Site		14,029.53		$ -	$ 2,806	$ -	**$ 2,806**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		75,158.19		$ -	$ 75,158	$ -	**$ 75,158**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		-		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		20,042.18		$ -	$ 20,042	$ -	**$ 20,042**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		6,012.65		$ -	$ 6,013	$ -	**$ 6,013**
9.15	Laydown Lease	-	LS		-		$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	-	LS		-		$ -	$ -	$ -	**$ -**
9.17	Legal Fees (Real estate)	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 74,000	$ -	$ -	$ 74,000	**$ 74,000**
9.20	Sales Tax on Materials	8.80%	LS	1,078,403.91			$ 94,900	$ -	$ -	**$ 94,900**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		2,004.22		$ -	$ 2,004	$ -	**$ 2,004**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 114,942	$ 424,477	$ 91,527	**$ 630,946**

NEXTera Energy- TO44 Enhanced 2

16. - Comp 231 & 101 Buchanan 345kV GIS & HVDC Substation Upgrade

Total: $ 1,040,319,868

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
16. - Comp 231 & 101 Buchanan 345kV GIS & HVDC Substation Upgrade				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 2,533,876	$ 2,243,681	$ 1,283,940	$ 6,061,497
2. SUBSTATION FOUNDATIONS	$ 2,589,656	$ 2,600,163	$ 1,600,162	$ 6,789,981
3. SUBSTATION STRUCTURES	$ 447,704	$ 643,612	$ 419,265	$ 1,510,581
4. MAJOR EQUIPTMENT	$ 366,888,389	$ 204,778,440	$ 136,487,960	$ 708,154,789
5. LOW VOLTAGE & CONTROL CABLE	$ 55,624	$ 15,041	$ 3,008	$ 73,673
6. CONDUIT & CABLE TRENCH	$ 2,031,442	$ 1,284,659	$ 723,654	$ 4,039,756
7. GROUND GRID	$ 695,582	$ 503,538	$ 118,088	$ 1,317,208
8. CONTROL ENCLOSURE	$ 3,595,060	$ 2,783,654	$ 1,060,405	$ 7,439,119
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 33,923,651	$ 12,963,812	$ 21,241,206	$ 68,128,670
Turnkey cost (HVDC, GIS)	$ 338,395,000	$ 203,037,000	$ 135,358,000	$ 676,790,000
Non-Turnkey cost	$ 74,365,984	$ 24,779,601	$ 27,579,689	$ 126,725,274
SUBTOTAL (Costs):	$ 412,760,984	$ 227,816,601	$ 162,937,689	$ 803,515,274
CONTRACTOR MARK-UP (OH&P)	$ 33,689,577	$ 16,642,548	$ 13,085,824	$ 63,417,949
SUBTOTAL:	$ 446,450,561	$ 244,459,149	$ 176,023,513	$ 866,933,223
CONTINGENCY ON ENTIRE PROJECT	$ 89,290,112	$ 48,891,830	$ 35,204,703	$ 173,386,645
TOTAL:	$ 535,740,673	$ 293,350,979	$ 211,228,215	$ 1,040,319,868

Description of Work: Construct two (2) new Buchanan HVDC 1200 MW converter stations, with a transition from 320 kV DC to 345 kV AC and ties into the existing Buchanan 345 kV station and the new NEET Offshore Wind Platform HVDC cables.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
16. - Comp 231 & 101 Buchanan 345kV GIS & HVDC Substation Upgrade										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	8.5	ACRE	-	21,000.00	14,000.00	$ -	$ 178,500	$ 119,000	**$ 297,500**
1.2	Demolition	0	ACRE	-	-	-	$ -	$ -	$ -	**$ -**
1.3	New Access Road - 20'	3,864	SY	4.85	7.20	4.80	$ 18,743	$ 27,824	$ 18,549	**$ 65,116**
1.4	Strip and Dispose Top Soil	13,713	CY		24.50	10.50	$ -	$ 335,977	$ 143,990	**$ 479,967**
1.5	Site Grading- Excavation for Substation Pad	41,140	CY		9.00	6.00	$ -	$ 370,260	$ 246,840	**$ 617,100**
1.6	Site Grading- Excavation for Substation Pad-Hauling and disposal	22,216	CY		21.00	9.00	$ -	$ 466,527.60	$ 199,940.40	**$ 666,468.00**
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	33,323	CY		2.40	1.60	$ -	$ 79,976	$ 53,317	**$ 133,294**
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	22,216	CY	25.00	2.40	1.60	$ 555,390	$ 53,317	$ 35,545	**$ 644,252**
1.9	Install substation 8" pad base	20,570	SY	11.00	6.00	4.00	$ 226,270	$ 123,420	$ 82,280	**$ 431,970**
1.10	Site Surfacing - Aggregate 6" Thick	30,855	SY	16.50	4.50	3.00	$ 509,108	$ 138,848	$ 92,565	**$ 740,520**
1.11	7' Station Fence w/ Barbed Wire & Grounding	3,510	LF	13.85	13.85	6.92	$ 48,606	$ 48,606	$ 24,303	**$ 121,516**
1.12	25' Slide Gate & Grounding	2	EA	8,100.00	3,245.00	1,305.00	$ 16,200	$ 6,490	$ 2,610	**$ 25,300**
1.13	4' Pedestrian gate	2	EA	2,500.00	1,000.00	350.00	$ 5,000	$ 2,000	$ 700	**$ 7,700**
1.14	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	1	LS	1,016,870.40	262,080.00	173,136.60	$ 1,016,870	$ 262,080	$ 173,137	**$ 1,452,087**
1.15	Seeding	27,216	SF	1.50	1.50	1.00	$ 40,824	$ 40,824	$ 27,216	**$ 108,864**
1.16	Erosion Control-Silt fence install & remove	5,792	LF	2.41	3.16	0.72	$ 13,958	$ 18,301	$ 4,170	**$ 36,429**
1.17	Temporary fencing	3,861	LF	7.50	5.25	2.25	$ 28,958	$ 20,270	$ 8,687	**$ 57,915**
1.18	Substation entrance with asphalt	2,500	SY	19.50	26.00	19.50	$ 48,750	$ 65,000	$ 48,750	**$ 162,500**
1.19	Concrete curb	200	LF	26.00	27.30	11.70	$ 5,200	$ 5,460	$ 2,340	**$ 13,000**
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 2,533,876	$ 2,243,681	$ 1,283,940	**$ 6,061,497**
2. SUBSTATION FOUNDATIONS										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2.1	345kV, Lightning mast foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, H Frame -SHARED COLUMN (3 BAY)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.4	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-3 Ph, low	111	CY	703.89	804.44	502.78	$ 77,850	$ 88,971	$ 55,607	**$ 222,428**
2.6	345kV, Bus support-1 Ph	95	CY	703.89	804.44	502.78	$ 66,897	$ 76,454	$ 47,784	**$ 191,135**
2.7	345kV, GIS air terminal	20	CY	703.89	804.44	502.78	$ 13,937	$ 15,928	$ 9,955	**$ 39,820**
2.8	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.11	345kV, Cable sealing end	21	CY	703.89	804.44	502.78	$ 15,063	$ 17,215	$ 10,759	**$ 43,038**
2.12	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.13	345kV, SSVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Disconnect Switch	158	CY	703.89	804.44	502.78	$ 111,495	$ 127,423	$ 79,640	**$ 318,558**
2.15	345/138KV, Single-Phase 720/900/1200MVA Power Transformer with oil containmenet	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.16	345kV, Shunt Reactor with oil containment-150MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Shunt Reactor with oil containment-75MVAR	100	CY	703.89	804.44	502.78	$ 70,389	$ 80,444	$ 50,278	**$ 201,110**
2.18	345kV, Phase Angle Regulator with oil containment	706	CY	703.89	804.44	502.78	$ 496,943	$ 567,935	$ 354,959	**$ 1,419,837**
2.19	345kV, Circuit Breaker (PASS)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.20	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.21	345kV, Surge arrester	32	CY	703.89	804.44	502.78	$ 22,595	$ 25,823	$ 16,139	**$ 64,556**
2.22	345/138 Kv, Control Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.23	345kV, GIS Enclosure-BLDG	1,140	CY	703.89	804.44	502.78	$ 802,429	$ 917,062	$ 573,164	**$ 2,292,654**
2.24	HVDC VSC Converter Station -DC Converter Hall		CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.25	HVDC VSC Converter Station -Control Building		CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.26	HVDC VSC Converter Station -Cooler Bank		CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.27	HVDC VSC Converter Station -Storage Buiilding		CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.28	HVDC VSC Converter Station-Network AC harmonic filters		CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.29	HVDC VSC Converter Station -AC PLC filter area		CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	HVDC VSC Converter Station-Transformer area		CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.31	HVDC VSC Converter Station- AIS equipment		CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.32	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.33	138kV, Dead-Tank Breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.34	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.35	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.36	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.37	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.38	138kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.39	138kV, H Frame H Frame -SHARED COLUMN (3 BAY)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.40	Steel grating and support beams-transformer moat	129,840	LB	2.73	1.17	0.50	$ 354,699	$ 151,783	$ 65,050	**$ 571,532**
2.41	Firewall Foundation	515	CY	703.89	804.44	502.78	$ 362,360	$ 414,126	$ 258,829	**$ 1,035,314**
2.42	Precast Firewall for transformer, PARs, reactors	7,800	SF	25.00	15.00	10.00	$ 195,000	$ 117,000	$ 78,000	**$ 390,000**
TOTAL - 345KV FOUNDATION							$ 2,589,656	$ 2,600,163	$ 1,600,162	**$ 6,789,981**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast foundation	0	EA	23,400.00	14,040.00	9,360.00	$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, H Frame -SHARED COLUMN (3 BAY)	0	EA	64,350.00	38,610.00	25,740.00	$ -	$ -	$ -	**$ -**
3.4	345kV, Bus support-3 Ph	10	EA	8,346.00	5,758.74	3,839.16	$ 83,460	$ 57,587	$ 38,392	**$ 179,439**
3.5	345kV, Bus support-3 Ph, low	12	EA	8,346.00	5,758.74	3,839.16	$ 100,152	$ 69,105	$ 46,070	**$ 215,327**
3.6	345kV, Bus support-1 Ph	3	EA	4,810.00	2,886.00	1,924.00	$ 14,430	$ 8,658	$ 5,772	**$ 28,860**
3.7	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.8	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.10	345kV, GIS Cable sealing end	2	EA	8,346.00	5,758.74	3,839.16	$ 16,692	$ 11,517	$ 7,678	**$ 35,888**
3.11	345kV, Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.12	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.13	345kV, SSVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.14	345kV, Disconnect Switch	5	EA	19,240.00	11,544.00	7,696.00	$ 96,200	$ 57,720	$ 38,480	**$ 192,400**
3.15	345kV, Surge arrester	6	EA	4,810.00	2,886.00	1,924.00	$ 28,860	$ 17,316	$ 11,544	**$ 57,720**
3.16	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	**$ -**
3.17	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.18	138kV, Disconnect Switch	0	EA							
3.19	138kV, Cable sealing end	0	EA	4,066.40	1,443.00	962.00	$ -	$ -	$ -	**$ -**
3.20	138kV, Surge arrester	0	EA	4,066.40	1,443.00	962.00	$ -	$ -	$ -	**$ -**
3.21	138kV, H Frame H Frame -SHARED COLUMN (3 BAY)	0	EA	45,045.00	27,027.00	18,018.00	$ -	$ -	$ -	**$ -**
3.22	AL. Bus Tubing, 5" SCH 80	1,962	LF	25.00	184.94	123.29	$ 49,050	$ 362,848	$ 241,899	**$ 653,797**
3.23	AL. Bus fittings	1	LS	58,860.00	58,860.00	29,430.00	$ 58,860	$ 58,860	$ 29,430	**$ 147,150**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
3.24	HVDC VSC Converter Station -DC Equipment stands		EA				$ -	$ -	$ -	$ -
3.25	HVDC VSC Converter Station-AC Switch Yard Equipment stands		EA				$ -	$ -	$ -	$ -
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 447,704	$ 643,612	$ 419,265	$ 1,510,581
4. MAJOR EQUIPTMENT										
4.1	345Kv, GIS indoor	9	EA	849,444.44	509,666.67	339,777.78	$ 7,645,000	$ 4,587,000	$ 3,058,000	**$ 15,290,000**
4.2	345kV, GIS air terminal	3	EA				$ -	$ -	$ -	$ -
4.3	345kV, Cable sealing end	6	EA	27,144.00	5,460.00	2,340.00	$ 162,864	$ 32,760	$ 14,040	**$ 209,664**
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	$ -
4.5	345kV, SSVT	0	EA				$ -	$ -	$ -	$ -
4.6	345kV, Disconnect Switch	5	EA	57,720.00	34,632.00	23,088.00	$ 288,600	$ 173,160	$ 115,440	**$ 577,200**
4.7	345/138KV, Single-Phase 720/900/1200MVA Power Transformer with oil containmenet	0	EA	9,980,000.00	3,520.00	880.00	$ -	$ -	$ -	$ -
4.8	Transport & Testing- Transformer	0	EA		1,170,400.00	501,600.00	$ -	$ -	$ -	$ -
4.9	345kV, Shunt Reactor with oil containment-150MVAR	0	EA	2,629,516.50	3,520.00	880.00	$ -	$ -	$ -	$ -
4.10	345kV, Shunt Reactor with oil containment-75MVAR	1	EA	2,277,924.50	3,520.00	880.00	$ 2,277,925	$ 3,520	$ 880	**$ 2,282,325**
4.11	Transport & Testing- Shunt Reactor	1	EA		261,400.00	170,600.00	$ -	$ 261,400	$ 170,600	**$ 432,000**
4.12	345kV, Phase Angle Regulator	2	EA	12,882,000.00	3,520.00	880.00	$ 25,764,000	$ 7,040	$ 1,760	**$ 25,772,800**
4.13	Transport & Testing- Phase Angle Regulating Transformer, 345kV	2	EA		615,400.00	406,600.00	$ -	$ 1,230,800	$ 813,200	**$ 2,044,000**
4.14	345kV, Circuit Breaker (PASS)	0	EA		57,239.00	24,531.00	$ -	$ -	$ -	$ -
4.15	345kV, Circuit Breaker (GIS), outdoor rated	0	EA	1,341,857.17	805,114.30	536,742.87	$ -	$ -	$ -	$ -
4.16	345kV, surge Arrester	6	EA		5,460.00	2,340.00	$ -	$ 32,760	$ 14,040	**$ 46,800**
4.17	345kV, Cable sealing end	0	EA				$ -	$ -	$ -	$ -
4.18	138kV, Phase Angle Regulator	0	EA	11,902,178.00	3,520.00	880.00	$ -	$ -	$ -	$ -
4.19	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		701,400.00	300,600.00	$ -	$ -	$ -	$ -
4.20	138kV, Dead-Tank Breaker	0	EA	183,000.00	13,559.00	5,811.00	$ -	$ -	$ -	$ -
4.21	138kV, Disconnect Switch	0	EA				$ -	$ -	$ -	$ -
4.22	138kV, Cable sealing end	0	EA	37,700.00	11,875.50	5,089.50	$ -	$ -	$ -	$ -
4.23	138kV, Surge arrester	0	EA	4,446.00	4,200.00	1,800.00	$ -	$ -	$ -	$ -
4.24	Station service transformers- 120/208v-250VA	0	EA	260,000.00	45,500.00	19,500.00	$ -	$ -	$ -	$ -
4.25	HVDC 1200MW Monopoles	2.0	EA	165,375,000.00	99,225,000.00	66,150,000.00	$ 330,750,000.00	$ 198,450,000.00	$ 132,300,000.00	**$ 661,500,000**
4.26	HVDC VSC Converter Station -DC transducer		EA				$ -	$ -	$ -	$ -
4.27	HVDC VSC Converter Station -Converter phase reactor		EA				$ -	$ -	$ -	$ -
4.28	HVDC VSC Converter Station -Cooling fans		EA				$ -	$ -	$ -	$ -
4.29	HVDC VSC Converter Station- Converter Transformer		EA				$ -	$ -	$ -	$ -
4.30	HVDC VSC Converter Station -Converter enclosure		EA				$ -	$ -	$ -	$ -
4.31	HVDC VSC Converter Station -Control enclosure		EA				$ -	$ -	$ -	$ -
4.32	HVDC VSC Converter Station -Storage building									
4.32	345kV Gas-Insulated Bus Conductor (Ourdoor)		LF	550.00	275.00	82.50	$ -	$ -	$ -	-
4.33	345kV Gas-Insulated Bus Conductor-elbow (Ourdoor)		EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	-
4.28	Transport & Testing- GIL		LS		-	-	$ -	$ -	$ -	$ -
TOTAL - MAJOR EQUIPMENT							$ 366,888,389	$ 204,778,440	$ 136,487,960	**$ 708,154,789**
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	10,500	LF	5.30	1.43	0.29	$ 55,624	$ 15,041	$ 3,008	**$ 73,673**
5.2			LF	5.30	1.43	0.29	$ -	$ -	$ -	$ -
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 55,624	$ 15,041	$ 3,008	**$ 73,673**
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	$ -
6.2	Conduit, PVC, 4", SCH 40	22,500	LF	11.15	10.80	5.40	$ 250,875	$ 243,000	$ 121,500	**$ 615,375**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	$ -
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	$ -
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	$ -
6.6	Cable Trench		LF	266.50	53.04	13.26	$ -	$ -	$ -	$ -
6.7	345kV-OH	1,000	LF	375.00	225.00	150.00	$ 375,000	$ 225,000	$ 150,000	**$ 750,000**
6.8	345kV UG- Conduit	1,360	LF	266.73	202.15	100.00	$ 362,754	$ 274,919	$ 136,007	**$ 773,680**
6.9	345kV UG- Cable	4,080	LF	167.00	100.20	66.80	$ 681,360	$ 408,816	$ 272,544	**$ 1,362,720**
6.10	345kV UG- Termination	12	EA	27,805.00	9,846.48	2,813.28	$ 333,660	$ 118,158	$ 33,759	**$ 485,577**
6.11	Fiber Optic Cable	1,360	LF	7.40	3.33	2.22	$ 10,060	$ 4,530	$ 3,020	**$ 17,609**
6.12	Ground Continuity Conductor	1,360	LF	13.04	7.53	5.02	$ 17,733	$ 10,237	$ 6,824	**$ 34,794**
TOTAL - CONDUIT & CABLE TRENCH							$ 2,031,442	$ 1,284,659	$ 723,654	**$ 4,039,756**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	71,608	LF	2.09	3.42	1.46	$ 149,732	$ 244,563	$ 104,813	**$ 499,108**
7.2	Caweld, DSA, 4/0 , T, CROSS	1,860	EA	165.00	75.00		$ 306,900	$ 139,500	$ -	**$ 446,400**
7.3	Ground Rod, 3/4" x 15'	1,770	EA	135.00	67.50	7.50	$ 238,950	$ 119,475	$ 13,275	**$ 371,700**
TOTAL - GROUND GRID							$ 695,582	$ 503,538	$ 118,088	**$ 1,317,208**
8. CONTROL ENCLOSURE										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.1	345/138 Kv, Control Enclosure-BLDG with generator pad	0	EA	964,411.37	675,087.96	289,323.41	$ -	$ -	$ -	$ -
8.2	345kV, GIS Enclosure-BLDG	1	EA	2,226,935.13	1,558,854.59	668,080.54	$ 2,226,935	$ 1,558,855	$ 668,081	$ **4,453,870**
8.3	Primary Line Relays (87L): SEL-411L	5	EA	21,328.12	17,062.49	4,265.62	$ 106,641	$ 85,312	$ 21,328	$ **213,281**
8.4	Backup Line Relays (87L): GE L90	5	EA	21,328.12	17,062.49	4,265.62	$ 106,641	$ 85,312	$ 21,328	$ **213,281**
8.5	Primary Bay Control: SEL-451	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	$ **127,969**
8.6	Backup Bay Control: SEL-451	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	$ **127,969**
8.7	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	$ **127,969**
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	$ **127,969**
8.9	Primary Bus Differential Relays: SEL-487B	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	$ **127,969**
8.10	Backup Bus Differential Relays: GE B90	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	$ **127,969**
8.11	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Annunci	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	$ **25,000**
8.12	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annnunciator	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	$ **25,000**
8.13	HMI Panel	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	$ **25,000**
8.14	Primary Line Relays (87L): SEL-411L	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	$ **85,312**
8.15	Backup Line Relays (87L): GE L90	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	$ **85,312**
8.16	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Annunci	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	$ **25,000**
8.17	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annnunciator	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	$ **25,000**
8.18	HMI Panel	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	$ **25,000**
8.19	Primary Line Relays (87L): SEL-411L	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	$ **170,625**
8.20	Backup Line Relays (87L): GE L90	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	$ **170,625**
8.21	125VDC Battery System	2	LS	25,000.00	22,750.00	9,750.00	$ 50,000	$ 45,500	$ 19,500	$ **115,000**
8.22	Control house AC Panel	2	EA	65,000.00	91,000.00	39,000.00	$ 130,000	$ 182,000	$ 78,000	$ **390,000**
8.23	Control House DC Panel	2	EA	65,000.00	91,000.00	39,000.00	$ 130,000	$ 182,000	$ 78,000	$ **390,000**
8.24	Generator	1	EA	130,000.00	72,800.00	31,200.00	$ 130,000	$ 72,800	$ 31,200	$ **234,000**
TOTAL - CONTROL ENCLOSURE							$ 3,595,060	$ 2,783,654	$ 1,060,405	$ **7,439,119**
16. - Comp 231 & 101 Buchanan 345kV GIS & HVDC Substation Upgrade							$ 378,837,333	$ 214,852,789	$ 141,696,483	$ 735,386,604
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		635,399.50	272,314.07	$ -	$ 635,399	$ 272,314	$ **907,714**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		585,966.04		$ -	$ 585,966	$ -	$ **585,966**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		2,343,864.16		$ -	$ 2,343,864	$ -	$ **2,343,864**
9.4	Utility PM and Project Oversite	1	LS		585,966.04		$ -	$ 585,966	$ -	$ **585,966**
9.5	Site Accommodation, Facilities, Storage	1	LS	585,966.04			$ 585,966	$ -	$ -	$ **585,966**
	Engineering									
9.6	Design Engineering	1.00	LS		4,687,728.32		$ -	$ 4,687,728	$ -	$ **4,687,728**
9.7	LiDAR /GPR	1.00	LS		-		$ -	$ -	$ -	$ -
9.8	Geotech	5.00	EA		2,730.00	1,820.00	$ -	$ 13,650	$ 9,100	$ **22,750**
9.9	Surveying/Staking	1.00	Site		410,176.23		$ -	$ 410,176	$ -	$ **410,176**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		2,197,372.65		$ -	$ 2,197,373	$ -	$ **2,197,373**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		6,546.96		$ -	$ 6,547	$ -	$ **6,547**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		585,966.04		$ -	$ 585,966	$ -	$ **585,966**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	$ -
9.14	Warranties / LOC's	1.00	LS		175,789.81		$ -	$ 175,790	$ -	$ **175,790**
9.15	Laydown Lease	-	LS		-		$ -	$ -	$ -	$ -
9.16	Real Estate (Acquisition)	1.00	LS			155,138.00	$ -	$ -	$ 155,138	$ **155,138**
9.17	Legal Fees (Real estate)	1.00	LS		-	4,654.14	$ -	$ -	$ 4,654	$ **4,654**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	$ -
9.19	Bonds	1	LS		-	$ 20,800,000	$ -	$ -	$ 20,800,000	$ **20,800,000**
9.20	Sales Tax on Materials	8.80%	LS	378,837,332.70			$ 33,337,685	$ -	$ -	$ **33,337,685**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		735,386.60		$ -	$ 735,387	$ -	$ **735,387**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 33,923,651	$ 12,963,812	$ 21,241,206	$ **68,128,670**

NEXTera Energy- TO37 Core 2

17. Farragut 345kV Substation Expansion

Total: $ 131,651,302

NEXTera Energy- TO37 Core 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
17. Farragut 345kV Substation Expansion				
1. MARINE CONSTRUCITON CIVIL	$ 15,364,664	$ 17,326,648	$ 14,501,686	$ 47,192,999
2. SUBSTATION FOUNDATIONS	$ 1,162,370	$ 1,238,851	$ 778,407	$ 3,179,628
3. SUBSTATION STRUCTURES	$ 236,466	$ 101,189	$ 43,367	$ 381,021
4. MAJOR EQUIPTMENT	$ 11,092,004	$ 3,745,840	$ 2,486,960	$ 17,324,804
5. LOW VOLTAGE & CONTROL CABLE	$ 7,946	$ 2,149	$ 430	$ 10,525
6. CONDUIT & CABLE TRENCH	$ 156,583	$ 33,738	$ 9,245	$ 199,565
7. GROUND GRID	$ 50,250	$ 35,902	$ 8,219	$ 94,370
8. CONTROL ENCLOSURE	$ 2,437,317	$ 1,844,360	$ 711,958	$ 4,993,635
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 3,315,834	$ 14,052,958	$ 3,272,134	$ 20,640,926
Turnkey cost (HVDC, GIS)	$ 5,130,000	$ 3,078,000	$ 2,052,000	$ 10,260,000
Non-Turnkey cost	$ 28,693,435	$ 35,303,634	$ 19,760,405	$ 83,757,473
SUBTOTAL (Costs):	$ 33,823,435	$ 38,381,634	$ 21,812,405	$ 94,017,473
CONTRACTOR MARK-UP (OH&P)	$ 5,472,618	$ 6,539,334	$ 3,679,993	$ 15,691,945
SUBTOTAL:	$ 39,296,053	$ 44,920,968	$ 25,492,397	$ 109,709,418
CONTINGENCY ON ENTIRE PROJECT	$ 7,859,211	$ 8,984,194	$ 5,098,479	$ 21,941,884
TOTAL:	$ 47,155,264	$ 53,905,161	$ 30,590,877	$ 131,651,302

Description of Work: Expand the existing Sprain Brook 345kV substation with additional GIS bay.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
17. Farragut 345kV Substation Expansion										
1. MARINE CONSTRUCITON CIVIL										
1.1	Site Clearing	0.0	ACRE	-	10,800.00	7,200.00	$ -	$ -	$ -	**$ -**
1.2	Demolition	1	LS	-	68,400.00	45,600.00	$ -	$ 68,400	$ 45,600	**$ 114,000**
1.3	Sheet Pile Wall	840	FT	3,778.81	6,046.09	5,290.33	$ 3,174,199	$ 5,078,718	$ 4,443,878	**$ 12,696,795**
1.4	Dewater	1	LS		225,000.00	150,000.00	$ -	$ 225,000	$ 150,000	**$ 375,000**
1.5	Excavate and Remove existing organic material	8,077	CY		300.00	200.00	$ -	$ 2,423,111	$ 1,615,407	**$ 4,038,519**
1.6	Backfill (import, compacted in place)	65,424	CY	77.50	46.50	31.00	$ 5,070,360	$ 3,042,216	$ 2,028,144	**$ 10,140,720**
1.7	18" concrete pile	1,392	EA	3,367.00	3,030.30	2,020.20	$ 4,686,864	$ 4,218,178	$ 2,812,118	**$ 11,717,160**
1.8	Concrete Slab (Pier)	4,846	CY	480.00	448.00	672.00	$ 2,326,187	$ 2,171,108	$ 3,256,661	**$ 7,753,956**
1.9	3.5' Sea wall	610	FT	175.50	163.80	245.70	$ 107,055	$ 99,918	$ 149,877	**$ 356,850**
1.10	Continuous concrete on bulkhead	0	FT	234.00	218.40	327.60	$ -	$ -	$ -	**$ -**
1.11	Outter fender system	0	LF	80.00	48.00	72.00	$ -	$ -	$ -	**$ -**
1.12										
1.13										
TOTAL - Marine Construction Civil							$ 15,364,664	$ 17,326,648	$ 14,501,686	**$ 47,192,999**
2. SUBSTATION FOUNDATIONS										
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.6	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.12	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Shunt Reactor with oil containment-150MVAR	221	CY	703.89	804.44	502.78	$ 155,559	$ 177,781	$ 111,113	**$ 444,453**
2.15	345kV, Shunt Reactor with oil containment-275MVAR	300	CY	703.89	804.44	502.78	$ 211,166	$ 241,332	$ 150,833	**$ 603,330**
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Circuit Breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345Kv, GIS Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.20	345kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.21	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.22	138kV, Shunt Reactor with oil containment-80MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.23	138kV, Circuit Breaker, AIS breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.24	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.25	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.26	138kV, Disconnect Switch-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.27	138kV, Cable sealing end-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.28	138kV, Surge arrester	-	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.29	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.31	Firewall Foundation	896	CY	703.89	804.44	502.78	$ 630,646	$ 720,738	$ 450,461	**$ 1,801,845**
2.32	Precast Firewall for transformer, PARs, reactors	6,600	SF	25.00	15.00	10.00	$ 165,000	$ 99,000	$ 66,000	**$ 330,000**
2.33	Precast Concrete Piles-12"X80'	-	EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.34	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.35	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
TOTAL - 345KV FOUNDATION							$ 1,162,370	$ 1,238,851	$ 778,407	**$ 3,179,628**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast	0	EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, Bus support-3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.4	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.6	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.7	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.8	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.11	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch	0	EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	**$ -**
3.13	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	**$ -**
3.14	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.15	138kV, Disconnect Switch-3 Ph	0	EA				$ -	$ -	$ -	
3.16	138kV, Cable sealing end-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.18	138kV, Surge arrester	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.17	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.18	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.19	345kV Gas-Insulated Bus Conductor	0	LF	550.00	275.00	82.50	$ -	$ -	$ -	**$ -**
3.20	345kV Gas-Insulated Bus Conductor-elbow	0	EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	**$ -**
3.21	AL. Bus Tubing, 5" SCH 80	0	LF	25.00	184.94	123.29	$ -	$ -	$ -	**$ -**
3.22	AL. Bus fittings	0	LS	-	-	-	$ -	$ -	$ -	**$ -**
3.23	Steel grating and support beams-transformer moat	86,560	LB	2.73	1.17	0.50	$ 236,466	$ 101,189	$ 43,367	**$ 381,021**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 236,466	$ 101,189	$ 43,367	$ 381,021
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	0	EA							
4.2	345kV, GIS Cable sealing end	0	EA					$ -	$ -	**$ -**
4.3	345kV, Cable sealing end	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28		$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch	0	EA		7,234.50	3,100.50		$ -	$ -	**$ -**
4.6	345/138KV, Power Transformer with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.7	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.8	345kV, Shunt Reactor with oil containment-150MVAR	1	EA	2,629,516.50	3,520.00	880.00	$ 2,629,517	$ 3,520	$ 880	**$ 2,633,917**
4.9	345kV, Shunt Reactor with oil containment-275MVAR	1	EA	3,332,487.50	3,520.00	880.00	$ 3,332,488	$ 3,520	$ 880	**$ 3,336,888**
4.10	Transport & Testing- Shunt Reactor	2	EA		330,400.00	216,600.00	$ -	$ 660,800	$ 433,200	**$ 1,094,000**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.12	345kV, Gas Insulated Switchgear, BAAH Arrangement	6	BKR	855,000.00	513,000.00	342,000.00	$ 5,130,000	$ 3,078,000	$ 2,052,000	**$ 10,260,000**
4.13	345kV, Circuit Breaker	0	EA		57,239.00	24,531.00		$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker (GIS), outdoor rated	0	EA					$ -	$ -	**$ -**
4.15	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA					$ -	$ -	**$ -**
4.16	345kV, surge Arrester	0	EA		5,460.00	2,340.00		$ -	$ -	**$ -**
4.17	138kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.18	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.19	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.20	138kV, Shunt Reactor with oil containment-80MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.21	Transport & Testing- Shunt Reactor	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.22	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.23	138kV, Circuit Breaker, AIS breaker	0	EA		13,559.00	5,811.00		$ -	$ -	**$ -**
4.24	138kV, Disconnect Switch-3 Ph	0	EA		3,958.50	1,696.50		$ -	$ -	**$ -**
4.25	138kV, Cable sealing end-3 Ph	0	EA		1,050.00	450.00	$ -	$ -	$ -	**$ -**
4.26	138kV, CCVT	0	EA		7,970.08	3,415.75		$ -	$ -	**$ -**
4.27	138kV, Surge arrester	0	EA		4,200.00	1,800.00	$ -	$ -	$ -	**$ -**
4.28	Station service transformers- 120/208v-250VA	0	EA		45,500.00	19,500.00	$ -	$ -	$ -	**$ -**
TOTAL - MAJOR EQUIPMENT							$ 11,092,004	$ 3,745,840	$ 2,486,960	$ 17,324,804
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	1,500	LF	5.30	1.43	0.29	$ 7,946	$ 2,149	$ 430	**$ 10,525**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 7,946	$ 2,149	$ 430	**$ 10,525**
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	300	LF	11.15	10.80	5.40	$ 3,345	$ 3,240	$ 1,620	**$ 8,205**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench	575	LF	266.50	53.04	13.26	$ 153,238	$ 30,498	$ 7,625	**$ 191,360**
6.7										
6.8	138kV UG- Conduit	0	LF	41.00	30.00	16.00	$ -	$ -	$ -	**$ -**
6.9	138kV UG- Cable		LF	175.00	105.00	70.00	$ -	$ -	$ -	**$ -**
6.10	138kV UG- Termination	0	EA	9,360.00	11,700.00		$ -	$ -	$ -	**$ -**
6.11	345kV UG- Conduit		LF	52.00	47.00	29.00	$ -	$ -	$ -	**$ -**
6.12	345kV UG- Cable		LF	175.00	105.00	70.00	$ -	$ -	$ -	**$ -**
6.13	345kV UG- Termination		EA				$ -	$ -	$ -	**$ -**
6.14										
6.15							$ -	$ -	$ -	**$ -**
TOTAL - CONDUIT & CABLE TRENCH							$ 156,583	$ 33,738	$ 9,245	**$ 199,565**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	5,000	LF	2.09	3.42	1.46	$ 10,455	$ 17,077	$ 7,319	**$ 34,850**
7.2	Caweld, DSA, 4/0 , T, CROSS	143	EA	165.00	75.00		$ 23,595	$ 10,725	$ -	**$ 34,320**
7.3	Ground Rod, 3/4" x 15'	120	EA	135.00	67.50	7.50	$ 16,200	$ 8,100	$ 900	**$ 25,200**
TOTAL - GROUND GRID							$ 50,250	$ 35,902	$ 8,219	**$ 94,370**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	1	EA	1,577,942.61	1,104,559.83	473,382.78	$ 1,577,943	$ 1,104,560	$ 473,383	**$ 3,155,885**
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	**$ -**
8.3	Primary Line Relays (87L): SEL-411L	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.4	Backup Line Relays (87L): GE L90	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.5	Primary Bay Control: SEL-451	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.6	Backup Bay Control: SEL-451	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.7	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.9	Primary Bus Differential Relays: SEL-487B	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.10	Backup Bus Differential Relays: GE B90	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.11	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Ann	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.12	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annnunciator	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.13	HMI Panel	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.14	Primary Line Relays (87L): SEL-411L	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.15	Backup Line Relays (87L): GE L90	2	EA	21,328.12	17,062.49	4,265.62	$ 42,656	$ 34,125	$ 8,531	**$ 85,312**
8.16	125VDC Battery System	2	LS	25,000.00	22,750.00	9,750.00	$ 50,000	$ 45,500	$ 19,500	**$ 115,000**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.17	Control house AC Panel	1	EA	65,000.00	91,000.00	39,000.00	$ 65,000	$ 91,000	$ 39,000	**$ 195,000**
8.18	Control House DC Panel	1	EA	65,000.00	91,000.00	39,000.00	$ 65,000	$ 91,000	$ 39,000	**$ 195,000**
8.19	Generator	1	EA	130,000.00	72,800.00	31,200.00	$ 130,000	$ 72,800	$ 31,200	**$ 234,000**
TOTAL - CONTROL ENCLOSURE							$ 2,437,317	$ 1,844,360	$ 711,958	$ 4,993,635
17. Farragut 345kV Substation Expansion							$ 30,507,600	$ 24,328,676	$ 18,540,270	$ 73,376,547
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		1,500,413.12	643,034.19	$ -	$ 1,500,413	$ 643,034	**$ 2,143,447**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		631,165.47		$ -	$ 631,165	$ -	**$ 631,165**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		2,524,661.87		$ -	$ 2,524,662	$ -	**$ 2,524,662**
9.4	Utility PM and Project Oversite	1	LS		631,165.47		$ -	$ 631,165	$ -	**$ 631,165**
9.5	Site Accommodation, Facilities, Storage	1	LS	631,165.47			$ 631,165	$ -	$ -	**$ 631,165**
	Engineering									
9.6	Design Engineering	1.00	LS		5,049,323.74		$ -	$ 5,049,324	$ -	**$ 5,049,324**
9.7	LiDAR /GPR	1.00	LS				$ -	$ -	$ -	**$ -**
9.8	Geotech	5.00	EA		2,730.00	1,820.00	$ -	$ 13,650	$ 9,100	**$ 22,750**
9.9	Surveying/Staking	1.00	Site		441,815.83		$ -	$ 441,816	$ -	**$ 441,816**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		2,366,870.50		$ -	$ 2,366,871	$ -	**$ 2,366,871**
	Permitting and Additional Costs									
9.11	Physical Security	-	LS		6,546.96		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		631,165.47		$ -	$ 631,165	$ -	**$ 631,165**
9.13	Environmental-special studies/investigation		LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		189,349.64		$ -	$ 189,350	$ -	**$ 189,350**
9.15	Laydown Lease	1.00	LS				$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	-	LS		-		$ -	$ -	$ -	**$ -**
9.17	Legal Fees (Real estate)	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 2,620,000	$ -	$ -	$ 2,620,000	**$ 2,620,000**
9.20	Sales Tax on Materials	8.80%	LS	30,507,600.43			$ 2,684,669	$ -	$ -	**$ 2,684,669**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		73,376.55		$ -	$ 73,377	$ -	**$ 73,377**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 3,315,834	$ 14,052,958	$ 3,272,134	**$ 20,640,926**

NEXTera Energy- TO44 Enhanced 2

18- Corona 138kV Substation Upgrades

Total: $ 22,156,789

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
18- Corona 138kV Substation Upgrades				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ -	$ -	$ -	$ -
2. SUBSTATION FOUNDATIONS	$ 136,272	$ 155,740	$ 97,337	$ 389,349
3. SUBSTATION STRUCTURES	$ 168,309	$ 85,147	$ 44,718	$ 298,174
4. MAJOR EQUIPTMENT	$ 9,798,059	$ 3,520	$ 880	$ 9,802,459
5. LOW VOLTAGE & CONTROL CABLE	$ 15,893	$ 4,298	$ 860	$ 21,050
6. CONDUIT & CABLE TRENCH	$ 637,934	$ 320,757	$ 160,256	$ 1,118,947
7. GROUND GRID	$ 6,070	$ 4,188	$ 895	$ 11,154
8. CONTROL ENCLOSURE	$ 85,312	$ 68,250	$ 17,062	$ 170,625
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 1,072,728	$ 2,306,686	$ 456,279	$ 3,835,693
SUBTOTAL (Costs):	$ 11,920,577	$ 2,948,586	$ 778,287	$ 15,647,450
CONTRACTOR MARK-UP (OH&P)	$ 2,145,704	$ 530,745	$ 140,092	$ 2,816,541
SUBTOTAL:	$ 14,066,281	$ 3,479,331	$ 918,379	$ 18,463,991
CONTINGENCY ON ENTIRE PROJECT	$ 2,813,256	$ 695,866	$ 183,676	$ 3,692,798
TOTAL:	$ 16,879,538	$ 4,175,197	$ 1,102,055	$ 22,156,789

Description of Work: Install a new PAR at the exisitng Corona 138KV substation connected to the bus tie terminal

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
10.Shore Road 138kV Substation Upgrades										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	0.0	ACRE	-	10,800.00	7,200.00	$ -	$ -	$ -	$ -
1.2	Demolition	0	LS		24,000.00	16,000.00	$ -	$ -	$ -	$ -
1.3	New Access Road - 20'	0	SY	4.85	7.20	4.80	$ -	$ -	$ -	$ -
1.4	Strip and Dispose Top Soil	0	CY		24.50	10.50	$ -	$ -	$ -	$ -
1.5	Site Grading- Excavation for Substation Pad	0	CY		9.00	6.00	$ -	$ -	$ -	$ -
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	0	CY		21.00	9.00	$ -	$ -	$ -	$ -
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	0	CY		2.40	1.60	$ -	$ -	$ -	$ -
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	0	CY	25.00	2.40	1.60	$ -	$ -	$ -	$ -
1.9	Blasting		EA				$ -	$ -	$ -	$ -
1.10	Install substation 8" pad base	0	SY	11.00	6.00	4.00	$ -	$ -	$ -	$ -
1.11	Site Surfacing - Aggregate 6" Thick	0	SY	16.50	4.50	3.00	$ -	$ -	$ -	$ -
1.12	7' Station Fence w/ Barbed Wire & Grounding	0	LF	13.85	13.85	6.92	$ -	$ -	$ -	$ -
1.13	20' Slide Gate & Grounding	0	EA	8,100.00	3,245.00	1,305.00	$ -	$ -	$ -	$ -
1.14	4' Pedestrian gate	0	EA	2,500.00	1,000.00	350.00	$ -	$ -	$ -	$ -
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	0	LS	75,000.00	45,000.00	30,000.00	$ -	$ -	$ -	$ -
1.16	Seeding	0	SF	1.50	1.50	1.00	$ -	$ -	$ -	$ -
1.17	Erosion Control-Silt fence install & remove	0	LF	2.41	3.16	0.72	$ -	$ -	$ -	$ -
1.18	Temporary fencing	0	LF	7.50	5.25	2.25	$ -	$ -	$ -	$ -
1.19	Substation entrance with asphalt	0	SY	19.50	26.00	19.50	$ -	$ -	$ -	$ -
1.20	Concrete curb	0	LF	26.00	27.30	11.70	$ -	$ -	$ -	$ -
1.21	Retaining Wall	0	LF	156.00	117.00	117.00	$ -	$ -	$ -	$ -
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ -	$ -	$ -	$ -
2. SUBSTATION FOUNDATIONS										
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.6	345kV, GIS air terminal	40	CY	703.89	804.44	502.78	$ 27,874	$ 31,856	$ 19,910	**$ 79,640**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.10	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.12	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.14	345kV, Shunt Reactor with oil containment-250MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.15	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.17	345kV, Circuit Breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.19	345Kv, GIS Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.20	345kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.21	138kV, Phase Angle Regulator with oil containment	154	CY	703.89	804.44	502.78	$ 108,398	$ 123,884	$ 77,427	**$ 309,709**
2.22	138kV, Shunt Reactor with oil containment-250MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.23	138kV, Circuit Breaker,	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.24	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.25	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.26	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.27	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.28	138kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.29	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.30	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.31	Firewall Foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.32	Precast Firewall for transformer, PARs, reactors		SF	25.00	15.00	10.00	$ -	$ -	$ -	$ -
2.33	Precast Concrete Piles-12"X80'		EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	$ -
2.34	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.35	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
TOTAL - 345KV FOUNDATION							$ 136,272	$ 155,740	$ 97,337	**$ 389,349**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast		EA				$ -	$ -	$ -	$ -
3.2	345kV, A Frame 70'		EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	$ -
3.3	345kV, Bus support-3 Ph		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.4	345kV, Bus support-3 Ph, low		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.5	345kV, Bus support-1 Ph		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.6	345kV, GIS air terminal	6	EA	8,346.00	5,758.74	3,839.16	$ 50,076	$ 34,552	$ 23,035	**$ 107,663**
3.7	345kV, GIS support-1 Ph		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.8	345kV, GIS support-3 Ph		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.9	345kV, GIS Cable sealing end		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.10	345kV, Cable sealing end		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
3.11	345kV, CCVT		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.12	345kV, Disconnect Switch		EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	$ -
3.13	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	$ -
3.14	138kV, Bus support-1 Ph, low		EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	$ -
3.15	138kV, Disconnect Switch	0	EA	4,896.84	4,896.84	2,448.42	$ -	$ -	$ -	$ -
3.16	138kV, Cable sealing end	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.18	138kV, Surge arrester	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
3.17	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	$ -
3.18	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	$ -
3.19	345kV Gas-Insulated Bus Conductor		LF	550.00	275.00	82.50	$ -	$ -	$ -	$ -
3.20	345kV Gas-Insulated Bus Conductor-elbow		EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	$ -
3.21	AL. Bus Tubing, 5" SCH 80	0	LF	25.00	184.94	123.29	$ -	$ -	$ -	$ -
3.22	AL. Bus fittings	0	LS	-	-	-	$ -	$ -	$ -	$ -
3.23	Steel grating and support beams-transformer moat	43,280	LB	2.73	1.17	0.50	$ 118,233	$ 50,594	$ 21,683	**$ 190,511**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 168,309	$ 85,147	$ 44,718	**$ 298,174**
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	$ -
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	$ -
4.3	345kV, Cable sealing end	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	$ -
4.4	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
4.5	345kV, Disconnect Switch		EA				$ -	$ -	$ -	$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.6	345/138KV, Power Transformer with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	$ -
4.7	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	$ -
4.8	345kV, Shunt Reactor with oil containment-250MVAR		EA		3,520.00	880.00	$ -	$ -	$ -	$ -
4.9	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	$ -
4.10	Transport & Testing- Shunt Reactor		EA		15,400.00	6,600.00	$ -	$ -	$ -	$ -
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	$ -
4.12	Transport & Testing- PAR	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	$ -
4.13	345kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	$ -
4.14	345kV, Circuit Breaker		EA		57,239.00	24,531.00	$ -	$ -	$ -	$ -
4.15	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	$ -
4.16	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	$ -
4.17	345kV, surge Arrester	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	$ -
4.18	138kV, Phase Angle Regulator with oil containment	1	EA	9,798,059.00	3,520.00	880.00	$ 9,798,059	$ 3,520	$ 880	**$ 9,802,459**
4.19	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		336,400.00	220,600.00	$ -	$ -	$ -	$ -
4.20	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	$ -
4.21	138kV, Shunt Reactor with oil containment-250MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	$ -
4.22	Transport & Testing- Shunt Reactor	0	EA		204,400.00	132,600.00	$ -	$ -	$ -	$ -
4.23	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	$ -
4.24	138kV, Circuit Breaker,	0	EA	112,000.00	13,559.00	5,811.00	$ -	$ -	$ -	$ -
4.25	138kV, Circuit Breaker, reinstallation only	0	EA		13,559.00	5,811.00	$ -	$ -	$ -	$ -
4.26	138kV, Disconnect Switch	0	EA	37,700.00	11,875.50	5,089.50	$ -	$ -	$ -	$ -
4.27	138kV, Cable sealing end	0	EA	11,600.00	5,460.00	2,340.00	$ -	$ -	$ -	$ -
4.28	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	$ -
4.29	138kV, Surge arrester	0	EA	4,066.40	1,443.00	962.00	$ -	$ -	$ -	$ -
4.30	Station service transformers- 120/208v-250VA	0	EA		45,500.00	19,500.00	$ -	$ -	$ -	$ -
TOTAL - MAJOR EQUIPMENT							$ 9,798,059	$ 3,520	$ 880	$ 9,802,459
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	3,000	LF	5.30	1.43	0.29	$ 15,893	$ 4,298	$ 860	**$ 21,050**
5.2			LF		-	-	$ -	$ -	$ -	$ -
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 15,893	$ 4,298	$ 860	$ 21,050
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	$ -
6.2	Conduit, PVC, 4", SCH 40	600	LF	11.15	10.80	5.40	$ 6,690	$ 6,480	$ 3,240	**$ 16,410**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	$ -
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	$ -
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	$ -
6.6	Cable Trench	188	LF	266.50	53.04	13.26	$ 49,969	$ 9,945	$ 2,486	**$ 62,400**
6.7							$ -	$ -	$ -	$ -
6.8	345kV UG- Conduit	420	LF	266.73	202.15	100.00	$ 112,027	$ 84,902	$ 42,002	**$ 238,931**
6.9	345kV UG- Cable	1,260	LF	167.00	100.20	66.80	$ 210,420	$ 126,252	$ 84,168	**$ 420,840**
6.10	345kV UG- Termination	9	EA	27,805.00	9,846.48	2,813.28	$ 250,245	$ 88,618	$ 25,320	**$ 364,183**
6.11	Fiber Optic Cable	420	LF	7.40	3.33	2.22	$ 3,107	$ 1,399	$ 933	**$ 5,438**
6.12	Ground Continuity Conductor	420	LF	13.04	7.53	5.02	$ 5,476	$ 3,161	$ 2,108	**$ 10,745**
6.13							$ -	$ -	$ -	$ -
6.14							$ -	$ -	$ -	$ -
TOTAL - CONDUIT & CABLE TRENCH							$ 637,934	$ 320,757	$ 160,256	$ 1,118,947
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	550	LF	2.09	3.42	1.46	$ 1,150	$ 1,878	$ 805	**$ 3,834**
7.2	Caweld, DSA, 4/0 , T, CROSS	20	EA	165.00	75.00		$ 3,300	$ 1,500	$ -	**$ 4,800**
7.3	Ground Rod, 3/4" x 15'	12	EA	135.00	67.50	7.50	$ 1,620	$ 810	$ 90	**$ 2,520**
TOTAL - GROUND GRID							$ 6,070	$ 4,188	$ 895	**$ 11,154**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	0	EA	2,226,935.13	1,558,854.59	668,080.54	$ -	$ -	$ -	$ -
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	$ -
8.3	Primary Line Relays (87L): SEL-411L	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.4	Backup Line Relays (87L): GE L90	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.5	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.6	Backup Transformer/Reactor/PAR Differential Relays: GE T60	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.7	125VDC Battery System	0	LS	25,000.00	22,750.00	9,750.00	$ -	$ -	$ -	$ -
8.8	Control house AC Panel	0	EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	$ -
8.9	Control House DC Panel	0	EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	$ -
8.10	Generator	0	EA	130,000.00	72,800.00	31,200.00	$ -	$ -	$ -	$ -
TOTAL - CONTROL ENCLOSURE							$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
10.Shore Road 138kV Substation Upgrades							$ 10,847,849	$ 641,899	$ 322,008	**$ 11,811,757**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		33,736.77	14,458.62	$ -	$ 33,737	$ 14,459	**$ 48,195**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		118,117.57		$ -	$ 118,118	$ -	**$ 118,118**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		472,470.27		$ -	$ 472,470	$ -	**$ 472,470**
9.4	Utility PM and Project Oversite	1	LS		118,117.57		$ -	$ 118,118	$ -	**$ 118,118**
9.5	Site Accommodation, Facilities, Storage	1	LS	118,117.57			$ 118,118	$ -	$ -	**$ 118,118**
	Engineering									
9.6	Design Engineering	1.00	LS		944,940.54		$ -	$ 944,941	$ -	**$ 944,941**
9.7	LiDAR /GPR	1.00	LS				$ -	$ -	$ -	**$ -**
9.8	Geotech	1.00	EA		2,730.00	1,820.00	$ -	$ 2,730	$ 1,820	**$ 4,550**
9.9	Surveying/Staking	0.10	Site		82,682.30		$ -	$ 8,268	$ -	**$ 8,268**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		442,940.88		$ -	$ 442,941	$ -	**$ 442,941**
	Permitting and Additional Costs									
9.11	Physical Security	-	LS		-		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		118,117.57		$ -	$ 118,118	$ -	**$ 118,118**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		35,435.27		$ -	$ 35,435	$ -	**$ 35,435**
9.15	Laydown Lease	-	LS		-		$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	-	LS		-		$ -	$ -	$ -	**$ -**
9.17	Legal Fees (Real estate)	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 440,000	$ -	$ -	$ 440,000	**$ 440,000**
9.20	Sales Tax on Materials	8.80%	LS	10,847,849.05			$ 954,611	$ -	$ -	**$ 954,611**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		11,811.76		$ -	$ 11,812	$ -	**$ 11,812**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 1,072,728	$ 2,306,686	$ 456,279	**$ 3,835,693**

NEXTera Energy- TO44 Enhanced 2

19.Holbrook 138kV Substation Upgrades

Total: $ 4,300,301

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
19.Holbrook 138kV Substation Upgrades				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 231,611	$ 238,850	$ 140,472	$ 610,933
2. SUBSTATION FOUNDATIONS	$ 90,358	$ 103,266	$ 64,541	$ 258,165
3. SUBSTATION STRUCTURES	$ 181,017	$ 269,516	$ 172,258	$ 622,791
4. MAJOR EQUIPTMENT	$ 287,198	$ 83,278	$ 37,752	$ 408,228
5. LOW VOLTAGE & CONTROL CABLE	$ 54,035	$ 14,612	$ 2,922	$ 71,568
6. CONDUIT & CABLE TRENCH	$ 143,326	$ 43,971	$ 15,853	$ 203,150
7. GROUND GRID	$ 29,940	$ 21,076	$ 4,704	$ 55,719
8. CONTROL ENCLOSURE	$ 42,656	$ 34,125	$ 8,531	$ 85,312
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 116,451	$ 496,141	$ 108,476	$ 721,068
SUBTOTAL (Costs):	$ 1,176,592	$ 1,304,834	$ 555,509	$ 3,036,935
CONTRACTOR MARK-UP (OH&P)	$ 211,787	$ 234,870	$ 99,992	$ 546,648
SUBTOTAL:	$ 1,388,379	$ 1,539,705	$ 655,501	$ 3,583,584
CONTINGENCY ON ENTIRE PROJECT	$ 277,676	$ 307,941	$ 131,100	$ 716,717
TOTAL:	$ 1,666,054	$ 1,847,645	$ 786,601	$ 4,300,301

Description of Work: Install a new breaker at Holbrook 138 kV substation to create a new terminal

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
10.Shore Road 138kV Substation Upgrades										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	0.7	ACRE	-	10,800.00	7,200.00	$ -	$ 7,560	$ 5,040	**$ 12,600**
1.2	Demolition	1	LS		24,000.00	16,000.00	$ -	$ 24,000	$ 16,000	**$ 40,000**
1.3	New Access Road - 20'	967	SY	4.85	7.20	4.80	$ 4,688	$ 6,960	$ 4,640	**$ 16,288**
1.4	Strip and Dispose Top Soil	1,129	CY		24.50	10.50	$ -	$ 27,669	$ 11,858	**$ 39,527**
1.5	Site Grading- Excavation for Substation Pad	3,388	CY		9.00	6.00	$ -	$ 30,492	$ 20,328	**$ 50,820**
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	1,830	CY		21.00	9.00	$ -	$ 38,419.92	$ 16,465.68	**$ 54,885.60**
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	2,744	CY		2.40	1.60	$ -	$ 6,586	$ 4,391	**$ 10,977**
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	1,830	CY	25.00	2.40	1.60	$ 45,738	$ 4,391	$ 2,927	**$ 53,056**
1.9	Blasting		EA				$ -	$ -	$ -	**$ -**
1.10	Install substation 8" pad base	3,388	SY	11.00	6.00	4.00	$ 37,268	$ 20,328	$ 13,552	**$ 71,148**
1.11	Site Surfacing - Aggregate 6" Thick	3,388	SY	16.50	4.50	3.00	$ 55,902	$ 15,246	$ 10,164	**$ 81,312**
1.12	7' Station Fence w/ Barbed Wire & Grounding	435	LF	13.85	13.85	6.92	$ 6,024	$ 6,024	$ 3,012	**$ 15,060**
1.13	20' Slide Gate & Grounding	0	EA	8,100.00	3,245.00	1,305.00	$ -	$ -	$ -	**$ -**
1.14	4' Pedestrian gate	0	EA	2,500.00	1,000.00	350.00	$ -	$ -	$ -	**$ -**
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	1	LS	75,000.00	45,000.00	30,000.00	$ 75,000	$ 45,000	$ 30,000	**$ 150,000**
1.16	Seeding	0	SF	1.50	1.50	1.00	$ -	$ -	$ -	**$ -**
1.17	Erosion Control-Silt fence install & remove	870	LF	2.41	3.16	0.72	$ 2,097	$ 2,749	$ 626	**$ 5,472**
1.18	Temporary fencing	653	LF	7.50	5.25	2.25	$ 4,894	$ 3,426	$ 1,468	**$ 9,788**
1.19	Substation entrance with asphalt	0	SY	19.50	26.00	19.50	$ -	$ -	$ -	**$ -**
1.20	Concrete curb	0	LF	26.00	27.30	11.70	$ -	$ -	$ -	**$ -**
1.21	Retaining Wall	0	LF	156.00	117.00	117.00	$ -	$ -	$ -	**$ -**
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 231,611	$ 238,850	$ 140,472	**$ 610,933**
2. SUBSTATION FOUNDATIONS										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.6	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.12	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Shunt Reactor with oil containment-250MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.15	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Circuit Breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345Kv, GIS Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.20	345kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.21	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.22	138kV, Shunt Reactor with oil containment-250MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.23	138kV, Circuit Breaker,	9	CY	703.89	804.44	502.78	$ 6,265	$ 7,160	$ 4,475	**$ 17,899**
2.24	138kV, Bus support-3 Ph, low	27	CY	703.89	804.44	502.78	$ 18,829	$ 21,519	$ 13,449	**$ 53,797**
2.25	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.26	138kV, Disconnect Switch	24	CY	703.89	804.44	502.78	$ 17,062	$ 19,500	$ 12,187	**$ 48,749**
2.27	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.28	138kV, Surge arrester	32	CY	703.89	804.44	502.78	$ 22,595	$ 25,823	$ 16,139	**$ 64,556**
2.29	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	138kV, A Frame 50'	36	CY	703.89	804.44	502.78	$ 25,607	$ 29,266	$ 18,291	**$ 73,164**
2.31	Firewall Foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.32	Precast Firewall for transformer, PARs, reactors		SF	25.00	15.00	10.00	$ -	$ -	$ -	**$ -**
2.33	Precast Concrete Piles-12"X80'		EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.34	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.35	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
TOTAL - 345KV FOUNDATION							$ 90,358	$ 103,266	$ 64,541	**$ 258,165**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast		EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'		EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, Bus support-3 Ph		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.4	345kV, Bus support-3 Ph, low		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.6	345kV, GIS air terminal		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.7	345kV, GIS support-1 Ph		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.8	345kV, GIS support-3 Ph		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.11	345kV, CCVT		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch		EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	**$ -**
3.13	138kV, Bus support-3 Ph, low	5	EA	4,173.00	2,879.76	1,919.84	$ 20,865	$ 14,399	$ 9,599	**$ 44,863**
3.14	138kV, Bus support-1 Ph, low		EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.15	138kV, Disconnect Switch	4	EA	4,896.84	4,896.84	2,448.42	$ 19,587	$ 19,587	$ 9,794	**$ 48,968**
3.16	138kV, Cable sealing end	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.18	138kV, Surge arrester	6	EA	4,810.00	2,886.00	1,924.00	$ 28,860	$ 17,316	$ 11,544	**$ 57,720**
3.17	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.18	138kV, A Frame 50'	2	EA	33,000.00	19,800.00	13,200.00	$ 66,000	$ 39,600	$ 26,400	**$ 132,000**
3.19	345kV Gas-Insulated Bus Conductor		LF	550.00	275.00	82.50	$ -	$ -	$ -	**$ -**
3.20	345kV Gas-Insulated Bus Conductor-elbow		EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	**$ -**
3.21	AL. Bus Tubing, 5" SCH 80	831	LF	25.00	184.94	123.29	$ 20,775	$ 153,683	$ 102,456	**$ 276,914**
3.22	AL. Bus fittings	1	LS	24,930.00	24,930.00	12,465.00	$ 24,930	$ 24,930	$ 12,465	**$ 62,325**
3.23	Steel grating and support beams-transformer moat	0	LB	2.73	1.17	0.50	$ -	$ -	$ -	**$ -**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 181,017	$ 269,516	$ 172,258	**$ 622,791**
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	**$ -**
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.3	345kV, Cable sealing end	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.4	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch		EA				$ -	$ -	$ -	**$ -**
4.6	345/138KV, Power Transformer with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.7	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.8	345kV, Shunt Reactor with oil containment-250MVAR		EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.9	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.10	Transport & Testing- Shunt Reactor		EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.12	345kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.13	345kV, Circuit Breaker		EA		57,239.00	24,531.00	$ -	$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	**$ -**
4.15	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.16	345kV, surge Arrester	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.17	138kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.18	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.19	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.20	138kV, Shunt Reactor with oil containment-250MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.21	Transport & Testing- Shunt Reactor	0	EA		204,400.00	132,600.00	$ -	$ -	$ -	**$ -**
4.22	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.23	138kV, Circuit Breaker,	1	EA	112,000.00	13,559.00	5,811.00	$ 112,000	$ 13,559	$ 5,811	**$ 131,370**
4.24	138kV, Circuit Breaker, reinstallation only	1	EA		13,559.00	5,811.00	$ -	$ 13,559	$ 5,811	**$ 19,370**
4.25	138kV, Disconnect Switch	4	EA	37,700.00	11,875.50	5,089.50	$ 150,800	$ 47,502	$ 20,358	**$ 218,660**
4.26	138kV, Cable sealing end	0	EA	11,600.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.27	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
4.28	138kV, Surge arrester	6	EA	4,066.40	1,443.00	962.00	$ 24,398	$ 8,658	$ 5,772	**$ 38,828**
4.28	Station service transformers- 120/208v-250VA	0	EA		45,500.00	19,500.00	$ -	$ -	$ -	**$ -**
TOTAL - MAJOR EQUIPMENT							$ 287,198	$ 83,278	$ 37,752	$ 408,228
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	10,200	LF	5.30	1.43	0.29	$ 54,035	$ 14,612	$ 2,922	**$ 71,568**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 54,035	$ 14,612	$ 2,922	$ 71,568
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	1,800	LF	11.15	10.80	5.40	$ 20,070	$ 19,440	$ 9,720	**$ 49,230**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench	463	LF	266.50	53.04	13.26	$ 123,256	$ 24,531	$ 6,133	**$ 153,920**
6.7							$ -	$ -	$ -	**$ -**
6.8	138kV UG- Conduit	0	LF	266.73	202.15	100.00	$ -	$ -	$ -	**$ -**
6.9	138kV UG- Cable	0	LF	145.00	87.00	58.00	$ -	$ -	$ -	**$ -**
6.10	138kV UG- Termination	0	EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.11	345kV UG- Conduit	0	LF	266.73	202.15	100.00	$ -	$ -	$ -	**$ -**
6.12	345kV UG- Cable	0	LF	167.00	100.20	66.80	$ -	$ -	$ -	**$ -**
6.13	345kV UG- Termination	0	EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.14							$ -	$ -	$ -	**$ -**
6.15							$ -	$ -	$ -	**$ -**
TOTAL - CONDUIT & CABLE TRENCH							$ 143,326	$ 43,971	$ 15,853	$ 203,150
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	2,855	LF	2.09	3.42	1.46	$ 5,970	$ 9,751	$ 4,179	**$ 19,899**
7.2	Caweld, DSA, 4/0 , T, CROSS	88	EA	165.00	75.00		$ 14,520	$ 6,600	$ -	**$ 21,120**
7.3	Ground Rod, 3/4" x 15'	70	EA	135.00	67.50	7.50	$ 9,450	$ 4,725	$ 525	**$ 14,700**
TOTAL - GROUND GRID							$ 29,940	$ 21,076	$ 4,704	**$ 55,719**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	0	EA	2,226,935.13	1,558,854.59	668,080.54	$ -	$ -	$ -	**$ -**
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	**$ -**
8.3	Primary Line Relays (87L): SEL-411L	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.4	Backup Line Relays (87L): GE L90	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.5	125VDC Battery System	0	LS	25,000.00	22,750.00	9,750.00	$ -	$ -	$ -	**$ -**
8.6	Control house AC Panel	0	EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.7	Control House DC Panel	0	EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.8	Generator	0	EA	130,000.00	72,800.00	31,200.00	$ -	$ -	$ -	**$ -**
TOTAL - CONTROL ENCLOSURE							$ 42,656	$ 34,125	$ 8,531	**$ 85,312**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
10.Shore Road 138kV Substation Upgrades							$ 1,060,141	$ 808,693	$ 447,033	**$ 2,315,867**
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		43,950.42	18,835.89	$ -	$ 43,950	$ 18,836	**$ 62,786**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		23,158.67		$ -	$ 23,159	$ -	**$ 23,159**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		92,634.69		$ -	$ 92,635	$ -	**$ 92,635**
9.4	Utility PM and Project Oversite	1	LS		23,158.67		$ -	$ 23,159	$ -	**$ 23,159**
9.5	Site Accommodation, Facilities, Storage	1	LS	23,158.67			$ 23,159	$ -	$ -	**$ 23,159**
	Engineering									
9.6	Design Engineering	1.00	LS		185,269.38		$ -	$ 185,269	$ -	**$ 185,269**
9.7	LiDAR /GPR	1.00	LS				$ -	$ -	$ -	**$ -**
9.8	Geotech	2.00	EA		2,730.00	1,820.00	$ -	$ 5,460	$ 3,640	**$ 9,100**
9.9	Surveying/Staking	0.20	Site		16,211.07		$ -	$ 3,242	$ -	**$ 3,242**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		86,845.02		$ -	$ 86,845	$ -	**$ 86,845**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		-		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		23,158.67		$ -	$ 23,159	$ -	**$ 23,159**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		6,947.60		$ -	$ 6,948	$ -	**$ 6,948**
9.15	Laydown Lease	-	LS		-		$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	-	LS		-		$ -	$ -	$ -	**$ -**
9.17	Legal Fees (Real estate)	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 86,000	$ -	$ -	$ 86,000	**$ 86,000**
9.20	Sales Tax on Materials	8.80%	LS	1,060,140.93			$ 93,292	$ -	$ -	**$ 93,292**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		2,315.87		$ -	$ 2,316	$ -	**$ 2,316**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 116,451	$ 496,141	$ 108,476	**$ 721,068**

NEXTera Energy- TO44 Enhanced 2

20- Ramapo 345kV Substation Upgrades

Total: $ 12,574,005

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
20- Ramapo 345kV Substation Upgrades				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ 123,891	$ 146,057	$ 82,932	$ 352,880
2. SUBSTATION FOUNDATIONS	$ 178,174	$ 203,628	$ 127,267	$ 509,070
3. SUBSTATION STRUCTURES	$ 297,191	$ 160,223	$ 94,769	$ 552,182
4. MAJOR EQUIPTMENT	$ 3,171,092	$ 499,674	$ 296,826	$ 3,967,592
5. LOW VOLTAGE & CONTROL CABLE	$ 58,802	$ 15,901	$ 3,180	$ 77,883
6. CONDUIT & CABLE TRENCH	$ 512,437	$ 251,166	$ 129,158	$ 892,761
7. GROUND GRID	$ 24,512	$ 17,617	$ 4,057	$ 46,185
8. CONTROL ENCLOSURE	$ 170,625	$ 136,500	$ 34,125	$ 341,250
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 466,630	$ 1,396,829	$ 276,686	$ 2,140,145
SUBTOTAL (Costs):	$ 5,003,354	$ 2,827,593	$ 1,049,000	$ 8,879,947
CONTRACTOR MARK-UP (OH&P)	$ 900,604	$ 508,967	$ 188,820	$ 1,598,390
SUBTOTAL:	$ 5,903,957	$ 3,336,560	$ 1,237,820	$ 10,478,338
CONTINGENCY ON ENTIRE PROJECT	$ 1,180,791	$ 667,312	$ 247,564	$ 2,095,668
TOTAL:	$ 7,084,749	$ 4,003,872	$ 1,485,384	$ 12,574,005

Description of Work: Install a new PAR and additonal CB to existing bay

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
10.Shore Road 138kV Substation Upgrades										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	0.5	ACRE	-	10,800.00	7,200.00	$ -	$ 5,400	$ 3,600	**$ 9,000**
1.2	Demolition	1	LS		12,000.00	8,000.00	$ -	$ 12,000	$ 8,000	**$ 20,000**
1.3	New Access Road - 20'	1,111	SY	4.85	7.20	4.80	$ 5,389	$ 8,000	$ 5,333	**$ 18,722**
1.4	Strip and Dispose Top Soil	807	CY		24.50	10.50	$ -	$ 19,763	$ 8,470	**$ 28,233**
1.5	Site Grading- Excavation for Substation Pad	2,420	CY		9.00	6.00	$ -	$ 21,780	$ 14,520	**$ 36,300**
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	1,307	CY		21.00	9.00	$ -	$ 27,442.80	$ 11,761.20	**$ 39,204.00**
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	1,960	CY		2.40	1.60	$ -	$ 4,704	$ 3,136	**$ 7,841**
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	1,307	CY	25.00	2.40	1.60	$ 32,670	$ 3,136	$ 2,091	**$ 37,897**
1.9	Blasting		EA				$ -	$ -	$ -	**$ -**
1.10	Install substation 8" pad base	2,420	SY	11.00	6.00	4.00	$ 26,620	$ 14,520	$ 9,680	**$ 50,820**
1.11	Site Surfacing - Aggregate 6" Thick	2,420	SY	16.50	4.50	3.00	$ 39,930	$ 10,890	$ 7,260	**$ 58,080**
1.12	7' Station Fence w/ Barbed Wire & Grounding	460	LF	13.85	13.85	6.92	$ 6,370	$ 6,370	$ 3,185	**$ 15,925**
1.13	20' Slide Gate & Grounding	0	EA	8,100.00	3,245.00	1,305.00	$ -	$ -	$ -	**$ -**
1.14	4' Pedestrian gate	0	EA	2,500.00	1,000.00	350.00	$ -	$ -	$ -	**$ -**
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator	0	LS	75,000.00	45,000.00	30,000.00	$ -	$ -	$ -	**$ -**
1.16	Seeding	3,680	SF	1.50	1.50	1.00	$ 5,520	$ 5,520	$ 3,680	**$ 14,720**
1.17	Erosion Control-Silt fence install & remove	920	LF	2.41	3.16	0.72	$ 2,217	$ 2,907	$ 662	**$ 5,787**
1.18	Temporary fencing	690	LF	7.50	5.25	2.25	$ 5,175	$ 3,623	$ 1,553	**$ 10,350**
1.19	Substation entrance with asphalt	0	SY	19.50	26.00	19.50	$ -	$ -	$ -	**$ -**
1.20	Concrete curb	0	LF	26.00	27.30	11.70	$ -	$ -	$ -	**$ -**
1.21	Retaining Wall	0	LF	156.00	117.00	117.00	$ -	$ -	$ -	**$ -**
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 123,891	$ 146,057	$ 82,932	**$ 352,880**
2. SUBSTATION FOUNDATIONS										
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	73	CY	703.89	804.44	502.78	$ 51,609	$ 58,982	$ 36,863	**$ 147,454**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.6	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.12	345kV, Disconnect Switch	24	CY	703.89	804.44	502.78	$ 16,724	$ 19,113	$ 11,946	**$ 47,784**
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Shunt Reactor with oil containment-250MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.15	345kV, Shunt Reactor with oil containment-75MVAR	100	CY	703.89	804.44	502.78	$ 70,389	$ 80,444	$ 50,278	**$ 201,110**
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Circuit Breaker	40	CY	703.89	804.44	502.78	$ 28,155	$ 32,178	$ 20,111	**$ 80,444**
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345Kv, GIS Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.20	345kV, Surge arrester	16	CY	703.89	804.44	502.78	$ 11,297	$ 12,911	$ 8,070	**$ 32,278**
2.21	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.22	138kV, Shunt Reactor with oil containment-250MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.23	138kV, Circuit Breaker,	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.24	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.25	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.26	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.27	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.28	138kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.29	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.31	Firewall Foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.32	Precast Firewall for transformer, PARs, reactors		SF	25.00	15.00	10.00	$ -	$ -	$ -	**$ -**
2.33	Precast Concrete Piles-12"X80'		EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.34	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.35	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
TOTAL - 345KV FOUNDATION							$ 178,174	$ 203,628	$ 127,267	**$ 509,070**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast		EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	2	EA	48,100.00	28,860.00	19,240.00	$ 96,200	$ 57,720	$ 38,480	**$ 192,400**
3.3	345kV, Bus support-3 Ph		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.4	345kV, Bus support-3 Ph, low		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.6	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.7	345kV, GIS support-1 Ph		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.8	345kV, GIS support-3 Ph		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end		EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.11	345kV, Surge arrester	3	EA	8,346.00	5,758.74	3,839.16	$ 25,038	$ 17,276	$ 11,517	**$ 53,832**
3.12	345kV, CCVT		EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.13	345kV, Disconnect Switch	3	EA	19,240.00	11,544.00	7,696.00	$ 57,720	$ 34,632	$ 23,088	**$ 115,440**
3.14	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	**$ -**
3.15	138kV, Bus support-1 Ph, low		EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.16	138kV, Disconnect Switch	0	EA	4,896.84	4,896.84	2,448.42	$ -	$ -	$ -	**$ -**
3.17	138kV, Cable sealing end	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.18	138kV, Surge arrester	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.19	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.20	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.21	345kV Gas-Insulated Bus Conductor		LF	550.00	275.00	82.50	$ -	$ -	$ -	**$ -**
3.22	345kV Gas-Insulated Bus Conductor-elbow		EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	**$ -**
3.23	AL. Bus Tubing, 5" SCH 80	0	LF	25.00	184.94	123.29	$ -	$ -	$ -	**$ -**
3.24	AL. Bus fittings	0	LS	-	-	-	$ -	$ -	$ -	**$ -**
3.25	Steel grating and support beams-transformer moat	43,280	LB	2.73	1.17	0.50	$ 118,233	$ 50,594	$ 21,683	**$ 190,511**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 297,191	$ 160,223	$ 94,769	**$ 552,182**
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	**$ -**
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$ -**
4.3	345kV, Cable sealing end	0	EA		5,460.00	2,340.00	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.4	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch	3	EA	57,720.00	34,632.00	23,088.00	$ 173,160	$ 103,896	$ 69,264	**$ 346,320**
4.6	345/138KV, Power Transformer with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.7	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.8	345kV, Shunt Reactor with oil containment-250MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.9	345kV, Shunt Reactor with oil containment-75MVAR	1	EA	2,277,924.50	3,520.00	880.00	$ 2,277,925	$ 3,520	$ 880	**$ 2,282,325**
4.10	Transport & Testing- Shunt Reactor	1	EA		261,400.00	170,600.00	$ -	$ 261,400	$ 170,600	**$ 432,000**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.12	Transport & Testing- PAR	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.13	345kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker	2	EA	350,000.00	57,239.00	24,531.00	$ 700,000	$ 114,478	$ 49,062	**$ 863,540**
4.15	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	**$ -**
4.16	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.17	345kV, surge Arrester	3	EA	6,669.00	5,460.00	2,340.00	$ 20,007	$ 16,380	$ 7,020	**$ 43,407**
4.18	138kV, Phase Angle Regulator with oil containment	0	EA	9,798,059.00	3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.19	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		336,400.00	220,600.00	$ -	$ -	$ -	**$ -**
4.20	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.21	138kV, Shunt Reactor with oil containment-250MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.22	Transport & Testing- Shunt Reactor	0	EA		204,400.00	132,600.00	$ -	$ -	$ -	**$ -**
4.23	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.24	138kV, Circuit Breaker,	0	EA	112,000.00	13,559.00	5,811.00	$ -	$ -	$ -	**$ -**
4.25	138kV, Circuit Breaker, reinstallation only	0	EA		13,559.00	5,811.00	$ -	$ -	$ -	**$ -**
4.26	138kV, Disconnect Switch	0	EA	37,700.00	11,875.50	5,089.50	$ -	$ -	$ -	**$ -**
4.27	138kV, Cable sealing end	0	EA	11,600.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.28	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
4.29	138kV, Surge arrester	0	EA	4,066.40	1,443.00	962.00	$ -	$ -	$ -	**$ -**
4.30	Station service transformers- 120/208v-250VA	0	EA		45,500.00	19,500.00	$ -	$ -	$ -	**$ -**
TOTAL - MAJOR EQUIPMENT							$ 3,171,092	$ 499,674	$ 296,826	$ 3,967,592
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	11,100	LF	5.30	1.43	0.29	$ 58,802	$ 15,901	$ 3,180	**$ 77,883**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 58,802	$ 15,901	$ 3,180	$ 77,883
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	1,950	LF	11.15	10.80	5.40	$ 21,743	$ 21,060	$ 10,530	**$ 53,333**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench	538	LF	266.50	53.04	13.26	$ 143,244	$ 28,509	$ 7,127	**$ 178,880**
6.7							$ -	$ -	$ -	**$ -**
6.8	345kV UG- Conduit	335	LF	266.73	202.15	100.00	$ 89,355	$ 67,719	$ 33,502	**$ 190,576**
6.9	345kV UG- Cable	1,005	LF	167.00	100.20	66.80	$ 167,835	$ 100,701	$ 67,134	**$ 335,670**
6.10	345kV UG- Termination	3	EA	27,805.00	9,846.48	2,813.28	$ 83,415	$ 29,539	$ 8,440	**$ 121,394**
6.11	Fiber Optic Cable	335	LF	7.40	3.33	2.22	$ 2,478	$ 1,116	$ 744	**$ 4,338**
6.12	Ground Continuity Conductor	335	LF	13.04	7.53	5.02	$ 4,368	$ 2,522	$ 1,681	**$ 8,571**
6.13							$ -	$ -	$ -	**$ -**
6.14							$ -	$ -	$ -	**$ -**
TOTAL - CONDUIT & CABLE TRENCH							$ 512,437	$ 251,166	$ 129,158	$ 892,761
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	2,490	LF	2.09	3.42	1.46	$ 5,207	$ 8,504	$ 3,645	**$ 17,355**
7.2	Caweld, DSA, 4/0 , T, CROSS	72	EA	165.00	75.00		$ 11,880	$ 5,400	$ -	**$ 17,280**
7.3	Ground Rod, 3/4" x 15'	55	EA	135.00	67.50	7.50	$ 7,425	$ 3,713	$ 413	**$ 11,550**
TOTAL - GROUND GRID							$ 24,512	$ 17,617	$ 4,057	**$ 46,185**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	0	EA	2,226,935.13	1,558,854.59	668,080.54	$ -	$ -	$ -	**$ -**
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	**$ -**
8.3	Primary Line Relays (87L): SEL-411L	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.4	Backup Line Relays (87L): GE L90	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.5	Primary Bay Control: SEL-451	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.6	Backup Bay Control: SEL-451	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.7	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.9	Primary Bus Differential Relays: SEL-487B	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.10	Backup Bus Differential Relays: GE B90	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.11	125VDC Battery System	0	LS	25,000.00	22,750.00	9,750.00	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.12	Control house AC Panel	0	EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	$ -
8.13	Control House DC Panel	0	EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	$ -
8.14	Generator	0	EA	130,000.00	72,800.00	31,200.00	$ -	$ -	$ -	$ -
TOTAL - CONTROL ENCLOSURE							$ 170,625	$ 136,500	$ 34,125	**$ 341,250**
10.Shore Road 138kV Substation Upgrades							$ 4,536,724	$ 1,430,764	$ 772,314	**$ 6,739,802**
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		77,107.73	33,046.17	$ -	$ 77,108	$ 33,046	**$ 110,154**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		67,398.02		$ -	$ 67,398	$ -	**$ 67,398**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		269,592.08		$ -	$ 269,592	$ -	**$ 269,592**
9.4	Utility PM and Project Oversite	1	LS		67,398.02		$ -	$ 67,398	$ -	**$ 67,398**
9.5	Site Accommodation, Facilities, Storage	1	LS	67,398.02			$ 67,398	$ -	$ -	**$ 67,398**
	Engineering									
9.6	Design Engineering	1.00	LS		539,184.16		$ -	$ 539,184	$ -	**$ 539,184**
9.7	LiDAR /GPR	1.00	LS				$ -	$ -	$ -	**$ -**
9.8	Geotech	2.00	EA		2,730.00	1,820.00	$ -	$ 5,460	$ 3,640	**$ 9,100**
9.9	Surveying/Staking	0.50	Site		47,178.61		$ -	$ 23,589	$ -	**$ 23,589**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		252,742.58		$ -	$ 252,743	$ -	**$ 252,743**
	Permitting and Additional Costs									
9.11	Physical Security	-	LS		-		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		67,398.02		$ -	$ 67,398	$ -	**$ 67,398**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		20,219.41		$ -	$ 20,219	$ -	**$ 20,219**
9.15	Laydown Lease	-	LS		-		$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	-	LS		-		$ -	$ -	$ -	**$ -**
9.17	Legal Fees (Real estate)	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 240,000	$ -	$ -	$ 240,000	**$ 240,000**
9.20	Sales Tax on Materials	8.80%	LS	4,536,724.06			$ 399,232	$ -	$ -	**$ 399,232**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		6,739.80		$ -	$ 6,740	$ -	**$ 6,740**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 466,630	$ 1,396,829	$ 276,686	**$ 2,140,145**

NEXTera Energy- TO44 Enhanced 2

21. Existing Ruland Road 138 kV Substation

Total: $ 2,030,035

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
21. Existing Ruland Road 138 kV Substation				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ -	$ -	$ -	$ -
2. SUBSTATION FOUNDATIONS	$ 3,128	$ 3,575	$ 2,235	$ 8,938
3. SUBSTATION STRUCTURES	$ -	$ -	$ -	$ -
4. MAJOR EQUIPTMENT	$ 920,000	$ 13,559	$ 5,811	$ 939,370
5. LOW VOLTAGE & CONTROL CABLE	$ 20,660	$ 5,587	$ 1,117	$ 27,364
6. CONDUIT & CABLE TRENCH	$ 6,690	$ 6,480	$ 3,240	$ 16,410
7. GROUND GRID	$ -	$ -	$ -	$ -
8. CONTROL ENCLOSURE	$ 42,656	$ 34,125	$ 8,531	$ 85,312
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 98,170	$ 216,812	$ 41,264	$ 356,246
SUBTOTAL (Costs):	$ 1,091,305	$ 280,138	$ 62,198	$ 1,433,641
CONTRACTOR MARK-UP (OH&P)	$ 196,435	$ 50,425	$ 11,196	$ 258,055
SUBTOTAL:	$ 1,287,740	$ 330,563	$ 73,394	$ 1,691,696
CONTINGENCY ON ENTIRE PROJECT	$ 257,548	$ 66,113	$ 14,679	$ 338,339
TOTAL:	$ 1,545,287	$ 396,675	$ 88,072	$ 2,030,035

Description of Work: Modification at existing 138kv Ruland station (replace with two hybrid circuit breaker)

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
21. Existing Ruland Road 138 kV Substation										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing		ACRE	-	10,800.00	7,200.00	$ -	$ -	$ -	$ -
1.2	Demolition		ACRE	-	-	-	$ -	$ -	$ -	$ -
1.3	New Access Road - 20'		SY	4.85	7.20	4.80	$ -	$ -	$ -	$ -
1.4	Strip and Dispose Top Soil		CY		24.50	10.50	$ -	$ -	$ -	$ -
1.5	Site Grading- Excavation for Substation Pad		CY		9.00	6.00	$ -	$ -	$ -	$ -
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal		CY		21.00	9.00	$ -	$ -	$ -	$ -
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)		CY		2.40	1.60	$ -	$ -	$ -	$ -
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)		CY	25.00	2.40	1.60	$ -	$ -	$ -	$ -
1.9	Blasting		EA				$ -	$ -	$ -	$ -
1.10	Install substation 8" pad base		SY	11.00	6.00	4.00	$ -	$ -	$ -	$ -
1.11	Site Surfacing - Aggregate 6" Thick		SY	16.50	4.50	3.00	$ -	$ -	$ -	$ -
1.12	7' Station Fence w/ Barbed Wire & Grounding		LF	13.85	13.85	6.92	$ -	$ -	$ -	$ -
1.13	20' Slide Gate & Grounding		EA	8,100.00	3,245.00	1,305.00	$ -	$ -	$ -	$ -
1.14	4' Pedestrian gate		EA	2,500.00	1,000.00	350.00	$ -	$ -	$ -	$ -
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator		LS	446,976.00	115,200.00	76,104.00	$ -	$ -	$ -	$ -
1.16	Seeding		SF	1.50	1.50	1.00	$ -	$ -	$ -	$ -
1.17	Erosion Control-Silt fence install & remove		LF	2.41	3.16	0.72	$ -	$ -	$ -	$ -
1.18	Temporary fencing		LF	7.50	5.25	2.25	$ -	$ -	$ -	$ -
1.19	Substation entrance with asphalt		SY	19.50	26.00	19.50	$ -	$ -	$ -	$ -
1.20	Concrete curb		LF	26.00	27.30	11.70	$ -	$ -	$ -	$ -
1.21	Retaining Wall		LF	156.00	117.00	117.00	$ -	$ -	$ -	$ -
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ -	$ -	$ -	$ -
2. SUBSTATION FOUNDATIONS										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.6	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
=3*3	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
11	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Shunt Reactor with oil containment-275MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.15	345kV, Shunt Reactor with oil containment-100MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Circuit Breaker (PASS)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.18	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345Kv, Control Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.20	345kV, Surge arrester	-	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.21	138kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.22	138kV, Circuit Breaker, Hybrid circuit breaker	4	CY	703.89	804.44	502.78	$ 3,128	$ 3,575	$ 2,235	**$ 8,938**
2.23	138kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.24	138kV, Bus support-1 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.25	138kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.26	138kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.27	138kV, Surge arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.28	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.29	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	Firewall Foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.31	Precast Firewall for transformer, PARs, reactors	-	SF	25.00	15.00	10.00	$ -	$ -	$ -	**$ -**
2.32	Precast Concrete Piles-12"X80'	-	EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.33	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.34	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
TOTAL - 345KV FOUNDATION							$ 3,128	$ 3,575	$ 2,235	**$ 8,938**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast	0	EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, Bus support-3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.4	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.6	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.7	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.8	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.11	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch	0	EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	**$ -**
3.13	138kV, Bus support-3 Ph, low	0	EA	4,173.00	2,879.76	1,919.84	$ -	$ -	$ -	**$ -**
3.14	138kV, Bus support-1 Ph, low	0	EA	2,782.00	1,919.84	1,279.89	$ -	$ -	$ -	**$ -**
3.15	138kV, Disconnect Switch	0	EA				$ -	$ -	$ -	**$ -**
3.16	138kV, Cable sealing end	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.17	138kV, Surge arrester	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.18	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.19	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.20	345kV Gas-Insulated Bus Conductor	0	LF	550.00	275.00	82.50	$ -	$ -	$ -	**$ -**
3.21	345kV Gas-Insulated Bus Conductor-elbow	0	EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	**$ -**
3.22	AL. Bus Tubing, 5" SCH 80		LF	25.00	184.94	123.29	$ -	$ -	$ -	**$ -**
3.23	AL. Bus fittings		LS	-	-	-	$ -	$ -	$ -	**$ -**
3.24	Steel grating and support beams-transformer moat		LB	2.73	1.17	0.50	$ -	$ -	$ -	**$ -**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ -	$ -	$ -	$ -
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	**$ -**
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$ -**
4.3	345kV, Cable sealing end	0	EA	17,400.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch	0	EA	57,720.00	34,632.00	23,088.00	$ -	$ -	$ -	**$ -**
4.6	345/138KV, Power Transformer with oil containment	0	EA	5,020,000.00	3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.7	Transport & Testing- Transformer	0	EA		777,400.00	514,600.00	$ -	$ -	$ -	**$ -**
4.8	345kV, Shunt Reactor with oil containment-275MVAR	0	EA	3,332,488.00	3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.9	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.10	Transport & Testing- Shunt Reactor	0	EA		426,650.00	182,850.00	$ -	$ -	$ -	**$ -**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA	12,882,000.00	3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.10	Transport & Testing- PAR	0	EA		615,400.00	406,600.00	$ -	$ -	$ -	**$ -**
4.12	345kV, Circuit Breaker (PASS)	0	EA	350,000.00	57,239.00	24,531.00	$ -	$ -	$ -	**$ -**
4.13	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.15	345kV, surge Arrester	0	EA	6,669.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.16	138kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.17	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.18	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR	478,750.00	287,250.00	191,500.00	$ -	$ -	$ -	**$ -**
4.19	138kV, Circuit Breaker, Hybrid circuit breaker	1	EA	920,000.00	13,559.00	5,811.00	$ 920,000	$ 13,559	$ 5,811	**$ 939,370**
4.20	138kV, Disconnect Switch	0	EA		3,958.50	1,696.50	$ -	$ -	$ -	**$ -**
4.21	138kV, Cable sealing end	0	EA	11,600.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.21	138kV, Surge arrester	0	EA	4,446.00	4,200.00	1,800.00	$ -	$ -	$ -	**$ -**
4.22	138kV, CCVT	0	EA		7,970.08	3,415.75	$ -	$ -	$ -	**$ -**
4.24	Station service transformers- 120/208v-250VA	0	EA	260,000.00	45,500.00	19,500.00	$ -	$ -	$ -	**$ -**
TOTAL - MAJOR EQUIPMENT							$ 920,000	$ 13,559	$ 5,811	$ 939,370
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	3,900	LF	5.30	1.43	0.29	$ 20,660	$ 5,587	$ 1,117	**$ 27,364**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 20,660	$ 5,587	$ 1,117	**$ 27,364**
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	600	LF	11.15	10.80	5.40	$ 6,690	$ 6,480	$ 3,240	**$ 16,410**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench		LF	266.50	53.04	13.26	$ -	$ -	$ -	**$ -**
6.7										
6.8	138kV UG- Conduit		LF	266.73	202.15	100.00	$ -	$ -	$ -	$ -
6.9	138kV UG- Cable	0	LF	145.00	87.00	58.00	$ -	$ -	$ -	**$ -**
6.10	138kV UG- Termination		EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.11	Fiber Optic Cable	0	LF	7.40	3.33	2.22	$ -	$ -	$ -	**$ -**
6.12	Ground Continuity Conductor	0	LF	13.04	7.53	5.02	$ -	$ -	$ -	**$ -**
TOTAL - CONDUIT & CABLE TRENCH							$ 6,690	$ 6,480	$ 3,240	**$ 16,410**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor		LF	2.09	3.42	1.46	$ -	$ -	$ -	**$ -**
7.2	Caweld, DSA, 4/0 , T, CROSS		EA	165.00	75.00		$ -	$ -	$ -	**$ -**
7.3	Ground Rod, 3/4" x 15'		EA	135.00	67.50	7.50	$ -	$ -	$ -	**$ -**
TOTAL - GROUND GRID							$ -	$ -	$ -	**$ -**
8. CONTROL ENCLOSURE										
8.1	345kv Control Bldg	0	EA	407,211.00	285,047.70	122,163.30	$ -	$ -	$ -	**$ -**
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	**$ -**
8.3	Primary Line Relays (87L): SEL-411L		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.4	Backup Line Relays (87L): GE L90		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.5	Primary Bay Control: SEL-451		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.6	Backup Bay Control: SEL-451		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.7	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.9	Primary Bus Differential Relays: SEL-487B		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.10	Backup Bus Differential Relays: GE B90		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.11	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Annunciator, JMUX		EA	12,500.00	10,000.00	2,500.00	$ -	$ -	$ -	**$ -**
8.12	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annunciator		EA	12,500.00	10,000.00	2,500.00	$ -	$ -	$ -	**$ -**
8.13	HMI Panel		EA	12,500.00	10,000.00	2,500.00	$ -	$ -	$ -	**$ -**
8.14	Primary Line Relays (87L): SEL-411L	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.15	Backup Line Relays (87L): GE L90	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.16	Primary Bay Control: SEL-451		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.17	Backup Bay Control: SEL-451		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.18	Primary Bus Differential Relays: SEL-487B		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.19	Backup Bus Differential Relays: GE B90		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.20	125VDC Battery System		LS	25,000.00	22,750.00	9,750.00	$ -	$ -	$ -	**$ -**
8.21	Control house AC Panel		EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.22	Control House DC Panel		EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.23	Generator		EA	130,000.00	72,800.00	31,200.00	$ -	$ -	$ -	**$ -**
TOTAL - CONTROL ENCLOSURE							$ 42,656	$ 34,125	$ 8,531	$ 85,312
21. Existing Ruland Road 138 kV Substation							$ 993,135	$ 63,326	$ 20,934	$ 1,077,395
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		2,949.11	1,263.90	$ -	$ 2,949	$ 1,264	**$ 4,213**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		10,773.95		$ -	$ 10,774	$ -	**$ 10,774**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		43,095.80		$ -	$ 43,096	$ -	**$ 43,096**
9.4	Utility PM and Project Oversite	1	LS		10,773.95		$ -	$ 10,774	$ -	**$ 10,774**
9.5	Site Accommodation, Facilities, Storage	1	LS	10,773.95			$ 10,774	$ -	$ -	**$ 10,774**
	Engineering									
9.6	Design Engineering	1.00	LS		86,191.60		$ -	$ 86,192	$ -	**$ 86,192**
9.7	LiDAR /GPR	1.00	LS		-		$ -	$ -	$ -	**$ -**
9.8	Geotech	-	EA		2,730.00	1,820.00	$ -	$ -	$ -	**$ -**
9.9	Surveying/Staking	1.00	Site		7,541.77		$ -	$ 7,542	$ -	**$ 7,542**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		40,402.31		$ -	$ 40,402	$ -	**$ 40,402**
	Permitting and Additional Costs									
9.11	Physical Security	-	LS		6,546.96		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		10,773.95		$ -	$ 10,774	$ -	**$ 10,774**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		3,232.19		$ -	$ 3,232	$ -	**$ 3,232**
9.15	Laydown Lease	-	LS				$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	-	LS		-	1,158,245.00	$ -	$ -	$ -	**$ -**
9.17	Legal Fees (Real estate)	-	LS		-	34,747.35	$ -	$ -	$ -	**$ -**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 40,000	$ -	$ -	$ 40,000	**$ 40,000**
9.20	Sales Tax on Materials	8.80%	LS	993,134.86			$ 87,396	$ -	$ -	**$ 87,396**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		1,077.40		$ -	$ 1,077	$ -	**$ 1,077**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 98,170	$ 216,812	$ 41,264	**$ 356,246**

NEXTera Energy- TO44 Enhanced 2

22. Existing East Garden City 138 kV Substation Upgrades

Total: $ 28,298,464

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
22. Existing East Garden City 138 kV Substation Upgrades				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ -	$ -	$ -	$ -
2. SUBSTATION FOUNDATIONS	$ 249,640	$ 285,303	$ 178,314	$ 713,257
3. SUBSTATION STRUCTURES	$ 261,466	$ 347,805	$ 240,376	$ 849,646
4. MAJOR EQUIPTMENT	$ 10,602,422	$ 458,707	$ 272,389	$ 11,333,517
5. LOW VOLTAGE & CONTROL CABLE	$ 25,428	$ 6,876	$ 1,375	$ 33,679
6. CONDUIT & CABLE TRENCH	$ 814,095	$ 440,988	$ 236,281	$ 1,491,364
7. GROUND GRID	$ 14,819	$ 10,555	$ 2,392	$ 27,766
8. CONTROL ENCLOSURE	$ 298,594	$ 238,875	$ 59,719	$ 597,187
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 1,229,913	$ 3,097,662	$ 610,799	$ 4,938,374
SUBTOTAL (Costs):	$ 13,496,376	$ 4,886,771	$ 1,601,644	$ 19,984,791
CONTRACTOR MARK-UP (OH&P)	$ 2,429,348	$ 879,619	$ 288,296	$ 3,597,262
SUBTOTAL:	$ 15,925,724	$ 5,766,390	$ 1,889,940	$ 23,582,053
CONTINGENCY ON ENTIRE PROJECT	$ 3,185,145	$ 1,153,278	$ 377,988	$ 4,716,411
TOTAL:	$ 19,110,868	$ 6,919,667	$ 2,267,928	$ 28,298,464

Description of Work: Modification at existing 138kv EGC station

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
22. Existing East Garden City 138 kV Substation Upgrades										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing		ACRE	-	10,800.00	7,200.00	$ -	$ -	$ -	$ -
1.2	Demolition		LS	-	900,000.00	600,000.00	$ -	$ -	$ -	$ -
1.3	New Access Road - 20'		SY	4.85	7.20	4.80	$ -	$ -	$ -	$ -
1.4	Strip and Dispose Top Soil		CY		24.50	10.50	$ -	$ -	$ -	$ -
1.5	Site Grading- Excavation for Substation Pad		CY		9.00	6.00	$ -	$ -	$ -	$ -
1.6	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal		CY		21.00	9.00	$ -	$ -	$ -	$ -
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)		CY		2.40	1.60	$ -	$ -	$ -	$ -
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)		CY	25.00	2.40	1.60	$ -	$ -	$ -	$ -
1.9	Blasting		EA				$ -	$ -	$ -	$ -
1.10	Install substation 8" pad base		SY	11.00	6.00	4.00	$ -	$ -	$ -	$ -
1.11	Site Surfacing - Aggregate 6" Thick		SY	16.50	4.50	3.00	$ -	$ -	$ -	$ -
1.12	7' Station Fence w/ Barbed Wire & Grounding		LF	13.85	13.85	6.92	$ -	$ -	$ -	$ -
1.13	20' Slide Gate & Grounding		EA	8,100.00	3,245.00	1,305.00	$ -	$ -	$ -	$ -
1.14	4' Pedestrian gate		EA	2,500.00	1,000.00	350.00	$ -	$ -	$ -	$ -
1.15	Storm drain-15" HDPE, INFILTRATION TRENCH, INLET and Hydrodynamic Separator		LS	446,976.00	115,200.00	76,104.00	$ -	$ -	$ -	$ -
1.16	Seeding		SF	1.50	1.50	1.00	$ -	$ -	$ -	$ -
1.17	Erosion Control-Silt fence install & remove		LF	2.41	3.16	0.72	$ -	$ -	$ -	$ -
1.18	Temporary fencing		LF	7.50	5.25	2.25	$ -	$ -	$ -	$ -
1.19	Substation entrance with asphalt		SY	19.50	26.00	19.50	$ -	$ -	$ -	$ -
1.20	Concrete curb		LF	26.00	27.30	11.70	$ -	$ -	$ -	$ -
1.21	Retaining Wall		LF	156.00	117.00	117.00	$ -	$ -	$ -	$ -
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ -	$ -	$ -	$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
2. SUBSTATION FOUNDATIONS										
2.1	345kV, Lightning mast	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.2	345kV, A Frame 70'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.3	345kV, Bus support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.4	345kV, Bus support-3 Ph, low	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.5	345kV, Bus support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.6	345kV, GIS air terminal	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.7	345kV, GIS support-1 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.8	345kV, GIS support-3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.9	345kV, GIS Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.10	345kV, Cable sealing end	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.11	345kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.12	345kV, Disconnect Switch	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.13	345/138KV, Power Transformer with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Shunt Reactor with oil containment-225MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.14	345kV, Shunt Reactor with oil containment-150MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.15	345kV, Shunt Reactor with oil containment-50MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.16	345kV, Shunt Reactor with oil containment-25MVAR	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.18	345kV, Circuit Breaker (PASS)	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.19	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.20	345Kv, GIS Enclosure-BLDG with generator pad	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.21	345kV, Surge arrester	-	CY	-	-	-	$ -	$ -	$ -	**$ -**
2.22	138kV, Phase Angle Regulator with oil containment	154	CY	703.89	804.44	502.78	$ 108,398	$ 123,884	$ 77,427	**$ 309,709**
2.23	138kV, Circuit Breaker, Hybrid circuit breaker	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.24	138kV, Bus support-3 Ph, low	43	CY	703.89	804.44	502.78	$ 30,126	$ 34,430	$ 21,519	**$ 86,075**
2.25	138kV, Bus support-1 Ph, low	61	CY	703.89	804.44	502.78	$ 42,867	$ 48,990	$ 30,619	**$ 122,476**
2.26	138kV, Disconnect Switch	73	CY	703.89	804.44	502.78	$ 51,187	$ 58,499	$ 36,562	**$ 146,247**
2.27	138kV, Cable sealing end	24	CY	703.89	804.44	502.78	$ 17,062	$ 19,500	$ 12,187	**$ 48,749**
2.28	138kV, CCVT	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.29	138kV, A Frame 50'	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.30	Firewall Foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.31	Precast Firewall for transformer, PARs, reactors		SF	25.00	15.00	10.00	$ -	$ -	$ -	**$ -**
2.32	Precast Concrete Piles-12"X80'	-	EA	18,000.00	3,200.00	2,800.00	$ -	$ -	$ -	**$ -**
2.33	Local Control Cabinet foundation	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.34	138kV, GIS Enclosure-BLDG & control room	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
TOTAL - 345KV FOUNDATION							$ 249,640	$ 285,303	$ 178,314	**$ 713,257**
3. SUBSTATION STRUCTURES										
3.1	345kV, Lightning mast	0	EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	0	EA	48,100.00	28,860.00	19,240.00	$ -	$ -	$ -	**$ -**
3.3	345kV, Bus support-3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.4	345kV, Bus support-3 Ph, low	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.5	345kV, Bus support-1 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.6	345kV, GIS air terminal	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.7	345kV, GIS support-1 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.8	345kV, GIS support-3 Ph	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.9	345kV, GIS Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.10	345kV, Cable sealing end	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
3.11	345kV, CCVT	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
3.12	345kV, Disconnect Switch	0	EA	19,240.00	11,544.00	7,696.00	$ -	$ -	$ -	**$ -**
3.13	138kV, Bus support-3 Ph, low	4	EA	4,173.00	2,879.76	1,919.84	$ 16,692	$ 11,519	$ 7,679	**$ 35,890**
3.14	138kV, Bus support-1 Ph, low	15	EA	2,782.00	1,919.84	1,279.89	$ 41,730	$ 28,798	$ 19,198	**$ 89,726**
3.15	138kV, Disconnect Switch	3	EA	4,896.84	4,896.84	2,448.42	$ 14,691	$ 14,691	$ 7,345	**$ 36,726**
3.16	138kV, Cable sealing end	2	EA	4,810.00	2,886.00	1,924.00	$ 9,620	$ 5,772	$ 3,848	**$ 19,240**
3.17	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.18	138kV, A Frame 50'	0	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.19	345kV Gas-Insulated Bus Conductor	0	LF	550.00	275.00	82.50	$ -	$ -	$ -	**$ -**
3.20	345kV Gas-Insulated Bus Conductor-elbow	0	EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	**$ -**
3.21	AL. Bus Tubing, 5" SCH 80	1,100	LF	25.00	184.94	123.29	$ 27,500	$ 203,432	$ 135,621	**$ 366,553**
3.22	AL. Bus fittings	1	LS	33,000.00	33,000.00	45,000.00	$ 33,000	$ 33,000	$ 45,000	**$ 111,000**
3.23	Steel grating and support beams-transformer moat	43,280	LB	2.73	1.17	0.50	$ 118,233	$ 50,594	$ 21,683	**$ 190,511**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 261,466	$ 347,805	$ 240,376	$ 849,646
4. MAJOR EQUIPTMENT										
4.1	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	**$ -**
4.2	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
4.3	345kV, Cable sealing end	0	EA	17,400.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.4	345kV, CCVT	0	EA		15,941.99	6,832.28	$ -	$ -	$ -	**$ -**
4.5	345kV, Disconnect Switch	0	EA	57,720.00	34,632.00	23,088.00	$ -	$ -	$ -	**$ -**
4.6	345/138KV, Power Transformer with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.7	Transport & Testing- Transformer	0	EA		15,400.00	6,600.00	$ -	$ -	$ -	**$ -**
4.8	345kV, Shunt Reactor with oil containment-225MVAR	0	EA	3,026,425.00	3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.9	345kV, Shunt Reactor with oil containment-150MVAR	0	EA	2,629,516.50	3,520.00	880.00				
4.10	345kV, Shunt Reactor with oil containment-50MVAR	0	EA	2,138,451.50	3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.11	345kV, Shunt Reactor with oil containment-25MVAR	0	EA	1,900,130.50	3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.12	Transport & Testing- Shunt Reactor	0	EA		424,900.00	279,600.00	$ -	$ -	$ -	**$ -**
4.13	345kV, Phase Angle Regulator with oil containment	0	EA	12,882,000.00	3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.14	Transport & Testing- PAR	0	EA		615,400.00	406,600.00	$ -	$ -	$ -	**$ -**
4.15	345kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR	838,571.43	503,142.86	335,428.57	$ -	$ -	$ -	**$ -**
4.16	345kV, Circuit Breaker (PASS)	0	EA		57,239.00	24,531.00	$ -	$ -	$ -	**$ -**
4.17	345kV, Circuit Breaker (GIS), outdoor rated	0	EA				$ -	$ -	$ -	**$ -**
4.18	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	0	EA				$ -	$ -	$ -	**$ -**
4.19	345kV, surge Arrester	0	EA	6,669.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.20	138kV, Phase Angle Regulator with oil containment	1	EA	10,366,370.00	3,520.00	880.00	$ 10,366,370	$ 3,520	$ 880	**$ 10,370,770**
4.21	Transport & Testing- Phase Angle Regulating Transformer, 138kV	1	EA		336,400.00	220,600.00	$ -	$ 336,400	$ 220,600	**$ 557,000**
4.22	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.23	138kV, Circuit Breaker, Hybrid circuit breaker	0	EA		13,559.00	5,811.00	$ -	$ -	$ -	**$ -**
4.24	138kV, Disconnect Switch	3	EA	37,700.00	11,875.50	5,089.50	$ 113,100	$ 35,627	$ 15,269	**$ 163,995**
4.25	138kV, Cable sealing end	6	EA	11,600.00	5,460.00	2,340.00	$ 69,600	$ 32,760	$ 14,040	**$ 116,400**
4.26	138kV, CCVT	0	EA		7,970.08	3,415.75	$ -	$ -	$ -	**$ -**
4.27	138kV, Surge arrester	12	EA	4,446.00	4,200.00	1,800.00	$ 53,352	$ 50,400	$ 21,600	**$ 125,352**
4.28	Station service transformers- 120/208v-250VA	0	EA	260,000.00	45,500.00	19,500.00	$ -	$ -	$ -	**$ -**
TOTAL - MAJOR EQUIPMENT							$ 10,602,422	$ 458,707	$ 272,389	$ 11,333,517
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	4,800	LF	5.30	1.43	0.29	$ 25,428	$ 6,876	$ 1,375	**$ 33,679**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 25,428	$ 6,876	$ 1,375	**$ 33,679**
6. CONDUIT & CABLE TRENCH										
6.1	Conduit, PVC, 6", SCH 40		LF	20.70	13.28	6.64	$ -	$ -	$ -	**$ -**
6.2	Conduit, PVC, 4", SCH 40	1,050	LF	11.15	10.80	5.40	$ 11,708	$ 11,340	$ 5,670	**$ 28,718**
6.3	Conduit, PVC, 3", SCH 40		LF	8.10	10.80	5.40	$ -	$ -	$ -	**$ -**
6.4	Conduit, PVC, 2", SCH 40		LF	3.95	10.80	5.40	$ -	$ -	$ -	**$ -**
6.5	Conduit, PVC, 1", SCH 40		LF	1.90	10.80	5.40	$ -	$ -	$ -	**$ -**
6.6	Cable Trench	375	LF	266.50	53.04	13.26	$ 99,938	$ 19,890	$ 4,973	**$ 124,800**
6.7										
6.8	138kV UG- Conduit	720	LF	266.73	202.15	100.00	$ 192,046	$ 145,545	$ 72,004	**$ 409,595**
6.9	138kV UG- Cable	2,268	LF	145.00	87.00	58.00	$ 328,860	$ 197,316	$ 131,544	**$ 657,720**
6.10	138kV UG- Termination	6	EA	27,805.00	9,846.48	2,813.28	$ 166,830	$ 59,079	$ 16,880	**$ 242,789**
6.11	345kV UG- Conduit	0	LF	266.73	202.15	100.00	$ -	$ -	$ -	**$ -**
6.12	345kV UG- Cable		LF	167.00	100.20	66.80	$ -	$ -	$ -	**$ -**
6.13	345kV UG- Termination		EA	27,805.00	9,846.48	2,813.28	$ -	$ -	$ -	**$ -**
6.14	Fiber Optic Cable	720	LF	7.40	3.33	2.22	$ 5,326	$ 2,398	$ 1,599	**$ 9,323**
6.15	Ground Continuity Conductor	720	LF	13.04	7.53	5.02	$ 9,388	$ 5,419	$ 3,613	**$ 18,420**
TOTAL - CONDUIT & CABLE TRENCH							$ 814,095	$ 440,988	$ 236,281	**$ 1,491,364**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	1,470	LF	2.09	3.42	1.46	$ 3,074	$ 5,020	$ 2,152	**$ 10,246**
7.2	Caweld, DSA, 4/0 , T, CROSS	45	EA	165.00	75.00		$ 7,425	$ 3,375	$ -	**$ 10,800**
7.3	Ground Rod, 3/4" x 15'	32	EA	135.00	67.50	7.50	$ 4,320	$ 2,160	$ 240	**$ 6,720**
TOTAL - GROUND GRID							$ 14,819	$ 10,555	$ 2,392	**$ 27,766**
8. CONTROL ENCLOSURE										
8.1	345kv GIS Bldg	0	EA	3,817,603.08	2,672,322.16	1,145,280.92	$ -	$ -	$ -	**$ -**
8.2	138kv GIS/Control Bldg	0	EA	1,145,280.92	801,696.65	343,584.28	$ -	$ -	$ -	**$ -**
8.3	Primary Line Relays (87L): SEL-411L		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.4	Backup Line Relays (87L): GE L90		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.5	Primary Bay Control: SEL-451		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.6	Backup Bay Control: SEL-451		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.7	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.9	Primary Bus Differential Relays: SEL-487B		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.10	Backup Bus Differential Relays: GE B90		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL COST
8.11	RTU Panel A: SEL-2240 Axion, SEL-2730M ENET SW., SEL-2407 GPS, Modem, SEL-2523 Annunciator, JMUX		EA	12,500.00	10,000.00	2,500.00	$ -	$ -	$ -	**$ -**
8.12	RTU Panel B: SEL-2730M Ethernet Switch, SEL-2407 GPS Clock, SEL-2523 Annunciator		EA	12,500.00	10,000.00	2,500.00	$ -	$ -	$ -	**$ -**
8.13	HMI Panel		EA	12,500.00	10,000.00	2,500.00	$ -	$ -	$ -	**$ -**
8.14	Primary Line Relays (87L): SEL-411L		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.15	Backup Line Relays (87L): GE L90		EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.16	Primary Line Relays (87L): SEL-411L	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.17	Backup Line Relays (87L): GE L90	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.18	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.19	Backup Transformer/Reactor/PAR Differential Relays: GE T60	1	EA	21,328.12	17,062.49	4,265.62	$ 21,328	$ 17,062	$ 4,266	**$ 42,656**
8.20	Primary Bus Differential Relays: SEL-487B	5	EA	21,328.12	17,062.49	4,265.62	$ 106,641	$ 85,312	$ 21,328	**$ 213,281**
8.21	Backup Bus Differential Relays: GE B90	5	EA	21,328.12	17,062.49	4,265.62	$ 106,641	$ 85,312	$ 21,328	**$ 213,281**
8.22	125VDC Battery System		LS	25,000.00	22,750.00	9,750.00	$ -	$ -	$ -	**$ -**
8.23	Control house AC Panel		EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.24	Control House DC Panel		EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.25	Generator		EA	130,000.00	72,800.00	31,200.00	$ -	$ -	$ -	**$ -**
TOTAL - CONTROL ENCLOSURE							$ 298,594	$ 238,875	$ 59,719	$ 597,187
22. Existing East Garden City 138 kV Substation Upgrades							$ 12,266,463	$ 1,789,109	$ 990,845	$ 15,046,417
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		97,298.38	41,699.31	$ -	$ 97,298	$ 41,699	**$ 138,998**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		150,464.17		$ -	$ 150,464	$ -	**$ 150,464**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		601,856.67		$ -	$ 601,857	$ -	**$ 601,857**
9.4	Utility PM and Project Oversite	1	LS		150,464.17		$ -	$ 150,464	$ -	**$ 150,464**
9.5	Site Accommodation, Facilities, Storage	1	LS	150,464.17			$ 150,464	$ -	$ -	**$ 150,464**
	Engineering									
9.6	Design Engineering	1.00	LS		1,203,713.34		$ -	$ 1,203,713	$ -	**$ 1,203,713**
9.7	LiDAR /GPR	-	LS				$ -	$ -	$ -	**$ -**
9.8	Geotech	5.00	EA		2,730.00	1,820.00	$ -	$ 13,650	$ 9,100	**$ 22,750**
9.9	Surveying/Staking	1.00	Site		105,324.92		$ -	$ 105,325	$ -	**$ 105,325**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		564,240.63		$ -	$ 564,241	$ -	**$ 564,241**
	Permitting and Additional Costs									
9.11	Physical Security		LS		6,546.96		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		150,464.17		$ -	$ 150,464	$ -	**$ 150,464**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		45,139.25		$ -	$ 45,139	$ -	**$ 45,139**
9.15	Laydown Lease	-	LS				$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)		LS		-	31,050,000.00	$ -	$ -	$ -	**$ -**
9.17	Legal Fees (Real estate)	-	LS		-	931,500.00	$ -	$ -	$ -	**$ -**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 560,000	$ -	$ -	$ 560,000	**$ 560,000**
9.20	Sales Tax on Materials	8.80%	LS	12,266,462.98			$ 1,079,449	$ -	$ -	**$ 1,079,449**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		15,046.42		$ -	$ 15,046	$ -	**$ 15,046**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 1,229,913	$ 3,097,662	$ 610,799	**$ 4,938,374**

NEXTera Energy- TO44 Enhanced 2
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit
(EGC To Dunwoodie 345 kV)

Total: $ 188,625,656

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 2,044,864	$ 10,048,478	$ 4,020,386	$ 16,113,728
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 14,363,368	$ 14,404,930	$ 9,713,465	$ 38,481,763
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 25,812,070	$ 15,635,513	$ 10,063,576	$ 51,511,158
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 4,810,229	$ 16,648,918	$ 5,644,412	$ 27,103,560
SUBTOTAL (Costs):	$ 47,030,531	$ 56,737,840	$ 29,441,838	$ 133,210,209
CONTRACTOR MARK-UP (OH&P)	$ 8,465,496	$ 10,212,811	$ 5,299,531	$ 23,977,838
SUBTOTAL:	$ 55,496,027	$ 66,950,651	$ 34,741,369	$ 157,188,047
CONTINGENCY ON ENTIRE PROJECT	$ 11,099,205	$ 13,390,130	$ 6,948,274	$ 31,437,609
TOTAL:	$ 66,595,232	$ 80,340,781	$ 41,689,643	$ 188,625,656

Description of Work: Dunwoodie - New Rochelle Landing (single cable duct). 5000 kcmil copper XLPE, single cable per phase.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	8.21	Mile		$ 700,000	$ 300,000	$ -	$ 5,747,000	$ 2,463,000	**$ 8,210,000**
1.3	Flaggers	260	DAY	$ 1,600	$ 4,800	$ 1,600	$ 416,000	$ 1,248,000	$ 416,000	**$ 2,080,000**
1.4	K Rail / Lane Control / Metal Plates	43,349	LF	$ 30	$ 18	$ 12	$ 1,300,464	$ 780,278	$ 520,186	**$ 2,600,928**
1.5	Police Support	10,400.0	HR		$ 120	$ 27	$ -	$ 1,248,000	$ 280,800	**$ 1,528,800**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	40.0	DAY		$ 1,000	$ 300	$ -	$ 40,000	$ 12,000	**$ 52,000**
1.9	Existing Utility Protection	8.21	Mile	$ 40,000	$ 120,000	$ 40,000	$ 328,400	$ 985,200	$ 328,400	**$ 1,642,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 2,044,864**	**$ 10,048,478**	**$ 4,020,386**	**$ 16,113,728**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	8	Miles		$ 139,800	$ 93,200	$ -	$ 1,147,758	$ 765,172	**$ 1,912,930**
2.2	Formwork in Trench	335,070	SF	$ 2	$ 1.5	$ 0.5	$ 670,141	$ 502,606	$ 167,535	**$ 1,340,282**
2.3	Trench Excavation	16,754	CY		$ 17.5	$ 7.5	$ -	$ 293,187	$ 125,651	**$ 418,838**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	1,745	SF	$ 50	$ 25	$ 14	$ 87,258	$ 42,756	$ 24,432	**$ 154,447**
2.5	Supply & Install Thermal Backfill	14,659	CY	$ 350	$ 245	$ 105	$ 5,130,766	$ 3,591,536	$ 1,539,230	**$ 10,261,531**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	6,825	CY	$ 200	$ 125	$ 50	$ 1,364,947	$ 853,092	$ 341,237	**$ 2,559,275**
2.9	Conduit 8" SCH 40PVC	173,395	LF	$ 28.6	$ 5.7	$ 2.4	$ 4,959,103	$ 983,151	$ 421,350	**$ 6,363,604**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	86,698	LF	$ 3.5	$ 3.15	$ 1.4	$ 305,176	$ 273,097	$ 117,042	**$ 695,315**
2.12	Warning Tape	86,698	LF	$ 0.15	$ 0.25	$ 0.10	$ 13,005	$ 21,674	$ 8,670	**$ 43,349**
2.13	Trench Box Shoring (Vault)	30	EA	$ -	$ 18,079	$ 27,119	$ -	$ 542,373	$ 813,559	**$ 1,355,932**
2.14	Splice Vault Excavation	2,992	CY		$ 17.5	$ 7.5	$ -	$ 52,360	$ 22,440	**$ 74,800**
2.15	Splice Vault Supply & Installation	30	EA	$ 35,000	$ 16,500	$ 38,500	$ 1,050,000	$ 495,000	$ 1,155,000	**$ 2,700,000**
2.16	Splice Vault Backfill	898	CY		$ 14.0	$ 6.0	$ -	$ 12,566	$ 5,386	**$ 17,952**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.17	Jack and Bore along Route	565	LF	$ 800	$ 1,600	$ 1,600	$ 452,000	$ 904,000	$ 904,000	**$ 2,260,000**
2.18	HDD along Route		LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.19	Air Test Ducts	260,093	LF			$ 0.25	$ -	$ -	$ 65,023	**$ 65,023**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	16,371	SY	$ 14.00	$ 14.00	$ 7.00	$ 229,199	$ 229,199	$ 114,600	**$ 572,998**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	4,548	CY	$ 22.38	$ 23.50	$ 10.07	$ 101,775	$ 106,864	$ 45,799	**$ 254,438**
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	68	EA		$ 400	$ 1,200	$ -	$ 27,299	$ 81,897	**$ 109,196**
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	68	EA		$ 10	$ 15	$ -	$ 682	$ 1,024	**$ 1,706**
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	147	EA		$ 400	$ 1,200	$ -	$ 58,637	$ 175,912	**$ 234,549**
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 448,266	$ 298,844	$ -	$ 448,266	$ 298,844	**$ 747,110**
2.26	Excess Materials Disposal to Certified Backfill	24,502	CY		$ 24.5	$ 10.5	$ -	$ 600,306	$ 257,274	**$ 857,580**
2.27	Rock Excavation and Removal	13,164	CY		$ 243	$ 162	$ -	$ 3,198,774	$ 2,132,516	**$ 5,331,290**
2.28	Dewatering	30	EA			$ 4,000	$ -	$ -	$ 120,000	**$ 120,000**
2.29	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.30	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.31	Excavated material - stockpile management	19,746	CF		$ 1.0	$ 0.5	$ -	$ 19,746	$ 9,873	**$ 29,618**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 14,363,368**	**$ 14,404,930**	**$ 9,713,465**	**$ 38,481,763**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 345kV 5000 kcmil copper XLPE	136,549	FT	$ 167	$ 100	$ 67	$ 22,803,636	$ 13,682,182	$ 9,121,454	**$ 45,607,272**
3.2	Circuit #1- Cable Splicing- 345kV 5000 kcmil copper XLPE	90	EA	$ 11,722	$ 9,846	$ 2,813	$ 1,054,980	$ 886,183	$ 253,195	**$ 2,194,358**
3.3	Circuit #1- Cable Termination- 345kV 5000 kcmil copper XLPE	6	EA	$ 27,805	$ 9,846	$ 2,813	$ 166,830	$ 59,079	$ 16,880	**$ 242,789**
3.4	Circuit #2- Procurement & Installation- 345kV 5000 kcmil copper XLPE		FT	$ 167	$ 100	$ 67	$ -	$ -	$ -	**$ -**
3.5	Circuit #2- Cable Splicing- 345kV 5000 kcmil copper XLPE		EA	$ 11,722	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.6	Circuit #2- Cable Termination- 345kV 5000 kcmil copper XLPE		EA	$ 27,805	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.7	Circuit #3- Procurement & Installation- 345kV 5000 kcmil copper XLPE		FT	$ 167	$ 100	$ 67	$ -	$ -	$ -	**$ -**
3.8	Circuit #3- Cable Splicing- 345kV 5000 kcmil copper XLPE		EA	$ 11,722	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.9	Circuit #3- Cable Termination- 345kV 5000 kcmil copper XLPE		EA	$ 27,805	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.10	Link Box & MH racking	30	EA	$ 28,548	$ 17,129	$ 11,419	$ 856,454	$ 513,872	$ 342,581	**$ 1,712,907**
3.11	Fiber Optic Cable	45,516	FT	$ 7	$ 3	$ 2	$ 336,684	$ 151,596	$ 101,064	**$ 589,344**
3.12	Ground Continuity Conductor	45,516	FT	$ 13	$ 8	$ 5	$ 593,486	$ 342,601	$ 228,400	**$ 1,164,487**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 25,812,070**	**$ 15,635,513**	**$ 10,063,576**	**$ 51,511,158**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 42,220,302**	**$ 40,088,921**	**$ 23,797,426**	**$ 106,106,649**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 1,916,590	$ 1,277,727	$ -	$ 1,916,590	$ 1,277,727	**$ 3,194,317**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		1,061,066.49		$ -	$ 1,061,066	$ -	**$ 1,061,066**
4.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		4,244,265.98		$ -	$ 4,244,266	$ -	**$ 4,244,266**
4.4	Utility PM and Project Oversite	1	LS		1,061,066.49		$ -	$ 1,061,066	$ -	**$ 1,061,066**
4.5	Site Accommodation, Facilities, Storage	1	LS	1,061,066.49			$ 1,061,066	$ -	$ -	**$ 1,061,066**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 5,305,332	$ -	$ -	$ 5,305,332	$ -	**$ 5,305,332**
4.7	LiDAR /GPR	1.0	LS		$ 190,992	$ 127,328	$ -	$ 190,992	$ 127,328	**$ 318,320**
4.8	Geotech	9.00	EA		2,730.00	1,820.00	$ -	$ 24,570	$ 16,380	**$ 40,950**
4.9	Surveying/Staking	1	LS		$ 445,648	$ 297,099	$ -	$ 445,648	$ 297,099	**$ 742,747**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ 20,000		$ -	$ 20,000	$ -	**$ 20,000**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 1,061,066		$ -	$ 1,061,066	$ -	**$ 1,061,066**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 318,320		$ -	$ 318,320	$ -	**$ 318,320**
4.14	Laydown Lease & temporary easement	1	LS		$ 1,000,000		$ -	$ 1,000,000	$ -	**$ 1,000,000**
4.15	Real Estate (Acquisition)	1	LS			$ 58,031	$ -	$ -	$ 58,031	**$ 58,031**
4.16	Legal Fees (Real estate)	1.00	LS		-	1,740.93	$ -	$ -	$ 1,741	**$ 1,741**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 3,760,000	$ -	$ -	$ 3,760,000	**$ 3,760,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 42,220,301.83			$ 3,749,163	$ -	$ -	**$ 3,749,163**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 106,107	$ -	$ -	$ 106,107	**$ 106,107**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 4,810,229**	**$ 16,648,918**	**$ 5,644,412**	**$ 27,103,560**

NEXTera Energy- TO44 Enhanced 2
Comp 4C - Sprain Brook To New Rochelle Landing Onshore 345kV UG Cables -Double circuits
(EGC To Sprain Brook 345 kV / Ruland To Sprain Brook 345 kV)

Total: $ 346,473,248

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
=A18				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	**$ 2,512,448**	**$ 12,822,389**	**$ 4,834,059**	**$ 20,168,896**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	**$ 27,540,967**	**$ 25,088,214**	**$ 16,490,743**	**$ 69,119,924**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	**$ 53,127,377**	**$ 32,168,921**	**$ 20,725,748**	**$ 106,022,045**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	**$ 9,339,563**	**$ 29,623,574**	**$ 10,410,495**	**$ 49,373,632**
SUBTOTAL (Costs):	**$ 92,520,355**	**$ 99,703,098**	**$ 52,461,045**	**$ 244,684,497**
CONTRACTOR MARK-UP (OH&P)	**$ 16,653,664**	**$ 17,946,558**	**$ 9,442,988**	**$ 44,043,210**
SUBTOTAL:	**$ 109,174,018**	**$ 117,649,655**	**$ 61,904,033**	**$ 288,727,707**
CONTINGENCY ON ENTIRE PROJECT	**$ 21,834,804**	**$ 23,529,931**	**$ 12,380,807**	**$ 57,745,541**
TOTAL:	**$ 131,008,822**	**$ 141,179,587**	**$ 74,284,840**	**$ 346,473,248**

Description of Work: Dunwoodie - New Rochelle Landing (double circuit duct). 5000 kcmil copper XLPE, single cable per phase.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 4C - Sprain Brook To New Rochelle Landing Onshore 345kV UG Cables -Double circuits(EGC To Sprain Brook 345 kV / Ruland To Sprain Brook 345 kV)										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	8.47	Mile		$ 700,000	$ 300,000	$ -	$ 5,929,000	$ 2,541,000	**$ 8,470,000**
1.3	Flaggers	520	DAY	$ 1,600	$ 4,800	$ 1,600	$ 832,000	$ 2,496,000	$ 832,000	**$ 4,160,000**
1.4	K Rail / Lane Control / Metal Plates	44,722	LF	$ 30	$ 18	$ 12	$ 1,341,648	$ 804,989	$ 536,659	**$ 2,683,296**
1.5	Police Support	20,800.0	HR		$ 120	$ 27	$ -	$ 2,496,000	$ 561,600	**$ 3,057,600**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	80.0	DAY		$ 1,000	$ 300	$ -	$ 80,000	$ 24,000	**$ 104,000**
1.9	Existing Utility Protection	8.47	Mile	$ 40,000	$ 120,000	$ 40,000	$ 338,800	$ 1,016,400	$ 338,800	**$ 1,694,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 2,512,448**	**$ 12,822,389**	**$ 4,834,059**	**$ 20,168,896**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
EGC-SP & RL-SP -Double CIRCUITS										
2.1	Trench Box Shoring & Trench Box Install Crew	8.47	Miles		$ 139,800	$ 93,200	$ -	$ 1,184,106	$ 789,404	**$ 1,973,510**
2.2	Formwork in Trench	357,773	SF	$ 2	$ 1.5	$ 0.5	$ 715,546	$ 536,659	$ 178,886	**$ 1,431,091**
2.3	Trench Excavation	33,790	CY		$ 17.5	$ 7.5	$ -	$ 591,319	$ 253,422	**$ 844,741**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	3,520	CY	$ 50	$ 25	$ 14	$ 175,988	$ 86,234	$ 49,277	**$ 311,498**
2.5	Supply & Install Thermal Backfill -conduit level	29,566	CY	$ 350	$ 245	$ 105	$ 10,348,081	$ 7,243,657	$ 3,104,424	**$ 20,696,163**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Supply & Install Native Backfill -direct bury conduits sys	0	CY	$ 350	$ 245.0	$ 105.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	13,774	CY	$ 200	$ 125.0	$ 50.0	$ 2,754,851	$ 1,721,782	$ 688,713	**$ 5,165,345**
2.8	Conduit 8" SCH 40PVC	357,773	LF	$ 28.6	$ 5.7	$ 2.4	$ 10,232,302	$ 2,028,572	$ 869,388	**$ 13,130,262**
2.9	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.10	Conduit 2" SCH 40PVC	178,886	LF	$ 3.5	$ 3.15	$ 1.4	$ 629,680	$ 563,492	$ 241,497	**$ 1,434,669**
2.11	Warning Tape	44,722	LF	$ 0.15	$ 0.25	$ 0.10	$ 6,708	$ 11,180	$ 4,472	**$ 22,361**
2.12	Trench Box Shoring (Vault)	60	EA	$ -	$ 18,079	$ 27,119	$ -	$ 1,084,746	$ 1,627,119	**$ 2,711,864**
2.13	Splice Vault Excavation	5,984	CY		$ 17.5	$ 7.5	$ -	$ 104,720	$ 44,880	**$ 149,600**
2.14	Splice Vault Supply & Installation	60	EA	$ 35,000	$ 16,500	$ 38,500	$ 2,100,000	$ 990,000	$ 2,310,000	**$ 5,400,000**
2.15	Splice Vault Backfill	1,795	CY		$ 14.0	$ 6.0	$ -	$ 25,133	$ 10,771	**$ 35,904**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.16	Jack and Bore along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	$ -
2.17	HDD along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	$ -
2.18	Air Test Ducts	536,659	LF			$ 0.25	$ -	$ -	$ 134,165	**$ 134,165**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	28,581	SY	$ 14.00	$ 14.00	$ 7.00	$ 400,133	$ 400,133	$ 200,067	**$ 1,000,333**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	7,939	CY	$ 22.38	$ 23.50	$ 10.07	$ 177,678	$ 186,562	$ 79,955	**$ 444,195**
2.20	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	138	EA		$ 400	$ 1,200	$ -	$ 55,097	$ 165,291	**$ 220,388**
2.21	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	138	EA		$ 10	$ 15	$ -	$ 1,377	$ 2,066	**$ 3,444**
2.22	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	296	EA		$ 400	$ 1,200	$ -	$ 118,264	$ 354,791	**$ 473,055**
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 462,462	$ 308,308	$ -	$ 462,462	$ 308,308	**$ 770,770**
2.24	Excess Materials Disposal to Certified Backfill	49,372	CY		$ 24.5	$ 10.5	$ -	$ 1,209,614	$ 518,406	**$ 1,728,020**
2.25	Rock Excavation and Removal	26,516	CY		$ 243	$ 162	$ -	$ 6,443,332	$ 4,295,555	**$ 10,738,886**
2.26	Dewatering	60	EA			$ 4,000	$ -	$ -	$ 240,000	**$ 240,000**
2.27	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	$ -
2.28	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	$ -
2.29	Excavated material - stockpile management	39,774	CF		$ 1.0	$ 0.5	$ -	$ 39,774	$ 19,887	**$ 59,660**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 27,540,967**	**$ 25,088,214**	**$ 16,490,743**	**$ 69,119,924**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 345kV 5000 kcmil copper XLPE	140,873	FT	$ 167	$ 100	$ 67	$ 23,525,798	$ 14,115,479	$ 9,410,319	**$ 47,051,595**
3.2	Circuit #1- Cable Splicing- 345kV 5000 kcmil copper XLPE	90	EA	$ 11,722	$ 9,846	$ 2,813	$ 1,054,980	$ 886,183	$ 253,195	**$ 2,194,358**
3.3	Circuit #1- Cable Termination- 345kV 5000 kcmil copper XLPE	6	EA	$ 27,805	$ 9,846	$ 2,813	$ 166,830	$ 59,079	$ 16,880	**$ 242,789**
3.4	Circuit #2- Procurement & Installation- 345kV 5000 kcmil copper XLPE	140,873	FT	$ 167	$ 100	$ 67	$ 23,525,798	$ 14,115,479	$ 9,410,319	**$ 47,051,595**
3.5	Circuit #2- Cable Splicing- 345kV 5000 kcmil copper XLPE	90	EA	$ 11,722	$ 9,846	$ 2,813	$ 1,054,980	$ 886,183	$ 253,195	**$ 2,194,358**
3.6	Circuit #2- Cable Termination- 345kV 5000 kcmil copper XLPE	6	EA	$ 27,805	$ 9,846	$ 2,813	$ 166,830	$ 59,079	$ 16,880	**$ 242,789**
3.7	Circuit #3- Procurement & Installation- 345kV 5000 kcmil copper XLPE		FT	$ 167	$ 100	$ 67	$ -	$ -	$ -	$ -
3.8	Circuit #3- Cable Splicing- 345kV 5000 kcmil copper XLPE		EA	$ 11,722	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.9	Circuit #3- Cable Termination- 345kV 5000 kcmil copper XLPE		EA	$ 27,805	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.10	Link Box & MH racking	60	EA	$ 28,548	$ 17,129	$ 11,419	$ 1,712,907	$ 1,027,744	$ 685,163	**$ 3,425,814**
3.11	Fiber Optic Cable	93,915	FT	$ 7	$ 3	$ 2	$ 694,692	$ 312,794	$ 208,530	**$ 1,216,016**
3.12	Ground Continuity Conductor	93,915	FT	$ 13	$ 8	$ 5	$ 1,224,562	$ 706,901	$ 471,267	**$ 2,402,731**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							$ 53,127,377	$ 32,168,921	$ 20,725,748	**$ 106,022,045**
Comp 4C - Sprain Brook To New Rochelle Landing Onshore 345kV UG Cables -Double circuits(EGC To Sprain Brook 345 kV / Ruland To Sprain							**$ 83,180,792**	**$ 70,079,524**	**$ 42,050,550**	**$ 195,310,866**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 3,363,902	$ 2,242,601	$ -	$ 3,363,902	$ 2,242,601	**$ 5,606,504**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		1,953,108.66		$ -	$ 1,953,109	$ -	**$ 1,953,109**
4.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		7,812,434.62		$ -	$ 7,812,435	$ -	**$ 7,812,435**
4.4	Utility PM and Project Oversite	1	LS		1,953,108.66		$ -	$ 1,953,109	$ -	**$ 1,953,109**
4.5	Site Accommodation, Facilities, Storage	1	LS	1,953,108.66			$ 1,953,109	$ -	$ -	**$ 1,953,109**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 9,765,543	$ -	$ -	$ 9,765,543	$ -	**$ 9,765,543**
4.7	LiDAR /GPR	1.0	LS		$ 351,560	$ 234,373	$ -	$ 351,560	$ 234,373	**$ 585,933**
4.8	Geotech	9.00	EA		2,730.00	1,820.00	$ -	$ 24,570	$ 16,380	**$ 40,950**
4.9	Surveying/Staking	1	LS		$ 820,306	$ 546,870	$ -	$ 820,306	$ 546,870	**$ 1,367,176**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ 40,000		$ -	$ 40,000	$ -	**$ 40,000**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 1,953,109		$ -	$ 1,953,109	$ -	**$ 1,953,109**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 585,933		$ -	$ 585,933	$ -	**$ 585,933**
4.14	Laydown Lease & temporary easement	1	LS		$ 1,000,000		$ -	$ 1,000,000	$ -	**$ 1,000,000**
4.15	Real Estate (Acquisition)	1	LS			$ 247,533	$ -	$ -	$ 247,533	**$ 247,533**
4.16	Legal Fees (Real estate)	1.00	LS		-	7,425.99	$ -	$ -	$ 7,426	**$ 7,426**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 6,920,000	$ -	$ -	$ 6,920,000	**$ 6,920,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 83,180,791.58			$ 7,386,454	$ -	$ -	**$ 7,386,454**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 195,311	$ -	$ -	$ 195,311	**$ 195,311**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 9,339,563**	**$ 29,623,574**	**$ 10,410,495**	**$ 49,373,632**

NEXTera Energy- TO44 Enhanced 2
Comp 4C - Sprain Brook To New Rochelle Landing Onshore 320kV DC UG Cables - Single circuit
(Northport To Sprain Brook 320 kV DC)

Total: $ 159,124,018

NEXTera Energy- TO44 Enhanced 2	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp 4C - Sprain Brook To New Rochelle Landing Onshore 345kV UG Cables -Double circuits(EGC To Sprain Brook 345 kV / Ruland To Sprain Brook 345 kV)				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 2,096,448	$ 10,286,389	$ 4,125,259	$ 16,508,096
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 13,444,148	$ 13,874,209	$ 9,004,614	$ 36,322,970
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 18,612,600	$ 10,891,459	$ 7,013,404	$ 36,517,464
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 3,926,289	$ 14,226,390	$ 4,874,509	$ 23,027,188
SUBTOTAL (Costs):	$ 38,079,485	$ 49,278,448	$ 25,017,786	$ 112,375,719
CONTRACTOR MARK-UP (OH&P)	$ 6,854,307	$ 8,870,121	$ 4,503,202	$ 20,227,629
SUBTOTAL:	$ 44,933,792	$ 58,148,568	$ 29,520,988	$ 132,603,348
CONTINGENCY ON ENTIRE PROJECT	$ 8,986,758	$ 11,629,714	$ 5,904,198	$ 26,520,670
TOTAL:	$ 53,920,551	$ 69,778,282	$ 35,425,185	$ 159,124,018

Description of Work: Northport - New Rochelle Landing (single circuit duct). 5000 kcmil copper XLPE, single cable per phase.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 4C - Sprain Brook To New Rochelle Landing Onshore 345kV UG Cables -Double circuits(EGC To Sprain Brook 345 kV / Ruland To Sprain Brook 345 kV)										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1+20:85	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	8.47	Mile		$ 700,000	$ 300,000	$ -	$ 5,929,000	$ 2,541,000	**$ 8,470,000**
1.3	Flaggers	260	DAY	$ 1,600	$ 4,800	$ 1,600	$ 416,000	$ 1,248,000	$ 416,000	**$ 2,080,000**
1.4	K Rail / Lane Control / Metal Plates	44,722	LF	$ 30	$ 18	$ 12	$ 1,341,648	$ 804,989	$ 536,659	**$ 2,683,296**
1.5	Police Support	10,400.0	HR		$ 120	$ 27	$ -	$ 1,248,000	$ 280,800	**$ 1,528,800**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	40.0	DAY		$ 1,000	$ 300	$ -	$ 40,000	$ 12,000	**$ 52,000**
1.9	Existing Utility Protection	8.47	Mile	$ 40,000	$ 120,000	$ 40,000	$ 338,800	$ 1,016,400	$ 338,800	**$ 1,694,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 2,096,448**	**$ 10,286,389**	**$ 4,125,259**	**$ 16,508,096**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	8	Miles		$ 139,800	$ 93,200	$ -	$ 1,184,106	$ 789,404	**$ 1,973,510**
2.2	Formwork in Trench	352,013	SF	$ 2	$ 1.5	$ 0.5	$ 704,026	$ 528,019	$ 176,006	**$ 1,408,051**
2.3	Trench Excavation	17,601	CY		$ 17.5	$ 7.5	$ -	$ 308,011	$ 132,005	**$ 440,016**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	1,833	SF	$ 50	$ 25	$ 14	$ 91,670	$ 44,918	$ 25,668	**$ 162,256**
2.5	Supply & Install Thermal Backfill	15,401	CY	$ 350	$ 245	$ 105	$ 5,390,196	$ 3,773,137	$ 1,617,059	**$ 10,780,392**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	7,717	CY	$ 200	$ 125	$ 50	$ 1,543,478	$ 964,674	$ 385,870	**$ 2,894,022**
2.9	Conduit 8" SCH 40PVC	134,165	LF	$ 28.6	$ 5.7	$ 2.4	$ 3,837,113	$ 760,714	$ 326,020	**$ 4,923,848**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	134,165	LF	$ 3.5	$ 3.15	$ 1.4	$ 472,260	$ 422,619	$ 181,122	**$ 1,076,002**
2.12	Warning Tape	89,443	LF	$ 0.15	$ 0.25	$ 0.10	$ 13,416	$ 22,361	$ 8,944	**$ 44,722**
2.13	Trench Box Shoring (Vault)	30	EA	$ -	$ 18,079	$ 27,119	$ -	$ 542,373	$ 813,559	**$ 1,355,932**
2.14	Splice Vault Excavation	2,464	CY		$ 17.5	$ 7.5	$ -	$ 43,120	$ 18,480	**$ 61,600**
2.15	Splice Vault Supply & Installation	30	EA	$ 35,000	$ 16,500	$ 38,500	$ 1,050,000	$ 495,000	$ 1,155,000	**$ 2,700,000**
2.16	Splice Vault Backfill	739	CY		$ 14.0	$ 6.0	$ -	$ 10,349	$ 4,435	**$ 14,784**
2.17	Jack and Bore along Route		LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.18	HDD along Route		LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.19	Air Test Ducts	268,330	LF			$ 0.25	$ -	$ -	$ 67,082	**$ 67,082**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	16,916	SY	$ 14.00	$ 14.00	$ 7.00	$ 236,826	$ 236,826	$ 118,413	**$ 592,065**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	4,699	CY	$ 22.38	$ 23.50	$ 10.07	$ 105,162	$ 110,420	$ 47,323	**$ 262,905**
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	77	EA		$ 400	$ 1,200	$ -	$ 30,870	$ 92,609	**$ 123,478**
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	77	EA		$ 10	$ 15	$ -	$ 772	$ 1,158	**$ 1,929**
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	154	EA		$ 400	$ 1,200	$ -	$ 61,602	$ 184,807	**$ 246,409**
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 448,266	$ 298,844	$ -	$ 448,266	$ 298,844	**$ 747,110**
2.26	Excess Materials Disposal to Certified Backfill	25,123	CY		$ 24.5	$ 10.5	$ -	$ 615,515	$ 263,792	**$ 879,308**
2.27	Rock Excavation and Removal	13,376	CY		$ 243	$ 162	$ -	$ 3,250,472	$ 2,166,981	**$ 5,417,453**
2.28	Dewatering	30	EA			$ 4,000	$ -	$ -	$ 120,000	**$ 120,000**
2.29	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.30	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.31	Excavated material - stockpile management	20,065	CF		$ 1.0	$ 0.5	$ -	$ 20,065	$ 10,032	**$ 30,097**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 13,444,148**	**$ 13,874,209**	**$ 9,004,614**	**$ 36,322,970**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 320 DCkV 5000 kcmil copper XLPE	93,915	FT	$ 166	$ 100	$ 66	$ 15,589,950	$ 9,353,970	$ 6,235,980	**$ 31,179,900**
3.2	Circuit #1- Cable Splicing- 320 DCkV 5000 kcmil copper XLPE	60	EA	$ 19,349	$ 9,846	$ 2,813	$ 1,160,940	$ 590,789	$ 168,797	**$ 1,920,526**
3.3	Circuit #1- Cable Termination- 320 DCkV 5000 kcmil copper XLPE	6	EA	$ 45,410	$ 9,846	$ 2,813	$ 272,460	$ 59,079	$ 16,880	**$ 348,419**
3.4	Circuit #2- Procurement & Installation- 320 DCkV 5000 kcmil copper XLPE		FT	$ 166	$ 100	$ 66	$ -	$ -	$ -	**$ -**
3.5	Circuit #2- Cable Splicing- 320 DCkV 5000 kcmil copper XLPE		EA	$ 19,349	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.6	Circuit #2- Cable Termination- 320 DCkV 5000 kcmil copper XLPE		EA	$ 45,410	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.7	Circuit #3- Procurement & Installation- 320 DCkV 5000 kcmil copper XLPE		FT	$ 166	$ 100	$ 66	$ -	$ -	$ -	**$ -**
3.8	Circuit #3- Cable Splicing- 320 DCkV 5000 kcmil copper XLPE		EA	$ 19,349	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.9	Circuit #3- Cable Termination- 320 DCkV 5000 kcmil copper XLPE		EA	$ 45,410	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.10	Link Box & MH racking	30	EA	$ 20,987	$ 12,592	$ 8,395	$ 629,624	$ 377,774	$ 251,849	**$ 1,259,247**
3.11	Fiber Optic Cable	46,958	FT	$ 7	$ 3	$ 2	$ 347,346	$ 156,397	$ 104,265	**$ 608,008**
3.12	Ground Continuity Conductor	46,958	FT	$ 13	$ 8	$ 5	$ 612,281	$ 353,450	$ 235,634	**$ 1,201,365**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 18,612,600**	**$ 10,891,459**	**$ 7,013,404**	**$ 36,517,464**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 34,153,196**	**$ 35,052,057**	**$ 20,143,277**	**$ 89,348,530**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 1,655,860	$ 1,103,907	$ -	$ 1,655,860	$ 1,103,907	**$ 2,759,767**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		893,485.30		$ -	$ 893,485	$ -	**$ 893,485**
4.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		3,573,941.22		$ -	$ 3,573,941	$ -	**$ 3,573,941**
4.4	Utility PM and Project Oversite	1	LS		893,485.30		$ -	$ 893,485	$ -	**$ 893,485**
4.5	Site Accommodation, Facilities, Storage	1	LS	893,485.30			$ 893,485	$ -	$ -	**$ 893,485**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 4,467,427	$ -	$ -	$ 4,467,427	$ -	**$ 4,467,427**
4.7	LiDAR /GPR	1.0	LS		$ 160,827	$ 107,218	$ -	$ 160,827	$ 107,218	**$ 268,046**
4.8	Geotech	9.00	EA		2,730.00	1,820.00	$ -	$ 24,570	$ 16,380	**$ 40,950**
4.9	Surveying/Staking	1	LS		$ 375,264	$ 250,176	$ -	$ 375,264	$ 250,176	**$ 625,440**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ 20,000		$ -	$ 20,000	$ -	**$ 20,000**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 893,485		$ -	$ 893,485	$ -	**$ 893,485**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 268,046		$ -	$ 268,046	$ -	**$ 268,046**
4.14	Laydown Lease & temporary easement	1	LS		$ 1,000,000		$ -	$ 1,000,000	$ -	**$ 1,000,000**
4.15	Real Estate (Acquisition)	1	LS			$ 123,767	$ -	$ -	$ 123,767	**$ 123,767**
4.16	Legal Fees (Real estate)	1.00	LS		-	3,713.00	$ -	$ -	$ 3,713	**$ 3,713**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 3,180,000	$ -	$ -	$ 3,180,000	**$ 3,180,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 34,153,196.04			$ 3,032,804	$ -	$ -	**$ 3,032,804**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 89,349	$ -	$ -	$ 89,349	**$ 89,349**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 3,926,289**	**$ 14,226,390**	**$ 4,874,509**	**$ 23,027,188**

NEXTera Energy- TO44 Enhanced 2

Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables - Three circuits (three lines, single circuit each) EGC-Dunwoodie 345KV / EGC-Sprain Brook 345KV/ Ruland-Sprain Brook 345KV

Total: $ 745,825,447

Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables - Three circuits (three lines, single circuit each)EGC-Dunwoodie 345KV / EGC-Spra	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables - Three circuits (three lines, single circuit each) EGC-Dunwoodie 345KV / EGC-Sprain Brook 345KV/ Ruland-Sprain Brook 345KV				
1. SUBMARINE CABLE	$ 170,749,328	$ 149,849,551	$ 99,574,291	$ 420,173,170
2. TRANSITION STATION	$ 1,367,680	$ 1,706,372	$ 1,640,135	$ 4,714,187
3. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	$ 19,395,170	$ 62,617,544	$ 19,812,816	$ 101,825,530
SUBTOTAL (Costs):	$ 191,512,178	$ 214,173,467	$ 121,027,241	$ 526,712,886
CONTRACTOR MARK-UP (OH&P)	$ 34,472,192	$ 38,551,224	$ 21,784,903	$ 94,808,320
SUBTOTAL:	$ 225,984,370	$ 252,724,691	$ 142,812,144	$ 621,521,206
CONTINGENCY ON ENTIRE PROJECT	$ 45,196,874	$ 50,544,938	$ 28,562,429	$ 124,304,241
TOTAL:	$ 271,181,244	$ 303,269,630	$ 171,374,573	$ 745,825,447

Description of Work: New Rochelle landing - Hempstead Harbor Landing. Part of any Dunwoodie to Shore/Ruland/EGC 345 kV project segment (Include HDD's to get onshore at both ends of route) 1600 mm2 Tri-Core

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables - Three circuits (three lines, single circuit each)EGC-Dunwoodie 345KV / EGC-Sprain										
1. SUBMARINE CABLE										
1.1	Submarine Cable - 1600 mm2 Tri-Core + Vessel Install	300,390	FT	$ 537	$ 400	$ 250	$ 161,309,301	$ 120,155,904	$ 75,097,440	**$ 356,562,645**
1.2	Submarine Cable- transportation from manufacture location to site	1	LS		$ 15,203,818	$ 10,135,879	$ -	$ 15,203,818	$ 10,135,879	**$ 25,339,697**
1.3	Submarine Cable Splicing if Required 1600 mm2 Tri-Core	-	EA				$ -	$ -	$ -	**$ -**
1.5	Cable Transition Splice	8	EA	$ 27,911	$ 37,214	$ 27,911	$ 223,286	$ 297,715	$ 223,286	**$ 744,286**
1.6	Outdoor Termination	8	EA	$ 27,911	$ 37,214	$ 27,911	$ 223,286	$ 297,715	$ 223,286	**$ 744,286**
1.7	"Shore End" (shallow) Diver Cable Install						$ -	$ -	$ -	**$ -**
1.8	Fiber Optic Cable	100,130	FT	$ 7			$ 740,661	$ -	$ -	**$ 740,661**
1.9	Ground Continuity Conductor	100,130	FT	$ 13			$ 1,305,594	$ -	$ -	**$ 1,305,594**
1.10							$ -	$ -	$ -	**$ -**
1.11	Jack and Bore along Route	0	LF	$ 1,600	$ 3,200	$ 3,200	$ -	$ -	$ -	**$ -**
1.12	HDD along Route	4,342	LF	$ 1,600	$ 3,200	$ 3,200	$ 6,947,200	$ 13,894,400	$ 13,894,400	**$ 34,736,000**
TOTAL - Submarine cable:							$ 170,749,328	$ 149,849,551	$ 99,574,291	**$ 420,173,170**
2. TRANSITION STATION										
2.1	Site Clearing	1.5	ACRE	-	10,800.00	7,200.00	$ -	$ 16,200	$ 10,800	**$ 27,000**
2.2	Demolition	0	LS	-	60,000.00	40,000.00	$ -	$ -	$ -	**$ -**
2.3	Strip and Dispose Top Soil	2,420	CY		24.50	10.50	$ -	$ 59,290	$ 25,410	**$ 84,700**
2.4	Site Grading- Excavation for Substation Pad	7,260	CY		9.00	6.00	$ -	$ 65,340	$ 43,560	**$ 108,900**
2.5	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	3,920	CY		21.00	9.00	$ -	$ 82,328.40	$ 35,283.60	**$ 117,612.00**
2.6	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	5,881	CY		2.40	1.60	$ -	$ 14,113	$ 9,409	**$ 23,522**
2.7	Site Grading -Fill for Substation Pad (import, compacted in place)	3,920	CY	25.00	2.40	1.60	$ 98,010	$ 9,409	$ 6,273	**$ 113,692**
2.8	Install substation 8" pad base	7,260	SY	11.00	6.00	4.00	$ 79,860	$ 43,560	$ 29,040	**$ 152,460**
2.9	Site Surfacing - Aggregate 6" Thick	7,260	SY	16.50	4.50	3.00	$ 119,790	$ 32,670	$ 21,780	**$ 174,240**
2.10	7' Station Fence w/ Barbed Wire & Grounding	1,350	LF	13.85	13.85	6.92	$ 18,695	$ 18,695	$ 9,347	**$ 46,737**
2.11	20' Slide Gate & Grounding	3	EA	8,100.00	3,245.00	1,305.00	$ 24,300	$ 9,735	$ 3,915	**$ 37,950**
2.12	4' Pedestrian gate	3	EA	2,500.00	1,000.00	350.00	$ 7,500	$ 3,000	$ 1,050	**$ 11,550**
2.13	Erosion Control-Silt fence install & remove	2,250	LF	2.41	3.16	0.72	$ 5,423	$ 7,110	$ 1,620	**$ 14,153**
2.14	Temporary fencing	1,500	LF	7.50	5.25	2.25	$ 11,250	$ 7,875	$ 3,375	**$ 22,500**
2.15	345kV, Cable sealing end - 3 Ph	96	CY	703.89	804.44	502.78	$ 67,784	$ 77,468	$ 48,417	**$ 193,669**
2.16	345kV, lighting arrester	96	CY	703.89	804.44	502.78	$ 67,784	$ 77,468	$ 48,417	**$ 193,669**
2.17	345kV, Cable sealing end - 3 Ph	18	EA	8,346.00	5,758.74	3,839.16	$ 150,228	$ 103,657	$ 69,105	**$ 322,990**
2.18	345kV, lighting arrester	18	EA	4,810.00	2,886.00	1,924.00	$ 86,580	$ 51,948	$ 34,632	**$ 173,160**
2.19	AL. Bus Tubing, 5" SCH 80	630	LF	25.00	184.94	123.29	$ 15,750	$ 116,511	$ 77,674	**$ 209,935**
2.20	AL. Bus fittings	1	LS	12,600.00	12,600.00	6,300.00	$ 12,600	$ 12,600	$ 6,300	**$ 31,500**
2.21	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	400	LF	2.09	-	-	$ 836	$ -	$ -	**$ 836**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.22	Caweld, DSA, 4/0 , T, CROSS	200	EA	165.00	75.00		$ 33,000	$ 15,000	$ -	**$ 48,000**
2.23	Ground Rod, 3/4" x 15'	54	EA	135.00	67.50	7.50	$ 7,290	$ 3,645	$ 405	**$ 11,340**
2.24	Trench Box Shoring (Vault)	12	EA	$ -	$ 18,079	$ 27,119	$ -	$ 216,949	$ 325,424	**$ 542,373**
2.25	Splice Vault Excavation	7,765	CY		$ 17.5	$ 7.5	$ -	$ 135,893	$ 58,240	**$ 194,133**
2.26	Splice Vault Supply & Installation	12	EA	$ 45,500	$ 21,450	$ 50,050	$ 546,000	$ 257,400	$ 600,600	**$ 1,404,000**
2.27	Splice Vault Backfill	2,330	CY		$ 14.0	$ 6.0	$ -	$ 32,614	$ 13,978	**$ 46,592**
2.28	Restoration (incl. Paving)	1	LS	$ 15,000.00	$ 20,000.00	$ 15,000.00	$ 15,000	$ 20,000	$ 15,000	**$ 50,000**
2.29	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 35,000	$ 15,000	$ -	$ 35,000	$ 15,000	**$ 50,000**
2.30	Excess Materials Disposal to Certified Backfill	7,066	CY		$ 24.5	$ 10.5	$ -	$ 173,128	$ 74,198	**$ 247,326**
2.31	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	**$ -**
2.32	Dewatering	12	EA			$ 4,000	$ -	$ -	$ 48,000	**$ 48,000**
2.33	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.34	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.35	Excavated material - stockpile management	7,765	CF		$ 1.0	$ 0.5	$ -	$ 7,765	$ 3,883	**$ 11,648**
2.36							$ -	$ -	$ -	**$ -**
TOTAL - Transition station :							$ 1,367,680	$ 1,706,372	$ 1,640,135	**$ 4,714,187**
Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables							$ 172,117,008	$ 151,555,924	$ 101,214,425	**$ 424,887,357**
3. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization									
3.1	Mob / Demob	1	LS		$ 6,000,000	$ 4,000,000	$ -	$ 6,000,000	$ 4,000,000	**$ 10,000,000**
	Project Management, Material Handling & Amenities									
3.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		4,248,873.57		$ -	$ 4,248,874	$ -	**$ 4,248,874**
3.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		16,995,494.27		$ -	$ 16,995,494	$ -	**$ 16,995,494**
3.4	Utility PM and Project Oversite	1	LS		4,248,873.57		$ -	$ 4,248,874	$ -	**$ 4,248,874**
3.5	Site Accommodation, Facilities, Storage	1	LS	4,248,873.57			$ 4,248,874	$ -	$ -	**$ 4,248,874**
	Engineering									
3.6	Design Engineering	1	LS		$ 21,244,368		$ -	$ 21,244,368	$ -	**$ 21,244,368**
3.7	Surveying/Staking	1	LS		$ 2,974,211		$ -	$ 2,974,211	$ -	**$ 2,974,211**
3.8	Geotech	10.00	EA		2,730.00	1,820.00	$ -	$ 27,300	$ 18,200	**$ 45,500**
	Testing & Commissioning / Inspection									
3.9	Testing & Commissioning / End to End Testing of Subsea Cable	1	EA		$ 60,000		$ -	$ 60,000	$ -	**$ 60,000**
3.10	Post Cable-Lay Inspection		EA				$ -	$ -	$ -	**$ -**
	Permitting and Additional Costs									
3.10	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 4,248,874		$ -	$ 4,248,874	$ -	**$ 4,248,874**
3.11	Environmental-special studies/investigation	1	LS		$ 370,000		$ -	$ 370,000	$ -	**$ 370,000**
3.12	Warranties / LOC's	1	LS		$ 1,274,662		$ -	$ 1,274,662	$ -	**$ 1,274,662**
3.13	Laydown Lease & temporary easement	1	LS		$ 500,000		$ -	$ 500,000	$ -	**$ 500,000**
3.14	Real Estate (Acquisition)	1	LS		$ -	$ 868,559	$ -	$ -	$ 868,559	**$ 868,559**
3.15	Legal Fees (Real estate)	1.00	LS		-	26,056.77	$ -	$ -	$ 26,057	**$ 26,057**
3.16	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
3.17	Insurance (specialty, e.g. railroad)		Crossing				$ -	$ -	$ -	**$ -**
3.19	Allowance for Funds Used During Construction (AFUDC)		LS				$ -	$ -	$ -	**$ -**
3.20	Sales Tax on Materials	8.8%	LS	$ 172,117,008			$ 15,146,297	$ -	$ -	**$ 15,146,297**
3.21	Contractor Permits	1	LS		$ 424,887		$ -	$ 424,887	$ -	**$ 424,887**
3.22	Payment & Performance Bond	1	LS			$ 14,900,000	$ -	$ -	$ 14,900,000	**$ 14,900,000**
3.23	Marine / Specialty Insurance		LS				$ -	$ -	$ -	**$ -**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 19,395,170	$ 62,617,544	$ 19,812,816	**$ 101,825,530**

NEXTera Energy- TO44 Enhanced 2

Comp 68. Northport to New Rochelle Landing 320kV DC Offshore Submarine Cables - One circuit

Northport-Sprain Brook 320KV DC

Total: $ 528,901,092

ew Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables - Three circuits (three lines, single circuit each)EGC-Dunwoodie 345KV / EGC-Sprain Brook 345KV/ Ruland-Sprain Bro				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables - Three circuits (three lines, single circuit each) EGC-Dunwoodie 345KV / EGC-Sprain Brook 345KV/ Ruland-Sprain Brook 345KV				
1. SUBMARINE CABLE	$ 71,948,691	$ 139,544,959	$ 90,274,548	$ 301,768,198
2. TRANSITION STATION	$ 106,000	$ 172,881	$ 209,037	$ 487,918
3. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	$ 9,363,374	$ 47,125,551	$ 14,772,680	$ 71,261,605
SUBTOTAL (Costs):	$ 81,418,065	$ 186,843,391	$ 105,256,264	$ 373,517,721
CONTRACTOR MARK-UP (OH&P)	$ 14,655,252	$ 33,631,810	$ 18,946,128	$ 67,233,190
SUBTOTAL:	$ 96,073,317	$ 220,475,201	$ 124,202,392	$ 440,750,910
CONTINGENCY ON ENTIRE PROJECT	$ 19,214,663	$ 44,095,040	$ 24,840,478	$ 88,150,182
TOTAL:	$ 115,287,981	$ 264,570,242	$ 149,042,870	$ 528,901,092

Description of Work: Northport-New Rochelle landing. Part of Northport to Sprainbrook 320 kV DC project segment, 5000kCMIL, Cu, Single Core, XLPE, submarine cable (25.38 miles)

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp										
1. SUBMARINE CABLE										
1.1	Submarine Cable - 320kV DC, 5000kCMIL, Cu, Single Core, XLPE, Submarine	294,814	FT	$ 212	$ 400	$ 250	$ 62,500,585	$ 117,925,632	$ 73,703,520	**$ 254,129,737**
1.2	Submarine Cable- transportation from manufacture location to site	1	LS		$ 14,921,613	$ 9,947,742	$ -	$ 14,921,613	$ 9,947,742	**$ 24,869,354**
1.3	Submarine Cable Splicing if Required 1600 mm2 Tri-Core	-	EA				$ -	$ -	$ -	$ -
1.4	Cable Transition Splice	4	EA	$ 27,911	$ 37,214	$ 27,911	$ 111,643	$ 148,857	$ 111,643	**$ 372,143**
1.5	Outdoor Termination	4	EA	$ 27,911	$ 37,214	$ 27,911	$ 111,643	$ 148,857	$ 111,643	**$ 372,143**
1.6	"Shore End" (shallow) Diver Cable Install						$ -	$ -	$ -	$ -
1.7	Fiber Optic Cable	294,814	FT	$ 7			$ 2,180,740	$ -	$ -	**$ 2,180,740**
1.8	Ground Continuity Conductor	294,814	FT	$ 13			$ 3,844,081	$ -	$ -	**$ 3,844,081**
1.9							$ -	$ -	$ -	$ -
1.10	Jack and Bore along Route	0	LF	$ 1,600	$ 3,200	$ 3,200	$ -	$ -	$ -	$ -
1.11	HDD along Route	4,000	LF	$ 800	$ 1,600	$ 1,600	$ 3,200,000	$ 6,400,000	$ 6,400,000	**$ 16,000,000**
TOTAL - Submarine cable:							$ 71,948,691	$ 139,544,959	$ 90,274,548	**$ 301,768,198**
2. TRANSITION STATION										
2.1	Site Clearing	0.0	ACRE	-	10,800.00	7,200.00	$ -	$ -	$ -	$ -
2.2	Demolition	0	LS	-	60,000.00	40,000.00	$ -	$ -	$ -	$ -
2.3	Strip and Dispose Top Soil	0	CY		24.50	10.50	$ -	$ -	$ -	$ -
2.4	Site Grading- Excavation for Substation Pad	0	CY		9.00	6.00	$ -	$ -	$ -	$ -
2.5	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	0	CY		21.00	9.00	$ -	$ -	$ -	$ -
2.6	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	0	CY		2.40	1.60	$ -	$ -	$ -	$ -
2.7	Site Grading -Fill for Substation Pad (import, compacted in place)	0	CY	25.00	2.40	1.60	$ -	$ -	$ -	$ -
2.8	Install substation 8" pad base	0	SY	11.00	6.00	4.00	$ -	$ -	$ -	$ -
2.9	Site Surfacing - Aggregate 6" Thick	0	SY	16.50	4.50	3.00	$ -	$ -	$ -	$ -
2.10	7' Station Fence w/ Barbed Wire & Grounding	0	LF	13.85	13.85	6.92	$ -	$ -	$ -	$ -
2.11	20' Slide Gate & Grounding	0	EA	8,100.00	3,245.00	1,305.00	$ -	$ -	$ -	$ -
2.12	4' Pedestrian gate	0	EA	2,500.00	1,000.00	350.00	$ -	$ -	$ -	$ -
2.13	Erosion Control-Silt fence install & remove	0	LF	2.41	3.16	0.72	$ -	$ -	$ -	$ -
2.14	Temporary fencing	0	LF	7.50	5.25	2.25	$ -	$ -	$ -	$ -
2.15	345kV, Cable sealing end - 3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.16	345kV, lighting arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	$ -
2.17	345kV, Cable sealing end - 3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	$ -
2.18	345kV, lighting arrester	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	$ -
2.19	AL. Bus Tubing, 5" SCH 80	0	LF	25.00	184.94	123.29	$ -	$ -	$ -	$ -
2.20	AL. Bus fittings	0	LS	-	-	-	$ -	$ -	$ -	$ -

Comp										
2.21	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	0	LF	2.09	-	-	$ -	$ -	$ -	$ -
2.22	Caweld, DSA, 4/0 , T, CROSS	0	EA	165.00	75.00		$ -	$ -	$ -	$ -
2.23	Ground Rod, 3/4" x 15'	0	EA	135.00	67.50	7.50	$ -	$ -	$ -	$ -
2.24	Trench Box Shoring (Vault)	2	EA	$ -	$ 18,079	$ 27,119	$ -	$ 36,158	$ 54,237	**$ 90,395**
2.25	Splice Vault Excavation	863	CY		$ 17.5	$ 7.5	$ -	$ 15,099	$ 6,471	**$ 21,570**
2.26	Splice Vault Supply & Installation	2	EA	$ 45,500	$ 21,450	$ 50,050	$ 91,000	$ 42,900	$ 100,100	**$ 234,000**
2.27	Splice Vault Backfill	259	CY		$ 14.0	$ 6.0	$ -	$ 3,624	$ 1,553	**$ 5,177**
2.28	Restoration (incl. Paving)	1	LS	$ 15,000.00	$ 20,000.00	$ 15,000.00	$ 15,000	$ 20,000	$ 15,000	**$ 50,000**
2.29	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 35,000	$ 15,000	$ -	$ 35,000	$ 15,000	**$ 50,000**
2.30	Excess Materials Disposal to Certified Backfill	785	CY		$ 24.5	$ 10.5	$ -	$ 19,236	$ 8,244	**$ 27,481**
2.31	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	$ -
2.32	Dewatering	2	EA			$ 4,000	$ -	$ -	$ 8,000	**$ 8,000**
2.33	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	$ -
2.34	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	$ -
2.35	Excavated material - stockpile management	863	CF		$ 1.0	$ 0.5	$ -	$ 863	$ 431	**$ 1,294**
2.36							$ -	$ -	$ -	$ -
TOTAL - Transition station :							$ 106,000	$ 172,881	$ 209,037	**$ 487,918**
Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables							$ 72,054,691	$ 139,717,840	$ 90,483,585	**$ 302,256,116**
3. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization									
3.1	Mob / Demob	1	LS		$ 6,000,000	$ 4,000,000	$ -	$ 6,000,000	$ 4,000,000	**$ 10,000,000**
	Project Management, Material Handling & Amenities									
3.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		3,022,561.16		$ -	$ 3,022,561	$ -	**$ 3,022,561**
3.3	Construction Project Management / Supervision	1	LS		12,090,244.64		$ -	$ 12,090,245	$ -	**$ 12,090,245**
3.4	Utility PM and Project Oversite	1	LS		3,022,561.16		$ -	$ 3,022,561	$ -	**$ 3,022,561**
3.5	Site Accommodation, Facilities, Storage	1	LS	3,022,561.16			$ 3,022,561	$ -	$ -	**$ 3,022,561**
	Engineering									
3.6	Design Engineering	1	LS		$ 15,112,806		$ -	$ 15,112,806	$ -	**$ 15,112,806**
3.7	Surveying/Staking	1	LS		$ 2,115,793		$ -	$ 2,115,793	$ -	**$ 2,115,793**
3.8	Geotech	-	EA		2,730.00	1,820.00	$ -	$ -	$ -	$ -
	Testing & Commissioning / Inspection									
3.9	Testing & Commissioning / End to End Testing of Subsea Cable	2	EA		$ 80,000		$ -	$ 160,000	$ -	**$ 160,000**
3.10	Post Cable-Lay Inspection		EA				$ -	$ -	$ -	$ -
	Permitting and Additional Costs									
3.10	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 3,022,561		$ -	$ 3,022,561	$ -	**$ 3,022,561**
3.11	Environmental-special studies/investigation	1	LS		$ 870,000		$ -	$ 870,000	$ -	**$ 870,000**
3.12	Warranties / LOC's	1	LS		$ 906,768		$ -	$ 906,768	$ -	**$ 906,768**
3.13	Laydown Lease & temporary easement	1	LS		$ 500,000		$ -	$ 500,000	$ -	**$ 500,000**
3.14	Real Estate (Acquisition)	1	LS		$ -	$ 206,485	$ -	$ -	$ 206,485	**$ 206,485**
3.15	Legal Fees (Real estate)	1.00	LS		-	6,194.55	$ -	$ -	$ 6,195	**$ 6,195**
3.16	Insurance	-	LS		-	-	$ -	$ -	$ -	$ -
3.17	Insurance (specialty, e.g. railroad)		Crossing				$ -	$ -	$ -	$ -
3.19	Allowance for Funds Used During Construction (AFUDC)		LS				$ -	$ -	$ -	$ -
3.20	Sales Tax on Materials	8.8%	LS	$ 72,054,691			$ 6,340,813	$ -	$ -	**$ 6,340,813**
3.21	Contractor Permits	1	LS		$ 302,256		$ -	$ 302,256	$ -	**$ 302,256**
3.22	Payment & Performance Bond	1	LS			$ 10,560,000	$ -	$ -	$ 10,560,000	**$ 10,560,000**
3.23	Marine / Specialty Insurance		LS				$ -	$ -	$ -	$ -
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 9,363,374	$ 47,125,551	$ 14,772,680	**$ 71,261,605**

NEXTera Energy- TO44 Enhanced 2
Comp 3A - East Garden City To Hempstead Harbor Landing 345kV Onshore UG Cables -Double circuits
(EGC To Sprain Brook 345 kV / EGC To Dunwoodie 345 kV)

Total: $ 385,634,343

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
Comp 3A - East Garden City To Hempstead Harbor Landing 345kV Onshore UG Cables -Double circuits(EGC To Sprain Brook 345 kV / EGC To Dunwoodie 345 kV)				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 2,553,664	$ 12,590,558	$ 5,026,706	$ 20,170,928
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 32,756,973	$ 23,529,781	$ 14,478,636	$ 70,765,391
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 63,187,504	$ 38,177,910	$ 24,731,740	$ 126,097,154
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 10,916,970	$ 33,123,408	$ 11,266,787	$ 55,307,165
SUBTOTAL (Costs):	$ 109,415,111	$ 107,421,657	$ 55,503,869	$ 272,340,638
CONTRACTOR MARK-UP (OH&P)	$ 19,694,720	$ 19,335,898	$ 9,990,696	$ 49,021,315
SUBTOTAL:	$ 129,109,831	$ 126,757,556	$ 65,494,565	$ 321,361,952
CONTINGENCY ON ENTIRE PROJECT	$ 25,821,966	$ 25,351,511	$ 13,098,913	$ 64,272,390
TOTAL:	$ 154,931,797	$ 152,109,067	$ 78,593,479	$ 385,634,343

Description of Work: East Garden City - Hempstead Harbor Landing (Shore Road, double circuits). 5000 kcmil copper XLPE, single cable per phase.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 3A - East Garden City To Hempstead Harbor Landing 345kV Onshore UG Cables -Double circuits(EGC To Sprain Brook 345 kV / EGC To Dunwoodie 345 kV)										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	10.21	Mile		$ 700,000	$ 300,000	$ -	$ 7,147,000	$ 3,063,000	**$ 10,210,000**
1.3	Flaggers	330	DAY	$ 1,600	$ 4,800	$ 1,600	$ 528,000	$ 1,584,000	$ 528,000	**$ 2,640,000**
1.4	K Rail / Lane Control / Metal Plates	53,909	LF	$ 30	$ 18	$ 12	$ 1,617,264	$ 970,358	$ 646,906	**$ 3,234,528**
1.5	Police Support	13,200.0	HR		$ 120	$ 27	$ -	$ 1,584,000	$ 356,400	**$ 1,940,400**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	80.0	DAY		$ 1,000	$ 300	$ -	$ 80,000	$ 24,000	**$ 104,000**
1.9	Existing Utility Protection	10.21	Mile	$ 40,000	$ 120,000	$ 40,000	$ 408,400	$ 1,225,200	$ 408,400	**$ 2,042,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 2,553,664**	**$ 12,590,558**	**$ 5,026,706**	**$ 20,170,928**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
EGC-SP & RL-DW -Double CIRCUITS										
2.1	Trench Box Shoring & Trench Box Install Crew	10.21	Miles		$ 139,800	$ 93,200	$ -	$ 1,427,358	$ 951,572	**$ 2,378,930**
2.2	Formwork in Trench	431,270	SF	$ 2	$ 1.5	$ 0.5	$ 862,541	$ 646,906	$ 215,635	**$ 1,725,082**
2.3	Trench Excavation	67,885	CY		$ 17.5	$ 7.5	$ -	$ 1,187,990	$ 509,139	**$ 1,697,129**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	4,243	CY	$ 50	$ 25	$ 14	$ 212,141	$ 103,949	$ 59,400	**$ 375,490**
2.5	Supply & Install Thermal Backfill -conduit level	35,640	CY	$ 350	$ 245	$ 105	$ 12,473,897	$ 8,731,728	$ 3,742,169	**$ 24,947,795**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Supply & Install Native Backfill -direct bury conduits sys	0	CY	$ 350	$ 245.0	$ 105.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	16,604	CY	$ 200	$ 125.0	$ 50.0	$ 3,320,782	$ 2,075,489	$ 830,196	**$ 6,226,466**
2.8	Conduit 8" SCH 40PVC	431,270	LF	$ 28.6	$ 5.7	$ 2.4	$ 12,334,333	$ 2,445,303	$ 1,047,987	**$ 15,827,624**
2.9	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.10	Conduit 2" SCH 40PVC	215,635	LF	$ 3.5	$ 3.15	$ 1.4	$ 759,036	$ 679,251	$ 291,108	**$ 1,729,394**
2.11	Warning Tape	53,909	LF	$ 0.15	$ 0.25	$ 0.10	$ 8,086	$ 13,477	$ 5,391	**$ 26,954**
2.12	Trench Box Shoring (Vault)	60	EA	$ -	$ 18,079	$ 27,119	$ -	$ 1,084,746	$ 1,627,119	**$ 2,711,864**
2.13	Splice Vault Excavation	9,973	CY		$ 17.5	$ 7.5	$ -	$ 174,533	$ 74,800	**$ 249,333**
2.14	Splice Vault Supply & Installation	60	EA	$ 35,000	$ 16,500	$ 38,500	$ 2,100,000	$ 990,000	$ 2,310,000	**$ 5,400,000**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.15	Splice Vault Backfill	2,992	CY		$ 14.0	$ 6.0	$ -	$ 41,888	$ 17,952	**$ 59,840**
2.16	Jack and Bore along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.17	HDD along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.18	Air Test Ducts	646,906	LF			$ 0.25	$ -	$ -	$ 161,726	**$ 161,726**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	33,940	SY	$ 14.00	$ 14.00	$ 7.00	$ 475,162	$ 475,162	$ 237,581	**$ 1,187,905**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	9,428	CY	$ 22.38	$ 23.50	$ 10.07	$ 210,994	$ 221,544	$ 94,948	**$ 527,486**
2.20	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	166	EA		$ 400	$ 1,200	$ -	$ 66,416	$ 199,247	**$ 265,663**
2.21	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	166	EA		$ 10	$ 15	$ -	$ 1,660	$ 2,491	**$ 4,151**
2.22	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	356	EA		$ 400	$ 1,200	$ -	$ 142,559	$ 427,676	**$ 570,235**
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 557,466	$ 371,644	$ -	$ 557,466	$ 371,644	**$ 929,110**
2.24	Excess Materials Disposal to Certified Backfill	97,326	CY		$ 24.5	$ 10.5	$ -	$ 2,384,498	$ 1,021,928	**$ 3,406,425**
2.25	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	**$ -**
2.26	Dewatering	60	EA			$ 4,000	$ -	$ -	$ 240,000	**$ 240,000**
2.27	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.28	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.29	Excavated material - stockpile management	77,858	CF		$ 1.0	$ 0.5	$ -	$ 77,858	$ 38,929	**$ 116,788**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 32,756,973**	**$ 23,529,781**	**$ 14,478,636**	**$ 70,765,391**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 345kV 5000 kcmil copper XLPE	169,813	FT	$ 167	$ 100	$ 67	$ 28,358,724	$ 17,015,235	$ 11,343,490	**$ 56,717,448**
3.2	Circuit #1- Cable Splicing- 345kV 5000 kcmil copper XLPE	90	EA	$ 11,722	$ 9,846	$ 2,813	$ 1,054,980	$ 886,183	$ 253,195	**$ 2,194,358**
3.3	Circuit #1- Cable Termination- 345kV 5000 kcmil copper XLPE	6	EA	$ 27,805	$ 9,846	$ 2,813	$ 166,830	$ 59,079	$ 16,880	**$ 242,789**
3.4	Circuit #2- Procurement & Installation- 345kV 5000 kcmil copper XLPE	169,813	FT	$ 167	$ 100	$ 67	$ 28,358,724	$ 17,015,235	$ 11,343,490	**$ 56,717,448**
3.5	Circuit #2- Cable Splicing- 345kV 5000 kcmil copper XLPE	90	EA	$ 11,722	$ 9,846	$ 2,813	$ 1,054,980	$ 886,183	$ 253,195	**$ 2,194,358**
3.6	Circuit #2- Cable Termination- 345kV 5000 kcmil copper XLPE	6	EA	$ 27,805	$ 9,846	$ 2,813	$ 166,830	$ 59,079	$ 16,880	**$ 242,789**
3.7	Circuit #3- Procurement & Installation- 345kV 5000 kcmil copper XLPE		FT	$ 167	$ 100	$ 67	$ -	$ -	$ -	**$ -**
3.8	Circuit #3- Cable Splicing- 345kV 5000 kcmil copper XLPE		EA	$ 11,722	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.9	Circuit #3- Cable Termination- 345kV 5000 kcmil copper XLPE		EA	$ 27,805	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.10	Link Box & MH racking	60	EA	$ 28,548	$ 17,129	$ 11,419	$ 1,712,907	$ 1,027,744	$ 685,163	**$ 3,425,814**
3.11	Fiber Optic Cable	113,208	FT	$ 7	$ 3	$ 2	$ 837,403	$ 377,052	$ 251,368	**$ 1,465,823**
3.12	Ground Continuity Conductor	113,208	FT	$ 13	$ 8	$ 5	$ 1,476,125	$ 852,120	$ 568,080	**$ 2,896,326**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							$ 63,187,504	$ 38,177,910	$ 24,731,740	**$ 126,097,154**
Comp 3A - East Garden City To Hempstead Harbor Landing 345kV Onshore UG Cables -Double circuits(EGC To Sprain Brook 345 kV / EGC To Dunwoodie 34							**$ 98,498,141**	**$ 74,298,250**	**$ 44,237,082**	**$ 217,033,473**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 3,556,060	$ 2,370,707	$ -	$ 3,556,060	$ 2,370,707	**$ 5,926,767**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		2,170,334.73		$ -	$ 2,170,335	$ -	**$ 2,170,335**
4.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		8,681,338.90		$ -	$ 8,681,339	$ -	**$ 8,681,339**
4.4	Utility PM and Project Oversite	1	LS		2,170,334.73		$ -	$ 2,170,335	$ -	**$ 2,170,335**
4.5	Site Accommodation, Facilities, Storage	1	LS	2,170,334.73			$ 2,170,335	$ -	$ -	**$ 2,170,335**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 10,851,674	$ -	$ -	$ 10,851,674	$ -	**$ 10,851,674**
4.7	LiDAR /GPR	1.0	LS		$ 390,660	$ 260,440	$ -	$ 390,660	$ 260,440	**$ 651,100**
4.8	Geotech	11.00	EA		2,730.00	1,820.00	$ -	$ 30,030	$ 20,020	**$ 50,050**
4.9	Surveying/Staking	1	LS		$ 911,541	$ 607,694	$ -	$ 911,541	$ 607,694	**$ 1,519,234**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ 40,000		$ -	$ 40,000	$ -	**$ 40,000**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 2,170,335		$ -	$ 2,170,335	$ -	**$ 2,170,335**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 651,100		$ -	$ 651,100	$ -	**$ 651,100**
4.14	Laydown Lease & temporary easement	1	LS		$ 1,500,000		$ -	$ 1,500,000	$ -	**$ 1,500,000**
4.15	Real Estate (Acquisition)	1	LS			$ 88,246	$ -	$ -	$ 88,246	**$ 88,246**
4.16	Legal Fees (Real estate)	1.00	LS		-	2,647.38	$ -	$ -	$ 2,647	**$ 2,647**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 7,700,000	$ -	$ -	$ 7,700,000	**$ 7,700,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 98,498,141.33			$ 8,746,635	$ -	$ -	**$ 8,746,635**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 217,033	$ -	$ -	$ 217,033	**$ 217,033**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 10,916,970**	**$ 33,123,408**	**$ 11,266,787**	**$ 55,307,165**

NEXTera Energy- TO44 Enhanced 2
Comp 5 - Ruland To Hempstead Harbor Landing (Shore Road) 345kV Onshore UG Cables -Single circuit
(Ruland To Sprain Brook 345 kV)

Total: $ 349,868,481

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
Comp 5 - Ruland To Hempstead Harbor Landing (Shore Road) 345kV Onshore UG Cables -Single circuit(Ruland To Sprain Brook 345 kV)				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 3,951,782	$ 19,416,325	$ 7,771,777	$ 31,139,885
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 28,082,043	$ 23,492,789	$ 15,680,897	$ 67,255,729
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 49,212,741	$ 29,776,525	$ 19,277,107	$ 98,266,373
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 9,181,315	$ 30,875,539	$ 10,363,420	$ 50,420,274
SUBTOTAL (Costs):	$ 90,427,881	$ 103,561,178	$ 53,093,201	$ 247,082,261
CONTRACTOR MARK-UP (OH&P)	$ 16,277,019	$ 18,641,012	$ 9,556,776	$ 44,474,807
SUBTOTAL:	$ 106,704,900	$ 122,202,190	$ 62,649,977	$ 291,557,067
CONTINGENCY ON ENTIRE PROJECT	$ 21,340,980	$ 24,440,438	$ 12,529,995	$ 58,311,413
TOTAL:	$ 128,045,880	$ 146,642,628	$ 75,179,973	$ 349,868,481

Description of Work: Ruland - Hempstead Harbor Landing (Shore Road, single circuit). 5000 kcmil copper XLPE, single cable per phase..

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 5 - Ruland To Hempstead Harbor Landing (Shore Road) 345kV Onshore UG Cables -Single circuit(Ruland To Sprain Brook 345 kV)										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	15.89	Mile		$ 700,000	$ 300,000	$ -	$ 11,120,200	$ 4,765,800	**$ 15,886,000**
1.3	Flaggers	500	DAY	$ 1,600	$ 4,800	$ 1,600	$ 800,000	$ 2,400,000	$ 800,000	**$ 4,000,000**
1.4	K Rail / Lane Control / Metal Plates	83,878	LF	$ 30	$ 18	$ 12	$ 2,516,342	$ 1,509,805	$ 1,006,537	**$ 5,032,685**
1.5	Police Support	20,000.0	HR		$ 120	$ 27	$ -	$ 2,400,000	$ 540,000	**$ 2,940,000**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	80.0	DAY		$ 1,000	$ 300	$ -	$ 80,000	$ 24,000	**$ 104,000**
1.9	Existing Utility Protection	15.89	Mile	$ 40,000	$ 120,000	$ 40,000	$ 635,440	$ 1,906,320	$ 635,440	**$ 3,177,200**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 3,951,782**	**$ 19,416,325**	**$ 7,771,777**	**$ 31,139,885**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	15.89	Miles		$ 139,800	$ 93,200	$ -	$ 2,220,863	$ 1,480,575	**$ 3,701,438**
2.2	Formwork in Trench	643,225	SF	$ 2	$ 1.5	$ 0.5	$ 1,286,449	$ 964,837	$ 321,612	**$ 2,572,899**
2.3	Trench Excavation	53,602	CY		$ 17.5	$ 7.5	$ -	$ 938,036	$ 402,015	**$ 1,340,051**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	3,350	SF	$ 50	$ 25	$ 14	$ 167,506	$ 82,078	$ 46,902	**$ 296,486**
2.5	Supply & Install Thermal Backfill	28,141	CY	$ 350	$ 245	$ 105	$ 9,849,377	$ 6,894,564	$ 2,954,813	**$ 19,698,755**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	13,101	CY	$ 200	$ 125	$ 50	$ 2,620,247	$ 1,637,654	$ 655,062	**$ 4,912,963**
2.9	Conduit 8" SCH 40PVC	335,512	LF	$ 28.6	$ 5.7	$ 2.4	$ 9,595,652	$ 1,902,355	$ 815,295	**$ 12,313,302**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	167,756	LF	$ 3.5	$ 3.15	$ 1.4	$ 590,502	$ 528,432	$ 226,471	**$ 1,345,404**
2.12	Warning Tape	167,756	LF	$ 0.15	$ 0.25	$ 0.10	$ 25,163	$ 41,939	$ 16,776	**$ 83,878**
2.13	Trench Box Shoring (Vault)	49	EA	$ -	$ 18,079	$ 27,119	$ -	$ 885,876	$ 1,328,814	**$ 2,214,689**
2.14	Splice Vault Excavation	8,145	CY		$ 17.5	$ 7.5	$ -	$ 142,536	$ 61,087	**$ 203,622**
2.15	Splice Vault Supply & Installation	49	EA	$ 35,000	$ 16,500	$ 38,500	$ 1,715,000	$ 808,500	$ 1,886,500	**$ 4,410,000**
2.16	Splice Vault Backfill	2,443	CY		$ 14.0	$ 6.0	$ -	$ 34,209	$ 14,661	**$ 48,869**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.17	Jack and Bore along Route	805	LF	$ 800	$ 1,600	$ 1,600	$ 644,000	$ 1,288,000	$ 1,288,000	**$ 3,220,000**
2.18	HDD along Route	1,200	LF	$ 800	$ 1,600	$ 1,600	$ 960,000	$ 1,920,000	$ 1,920,000	**$ 4,800,000**
2.19	Air Test Ducts	503,268	LF			$ 0.25	$ -	$ -	$ 125,817	**$ 125,817**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	31,071	SY	$ 14.00	$ 14.00	$ 7.00	$ 434,989	$ 434,989	$ 217,495	**$ 1,087,473**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	8,631	CY	$ 22.38	$ 23.50	$ 10.07	$ 193,156	$ 202,814	$ 86,920	**$ 482,890**
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	131	EA		$ 400	$ 1,200	$ -	$ 52,405	$ 157,215	**$ 209,620**
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	131	EA		$ 10	$ 15	$ -	$ 1,310	$ 1,965	**$ 3,275**
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	281	EA		$ 400	$ 1,200	$ -	$ 112,564	$ 337,693	**$ 450,257**
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 448,266	$ 298,844	$ -	$ 448,266	$ 298,844	**$ 747,110**
2.26	Excess Materials Disposal to Certified Backfill	77,095	CY		$ 24.5	$ 10.5	$ -	$ 1,888,816	$ 809,492	**$ 2,698,308**
2.27	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	**$ -**
2.28	Dewatering	49	EA			$ 4,000	$ -	$ -	$ 196,000	**$ 196,000**
2.29	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.30	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.31	Excavated material - stockpile management	61,747	CF		$ 1.0	$ 0.5	$ -	$ 61,747	$ 30,873	**$ 92,620**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 28,082,043**	**$ 23,492,789**	**$ 15,680,897**	**$ 67,255,729**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 345kV 5000 kcmil copper XLPE	264,216	FT	$ 167	$ 100	$ 67	$ 44,124,064	$ 26,474,438	$ 17,649,626	**$ 88,248,128**
3.2	Circuit #1- Cable Splicing- 345kV 5000 kcmil copper XLPE	147	EA	$ 11,722	$ 9,846	$ 2,813	$ 1,723,134	$ 1,447,433	$ 413,552	**$ 3,584,119**
3.3	Circuit #1- Cable Termination- 345kV 5000 kcmil copper XLPE	6	EA	$ 27,805	$ 9,846	$ 2,813	$ 166,830	$ 59,079	$ 16,880	**$ 242,789**
3.4	Circuit #2- Procurement & Installation- 345kV 5000 kcmil copper XLPE		FT	$ 167	$ 100	$ 67	$ -	$ -	$ -	**$ -**
3.5	Circuit #2- Cable Splicing- 345kV 5000 kcmil copper XLPE		EA	$ 11,722	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.6	Circuit #2- Cable Termination- 345kV 5000 kcmil copper XLPE		EA	$ 27,805	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.7	Circuit #3- Procurement & Installation- 345kV 5000 kcmil copper XLPE		FT	$ 167	$ 100	$ 67	$ -	$ -	$ -	**$ -**
3.8	Circuit #3- Cable Splicing- 345kV 5000 kcmil copper XLPE		EA	$ 11,722	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.9	Circuit #3- Cable Termination- 345kV 5000 kcmil copper XLPE		EA	$ 27,805	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.10	Link Box & MH racking	49	EA	$ 28,548	$ 17,129	$ 11,419	$ 1,398,874	$ 839,324	$ 559,550	**$ 2,797,748**
3.11	Fiber Optic Cable	88,072	FT	$ 7	$ 3	$ 2	$ 651,468	$ 293,333	$ 195,555	**$ 1,140,356**
3.12	Ground Continuity Conductor	88,072	FT	$ 13	$ 8	$ 5	$ 1,148,371	$ 662,918	$ 441,945	**$ 2,253,234**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 49,212,741**	**$ 29,776,525**	**$ 19,277,107**	**$ 98,266,373**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 81,246,566**	**$ 72,685,639**	**$ 42,729,781**	**$ 196,661,987**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 3,462,463	$ 2,308,308	$ -	$ 3,462,463	$ 2,308,308	**$ 5,770,771**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		1,966,619.87		$ -	$ 1,966,620	$ -	**$ 1,966,620**
4.3	Construction Project Management / Supervision	1	LS		7,866,479.47		$ -	$ 7,866,479	$ -	**$ 7,866,479**
4.4	Utility PM and Project Oversite	1	LS		1,966,619.87		$ -	$ 1,966,620	$ -	**$ 1,966,620**
4.5	Site Accommodation, Facilities, Storage	1	LS	1,966,619.87			$ 1,966,620	$ -	$ -	**$ 1,966,620**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 9,833,099	$ -	$ -	$ 9,833,099	$ -	**$ 9,833,099**
4.7	LiDAR /GPR	1.0	LS		$ 353,992	$ 235,994	$ -	$ 353,992	$ 235,994	**$ 589,986**
4.8	Geotech	16.00	EA		2,730.00	1,820.00	$ -	$ 43,680	$ 29,120	**$ 72,800**
4.9	Surveying/Staking	1	LS		$ 825,980	$ 550,654	$ -	$ 825,980	$ 550,654	**$ 1,376,634**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ -		$ -	$ -	$ -	**$ -**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 1,966,620		$ -	$ 1,966,620	$ -	**$ 1,966,620**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 589,986		$ -	$ 589,986	$ -	**$ 589,986**
4.14	Laydown Lease & temporary easement	1	LS		$ 2,000,000		$ -	$ 2,000,000	$ -	**$ 2,000,000**
4.15	Real Estate (Acquisition)	1	LS			$ 60,856	$ -	$ -	$ 60,856	**$ 60,856**
4.16	Legal Fees (Real estate)	1.00	LS		-	1,825.68	$ -	$ -	$ 1,826	**$ 1,826**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 6,980,000	$ -	$ -	$ 6,980,000	**$ 6,980,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 81,246,566.33			$ 7,214,695	$ -	$ -	**$ 7,214,695**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 196,662	$ -	$ -	$ 196,662	**$ 196,662**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 9,181,315**	**$ 30,875,539**	**$ 10,363,420**	**$ 50,420,274**

NEXTera Energy- TO44 Enhanced 2

Comp 8C - Rebuild: East Garden City - Newbridge 345kV Onshore UG Cables -Double circuits

Total: $ 133,317,472

NEXTera Energy- TO44 Enhanced 2	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp 8C - Rebuild: East Garden City - Newbridge 345kV Onshore UG Cables -Double circuits				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 96,000	$ 616,000	$ 172,800	$ 884,800
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ -	$ -	$ -	$ -
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 44,460,251	$ 18,243,138	$ 11,801,992	$ 74,505,381
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 4,710,497	$ 10,698,010	$ 3,352,069	$ 18,760,576
SUBTOTAL (Costs):	$ 49,266,748	$ 29,557,148	$ 15,326,861	$ 94,150,757
CONTRACTOR MARK-UP (OH&P)	$ 8,868,015	$ 5,320,287	$ 2,758,835	$ 16,947,136
SUBTOTAL:	$ 58,134,763	$ 34,877,435	$ 18,085,696	$ 111,097,893
CONTINGENCY ON ENTIRE PROJECT	$ 11,626,953	$ 6,975,487	$ 3,617,139	$ 22,219,579
TOTAL:	$ 69,761,715	$ 41,852,922	$ 21,702,835	$ 133,317,472

Description of Work: Convert two existing 138kV circuits (462, 463) to 345kV with new cable; disconnect other two (465, 467). 5000 kcmil copper XLPE, single cable per phase.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 8C - Rebuild: East Garden City - Newbridge 345kV Onshore UG Cables -Double circuits										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	4.87	Mile				$ -	$ -	$ -	**$ -**
1.3	Flaggers	60	DAY	$ 1,600	$ 4,800	$ 1,600	$ 96,000	$ 288,000	$ 96,000	**$ 480,000**
1.4	K Rail / Lane Control / Metal Plates	25,714	LF				$ -	$ -	$ -	**$ -**
1.5	Police Support	2,400.0	HR		$ 120	$ 27	$ -	$ 288,000	$ 64,800	**$ 352,800**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	40.0	DAY		$ 1,000	$ 300	$ -	$ 40,000	$ 12,000	**$ 52,000**
1.9	Existing Utility Protection	-	Mile	$ 40,000	$ 120,000	$ 40,000	$ -	$ -	$ -	**$ -**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 96,000**	**$ 616,000**	**$ 172,800**	**$ 884,800**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	0.00	Miles		$ 139,800	$ 93,200	$ -	$ -	$ -	**$ -**
2.2	Formwork in Trench	0	SF	$ 2	$ 1.5	$ 0.5	$ -	$ -	$ -	**$ -**
2.3	Trench Excavation	-	CY		$ 17.5	$ 7.5	$ -	$ -	$ -	**$ -**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	0	SF	$ 50	$ 25	$ 14	$ -	$ -	$ -	**$ -**
2.5	Supply & Install Thermal Backfill	0	CY	$ 350	$ 245	$ 105	$ -	$ -	$ -	**$ -**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.9	Conduit 8" SCH 40PVC	0	LF	$ 28.6	$ 5.7	$ 2.4	$ -	$ -	$ -	**$ -**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	0	LF	$ 3.5	$ 3.15	$ 1.4	$ -	$ -	$ -	**$ -**
2.12	Warning Tape	0	LF	$ 0.15	$ 0.25	$ 0.10	$ -	$ -	$ -	**$ -**
2.13	Trench Box Shoring (Vault)	0	EA	$ -	$ 18,079	$ 27,119	$ -	$ -	$ -	**$ -**
2.14	Splice Vault Excavation	0	CY		$ 17.5	$ 7.5	$ -	$ -	$ -	**$ -**
2.15	Splice Vault Supply & Installation	0	EA	$ 35,000	$ 16,500	$ 38,500	$ -	$ -	$ -	**$ -**
2.16	Splice Vault Backfill	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.17	Jack and Bore along Route	0	LF	$ 2,400	$ 4,800	$ 4,800	$ -	$ -	$ -	$ -
2.18	HDD along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	$ -
2.19	Air Test Ducts	0	LF			$ 0.25	$ -	$ -	$ -	$ -
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	0	SY	$ 14.00	$ 14.00	$ 7.00	$ -	$ -	$ -	$ -
2.21	PVMT, AGGREGATE, 10", BASE COURSE	0	CY	$ 22.38	$ 23.50	$ 10.07	$ -	$ -	$ -	$ -
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	0	EA		$ 400	$ 1,200	$ -	$ -	$ -	$ -
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	0	EA		$ 10	$ 15	$ -	$ -	$ -	$ -
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	0	EA		$ 400	$ 1,200	$ -	$ -	$ -	$ -
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	0	LS		$ 448,266	$ 298,844	$ -	$ -	$ -	$ -
2.26	Excess Materials Disposal to Certified Backfill	0	CY		$ 24.5	$ 10.5	$ -	$ -	$ -	$ -
2.27	Rock Excavation and Removal	0	LS				$ -	$ -	$ -	$ -
2.28	Dewatering	0	EA			$ 4,000	$ -	$ -	$ -	$ -
2.29	Contaminated Water Treatment and Disposal	0	LS				$ -	$ -	$ -	$ -
2.30	Contaminated Spoils Disposal	0	LS				$ -	$ -	$ -	$ -
2.31	Excavated material - stockpile management	0	CF		$ 1.0	$ 0.5	$ -	$ -	$ -	$ -
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ -**	**$ -**	**$ -**	**$ -**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 345kV 5000 kcmil copper XLPE	80,998	FT	$ 167	$ 100	$ 67	$ 13,526,639	$ 8,115,984	$ 5,410,656	**$ 27,053,279**
3.2	Circuit #1- Cable Splicing- 345kV 5000 kcmil copper XLPE	42	EA	$ 11,722	$ 9,846	$ 2,813	$ 492,324	$ 413,552	$ 118,158	**$ 1,024,034**
3.3	Circuit #1- Cable Termination- 345kV 5000 kcmil copper XLPE	6	EA	$ 27,805	$ 9,846	$ 2,813	$ 166,830	$ 59,079	$ 16,880	**$ 242,789**
3.4	Circuit #2- Procurement & Installation- 345kV 5000 kcmil copper XLPE	80,998	FT	$ 167	$ 100	$ 67	$ 13,526,639	$ 8,115,984	$ 5,410,656	**$ 27,053,279**
3.5	Circuit #2- Cable Splicing- 345kV 5000 kcmil copper XLPE	42	EA	$ 11,722	$ 9,846	$ 2,813	$ 492,324	$ 413,552	$ 118,158	**$ 1,024,034**
3.6	Circuit #2- Cable Termination- 345kV 5000 kcmil copper XLPE	6	EA	$ 27,805	$ 9,846	$ 2,813	$ 166,830	$ 59,079	$ 16,880	**$ 242,789**
3.7	Circuit #3- Procurement & Installation- 345kV 5000 kcmil copper XLPE		FT	$ 167	$ 100	$ 67	$ 13,526,639	$ -	$ -	**$ 13,526,639**
3.8	Circuit #3- Cable Splicing- 345kV 5000 kcmil copper XLPE		EA	$ 11,722	$ 9,846	$ 2,813	$ 492,324	$ -	$ -	**$ 492,324**
3.9	Circuit #3- Cable Termination- 345kV 5000 kcmil copper XLPE		EA	$ 27,805	$ 9,846	$ 2,813	$ 166,830	$ -	$ -	**$ 166,830**
3.10	Link Box & MH racking	28	EA	$ 28,548	$ 17,129	$ 11,419	$ 799,357	$ 479,614	$ 319,743	**$ 1,598,713**
3.11	Fiber Optic Cable	53,999	FT	$ 7	$ 3	$ 2	$ 399,427	$ 179,848	$ 119,898	**$ 699,173**
3.12	Ground Continuity Conductor	53,999	FT	$ 13	$ 8	$ 5	$ 704,087	$ 406,447	$ 270,965	**$ 1,381,499**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 44,460,251**	**$ 18,243,138**	**$ 11,801,992**	**$ 74,505,381**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 44,556,251**	**$ 18,859,138**	**$ 11,974,792**	**$ 75,390,181**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 925,018	$ 616,679	$ -	$ 925,018	$ 616,679	**$ 1,541,697**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		753,901.81		$ -	$ 753,902	$ -	**$ 753,902**
4.3	Construction Project Management / Supervision	1	LS		3,015,607.24		$ -	$ 3,015,607	$ -	**$ 3,015,607**
4.4	Utility PM and Project Oversite	1	LS		753,901.81		$ -	$ 753,902	$ -	**$ 753,902**
4.5	Site Accommodation, Facilities, Storage	1	LS	753,901.81			$ 753,902	$ -	$ -	**$ 753,902**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 3,769,509	$ -	$ -	$ 3,769,509	$ -	**$ 3,769,509**
4.7	LiDAR /GPR	-	LS		$ 135,702	$ 90,468	$ -	$ -	$ -	**$ -**
4.8	Geotech	-	EA		2,730.00	1,820.00	$ -	$ -	$ -	**$ -**
4.9	Surveying/Staking	-	LS		$ 316,639	$ 211,093	$ -	$ -	$ -	**$ -**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ -		$ -	$ -	$ -	**$ -**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 753,902		$ -	$ 753,902	$ -	**$ 753,902**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 226,171		$ -	$ 226,171	$ -	**$ 226,171**
4.14	Laydown Lease & temporary easement	1	LS		$ 500,000		$ -	$ 500,000	$ -	**$ 500,000**
4.15	Real Estate (Acquisition)		LS				$ -	$ -	$ -	**$ -**
4.16	Legal Fees (Real estate)	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 2,660,000	$ -	$ -	$ 2,660,000	**$ 2,660,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 44,556,251.01			$ 3,956,595	$ -	$ -	**$ 3,956,595**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 75,390	$ -	$ -	$ 75,390	**$ 75,390**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 4,710,497**	**$ 10,698,010**	**$ 3,352,069**	**$ 18,760,576**

NEXTera Energy- TO44 Enhanced 2

Comp 10A - East Garden City To Valley Stream 345kV Onshore UG Cables -Triple circuits

Total: $ 394,231,294

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
Comp 10A - East Garden City To Valley Stream 345kV Onshore UG Cables -Triple circuits				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 2,116,608	$ 10,859,085	$ 4,087,123	$ 17,062,816
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 27,896,453	$ 19,480,913	$ 14,097,858	$ 61,475,224
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 71,900,202	$ 44,673,808	$ 27,284,346	$ 143,858,356
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 11,273,862	$ 33,325,469	$ 11,416,205	$ 56,015,535
SUBTOTAL (Costs):	$ 113,187,125	$ 108,339,275	$ 56,885,531	$ 278,411,931
CONTRACTOR MARK-UP (OH&P)	$ 20,373,682	$ 19,501,069	$ 10,239,396	$ 50,114,148
SUBTOTAL:	$ 133,560,807	$ 127,840,344	$ 67,124,927	$ 328,526,078
CONTINGENCY ON ENTIRE PROJECT	$ 26,712,161	$ 25,568,069	$ 13,424,985	$ 65,705,216
TOTAL:	$ 160,272,969	$ 153,408,413	$ 80,549,913	$ 394,231,294

Description of Work: Replace two existing 138kv UG cable with three 345kv 5000 kcmil copper XLPE, single cable per phase.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 10A - East Garden City To Valley Stream 345kV Onshore UG Cables -Triple circuits										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	7.12	Mile		$ 700,000	$ 300,000	$ -	$ 4,984,000	$ 2,136,000	**$ 7,120,000**
1.3	Flaggers	440	DAY	$ 1,600	$ 4,800	$ 1,600	$ 704,000	$ 2,112,000	$ 704,000	**$ 3,520,000**
1.4	K Rail / Lane Control / Metal Plates	37,594	LF	$ 30	$ 18	$ 12	$ 1,127,808	$ 676,685	$ 451,123	**$ 2,255,616**
1.5	Police Support	17,600.0	HR		$ 120	$ 27	$ -	$ 2,112,000	$ 475,200	**$ 2,587,200**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	120.0	DAY		$ 1,000	$ 300	$ -	$ 120,000	$ 36,000	**$ 156,000**
1.9	Existing Utility Protection	7.12	Mile	$ 40,000	$ 120,000	$ 40,000	$ 284,800	$ 854,400	$ 284,800	**$ 1,424,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 2,116,608**	**$ 10,859,085**	**$ 4,087,123**	**$ 17,062,816**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	7.12	Miles		$ 139,800	$ 93,200	$ -	$ 995,376	$ 663,584	**$ 1,658,960**
2.2	Formwork in Trench	292,109	SF	$ 2	$ 1.5	$ 0.5	$ 584,218	$ 438,163	$ 146,054	**$ 1,168,435**
2.3	Trench Excavation	45,980	CY		$ 17.5	$ 7.5	$ -	$ 804,652	$ 344,851	**$ 1,149,502**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	2,874	SF	$ 50	$ 25	$ 14	$ 143,688	$ 70,407	$ 40,233	**$ 254,327**
2.5	Supply & Install Thermal Backfill	18,105	CY	$ 350	$ 245	$ 105	$ 6,336,631	$ 4,435,642	$ 1,900,989	**$ 12,673,262**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	14,924	CY	$ 200	$ 125	$ 50	$ 2,984,784	$ 1,865,490	$ 746,196	**$ 5,596,470**
2.9	Conduit 8" SCH 40PVC	451,123	LF	$ 28.6	$ 5.7	$ 2.4	$ 12,902,124	$ 2,557,869	$ 1,096,229	**$ 16,556,221**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	300,749	LF	$ 3.5	$ 3.15	$ 1.4	$ 1,058,636	$ 947,359	$ 406,011	**$ 2,412,005**
2.12	Warning Tape	75,187	LF	$ 0.15	$ 0.25	$ 0.10	$ 11,278	$ 18,797	$ 7,519	**$ 37,594**
2.13	Trench Box Shoring (Vault)	72	EA	$ -	$ 18,079	$ 27,119	$ -	$ 1,301,695	$ 1,952,542	**$ 3,254,237**
2.14	Splice Vault Excavation	11,968	CY		$ 17.5	$ 7.5	$ -	$ 209,440	$ 89,760	**$ 299,200**
2.15	Splice Vault Supply & Installation	72	EA	$ 35,000	$ 16,500	$ 38,500	$ 2,520,000	$ 1,188,000	$ 2,772,000	**$ 6,480,000**
2.16	Splice Vault Backfill	3,590	CY		$ 14.0	$ 6.0	$ -	$ 50,266	$ 21,542	**$ 71,808**
2.17	Jack and Bore along Route	360	LF	$ 2,400	$ 4,800	$ 4,800	$ 864,000	$ 1,728,000	$ 1,728,000	**$ 4,320,000**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.18	HDD along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.19	Air Test Ducts	751,872	LF			$ 0.25	$ -	$ -	$ 187,968	**$ 187,968**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	24,292	SY	$ 14.00	$ 14.00	$ 7.00	$ 340,082	$ 340,082	$ 170,041	**$ 850,206**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	6,748	CY	$ 22.38	$ 23.50	$ 10.07	$ 151,013	$ 158,563	$ 67,956	**$ 377,532**
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	149	EA		$ 400	$ 1,200	$ -	$ 59,696	$ 179,087	**$ 238,783**
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	149	EA		$ 10	$ 15	$ -	$ 1,492	$ 2,239	**$ 3,731**
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	181	EA		$ 400	$ 1,200	$ -	$ 72,419	$ 217,256	**$ 289,675**
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 448,266	$ 298,844	$ -	$ 448,266	$ 298,844	**$ 747,110**
2.26	Excess Materials Disposal to Certified Backfill	70,665	CY		$ 24.5	$ 10.5	$ -	$ 1,731,292	$ 741,982	**$ 2,473,275**
2.27	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	**$ -**
2.28	Dewatering	72	EA			$ 4,000	$ -	$ -	$ 288,000	**$ 288,000**
2.29	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.30	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.31	Excavated material - stockpile management	57,948	CF		$ 1.0	$ 0.5	$ -	$ 57,948	$ 28,974	**$ 86,922**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 27,896,453**	**$ 19,480,913**	**$ 14,097,858**	**$ 61,475,224**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 345kV 5000 kcmil copper XLPE	118,420	FT	$ 167	$ 100	$ 67	$ 19,776,113	$ 11,865,668	$ 7,910,445	**$ 39,552,227**
3.2	Circuit #1- Cable Splicing- 345kV 5000 kcmil copper XLPE	216	EA	$ 11,722	$ 9,846	$ 2,813	$ 2,531,952	$ 2,126,840	$ 607,668	**$ 5,266,460**
3.3	Circuit #1- Cable Termination- 345kV 5000 kcmil copper XLPE	6	EA	$ 27,805	$ 9,846	$ 2,813	$ 166,830	$ 59,079	$ 16,880	**$ 242,789**
3.4	Circuit #2- Procurement & Installation- 345kV 5000 kcmil copper XLPE	118,420	FT	$ 167	$ 100	$ 67	$ 19,776,113	$ 11,865,668	$ 7,910,445	**$ 39,552,227**
3.5	Circuit #2- Cable Splicing- 345kV 5000 kcmil copper XLPE	216	EA	$ 11,722	$ 9,846	$ 2,813	$ 2,531,952	$ 2,126,840	$ 607,668	**$ 5,266,460**
3.6	Circuit #2- Cable Termination- 345kV 5000 kcmil copper XLPE	6	EA	$ 27,805	$ 9,846	$ 2,813	$ 166,830	$ 59,079	$ 16,880	**$ 242,789**
3.7	Circuit #3- Procurement & Installation- 345kV 5000 kcmil copper XLPE	118,420	FT	$ 167	$ 100	$ 67	$ 19,776,113	$ 11,865,668	$ 7,910,445	**$ 39,552,227**
3.8	Circuit #3- Cable Splicing- 345kV 5000 kcmil copper XLPE	216	EA	$ 11,722	$ 9,846	$ 2,813	$ 2,531,952	$ 2,126,840	$ 607,668	**$ 5,266,460**
3.9	Circuit #3- Cable Termination- 345kV 5000 kcmil copper XLPE	6	EA	$ 27,805	$ 9,846	$ 2,813	$ 166,830	$ 59,079	$ 16,880	**$ 242,789**
3.10	Link Box & MH racking	72	EA	$ 28,548	$ 17,129	$ 11,419	$ 2,055,488	$ 1,233,293	$ 822,195	**$ 4,110,977**
3.11	Fiber Optic Cable	118,420	FT	$ 7	$ 3	$ 2	$ 875,952	$ 394,409	$ 262,939	**$ 1,533,300**
3.12	Ground Continuity Conductor	118,420	FT	$ 13	$ 8	$ 5	$ 1,544,076	$ 891,346	$ 594,231	**$ 3,029,653**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 71,900,202**	**$ 44,673,808**	**$ 27,284,346**	**$ 143,858,356**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 101,913,263**	**$ 75,013,806**	**$ 45,469,327**	**$ 222,396,395**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 3,614,494	$ 2,409,663	$ -	$ 3,614,494	$ 2,409,663	**$ 6,024,157**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		2,223,963.95		$ -	$ 2,223,964	$ -	**$ 2,223,964**
4.3	Construction Project Management / Supervision	1	LS		8,895,855.82		$ -	$ 8,895,856	$ -	**$ 8,895,856**
4.4	Utility PM and Project Oversite	1	LS		2,223,963.95		$ -	$ 2,223,964	$ -	**$ 2,223,964**
4.5	Site Accommodation, Facilities, Storage	1	LS	2,223,963.95			$ 2,223,964	$ -	$ -	**$ 2,223,964**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 11,119,820	$ -	$ -	$ 11,119,820	$ -	**$ 11,119,820**
4.7	LiDAR /GPR	1.0	LS		$ 400,314	$ 266,876	$ -	$ 400,314	$ 266,876	**$ 667,189**
4.8	Geotech	8.00	EA		2,730.00	1,820.00	$ -	$ 21,840	$ 14,560	**$ 36,400**
4.9	Surveying/Staking	1	LS		$ 934,065	$ 622,710	$ -	$ 934,065	$ 622,710	**$ 1,556,775**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ -		$ -	$ -	$ -	**$ -**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 2,223,964		$ -	$ 2,223,964	$ -	**$ 2,223,964**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 667,189		$ -	$ 667,189	$ -	**$ 667,189**
4.14	Laydown Lease & temporary easement	1	LS		$ 1,000,000		$ -	$ 1,000,000	$ -	**$ 1,000,000**
4.15	Real Estate (Acquisition)		LS				$ -	$ -	$ -	**$ -**
4.16	Legal Fees (Real estate)	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 7,880,000	$ -	$ -	$ 7,880,000	**$ 7,880,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 101,913,262.97			$ 9,049,898	$ -	$ -	**$ 9,049,898**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 222,396	$ -	$ -	$ 222,396	**$ 222,396**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 11,273,862**	**$ 33,325,469**	**$ 11,416,205**	**$ 56,015,535**

NEXTera Energy- TO44 Enhanced 2
Comp 11 - Pilgram to Northport 138kV Onshore UG Cables -Single circuit
(Pilgram to Northport kV)

Total: $ 165,653,108

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
Comp 5 - Ruland To Hempstead Harbor Landing (Shore Road) 345kV Onshore UG Cables -Single circuit(Ruland To Sprain Brook 345 kV)				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 2,070,656	$ 10,187,434	$ 4,078,822	$ 16,336,912
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 14,119,503	$ 11,092,018	$ 6,785,369	$ 31,996,890
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 22,156,432	$ 13,721,784	$ 8,855,275	$ 44,733,491
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 4,335,850	$ 14,671,872	$ 4,911,643	$ 23,919,365
SUBTOTAL (Costs):	$ 42,682,442	$ 49,673,108	$ 24,631,109	$ 116,986,658
CONTRACTOR MARK-UP (OH&P)	$ 7,682,840	$ 8,941,159	$ 4,433,600	$ 21,057,599
SUBTOTAL:	$ 50,365,281	$ 58,614,267	$ 29,064,708	$ 138,044,257
CONTINGENCY ON ENTIRE PROJECT	$ 10,073,056	$ 11,722,853	$ 5,812,942	$ 27,608,851.40
TOTAL:	$ 60,438,338	$ 70,337,121	$ 34,877,650	$ 165,653,108

Description of Work: Ruland - 138kV (399/567/900 MVA) 5000 kcmil copper XLPE, single cable per phase (8.34 miles)

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 5 - Ruland To Hempstead Harbor Landing (Shore Road) 345kV Onshore UG Cables -Single circuit(Ruland To Sprain Brook 345 kV)										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	8.34	Mile		$ 700,000	$ 300,000	$ -	$ 5,838,000	$ 2,502,000	**$ 8,340,000**
1.3	Flaggers	260	DAY	$ 1,600	$ 4,800	$ 1,600	$ 416,000	$ 1,248,000	$ 416,000	**$ 2,080,000**
1.4	K Rail / Lane Control / Metal Plates	44,035	LF	$ 30	$ 18	$ 12	$ 1,321,056	$ 792,634	$ 528,422	**$ 2,642,112**
1.5	Police Support	10,400.0	HR		$ 120	$ 27	$ -	$ 1,248,000	$ 280,800	**$ 1,528,800**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	60.0	DAY		$ 1,000	$ 300	$ -	$ 60,000	$ 18,000	**$ 78,000**
1.9	Existing Utility Protection	8.34	Mile	$ 40,000	$ 120,000	$ 40,000	$ 333,600	$ 1,000,800	$ 333,600	**$ 1,668,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 2,070,656**	**$ 10,187,434**	**$ 4,078,822**	**$ 16,336,912**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	8.34	Miles		$ 139,800	$ 93,200	$ -	$ 1,165,932	$ 777,288	**$ 1,943,220**
2.2	Formwork in Trench	346,914	SF	$ 2	$ 1.5	$ 0.5	$ 693,827	$ 520,370	$ 173,457	**$ 1,387,654**
2.3	Trench Excavation	28,909	CY		$ 17.5	$ 7.5	$ -	$ 505,916	$ 216,821	**$ 722,737**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	1,807	SF	$ 50	$ 25	$ 14	$ 90,342	$ 44,268	$ 25,296	**$ 159,905**
2.5	Supply & Install Thermal Backfill	15,177	CY	$ 350	$ 245	$ 105	$ 5,312,115	$ 3,718,480	$ 1,593,634	**$ 10,624,229**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	7,066	CY	$ 200	$ 125	$ 50	$ 1,413,191	$ 883,244	$ 353,298	**$ 2,649,733**
2.9	Conduit 8" SCH 40PVC	176,141	LF	$ 28.6	$ 5.7	$ 2.4	$ 5,037,627	$ 998,718	$ 428,022	**$ 6,464,367**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	88,070	LF	$ 3.5	$ 3.15	$ 1.4	$ 310,008	$ 277,422	$ 118,895	**$ 706,325**
2.12	Warning Tape	88,070	LF	$ 0.15	$ 0.25	$ 0.10	$ 13,211	$ 22,018	$ 8,807	**$ 44,035**
2.13	Trench Box Shoring (Vault)	24	EA	$ -	$ 18,079	$ 27,119	$ -	$ 433,898	$ 650,847	**$ 1,084,746**
2.14	Splice Vault Excavation	3,285	CY		$ 17.5	$ 7.5	$ -	$ 57,493	$ 24,640	**$ 82,133**
2.15	Splice Vault Supply & Installation	24	EA	$ 35,000	$ 16,500	$ 38,500	$ 840,000	$ 396,000	$ 924,000	**$ 2,160,000**
2.16	Splice Vault Backfill	986	CY		$ 14.0	$ 6.0	$ -	$ 13,798	$ 5,914	**$ 19,712**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.17	Jack and Bore along Route	95	LF	$ 800	$ 1,600	$ 1,600	$ 76,000	$ 152,000	$ 152,000	**$ 380,000**
2.18	HDD along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.19	Air Test Ducts	264,211	LF			$ 0.25	$ -	$ -	$ 66,053	**$ 66,053**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	16,481	SY	$ 14.00	$ 14.00	$ 7.00	$ 230,729	$ 230,729	$ 115,364	**$ 576,822**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	4,578	CY	$ 22.38	$ 23.50	$ 10.07	$ 102,455	$ 107,577	$ 46,105	**$ 256,136**
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	71	EA		$ 400	$ 1,200	$ -	$ 28,264	$ 84,791	**$ 113,055**
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	71	EA		$ 10	$ 15	$ -	$ 707	$ 1,060	**$ 1,766**
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	152	EA		$ 400	$ 1,200	$ -	$ 60,710	$ 182,130	**$ 242,840**
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 448,266	$ 298,844	$ -	$ 448,266	$ 298,844	**$ 747,110**
2.26	Excess Materials Disposal to Certified Backfill	40,572	CY		$ 24.5	$ 10.5	$ -	$ 994,013	$ 426,006	**$ 1,420,019**
2.27	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	**$ -**
2.28	Dewatering	24	EA			$ 4,000	$ -	$ -	$ 96,000	**$ 96,000**
2.29	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.30	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.31	Excavated material - stockpile management	32,195	CF		$ 1.0	$ 0.5	$ -	$ 32,195	$ 16,097	**$ 48,292**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 14,119,503**	**$ 11,092,018**	**$ 6,785,369**	**$ 31,996,890**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 138kV 5000 kcmil copper XLPE	138,711	FT	$ 145	$ 87	$ 58	$ 20,113,078	$ 12,067,847	$ 8,045,231	**$ 40,226,155**
3.2	Circuit #1- Cable Splicing- 138kV 5000 kcmil copper XLPE	72	EA	$ 5,898	$ 9,846	$ 2,813	$ 424,656	$ 708,947	$ 202,556	**$ 1,336,159**
3.3	Circuit #1- Cable Termination- 138kV 5000 kcmil copper XLPE	6	EA	$ 5,664	$ 9,846	$ 2,813	$ 33,984	$ 59,079	$ 16,880	**$ 109,943**
3.4	Circuit #2- Procurement & Installation- 138kV 5000 kcmil copper XLPE		FT	$ 145	$ 87	$ 58	$ -	$ -	$ -	**$ -**
3.5	Circuit #2- Cable Splicing- 138kV 5000 kcmil copper XLPE		EA	$ 5,898	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.6	Circuit #2- Cable Termination- 138kV 5000 kcmil copper XLPE		EA	$ 5,664	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.7	Circuit #3- Procurement & Installation- 138kV 5000 kcmil copper XLPE		FT	$ 145	$ 87	$ 58	$ -	$ -	$ -	**$ -**
3.8	Circuit #3- Cable Splicing- 138kV 5000 kcmil copper XLPE		EA	$ 5,898	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.9	Circuit #3- Cable Termination- 138kV 5000 kcmil copper XLPE		EA	$ 5,664	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.10	Link Box & MH racking	24	EA	$ 26,659	$ 15,995	$ 10,664	$ 639,816	$ 383,890	$ 255,926	**$ 1,279,632**
3.11	Fiber Optic Cable	46,237	FT	$ 7	$ 3	$ 2	$ 342,015	$ 153,997	$ 102,665	**$ 598,676**
3.12	Ground Continuity Conductor	46,237	FT	$ 13	$ 8	$ 5	$ 602,884	$ 348,026	$ 232,017	**$ 1,182,926**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 22,156,432**	**$ 13,721,784**	**$ 8,855,275**	**$ 44,733,491**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 38,346,592**	**$ 35,001,236**	**$ 19,719,466**	**$ 93,067,293**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 1,641,621	$ 1,094,414	$ -	$ 1,641,621	$ 1,094,414	**$ 2,736,035**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		930,672.93		$ -	$ 930,673	$ -	**$ 930,673**
4.3	Construction Project Management / Supervision	1	LS		3,722,691.74		$ -	$ 3,722,692	$ -	**$ 3,722,692**
4.4	Utility PM and Project Oversite	1	LS		930,672.93		$ -	$ 930,673	$ -	**$ 930,673**
4.5	Site Accommodation, Facilities, Storage	1	LS	930,672.93			$ 930,673	$ -	$ -	**$ 930,673**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 4,653,365	$ -	$ -	$ 4,653,365	$ -	**$ 4,653,365**
4.7	LiDAR /GPR	1.0	LS		$ 167,521	$ 111,681	$ -	$ 167,521	$ 111,681	**$ 279,202**
4.8	Geotech	9.00	EA		2,730.00	1,820.00	$ -	$ 24,570	$ 16,380	**$ 40,950**
4.9	Surveying/Staking	1	LS		$ 390,883	$ 260,588	$ -	$ 390,883	$ 260,588	**$ 651,471**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ -		$ -	$ -	$ -	**$ -**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 930,673		$ -	$ 930,673	$ -	**$ 930,673**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 279,202		$ -	$ 279,202	$ -	**$ 279,202**
4.14	Laydown Lease & temporary easement	1	LS		$ 1,000,000		$ -	$ 1,000,000	$ -	**$ 1,000,000**
4.15	Real Estate (Acquisition)	1	LS			$ 34,478	$ -	$ -	$ 34,478	**$ 34,478**
4.16	Legal Fees (Real estate)	1.00	LS		-	1,034.34	$ -	$ -	$ 1,034	**$ 1,034**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 3,300,000	$ -	$ -	$ 3,300,000	**$ 3,300,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 38,346,591.60			$ 3,405,177	$ -	$ -	**$ 3,405,177**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 93,067	$ -	$ -	$ 93,067	**$ 93,067**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 4,335,850**	**$ 14,671,872**	**$ 4,911,643**	**$ 23,919,365**

NEXTera Energy- TO44 Enhanced 2

Comp 13A - Syosset - Oakwood 138 kV Onshore UG Cables -Single circuit

Total: $ 25,498,312

NEXTera Energy- TO44 Enhanced 2	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp 13A - Syosset - Oakwood 138 kV Onshore UG Cables -Single circuit				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 64,000	$ 424,000	$ 119,200	$ 607,200
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ -	$ -	$ -	$ -
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 6,641,033	$ 4,155,419	$ 2,657,748	$ 13,454,200
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 736,021	$ 2,509,301	$ 700,561	$ 3,945,883
SUBTOTAL (Costs):	$ 7,441,054	$ 7,088,720	$ 3,477,509	$ 18,007,283
CONTRACTOR MARK-UP (OH&P)	$ 1,339,390	$ 1,275,970	$ 625,952	$ 3,241,311
SUBTOTAL:	$ 8,780,444	$ 8,364,689	$ 4,103,460	$ 21,248,594
CONTINGENCY ON ENTIRE PROJECT	$ 1,756,089	$ 1,672,938	$ 820,692	$ 4,249,719
TOTAL:	$ 10,536,533	$ 10,037,627	$ 4,924,152	$ 25,498,312

Description of Work: Replace existing 2.6 miles of UG cable, single cable per phase.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 13A - Syosset - Oakwood 138 kV Onshore UG Cables -Single circuit										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1.2	Existing Utility Conflict and Relocation	2.60	Mile				$ -	$ -	$ -	$ -
1.3	Flaggers	40	DAY	$ 1,600	$ 4,800	$ 1,600	$ 64,000	$ 192,000	$ 64,000	$ 320,000
1.4	K Rail / Lane Control / Metal Plates	0	LF	$ 30	$ 18	$ 12	$ -	$ -	$ -	$ -
1.5	Police Support	1,600.0	HR		$ 120	$ 27	$ -	$ 192,000	$ 43,200	$ 235,200
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	$ -
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	$ -
1.8	Snow Removal	40.0	DAY		$ 1,000	$ 300	$ -	$ 40,000	$ 12,000	$ 52,000
1.9	Existing Utility Protection	-	Mile	$ 40,000	$ 120,000	$ 40,000	$ -	$ -	$ -	$ -
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 64,000**	**$ 424,000**	**$ 119,200**	**$ 607,200**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew		Miles		$ 139,800	$ 93,200	$ -	$ -	$ -	$ -
2.2	Formwork in Trench		SF	$ 2	$ 1.5	$ 0.5	$ -	$ -	$ -	$ -
2.3	Trench Excavation		CY		$ 17.5	$ 7.5	$ -	$ -	$ -	$ -
2.4	Supply & Install 6" Sand Bedding for direct bury conduits		SF	$ 50	$ 25	$ 14	$ -	$ -	$ -	$ -
2.5	Supply & Install Thermal Backfill		CY	$ 350	$ 245	$ 105	$ -	$ -	$ -	$ -
2.6	Supply & Install Concrete Cap (6")		CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	$ -
2.7	Native Backfill -direct bury conduits sys Trench		CY		$ 14.0	$ 6.0	$ -	$ -	$ -	$ -
2.8	Supply & Install Ductbank Concrete		CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	$ -
2.9	Conduit 8" SCH 40PVC		LF	$ 28.6	$ 5.7	$ 2.4	$ -	$ -	$ -	$ -
2.10	Conduit 4" SCH 40PVC		LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	$ -
2.11	Conduit 2" SCH 40PVC		LF	$ 3.5	$ 3.15	$ 1.4	$ -	$ -	$ -	$ -
2.12	Warning Tape		LF	$ 0.15	$ 0.25	$ 0.10	$ -	$ -	$ -	$ -
2.13	Trench Box Shoring (Vault)		EA	$ -	$ 18,079	$ 27,119	$ -	$ -	$ -	$ -
2.14	Splice Vault Excavation	0	CY		$ 17.5	$ 7.5	$ -	$ -	$ -	$ -
2.15	Splice Vault Supply & Installation	0	EA	$ 35,000	$ 16,500	$ 38,500	$ -	$ -	$ -	$ -
2.16	Splice Vault Backfill	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.17	Jack and Bore along Route		LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	$ -
2.18	HDD along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	$ -
2.19	Air Test Ducts	0	LF			$ 0.25	$ -	$ -	$ -	$ -
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	0	SY	$ 14.00	$ 14.00	$ 7.00	$ -	$ -	$ -	$ -
2.21	PVMT, AGGREGATE, 10", BASE COURSE	0	CY	$ 22.38	$ 23.50	$ 10.07	$ -	$ -	$ -	$ -
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	0	EA		$ 400	$ 1,200	$ -	$ -	$ -	$ -
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	0	EA		$ 10	$ 15	$ -	$ -	$ -	$ -
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	0	EA		$ 400	$ 1,200	$ -	$ -	$ -	$ -
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)		LS		$ 448,266	$ 298,844	$ -	$ -	$ -	$ -
2.26	Excess Materials Disposal to Certified Backfill	0	CY		$ 24.5	$ 10.5	$ -	$ -	$ -	$ -
2.27	Rock Excavation and Removal		LS				$ -	$ -	$ -	$ -
2.28	Dewatering		EA			$ 4,000	$ -	$ -	$ -	$ -
2.29	Contaminated Water Treatment and Disposal		LS				$ -	$ -	$ -	$ -
2.30	Contaminated Spoils Disposal		LS				$ -	$ -	$ -	$ -
2.31	Excavated material - stockpile management		CF		$ 1.0	$ 0.5	$ -	$ -	$ -	$ -
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ -**	**$ -**	**$ -**	**$ -**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 138kV 5000 kcmil copper XLPE	41,184	FT	$ 145	$ 87	$ 58	$ 5,971,680	$ 3,583,008	$ 2,388,672	**$ 11,943,360**
3.2	Circuit #1- Cable Splicing- 138kV 5000 kcmil copper XLPE	24	EA	$ 5,898	$ 9,846	$ 2,813	$ 141,552	$ 236,316	$ 67,519	**$ 445,386**
3.3	Circuit #1- Cable Termination- 138kV 5000 kcmil copper XLPE	6	EA	$ 5,664	$ 9,846	$ 2,813	$ 33,984	$ 59,079	$ 16,880	**$ 109,943**
3.4	Circuit #2- Procurement & Installation- 138kV 5000 kcmil copper XLPE		FT	$ 145	$ 87	$ 58	$ -	$ -	$ -	$ -
3.5	Circuit #2- Cable Splicing- 138kV 5000 kcmil copper XLPE		EA	$ 5,898	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.6	Circuit #2- Cable Termination- 138kV 5000 kcmil copper XLPE		EA	$ 5,664	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.7	Circuit #3- Procurement & Installation- 138kV 5000 kcmil copper XLPE		FT	$ 145	$ 87	$ 58	$ -	$ -	$ -	$ -
3.8	Circuit #3- Cable Splicing- 138kV 5000 kcmil copper XLPE		EA	$ 5,898	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.9	Circuit #3- Cable Termination- 138kV 5000 kcmil copper XLPE		EA	$ 5,664	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.10	Link Box & MH racking	8	EA	$ 26,659	$ 15,995	$ 10,664	$ 213,272	$ 127,963	$ 85,309	**$ 426,544**
3.11	Fiber Optic Cable	13,728	FT	$ 7	$ 3	$ 2	$ 101,546	$ 45,722	$ 30,482	**$ 177,750**
3.12	Ground Continuity Conductor	13,728	FT	$ 13	$ 8	$ 5	$ 178,999	$ 103,331	$ 68,887	**$ 351,217**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 6,641,033**	**$ 4,155,419**	**$ 2,657,748**	**$ 13,454,200**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 6,705,033**	**$ 4,579,419**	**$ 2,776,948**	**$ 14,061,400**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 220,691	$ 147,127	$ -	$ 220,691	$ 147,127	**$ 367,818**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		140,614.00		$ -	$ 140,614	$ -	**$ 140,614**
4.3	Construction Project Management / Supervision	1	LS		562,456.00		$ -	$ 562,456	$ -	**$ 562,456**
4.4	Utility PM and Project Oversite	1	LS		140,614.00		$ -	$ 140,614	$ -	**$ 140,614**
4.5	Site Accommodation, Facilities, Storage	1	LS	140,614.00			$ 140,614	$ -	$ -	**$ 140,614**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 703,070	$ -	$ -	$ 703,070	$ -	**$ 703,070**
4.7	LiDAR /GPR	-	LS		$ 25,311	$ 16,874	$ -	$ -	$ -	$ -
4.8	Geotech	-	EA		2,730.00	1,820.00	$ -	$ -	$ -	$ -
4.9	Surveying/Staking	1	LS		$ 59,058	$ 39,372	$ -	$ 59,058	$ 39,372	**$ 98,430**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ -		$ -	$ -	$ -	$ -
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 140,614		$ -	$ 140,614	$ -	**$ 140,614**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	$ -
4.13	Warranties / LOC's	1	LS		$ 42,184		$ -	$ 42,184	$ -	**$ 42,184**
4.14	Laydown Lease & temporary easement	1	LS		$ 500,000		$ -	$ 500,000	$ -	**$ 500,000**
4.15	Real Estate (Acquisition)		LS				$ -	$ -	$ -	$ -
4.16	Legal Fees (Real estate)	-	LS		-	-	$ -	$ -	$ -	$ -
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	$ -
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	$ -
4.19	Bonds	1	LS			$ 500,000	$ -	$ -	$ 500,000	**$ 500,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 6,705,033.41			$ 595,407	$ -	$ -	**$ 595,407**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 14,061	$ -	$ -	$ 14,061	**$ 14,061**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 736,021**	**$ 2,509,301**	**$ 700,561**	**$ 3,945,883**

NEXTera Energy- TO44 Enhanced 2

Comp 13B - Syosset - Greenlawn 138 kV Onshore UG Cables -Single circuit

Total: $ 25,498,312

NEXTera Energy- TO44 Enhanced 2	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp 13B - Syosset - Greenlawn 138 kV Onshore UG Cables -Single circuit				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 64,000	$ 424,000	$ 119,200	$ 607,200
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ -	$ -	$ -	$ -
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 6,641,033	$ 4,155,419	$ 2,657,748	$ 13,454,200
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 736,021	$ 2,509,301	$ 700,561	$ 3,945,883
SUBTOTAL (Costs):	$ 7,441,054	$ 7,088,720	$ 3,477,509	$ 18,007,283
CONTRACTOR MARK-UP (OH&P)	$ 1,339,390	$ 1,275,970	$ 625,952	$ 3,241,311
SUBTOTAL:	$ 8,780,444	$ 8,364,689	$ 4,103,460	$ 21,248,594
CONTINGENCY ON ENTIRE PROJECT	$ 1,756,089	$ 1,672,938	$ 820,692	$ 4,249,719
TOTAL:	$ 10,536,533	$ 10,037,627	$ 4,924,152	$ 25,498,312

Description of Work: Replace existing 2.6 miles of UG cable, single cable per phase.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 13B - Syosset - Greenlawn 138 kV Onshore UG Cables -Single circuit										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1.2	Existing Utility Conflict and Relocation	2.60	Mile				$ -	$ -	$ -	$ -
1.3	Flaggers	40	DAY	$ 1,600	$ 4,800	$ 1,600	$ 64,000	$ 192,000	$ 64,000	**$ 320,000**
1.4	K Rail / Lane Control / Metal Plates	0	LF	$ 30	$ 18	$ 12	$ -	$ -	$ -	$ -
1.5	Police Support	1,600.0	HR		$ 120	$ 27	$ -	$ 192,000	$ 43,200	**$ 235,200**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	$ -
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	$ -
1.8	Snow Removal	40.0	DAY		$ 1,000	$ 300	$ -	$ 40,000	$ 12,000	**$ 52,000**
1.9	Existing Utility Protection	-	Mile	$ 40,000	$ 120,000	$ 40,000	$ -	$ -	$ -	$ -
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 64,000**	**$ 424,000**	**$ 119,200**	**$ 607,200**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew		Miles		$ 139,800	$ 93,200	$ -	$ -	$ -	$ -
2.2	Formwork in Trench		SF	$ 2	$ 1.5	$ 0.5	$ -	$ -	$ -	$ -
2.3	Trench Excavation		CY		$ 17.5	$ 7.5	$ -	$ -	$ -	$ -
2.4	Supply & Install 6" Sand Bedding for direct bury conduits		SF	$ 50	$ 25	$ 14	$ -	$ -	$ -	$ -
2.5	Supply & Install Thermal Backfill		CY	$ 350	$ 245	$ 105	$ -	$ -	$ -	$ -
2.6	Supply & Install Concrete Cap (6")		CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	$ -
2.7	Native Backfill -direct bury conduits sys Trench		CY		$ 14.0	$ 6.0	$ -	$ -	$ -	$ -
2.8	Supply & Install Ductbank Concrete		CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	$ -
2.9	Conduit 8" SCH 40PVC		LF	$ 28.6	$ 5.7	$ 2.4	$ -	$ -	$ -	$ -
2.10	Conduit 4" SCH 40PVC		LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	$ -
2.11	Conduit 2" SCH 40PVC		LF	$ 3.5	$ 3.15	$ 1.4	$ -	$ -	$ -	$ -
2.12	Warning Tape		LF	$ 0.15	$ 0.25	$ 0.10	$ -	$ -	$ -	$ -
2.13	Trench Box Shoring (Vault)		EA	$ -	$ 18,079	$ 27,119	$ -	$ -	$ -	$ -
2.14	Splice Vault Excavation	0	CY		$ 17.5	$ 7.5	$ -	$ -	$ -	$ -
2.15	Splice Vault Supply & Installation	0	EA	$ 35,000	$ 16,500	$ 38,500	$ -	$ -	$ -	$ -
2.16	Splice Vault Backfill	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.17	Jack and Bore along Route		LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	$ -
2.18	HDD along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	$ -
2.19	Air Test Ducts	0	LF			$ 0.25	$ -	$ -	$ -	$ -
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	0	SY	$ 14.00	$ 14.00	$ 7.00	$ -	$ -	$ -	$ -
2.21	PVMT, AGGREGATE, 10", BASE COURSE	0	CY	$ 22.38	$ 23.50	$ 10.07	$ -	$ -	$ -	$ -
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	0	EA		$ 400	$ 1,200	$ -	$ -	$ -	$ -
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	0	EA		$ 10	$ 15	$ -	$ -	$ -	$ -
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	0	EA		$ 400	$ 1,200	$ -	$ -	$ -	$ -
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)		LS		$ 448,266	$ 298,844	$ -	$ -	$ -	$ -
2.26	Excess Materials Disposal to Certified Backfill	0	CY		$ 24.5	$ 10.5	$ -	$ -	$ -	$ -
2.27	Rock Excavation and Removal		LS				$ -	$ -	$ -	$ -
2.28	Dewatering		EA			$ 4,000	$ -	$ -	$ -	$ -
2.29	Contaminated Water Treatment and Disposal		LS				$ -	$ -	$ -	$ -
2.30	Contaminated Spoils Disposal		LS				$ -	$ -	$ -	$ -
2.31	Excavated material - stockpile management		CF		$ 1.0	$ 0.5	$ -	$ -	$ -	$ -
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ -**	**$ -**	**$ -**	**$ -**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 138kV 5000 kcmil copper XLPE	41,184	FT	$ 145	$ 87	$ 58	$ 5,971,680	$ 3,583,008	$ 2,388,672	**$ 11,943,360**
3.2	Circuit #1- Cable Splicing- 138kV 5000 kcmil copper XLPE	24	EA	$ 5,898	$ 9,846	$ 2,813	$ 141,552	$ 236,316	$ 67,519	**$ 445,386**
3.3	Circuit #1- Cable Termination- 138kV 5000 kcmil copper XLPE	6	EA	$ 5,664	$ 9,846	$ 2,813	$ 33,984	$ 59,079	$ 16,880	**$ 109,943**
3.4	Circuit #2- Procurement & Installation- 138kV 5000 kcmil copper XLPE		FT	$ 145	$ 87	$ 58	$ -	$ -	$ -	$ -
3.5	Circuit #2- Cable Splicing- 138kV 5000 kcmil copper XLPE		EA	$ 5,898	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.6	Circuit #2- Cable Termination- 138kV 5000 kcmil copper XLPE		EA	$ 5,664	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.7	Circuit #3- Procurement & Installation- 138kV 5000 kcmil copper XLPE		FT	$ 145	$ 87	$ 58	$ -	$ -	$ -	$ -
3.8	Circuit #3- Cable Splicing- 138kV 5000 kcmil copper XLPE		EA	$ 5,898	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.9	Circuit #3- Cable Termination- 138kV 5000 kcmil copper XLPE		EA	$ 5,664	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.10	Link Box & MH racking	8	EA	$ 26,659	$ 15,995	$ 10,664	$ 213,272	$ 127,963	$ 85,309	**$ 426,544**
3.11	Fiber Optic Cable	13,728	FT	$ 7	$ 3	$ 2	$ 101,546	$ 45,722	$ 30,482	**$ 177,750**
3.12	Ground Continuity Conductor	13,728	FT	$ 13	$ 8	$ 5	$ 178,999	$ 103,331	$ 68,887	**$ 351,217**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 6,641,033**	**$ 4,155,419**	**$ 2,657,748**	**$ 13,454,200**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 6,705,033**	**$ 4,579,419**	**$ 2,776,948**	**$ 14,061,400**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 220,691	$ 147,127	$ -	$ 220,691	$ 147,127	**$ 367,818**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		140,614.00		$ -	$ 140,614	$ -	**$ 140,614**
4.3	Construction Project Management / Supervision	1	LS		562,456.00		$ -	$ 562,456	$ -	**$ 562,456**
4.4	Utility PM and Project Oversite	1	LS		140,614.00		$ -	$ 140,614	$ -	**$ 140,614**
4.5	Site Accommodation, Facilities, Storage	1	LS	140,614.00			$ 140,614	$ -	$ -	**$ 140,614**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 703,070	$ -	$ -	$ 703,070	$ -	**$ 703,070**
4.7	LiDAR /GPR	-	LS		$ 25,311	$ 16,874	$ -	$ -	$ -	$ -
4.8	Geotech	-	EA		2,730.00	1,820.00	$ -	$ -	$ -	$ -
4.9	Surveying/Staking	1	LS		$ 59,058	$ 39,372	$ -	$ 59,058	$ 39,372	**$ 98,430**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ -		$ -	$ -	$ -	$ -
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 140,614		$ -	$ 140,614	$ -	**$ 140,614**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	$ -
4.13	Warranties / LOC's	1	LS		$ 42,184		$ -	$ 42,184	$ -	**$ 42,184**
4.14	Laydown Lease & temporary easement	1	LS		$ 500,000		$ -	$ 500,000	$ -	**$ 500,000**
4.15	Real Estate (Acquisition)		LS				$ -	$ -	$ -	$ -
4.16	Legal Fees (Real estate)	-	LS		-	-	$ -	$ -	$ -	$ -
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	$ -
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	$ -
4.19	Bonds	1	LS			$ 500,000	$ -	$ -	$ 500,000	**$ 500,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 6,705,033.41			$ 595,407	$ -	$ -	**$ 595,407**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 14,061	$ -	$ -	$ 14,061	**$ 14,061**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 736,021**	**$ 2,509,301**	**$ 700,561**	**$ 3,945,883**

NEXTera Energy- TO37 Core 2
Comp 249 (MODIFY) - Jamaica To Farragut (Farragut-Metropolitan Ave) 345kV Onshore UG Cables -Single circuit (EGC-Farragut 345kv)

Total: $ 175,090,363

NEXTera Energy- TO37 Core 2	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp 249 (MODIFY) - Jamaica To Farragut (Farragut-Metropolitan Ave) 345kV Onshore UG Cables -Single circuit(EGC-Farragut 345kv)				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 2,009,024	$ 9,860,974	$ 3,953,250	$ 15,823,248
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 13,915,374	$ 11,236,538	$ 7,114,741	$ 32,266,653
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 25,120,998	$ 15,199,959	$ 9,840,725	$ 50,161,682
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 4,627,347	$ 15,415,210	$ 5,357,247	$ 25,399,804
SUBTOTAL (Costs):	$ 45,672,744	$ 51,712,681	$ 26,265,962	$ 123,651,387
CONTRACTOR MARK-UP (OH&P)	$ 8,221,094	$ 9,308,283	$ 4,727,873	$ 22,257,250
SUBTOTAL:	$ 53,893,837	$ 61,020,964	$ 30,993,835	$ 145,908,636
CONTINGENCY ON ENTIRE PROJECT	$ 10,778,767	$ 12,204,193	$ 6,198,767	$ 29,181,727
TOTAL:	$ 64,672,605	$ 73,225,157	$ 37,192,602	$ 175,090,363

Description of Work: Construct a new Farragut 345kv GIS substation and connect back to the existing Farragut 345kV, further interconnecting the Farragut East and West ring buses.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 249 (MODIFY) - Jamaica To Farragut (Farragut-Metropolitan Ave) 345kV Onshore UG Cables -Single circuit(EGC-Farragut 345kv)										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	8.11	Mile		$ 700,000	$ 300,000	$ -	$ 5,677,000	$ 2,433,000	**$ 8,110,000**
1.3	Flaggers	250	DAY	$ 1,600	$ 4,800	$ 1,600	$ 400,000	$ 1,200,000	$ 400,000	**$ 2,000,000**
1.4	K Rail / Lane Control / Metal Plates	42,821	LF	$ 30	$ 18	$ 12	$ 1,284,624	$ 770,774	$ 513,850	**$ 2,569,248**
1.5	Police Support	10,000.0	HR		$ 120	$ 27	$ -	$ 1,200,000	$ 270,000	**$ 1,470,000**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	40.0	DAY		$ 1,000	$ 300	$ -	$ 40,000	$ 12,000	**$ 52,000**
1.9	Existing Utility Protection	8.11	Mile	$ 40,000	$ 120,000	$ 40,000	$ 324,400	$ 973,200	$ 324,400	**$ 1,622,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 2,009,024**	**$ 9,860,974**	**$ 3,953,250**	**$ 15,823,248**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	8.11	Miles		$ 139,800	$ 93,200	$ -	$ 1,133,778	$ 755,852	**$ 1,889,630**
2.2	Formwork in Trench	333,806	SF	$ 2	$ 1.5	$ 0.5	$ 667,613	$ 500,710	$ 166,903	**$ 1,335,226**
2.3	Trench Excavation	27,817	CY		$ 17.5	$ 7.5	$ -	$ 486,801	$ 208,629	**$ 695,430**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	1,739	SF	$ 50	$ 25	$ 14	$ 86,929	$ 42,595	$ 24,340	**$ 153,864**
2.5	Supply & Install Thermal Backfill	14,604	CY	$ 350	$ 245	$ 105	$ 5,111,411	$ 3,577,987	$ 1,533,423	**$ 10,222,821**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	6,799	CY	$ 200	$ 125	$ 50	$ 1,359,797	$ 849,873	$ 339,949	**$ 2,549,620**
2.9	Conduit 8" SCH 40PVC	171,283	LF	$ 28.6	$ 5.7	$ 2.4	$ 4,898,700	$ 971,176	$ 416,218	**$ 6,286,093**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	85,642	LF	$ 3.5	$ 3.15	$ 1.4	$ 301,458	$ 269,771	$ 115,616	**$ 686,846**
2.12	Warning Tape	85,642	LF	$ 0.15	$ 0.25	$ 0.10	$ 12,846	$ 21,410	$ 8,564	**$ 42,821**
2.13	Trench Box Shoring (Vault)	25	EA	$ -	$ 18,079	$ 27,119	$ -	$ 451,977	$ 677,966	**$ 1,129,944**
2.14	Splice Vault Excavation	4,156	CY		$ 17.5	$ 7.5	$ -	$ 72,722	$ 31,167	**$ 103,889**
2.15	Splice Vault Supply & Installation	25	EA	$ 35,000	$ 16,500	$ 38,500	$ 875,000	$ 412,500	$ 962,500	**$ 2,250,000**
2.16	Splice Vault Backfill	1,247	CY		$ 14.0	$ 6.0	$ -	$ 17,453	$ 7,480	**$ 24,933**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.17	Jack and Bore along Route	345	LF	$ 800	$ 1,600	$ 1,600	$ 276,000	$ 552,000	$ 552,000	**$ 1,380,000**
2.18	HDD along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.19	Air Test Ducts	256,925	LF			$ 0.25	$ -	$ -	$ 64,231	**$ 64,231**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	16,107	SY	$ 14.00	$ 14.00	$ 7.00	$ 225,492	$ 225,492	$ 112,746	**$ 563,729**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	4,474	CY	$ 22.38	$ 23.50	$ 10.07	$ 100,129	$ 105,135	$ 45,058	**$ 250,322**
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	68	EA		$ 400	$ 1,200	$ -	$ 27,196	$ 81,588	**$ 108,784**
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	68	EA		$ 10	$ 15	$ -	$ 680	$ 1,020	**$ 1,700**
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	146	EA		$ 400	$ 1,200	$ -	$ 58,416	$ 175,248	**$ 233,664**
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 448,266	$ 298,844	$ -	$ 448,266	$ 298,844	**$ 747,110**
2.26	Excess Materials Disposal to Certified Backfill	39,944	CY		$ 24.5	$ 10.5	$ -	$ 978,626	$ 419,411	**$ 1,398,037**
2.27	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	**$ -**
2.28	Dewatering	25	EA			$ 4,000	$ -	$ -	$ 100,000	**$ 100,000**
2.29	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.30	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.31	Excavated material - stockpile management	31,973	CF		$ 1.0	$ 0.5	$ -	$ 31,973	$ 15,986	**$ 47,959**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 13,915,374**	**$ 11,236,538**	**$ 7,114,741**	**$ 32,266,653**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 345kV 5000 kcmil copper XLPE	134,886	FT	$ 167	$ 100	$ 67	$ 22,525,882	$ 13,515,529	$ 9,010,353	**$ 45,051,764**
3.2	Circuit #1- Cable Splicing- 345kV 5000 kcmil copper XLPE	75	EA	$ 11,722	$ 9,846	$ 2,813	$ 879,150	$ 738,486	$ 210,996	**$ 1,828,632**
3.3	Circuit #1- Cable Termination- 345kV 5000 kcmil copper XLPE	3	EA	$ 27,805	$ 9,846	$ 2,813	$ 83,415	$ 29,539	$ 8,440	**$ 121,394**
3.4	Circuit #2- Procurement & Installation- 345kV 5000 kcmil copper XLPE		FT	$ 167	$ 100	$ 67	$ -	$ -	$ -	**$ -**
3.5	Circuit #2- Cable Splicing- 345kV 5000 kcmil copper XLPE		EA	$ 11,722	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.6	Circuit #2- Cable Termination- 345kV 5000 kcmil copper XLPE		EA	$ 27,805	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.7	Circuit #3- Procurement & Installation- 345kV 5000 kcmil copper XLPE		FT	$ 167	$ 100	$ 67	$ -	$ -	$ -	**$ -**
3.8	Circuit #3- Cable Splicing- 345kV 5000 kcmil copper XLPE		EA	$ 11,722	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.9	Circuit #3- Cable Termination- 345kV 5000 kcmil copper XLPE		EA	$ 27,805	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.10	Link Box & MH racking	25	EA	$ 28,548	$ 17,129	$ 11,419	$ 713,711	$ 428,227	$ 285,485	**$ 1,427,423**
3.11	Fiber Optic Cable	44,962	FT	$ 7	$ 3	$ 2	$ 332,583	$ 149,750	$ 99,833	**$ 582,166**
3.12	Ground Continuity Conductor	44,962	FT	$ 13	$ 8	$ 5	$ 586,257	$ 338,428	$ 225,619	**$ 1,150,304**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 25,120,998**	**$ 15,199,959**	**$ 9,840,725**	**$ 50,161,682**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 41,045,396**	**$ 36,297,472**	**$ 20,908,715**	**$ 98,251,583**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 1,716,186	$ 1,144,124	$ -	$ 1,716,186	$ 1,144,124	**$ 2,860,309**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		982,515.83		$ -	$ 982,516	$ -	**$ 982,516**
4.3	Construction Project Management / Supervision	1	LS		3,930,063.32		$ -	$ 3,930,063	$ -	**$ 3,930,063**
4.4	Utility PM and Project Oversite	1	LS		982,515.83		$ -	$ 982,516	$ -	**$ 982,516**
4.5	Site Accommodation, Facilities, Storage	1	LS	982,515.83			$ 982,516	$ -	$ -	**$ 982,516**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 4,912,579	$ -	$ -	$ 4,912,579	$ -	**$ 4,912,579**
4.7	LiDAR /GPR	1.0	LS		$ 176,853	$ 117,902	$ -	$ 176,853	$ 117,902	**$ 294,755**
4.8	Geotech	9.00	EA		2,730.00	1,820.00	$ -	$ 24,570	$ 16,380	**$ 40,950**
4.9	Surveying/Staking	1	LS		$ 412,657	$ 275,104	$ -	$ 412,657	$ 275,104	**$ 687,761**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ -		$ -	$ -	$ -	**$ -**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 982,516		$ -	$ 982,516	$ -	**$ 982,516**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 294,755		$ -	$ 294,755	$ -	**$ 294,755**
4.14	Laydown Lease & temporary easement	1	LS		$ 1,000,000		$ -	$ 1,000,000	$ -	**$ 1,000,000**
4.15	Real Estate (Acquisition)	1	LS			$ 199,500	$ -	$ -	$ 199,500	**$ 199,500**
4.16	Legal Fees (Real estate)	1.00	LS		-	5,985.00	$ -	$ -	$ 5,985	**$ 5,985**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 3,500,000	$ -	$ -	$ 3,500,000	**$ 3,500,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 41,045,396.48			$ 3,644,831	$ -	$ -	**$ 3,644,831**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 98,252	$ -	$ -	$ 98,252	**$ 98,252**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 4,627,347**	**$ 15,415,210**	**$ 5,357,247**	**$ 25,399,804**

NEXTera Energy- TO44 Enhanced 2
Comp 207 (Modify)- Corona to Jamaica (Corona-Metropolitan Ave) 138kV Onshore UG Cables -Single circuit
(Corona to Jamaica 138kV)

Total: $ 52,074,147

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
Comp 5 - Ruland To Hempstead Harbor Landing (Shore Road) 345kV Onshore UG Cables -Single circuit(Ruland To Sprain Brook 345 kV)				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 629,952	$ 3,103,051	$ 1,240,901	$ 4,973,904
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 4,319,323	$ 3,700,252	$ 2,344,388	$ 10,363,962
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 6,804,260	$ 4,252,515	$ 2,722,479	$ 13,779,253
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 1,334,885	$ 4,785,206	$ 1,538,317	$ 7,658,408
SUBTOTAL (Costs):	$ 13,088,420	$ 15,841,023	$ 7,846,085	$ 36,775,528
CONTRACTOR MARK-UP (OH&P)	$ 2,355,916	$ 2,851,384	$ 1,412,295	$ 6,619,595
SUBTOTAL:	$ 15,444,335	$ 18,692,408	$ 9,258,380	$ 43,395,123
CONTINGENCY ON ENTIRE PROJECT	$ 3,088,867	$ 3,738,482	$ 1,851,676	$ 8,679,025
TOTAL:	$ 18,533,202	$ 22,430,889	$ 11,110,056	$ 52,074,147

Description of Work: Ruland - 138kV (399/567/900 MVA) 5000 kcmil copper XLPE, single cable per phase (8.34 miles)

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 5 - Ruland To Hempstead Harbor Landing (Shore Road) 345kV Onshore UG Cables -Single circuit(Ruland To Sprain Brook 345 kV)										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	2.53	Mile		$ 700,000	$ 300,000	$ -	$ 1,771,000	$ 759,000	**$ 2,530,000**
1.3	Flaggers	80	DAY	$ 1,600	$ 4,800	$ 1,600	$ 128,000	$ 384,000	$ 128,000	**$ 640,000**
1.4	K Rail / Lane Control / Metal Plates	13,358	LF	$ 30	$ 18	$ 12	$ 400,752	$ 240,451	$ 160,301	**$ 801,504**
1.5	Police Support	3,200.0	HR		$ 120	$ 27	$ -	$ 384,000	$ 86,400	**$ 470,400**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	20.0	DAY		$ 1,000	$ 300	$ -	$ 20,000	$ 6,000	**$ 26,000**
1.9	Existing Utility Protection	2.53	Mile	$ 40,000	$ 120,000	$ 40,000	$ 101,200	$ 303,600	$ 101,200	**$ 506,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 629,952**	**$ 3,103,051**	**$ 1,240,901**	**$ 4,973,904**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	2.53	Miles		$ 139,800	$ 93,200	$ -	$ 353,694	$ 235,796	**$ 589,490**
2.2	Formwork in Trench	105,139	SF	$ 2	$ 1.5	$ 0.5	$ 210,278	$ 157,709	$ 52,570	**$ 420,557**
2.3	Trench Excavation	8,762	CY		$ 17.5	$ 7.5	$ -	$ 153,328	$ 65,712	**$ 219,040**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	548	SF	$ 50	$ 25	$ 14	$ 27,380	$ 13,416	$ 7,666	**$ 48,463**
2.5	Supply & Install Thermal Backfill	4,600	CY	$ 350	$ 245	$ 105	$ 1,609,944	$ 1,126,961	$ 482,983	**$ 3,219,888**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	2,141	CY	$ 200	$ 125	$ 50	$ 428,296	$ 267,685	$ 107,074	**$ 803,055**
2.9	Conduit 8" SCH 40PVC	53,434	LF	$ 28.6	$ 5.7	$ 2.4	$ 1,528,201	$ 302,969	$ 129,844	**$ 1,961,013**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	26,717	LF	$ 3.5	$ 3.15	$ 1.4	$ 94,043	$ 84,158	$ 36,068	**$ 214,269**
2.12	Warning Tape	26,717	LF	$ 0.15	$ 0.25	$ 0.10	$ 4,008	$ 6,679	$ 2,672	**$ 13,358**
2.13	Trench Box Shoring (Vault)	9	EA	$ -	$ 18,079	$ 27,119	$ -	$ 162,712	$ 244,068	**$ 406,780**
2.14	Splice Vault Excavation	1,232	CY		$ 17.5	$ 7.5	$ -	$ 21,560	$ 9,240	**$ 30,800**
2.15	Splice Vault Supply & Installation	9	EA	$ 35,000	$ 16,500	$ 38,500	$ 315,000	$ 148,500	$ 346,500	**$ 810,000**
2.16	Splice Vault Backfill	370	CY		$ 14.0	$ 6.0	$ -	$ 5,174	$ 2,218	**$ 7,392**
2.17	Jack and Bore along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.18	HDD along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	$ -
2.19	Air Test Ducts	80,150	LF			$ 0.25	$ -	$ -	$ 20,038	$ 20,038
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	5,054	SY	$ 14.00	$ 14.00	$ 7.00	$ 70,754	$ 70,754	$ 35,377	$ 176,885
2.21	PVMT, AGGREGATE, 10", BASE COURSE	1,404	CY	$ 22.38	$ 23.50	$ 10.07	$ 31,418	$ 32,989	$ 14,138	$ 78,546
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	21	EA		$ 400	$ 1,200	$ -	$ 8,566	$ 25,698	$ 34,264
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	21	EA		$ 10	$ 15	$ -	$ 214	$ 321	$ 535
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	46	EA		$ 400	$ 1,200	$ -	$ 18,399	$ 55,198	$ 73,597
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 448,266	$ 298,844	$ -	$ 448,266	$ 298,844	$ 747,110
2.26	Excess Materials Disposal to Certified Backfill	12,511	CY		$ 24.5	$ 10.5	$ -	$ 306,524	$ 131,368	$ 437,892
2.27	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	$ -
2.28	Dewatering	9	EA			$ 4,000	$ -	$ -	$ 36,000	$ 36,000
2.29	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	$ -
2.30	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	$ -
2.31	Excavated material - stockpile management	9,994	CF		$ 1.0	$ 0.5	$ -	$ 9,994	$ 4,997	$ 14,990
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 4,319,323**	**$ 3,700,252**	**$ 2,344,388**	**$ 10,363,962**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 138kV 5000 kcmil copper XLPE	42,079	FT	$ 145	$ 87	$ 58	$ 6,101,449	$ 3,660,870	$ 2,440,580	$ 12,202,898
3.2	Circuit #1- Cable Splicing- 138kV 5000 kcmil copper XLPE	27	EA	$ 5,898	$ 9,846	$ 2,813	$ 159,246	$ 265,855	$ 75,959	$ 501,060
3.3	Circuit #1- Cable Termination- 138kV 5000 kcmil copper XLPE	3	EA	$ 5,664	$ 9,846	$ 2,813	$ 16,992	$ 29,539	$ 8,440	$ 54,971
3.4	Circuit #2- Procurement & Installation- 138kV 5000 kcmil copper XLPE		FT	$ 145	$ 87	$ 58	$ -	$ -	$ -	$ -
3.5	Circuit #2- Cable Splicing- 138kV 5000 kcmil copper XLPE		EA	$ 5,898	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.6	Circuit #2- Cable Termination- 138kV 5000 kcmil copper XLPE		EA	$ 5,664	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.7	Circuit #3- Procurement & Installation- 138kV 5000 kcmil copper XLPE		FT	$ 145	$ 87	$ 58	$ -	$ -	$ -	$ -
3.8	Circuit #3- Cable Splicing- 138kV 5000 kcmil copper XLPE		EA	$ 5,898	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.9	Circuit #3- Cable Termination- 138kV 5000 kcmil copper XLPE		EA	$ 5,664	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.10	Link Box & MH racking	9	EA	$ 26,659	$ 15,995	$ 10,664	$ 239,931	$ 143,959	$ 95,972	$ 479,862
3.11	Fiber Optic Cable	14,026	FT	$ 7	$ 3	$ 2	$ 103,753	$ 46,716	$ 31,144	$ 181,613
3.12	Ground Continuity Conductor	14,026	FT	$ 13	$ 8	$ 5	$ 182,889	$ 105,576	$ 70,384	$ 358,849
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 6,804,260**	**$ 4,252,515**	**$ 2,722,479**	**$ 13,779,253**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 11,753,535**	**$ 11,055,817**	**$ 6,307,767**	**$ 29,117,119**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 520,908	$ 347,272	$ -	$ 520,908	$ 347,272	$ 868,179
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		291,171.19		$ -	$ 291,171	$ -	$ 291,171
4.3	Construction Project Management / Supervision	1	LS		1,164,684.78		$ -	$ 1,164,685	$ -	$ 1,164,685
4.4	Utility PM and Project Oversite	1	LS		291,171.19		$ -	$ 291,171	$ -	$ 291,171
4.5	Site Accommodation, Facilities, Storage	1	LS	291,171.19			$ 291,171	$ -	$ -	$ 291,171
	Engineering									
4.6	Design Engineering	1.0	LS		$ 1,455,856	$ -	$ -	$ 1,455,856	$ -	$ 1,455,856
4.7	LiDAR /GPR	1.0	LS		$ 52,411	$ 34,941	$ -	$ 52,411	$ 34,941	$ 87,351
4.8	Geotech	3.00	EA		2,730.00	1,820.00	$ -	$ 8,190	$ 5,460	$ 13,650
4.9	Surveying/Staking	1	LS		$ 122,292	$ 81,528	$ -	$ 122,292	$ 81,528	$ 203,820
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ -		$ -	$ -	$ -	$ -
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 291,171		$ -	$ 291,171	$ -	$ 291,171
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	$ -
4.13	Warranties / LOC's	1	LS		$ 87,351		$ -	$ 87,351	$ -	$ 87,351
4.14	Laydown Lease & temporary easement	1	LS		$ 500,000		$ -	$ 500,000	$ -	$ 500,000
4.15	Real Estate (Acquisition)	1	LS			$ -	$ -	$ -	$ -	$ -
4.16	Legal Fees (Real estate)	1.00	LS		-	-	$ -	$ -	$ -	$ -
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	$ -
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	$ -
4.19	Bonds	1	LS			$ 1,040,000	$ -	$ -	$ 1,040,000	$ 1,040,000
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 11,753,534.64			$ 1,043,714	$ -	$ -	$ 1,043,714
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 29,117	$ -	$ -	$ 29,117	$ 29,117
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 1,334,885**	**$ 4,785,206**	**$ 1,538,317**	**$ 7,658,408**

NEXTera Energy- TO37 Core 2
Comp 207&249 - Metropolitan Ave-JA 138 and 345kV Onshore UG Cables -Double circuits
(Corona-Jamaica 138kv & EGC-Farragut 345kv)

Total: $ 106,195,369

NEXTera Energy- TO37 Core 2	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp 207&249 - Metropolitan Ave-JA 138 and 345kV Onshore UG Cables -Double circuits(Corona-Jamaica 138kv & EGC-Farragut 345kv)				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 757,440	$ 3,799,864	$ 1,483,176	$ 6,040,480
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 9,189,504	$ 7,089,504	$ 4,447,103	$ 20,726,110
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 16,407,575	$ 10,046,444	$ 6,495,073	$ 32,949,092
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 2,937,438	$ 9,252,348	$ 3,091,262	$ 15,281,048
SUBTOTAL (Costs):	$ 29,291,957	$ 30,188,159	$ 15,516,613	$ 74,996,730
CONTRACTOR MARK-UP (OH&P)	$ 5,272,552	$ 5,433,869	$ 2,792,990	$ 13,499,411
SUBTOTAL:	$ 34,564,510	$ 35,622,028	$ 18,309,604	$ 88,496,141
CONTINGENCY ON ENTIRE PROJECT	$ 6,912,902	$ 7,124,406	$ 3,661,921	$ 17,699,228
TOTAL:	$ 41,477,412	$ 42,746,433	$ 21,971,524	$ 106,195,369

Description of Work: Jamaica to East Garden City. 5000 kcmil copper XLPE (300/400/500 MVA), single cable per phase. (Double circuit for 138 and 345kv -11.08 miles and Single circuit for 138kv -0.51 miles)

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 207&249 - Metropolitan Ave-JA 138 and 345kV Onshore UG Cables -Double circuits(Corona-Jamaica 138kv & EGC-Farragut 345kv)										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1L3420:12420:1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	2.85	Mile		$ 700,000	$ 300,000	$ -	$ 1,995,000	$ 855,000	**$ 2,850,000**
1.3	Flaggers	120	DAY	$ 1,600	$ 4,800	$ 1,600	$ 192,000	$ 576,000	$ 192,000	**$ 960,000**
1.4	K Rail / Lane Control / Metal Plates	15,048	LF	$ 30	$ 18	$ 12	$ 451,440	$ 270,864	$ 180,576	**$ 902,880**
1.5	Police Support	4,800.0	HR		$ 120	$ 27	$ -	$ 576,000	$ 129,600	**$ 705,600**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	40.0	DAY		$ 1,000	$ 300	$ -	$ 40,000	$ 12,000	**$ 52,000**
1.9	Existing Utility Protection	2.85	Mile	$ 40,000	$ 120,000	$ 40,000	$ 114,000	$ 342,000	$ 114,000	**$ 570,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 757,440**	**$ 3,799,864**	**$ 1,483,176**	**$ 6,040,480**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	3	Mile		$ 139,800	$ 93,200	$ -	$ 398,430	$ 265,620	**$ 664,050**
2.2	Formwork in Trench	120,384	SF	$ 2	$ 1.5	$ 0.5	$ 240,768	$ 180,576	$ 60,192	**$ 481,536**
Double Circuit Conduit Trench (EGC-JA 138KV & EGC-New Farragut 345kV)										
2.3	Trench Excavation	18,949	CY		$ 17.5	$ 7.5	$ -	$ 331,613	$ 142,120	**$ 473,733**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	1,184	SF	$ 50	$ 25	$ 14	$ 59,217	$ 29,016	$ 16,581	**$ 104,814**
2.5	Supply & Install Thermal Backfill	9,948	CY	$ 350	$ 245	$ 105	$ 3,481,940	$ 2,437,358	$ 1,044,582	**$ 6,963,880**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	4,635	CY	$ 200	$ 125.0	$ 50.0	$ 926,957	$ 579,348	$ 231,739	**$ 1,738,044**
2.9	Conduit 8" SCH 40PVC	120,384	LF	$ 28.6	$ 5.7	$ 2.4	$ 3,442,982	$ 682,577	$ 292,533	**$ 4,418,093**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	60,192	LF	$ 3.5	$ 3.15	$ 1.4	$ 211,876	$ 189,605	$ 81,259	**$ 482,740**
2.12	Warning Tape	30,096	LF	$ 0.15	$ 0.25	$ 0.10	$ 4,514	$ 7,524	$ 3,010	**$ 15,048**
Single Circuit Conduit Trench										
2.13	Trench Excavation	-	CY		$ 17.5	$ 7.5	$ -	$ -	$ -	**$ -**
2.14	Supply & Install 6" Sand Bedding for direct bury conduits	0	SF	$ 50	$ 25	$ 14	$ -	$ -	$ -	**$ -**
2.15	Supply & Install Thermal Backfill	0	CY	$ 350	$ 245	$ 105	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.16	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	$ -
2.17	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	$ -
2.18	Supply & Install Ductbank Concrete	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	$ -
2.19	Conduit 8" SCH 40PVC	0	LF	$ 28.6	$ 5.7	$ 2.4	$ -	$ -	$ -	$ -
2.20	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	$ -
2.21	Conduit 2" SCH 40PVC	0	LF	$ 3.5	$ 3.15	$ 1.4	$ -	$ -	$ -	$ -
2.22	Warning Tape	0	LF	$ 0.15	$ 0.25	$ 0.10	$ -	$ -	$ -	$ -
138 KV Splice Vault										
2.12	Trench Box Shoring (Vault)	9	EA	$ -	$ 18,079	$ 27,119	$ -	$ 162,712	$ 244,068	**$ 406,780**
2.13	Splice Vault Excavation	1,232	CY		$ 17.5	$ 7.5	$ -	$ 21,560	$ 9,240	**$ 30,800**
2.14	Splice Vault Supply & Installation	9	EA	$ 35,000	$ 16,500	$ 38,500	$ 315,000	$ 148,500	$ 346,500	**$ 810,000**
2.15	Splice Vault Backfill	370	CY		$ 14.0	$ 6.0	$ -	$ 5,174	$ 2,218	**$ 7,392**
345 KV Splice Vault										
2.12	Trench Box Shoring (Vault)	9	EA	$ -	$ 18,079	$ 27,119	$ -	$ 162,712	$ 244,068	**$ 406,780**
2.13	Splice Vault Excavation	1,496	CY		$ 17.5	$ 7.5	$ -	$ 26,180	$ 11,220	**$ 37,400**
2.14	Splice Vault Supply & Installation	9	EA	$ 35,000	$ 16,500	$ 38,500	$ 315,000	$ 148,500	$ 346,500	**$ 810,000**
2.15	Splice Vault Backfill	449	CY		$ 14.0	$ 6.0	$ -	$ 6,283	$ 2,693	**$ 8,976**
2.16	Jack and Bore along Route	0	LF	$ 1,600	$ 3,200	$ 3,200	$ -	$ -	$ -	$ -
2.17	HDD along Route		LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	$ -
2.18	Air Test Ducts	180,576	LF			$ 0.25	$ -	$ -	$ 45,144	**$ 45,144**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	9,460	SY	$ 14.00	$ 14.00	$ 7.00	$ 132,440	$ 132,440	$ 66,220	**$ 331,100**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	2,628	CY	$ 22.38	$ 23.50	$ 10.07	$ 58,810	$ 61,750	$ 26,464	**$ 147,024**
2.20	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	46	EA		$ 400	$ 1,200	$ -	$ 18,539	$ 55,617	**$ 74,157**
2.21	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	46	EA		$ 10	$ 15	$ -	$ 463	$ 695	**$ 1,159**
2.22	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	99	EA		$ 400	$ 1,200	$ -	$ 39,794	$ 119,381	**$ 159,174**
2.23	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 632,814	$ 421,876	$ -	$ 632,814	$ 421,876	**$ 1,054,690**
2.24	Excess Materials Disposal to Certified Backfill	27,117	CY		$ 24.5	$ 10.5	$ -	$ 664,357	$ 284,724	**$ 949,081**
2.25	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	$ -
2.26	Dewatering	18	EA			$ 4,000	$ -	$ -	$ 72,000	**$ 72,000**
2.27	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	$ -
2.28	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	$ -
2.29	Excavated material - stockpile management	21,677	CF		$ 1.0	$ 0.5	$ -	$ 21,677	$ 10,839	**$ 32,516**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 9,189,504**	**$ 7,089,504**	**$ 4,447,103**	**$ 20,726,110**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 138kV 5000 kcmil copper XLPE (Corona-JA 138KV)	47,401	FT	$ 145	$ 87	$ 58	$ 6,873,174	$ 4,123,904	$ 2,749,270	**$ 13,746,348**
3.2	Circuit #1- Cable Splicing- 138kV 5000 kcmil copper XLPE	27	EA	$ 5,898	$ 9,846	$ 2,813	$ 159,246	$ 265,855	$ 75,959	**$ 501,060**
3.3	Circuit #1- Cable Termination- 138kV 5000 kcmil copper XLPE	-	EA	$ 5,664	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.4	Circuit #2- Procurement & Installation- 345kV 5000 kcmil copper XLPE (Farragut-EGC 345KV)	47,401	FT	$ 167	$ 100	$ 67	$ 7,916,000	$ 4,749,600	$ 3,166,400	**$ 15,832,001**
3.5	Circuit #2- Cable Splicing- 345kV 5000 kcmil copper XLPE	27	EA	$ 11,722	$ 9,846	$ 2,813	$ 316,494	$ 265,855	$ 75,959	**$ 658,308**
3.6	Circuit #2- Cable Termination- 345kV 5000 kcmil copper XLPE	-	EA	$ 27,805	$ 9,846	$ 2,813	$ -	$ -	$ -	$ -
3.7	Circuit #3- Procurement & Installation- 138kV 5000 kcmil copper XLPE		FT				$ -	$ -	$ -	$ -
3.8	Circuit #3- Cable Splicing- 138kV 5000 kcmil copper XLPE		EA				$ -	$ -	$ -	$ -
3.9	Circuit #3- Cable Termination- 138kV 5000 kcmil copper XLPE		EA				$ -	$ -	$ -	$ -
3.10	Link Box & MH racking (138kv)	9	EA	$ 26,659	$ 15,995	$ 10,664	$ 239,931	$ 143,959	$ 95,972	**$ 479,862**
3.10	Link Box & MH racking (345kv)	9	EA	$ 28,548	$ 17,129	$ 11,419	$ 256,936	$ 154,162	$ 102,774	**$ 513,872**
3.10	Fiber Optic Cable	31,601	FT	$ 7	$ 3	$ 2	$ 233,751	$ 105,250	$ 70,166	**$ 409,167**
3.11	Ground Continuity Conductor	31,601	FT	$ 13	$ 8	$ 5	$ 412,043	$ 237,859	$ 158,573	**$ 808,475**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							$ 16,407,575	$ 10,046,444	$ 6,495,073	**$ 32,949,092**
Comp 207&249 - Metropolitan Ave-JA 138 and 345kV Onshore UG Cables -Double circuits(Corona-Jamaica 138kv & EGC-Farragut 345kv)							$ 26,354,519	$ 20,935,811	$ 12,425,352	**$ 59,715,682**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 1,000,835	$ 667,223	$ -	$ 1,000,835	$ 667,223	**$ 1,668,058**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		597,156.82		$ -	$ 597,157	$ -	**$ 597,157**
4.3	Construction Project Management / Supervision	1	LS		2,388,627.28		$ -	$ 2,388,627	$ -	**$ 2,388,627**
4.4	Utility PM and Project Oversite	1	LS		597,156.82		$ -	$ 597,157	$ -	**$ 597,157**
4.5	Site Accommodation, Facilities, Storage	1	LS	597,156.82			$ 597,157	$ -	$ -	**$ 597,157**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 2,985,784	$ -	$ -	$ 2,985,784	$ -	**$ 2,985,784**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
4.7	LiDAR /GPR	1.0	LS		$ 107,488	$ 71,659	$ -	$ 107,488	$ 71,659	**$ 179,147**
4.8	Geotech	3.00	EA		2,730.00	1,820.00	$ -	$ 8,190	$ 5,460	**$ 13,650**
4.9	Surveying/Staking	1	LS		$ 250,806	$ 167,204	$ -	$ 250,806	$ 167,204	**$ 418,010**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ 40,000		$ -	$ 40,000	$ -	**$ 40,000**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 597,157		$ -	$ 597,157	$ -	**$ 597,157**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 179,147		$ -	$ 179,147	$ -	**$ 179,147**
4.14	Laydown Lease & temporary easement	1	LS		$ 500,000		$ -	$ 500,000	$ -	**$ 500,000**
4.15	Real Estate (Acquisition)		LS				$ -	$ -	$ -	**$ -**
4.16	Legal Fees (Real estate)	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 2,120,000	$ -	$ -	$ 2,120,000	**$ 2,120,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 26,354,519.17			$ 2,340,281	$ -	$ -	**$ 2,340,281**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 59,716	$ -	$ -	$ 59,716	**$ 59,716**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 2,937,438**	**$ 9,252,348**	**$ 3,091,262**	**$ 15,281,048**

NEXTera Energy- TO37 Core 2
Comp 247 - Jamaica to East Garden City 138 and 345kV Onshore UG Cables -Double circuits
(Corona-Jamaica 138kV& EGC-Jamaica 138kv & EGC-Farragut 345kv)

Total: $ 420,295,497

NEXTera Energy- TO37 Core 2	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp 247 - Jamaica to East Garden City 138 and 345kV Onshore UG Cables -Double circuits(Corona-Jamaica 138kV& EGC-Jamaica 138kv & EGC-Farragut 345kv)				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 2,843,456	$ 13,949,314	$ 5,610,142	$ 22,402,912
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 36,795,571	$ 26,811,768	$ 17,122,283	$ 80,729,622
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 66,533,097	$ 40,778,716	$ 26,326,822	$ 133,638,635
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 11,795,796	$ 36,034,212	$ 12,217,677	$ 60,047,685
SUBTOTAL (Costs):	$ 117,967,919	$ 117,574,010	$ 61,276,924	$ 296,818,854
CONTRACTOR MARK-UP (OH&P)	$ 21,234,225	$ 21,163,322	$ 11,029,846	$ 53,427,394
SUBTOTAL:	$ 139,202,145	$ 138,737,332	$ 72,306,771	$ 350,246,247
CONTINGENCY ON ENTIRE PROJECT	$ 27,840,429	$ 27,747,466	$ 14,461,354	$ 70,049,249
TOTAL:	$ 167,042,574	$ 166,484,798	$ 86,768,125	$ 420,295,497

Description of Work: Jamaica to East Garden City. 5000 kcmil copper XLPE (300/400/500 MVA), single cable per phase. (Double circuit for 138 and 345kv -11.08 miles and Single circuit for 138kv -0.51 miles)

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 247 - Jamaica to East Garden City 138 and 345kV Onshore UG Cables -Double circuits(Corona-Jamaica 138kV& EGC-Jamaica 138kv & EGC-Farragut 345kv)										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	11.59	Mile		$ 700,000	$ 300,000	$ -	$ 8,113,000	$ 3,477,000	**$ 11,590,000**
1.3	Flaggers	340	DAY	$ 1,600	$ 4,800	$ 1,600	$ 544,000	$ 1,632,000	$ 544,000	**$ 2,720,000**
1.4	K Rail / Lane Control / Metal Plates	61,195	LF	$ 30	$ 18	$ 12	$ 1,835,856	$ 1,101,514	$ 734,342	**$ 3,671,712**
1.5	Police Support	13,600.0	HR		$ 120	$ 27	$ -	$ 1,632,000	$ 367,200	**$ 1,999,200**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	80.0	DAY		$ 1,000	$ 300	$ -	$ 80,000	$ 24,000	**$ 104,000**
1.9	Existing Utility Protection	11.59	Mile	$ 40,000	$ 120,000	$ 40,000	$ 463,600	$ 1,390,800	$ 463,600	**$ 2,318,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 2,843,456**	**$ 13,949,314**	**$ 5,610,142**	**$ 22,402,912**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	12	Mile		$ 139,800	$ 93,200	$ -	$ 1,620,282	$ 1,080,188	**$ 2,700,470**
2.2	Formwork in Trench	466,058	SF	$ 2	$ 1.5	$ 0.5	$ 932,115	$ 699,086	$ 233,029	**$ 1,864,230**
Double Circuit Conduit Trench (EGC-JA 138KV & EGC-New Farragut 345kV)										
2.3	Trench Excavation	73,361	CY		$ 17.5	$ 7.5	$ -	$ 1,283,816	$ 550,207	**$ 1,834,023**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	4,585	SF	$ 50	$ 25	$ 14	$ 229,253	$ 112,334	$ 64,191	**$ 405,778**
2.5	Supply & Install Thermal Backfill	38,514	CY	$ 350	$ 245	$ 105	$ 13,480,069	$ 9,436,048	$ 4,044,021	**$ 26,960,138**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	17,943	CY	$ 200	$ 125.0	$ 50.0	$ 3,588,644	$ 2,242,902	$ 897,161	**$ 6,728,707**
2.9	Conduit 8" SCH 40PVC	489,562	LF	$ 28.6	$ 5.7	$ 2.4	$ 14,001,462	$ 2,775,814	$ 1,189,635	**$ 17,966,911**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	244,781	LF	$ 3.5	$ 3.15	$ 1.4	$ 861,628	$ 771,060	$ 330,454	**$ 1,963,142**
2.12	Warning Tape	122,390	LF	$ 0.15	$ 0.25	$ 0.10	$ 18,359	$ 30,598	$ 12,239	**$ 61,195**
Double Circuit Conduit Trench (EGC-JA 138KV & Corona-JA 138kV)										
2.3	Trench Excavation	-	CY		$ 17.5	$ 7.5	$ -	$ -	$ -	**$ -**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	0	SF	$ 50	$ 25	$ 14	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.5	Supply & Install Thermal Backfill	0	CY	$ 350	$ 245	$ 105	$ -	$ -	$ -	$ -
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	$ -
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	$ -
2.8	Supply & Install Ductbank Concrete	0	CY	$ 200	$ 125.0	$ 50.0	$ -	$ -	$ -	$ -
2.9	Conduit 8" SCH 40PVC	0	LF	$ 28.6	$ 5.7	$ 2.4	$ -	$ -	$ -	$ -
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	$ -
2.11	Conduit 2" SCH 40PVC	0	LF	$ 3.5	$ 3.15	$ 1.4	$ -	$ -	$ -	$ -
2.12	Warning Tape	146,722	LF	$ 0.15	$ 0.25	$ 0.10	$ 22,008	$ 36,680	$ 14,672	**$ 73,361**
138 KV Splice Vault										
2.12	Trench Box Shoring (Vault)	37	EA	$ -	$ 18,079	$ 27,119	$ -	$ 668,927	$ 1,003,390	**$ 1,672,316**
2.13	Splice Vault Excavation	5,065	CY		$ 17.5	$ 7.5	$ -	$ 88,636	$ 37,987	**$ 126,622**
2.14	Splice Vault Supply & Installation	37	EA	$ 35,000	$ 16,500	$ 38,500	$ 1,295,000	$ 610,500	$ 1,424,500	**$ 3,330,000**
2.15	Splice Vault Backfill	1,519	CY		$ 14.0	$ 6.0	$ -	$ 21,273	$ 9,117	**$ 30,389**
345 KV Splice Vault										
2.12	Trench Box Shoring (Vault)	35	EA	$ -	$ 18,079	$ 27,119	$ -	$ 632,768	$ 949,153	**$ 1,581,921**
2.13	Splice Vault Excavation	5,818	CY		$ 17.5	$ 7.5	$ -	$ 101,811	$ 43,633	**$ 145,444**
2.14	Splice Vault Supply & Installation	35	EA	$ 35,000	$ 16,500	$ 38,500	$ 1,225,000	$ 577,500	$ 1,347,500	**$ 3,150,000**
2.15	Splice Vault Backfill	1,745	CY		$ 14.0	$ 6.0	$ -	$ 24,435	$ 10,472	**$ 34,907**
2.16	Jack and Bore along Route	250	LF	$ 1,600	$ 3,200	$ 3,200	$ 400,000	$ 800,000	$ 800,000	**$ 2,000,000**
2.17	HDD along Route		LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	$ -
2.18	Air Test Ducts	734,342	LF			$ 0.25	$ -	$ -	$ 183,586	**$ 183,586**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	36,704	SY	$ 14.00	$ 14.00	$ 7.00	$ 513,856	$ 513,856	$ 256,928	**$ 1,284,641**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	10,196	CY	$ 22.38	$ 23.50	$ 10.07	$ 228,177	$ 239,586	$ 102,680	**$ 570,442**
2.20	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	179	EA		$ 400	$ 1,200	$ -	$ 71,773	$ 215,319	**$ 287,091**
2.21	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	179	EA		$ 10	$ 15	$ -	$ 1,794	$ 2,691	**$ 4,486**
2.22	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	385	EA		$ 400	$ 1,200	$ -	$ 154,058	$ 462,174	**$ 616,232**
2.23	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 632,814	$ 421,876	$ -	$ 632,814	$ 421,876	**$ 1,054,690**
2.24	Excess Materials Disposal to Certified Backfill	105,272	CY		$ 24.5	$ 10.5	$ -	$ 2,579,174	$ 1,105,360	**$ 3,684,535**
2.25	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	**$ -**
2.26	Dewatering	72	EA			$ 4,000	$ -	$ -	$ 288,000	**$ 288,000**
2.27	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.28	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.29	Excavated material - stockpile management	84,244	CF		$ 1.0	$ 0.5	$ -	$ 84,244	$ 42,122	**$ 126,365**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 36,795,571**	**$ 26,811,768**	**$ 17,122,283**	**$ 80,729,622**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 138kV 5000 kcmil copper XLPE (JA-EGC 138KV)	192,765	FT	$ 145	$ 87	$ 58	$ 27,950,908	$ 16,770,545	$ 11,180,363	**$ 55,901,815**
3.2	Circuit #1- Cable Splicing- 138kV 5000 kcmil copper XLPE	111	EA	$ 5,898	$ 9,846	$ 2,813	$ 654,678	$ 1,092,959	$ 312,274	**$ 2,059,911**
3.3	Circuit #1- Cable Termination- 138kV 5000 kcmil copper XLPE	6	EA	$ 5,664	$ 9,846	$ 2,813	$ 33,984	$ 59,079	$ 16,880	**$ 109,943**
3.4	Circuit #2- Procurement & Installation- 345kV 5000 kcmil copper XLPE (Farragut-EGC 345KV)	184,297	FT	$ 167	$ 100	$ 67	$ 30,777,607	$ 18,466,564	$ 12,311,043	**$ 61,555,215**
3.5	Circuit #2- Cable Splicing- 345kV 5000 kcmil copper XLPE	105	EA	$ 11,722	$ 9,846	$ 2,813	$ 1,230,810	$ 1,033,880	$ 295,394	**$ 2,560,085**
3.6	Circuit #2- Cable Termination- 345kV 5000 kcmil copper XLPE	3	EA	$ 27,805	$ 9,846	$ 2,813	$ 83,415	$ 29,539	$ 8,440	**$ 121,394**
3.7	Circuit #3- Procurement & Installation- 138kV 5000 kcmil copper XLPE (Corona-JA 138kv)	8,064	FT	$ 145	$ 87	$ 58	$ 1,169,280	$ 701,568	$ 467,712	**$ 2,338,560**
3.8	Circuit #3- Cable Splicing- 138kV 5000 kcmil copper XLPE	3	EA	$ 5,898	$ 9,846	$ 2,813	$ 17,694	$ 29,539	$ 8,440	**$ 55,673**
3.9	Circuit #3- Cable Termination- 138kV 5000 kcmil copper XLPE	1	EA	$ 5,664	$ 9,846	$ 2,813	$ 5,664	$ 9,846	$ 2,813	**$ 18,324**
3.10	Link Box & MH racking (138kv)	37	EA	$ 26,659	$ 15,995	$ 10,664	$ 986,383	$ 591,830	$ 394,553	**$ 1,972,766**
3.10	Link Box & MH racking (345kv)	35	EA	$ 28,548	$ 17,129	$ 11,419	$ 999,196	$ 599,517	$ 399,678	**$ 1,998,392**
3.10	Fiber Optic Cable	128,375	FT	$ 7	$ 3	$ 2	$ 949,592	$ 427,567	$ 285,045	**$ 1,662,204**
3.11	Ground Continuity Conductor	128,375	FT	$ 13	$ 8	$ 5	$ 1,673,886	$ 966,281	$ 644,187	**$ 3,284,354**
TOTAL - INSULATORS, FITTINGS, HARDWARE:							$ 66,533,097	$ 40,778,716	$ 26,326,822	**$ 133,638,635**
Comp 247 - Jamaica to East Garden City 138 and 345kV Onshore UG Cables -Double circuits(Corona-Jamaica 138kV& EGC-Jamaica 138kv & EGC-F							$ 106,172,123	$ 81,539,798	$ 49,059,247	**$ 236,771,169**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 3,917,971	$ 2,611,981	$ -	$ 3,917,971	$ 2,611,981	**$ 6,529,952**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		2,367,711.69		$ -	$ 2,367,712	$ -	**$ 2,367,712**
4.3	Construction Project Management / Supervision	1	LS		9,470,846.74		$ -	$ 9,470,847	$ -	**$ 9,470,847**
4.4	Utility PM and Project Oversite	1	LS		2,367,711.69		$ -	$ 2,367,712	$ -	**$ 2,367,712**
4.5	Site Accommodation, Facilities, Storage	1	LS	2,367,711.69			$ 2,367,712	$ -	$ -	**$ 2,367,712**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 11,838,558	$ -	$ -	$ 11,838,558	$ -	**$ 11,838,558**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
4.7	LiDAR /GPR	1.0	LS		$ 426,188	$ 284,125	$ -	$ 426,188	$ 284,125	**$ 710,314**
4.8	Geotech	12.00	EA		2,730.00	1,820.00	$ -	$ 32,760	$ 21,840	**$ 54,600**
4.9	Surveying/Staking	1	LS		$ 994,439	$ 662,959	$ -	$ 994,439	$ 662,959	**$ 1,657,398**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ 40,000		$ -	$ 40,000	$ -	**$ 40,000**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 2,367,712		$ -	$ 2,367,712	$ -	**$ 2,367,712**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 710,314		$ -	$ 710,314	$ -	**$ 710,314**
4.14	Laydown Lease & temporary easement	1	LS		$ 1,500,000		$ -	$ 1,500,000	$ -	**$ 1,500,000**
4.15	Real Estate (Acquisition)		LS				$ -	$ -	$ -	**$ -**
4.16	Legal Fees (Real estate)	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 8,400,000	$ -	$ -	$ 8,400,000	**$ 8,400,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 106,172,123.12			$ 9,428,085	$ -	$ -	**$ 9,428,085**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 236,771	$ -	$ -	$ 236,771	**$ 236,771**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 11,795,796**	**$ 36,034,212**	**$ 12,217,677**	**$ 60,047,685**

NEXTera Energy- TO44 Enhanced 2

Comp XX - Ruland Road - Newbridge138 kV #3 (567 Line) Onshore UG Cables -Single circuit

Total: $ 5,354,910

NEXTera Energy- TO44 Enhanced 2	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp XX - Ruland Road - Newbridge138 kV #3 (567 Line) Onshore UG Cables -Single circuit				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 103,680	$ 467,008	$ 139,872	$ 710,560
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 350,497	$ 277,908	$ 192,142	$ 820,547
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 516,796	$ 366,133	$ 210,329	$ 1,093,258
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 112,466	$ 890,875	$ 154,010	$ 1,157,351
SUBTOTAL (Costs):	$ 1,083,440	$ 2,001,924	$ 696,353	$ 3,781,716
CONTRACTOR MARK-UP (OH&P)	$ 195,019	$ 360,346	$ 125,343	$ 680,709
SUBTOTAL:	$ 1,278,459	$ 2,362,270	$ 821,696	$ 4,462,425
CONTINGENCY ON ENTIRE PROJECT	$ 255,692	$ 472,454	$ 164,339	$ 892,485
TOTAL:	$ 1,534,151	$ 2,834,724	$ 986,035	$ 5,354,910

Description of Work: Rebuild 0.2 mile of UG line (trench, conduits and cable), single cable per phase.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp XX - Ruland Road - Newbridge138 kV #3 (567 Line) Onshore UG Cables -Single circuit										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	0.20	Mile				$ -	$ -	$ -	**$ -**
1.3	Flaggers	40	DAY	$ 1,600	$ 4,800	$ 1,600	$ 64,000	$ 192,000	$ 64,000	**$ 320,000**
1.4	K Rail / Lane Control / Metal Plates	1,056	LF	$ 30	$ 18	$ 12	$ 31,680	$ 19,008	$ 12,672	**$ 63,360**
1.5	Police Support	1,600.0	HR		$ 120	$ 27	$ -	$ 192,000	$ 43,200	**$ 235,200**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	40.0	DAY		$ 1,000	$ 300	$ -	$ 40,000	$ 12,000	**$ 52,000**
1.9	Existing Utility Protection	0.20	Mile	$ 40,000	$ 120,000	$ 40,000	$ 8,000	$ 24,000	$ 8,000	**$ 40,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 103,680**	**$ 467,008**	**$ 139,872**	**$ 710,560**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	0.20	Miles		$ 139,800	$ 93,200	$ -	$ 27,960	$ 18,640	**$ 46,600**
2.2	Formwork in Trench	8,256	SF	$ 2	$ 1.5	$ 0.5	$ 16,512	$ 12,384	$ 4,128	**$ 33,024**
2.3	Trench Excavation	688	CY		$ 17.5	$ 7.5	$ -	$ 12,040	$ 5,160	**$ 17,200**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	43	SF	$ 50	$ 25	$ 14	$ 2,150	$ 1,054	$ 602	**$ 3,806**
2.5	Supply & Install Thermal Backfill	361	CY	$ 350	$ 245	$ 105	$ 126,420	$ 88,494	$ 37,926	**$ 252,840**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	168	CY	$ 200	$ 125	$ 50	$ 33,632	$ 21,020	$ 8,408	**$ 63,060**
2.9	Conduit 8" SCH 40PVC	4,224	LF	$ 28.6	$ 5.7	$ 2.4	$ 120,806	$ 23,950	$ 10,264	**$ 155,021**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	2,112	LF	$ 3.5	$ 3.15	$ 1.4	$ 7,434	$ 6,653	$ 2,851	**$ 16,938**
2.12	Warning Tape	2,112	LF	$ 0.15	$ 0.25	$ 0.10	$ 317	$ 528	$ 211	**$ 1,056**
2.13	Trench Box Shoring (Vault)	1	EA	$ -	$ 18,079	$ 27,119	$ -	$ 18,079	$ 27,119	**$ 45,198**
2.14	Splice Vault Excavation	137	CY		$ 17.5	$ 7.5	$ -	$ 2,396	$ 1,027	**$ 3,422**
2.15	Splice Vault Supply & Installation	1	EA	$ 35,000	$ 16,500	$ 38,500	$ 35,000	$ 16,500	$ 38,500	**$ 90,000**
2.16	Splice Vault Backfill	41	CY		$ 14.0	$ 6.0	$ -	$ 575	$ 246	**$ 821**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.17	Jack and Bore along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.18	HDD along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.19	Air Test Ducts	6,336	LF			$ 0.25	$ -	$ -	$ 1,584	**$ 1,584**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	407	SY	$ 14.00	$ 14.00	$ 7.00	$ 5,696	$ 5,696	$ 2,848	**$ 14,241**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	113	CY	$ 22.38	$ 23.50	$ 10.07	$ 2,529	$ 2,656	$ 1,138	**$ 6,324**
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	2	EA		$ 400	$ 1,200	$ -	$ 673	$ 2,018	**$ 2,691**
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	2	EA		$ 10	$ 15	$ -	$ 17	$ 25	**$ 42**
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	4	EA		$ 400	$ 1,200	$ -	$ 1,445	$ 4,334	**$ 5,779**
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 10,000	$ 10,000	$ -	$ 10,000	$ 10,000	**$ 20,000**
2.26	Excess Materials Disposal to Certified Backfill	1,019	CY		$ 24.5	$ 10.5	$ -	$ 24,965	$ 10,699	**$ 35,664**
2.27	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	**$ -**
2.28	Dewatering	1	EA			$ 4,000	$ -	$ -	$ 4,000	**$ 4,000**
2.29	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.30	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.31	Excavated material - stockpile management	825	CF		$ 1.0	$ 0.5	$ -	$ 825	$ 412	**$ 1,237**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 350,497**	**$ 277,908**	**$ 192,142**	**$ 820,547**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 138kV 5000 kcmil copper XLPE	3,326	FT	$ 125	$ 75	$ 50	$ 415,800	$ 249,480	$ 166,320	**$ 831,600**
3.2	Circuit #1- Cable Splicing- 138kV 5000 kcmil copper XLPE	3	EA	$ 5,898	$ 9,846	$ 2,813	$ 17,694	$ 29,539	$ 8,440	**$ 55,673**
3.3	Circuit #1- Cable Termination- 138kV 5000 kcmil copper XLPE	6	EA	$ 5,664	$ 9,846	$ 2,813	$ 33,984	$ 59,079	$ 16,880	**$ 109,943**
3.4	Circuit #2- Procurement & Installation- 138kV 5000 kcmil copper XLPE		FT	$ 125	$ 75	$ 50	$ -	$ -	$ -	**$ -**
3.5	Circuit #2- Cable Splicing- 138kV 5000 kcmil copper XLPE		EA	$ 5,898	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.6	Circuit #2- Cable Termination- 138kV 5000 kcmil copper XLPE		EA	$ 5,664	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.7	Circuit #3- Procurement & Installation- 138kV 5000 kcmil copper XLPE		FT	$ 125	$ 75	$ 50	$ -	$ -	$ -	**$ -**
3.8	Circuit #3- Cable Splicing- 138kV 5000 kcmil copper XLPE		EA	$ 5,898	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.9	Circuit #3- Cable Termination- 138kV 5000 kcmil copper XLPE		EA	$ 5,664	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.10	Link Box & MH racking	1	EA	$ 26,659	$ 15,995	$ 10,664	$ 26,659	$ 15,995	$ 10,664	**$ 53,318**
3.11	Fiber Optic Cable	1,109	FT	$ 7	$ 3	$ 2	$ 8,202	$ 3,693	$ 2,462	**$ 14,357**
3.12	Ground Continuity Conductor	1,109	FT	$ 13	$ 8	$ 5	$ 14,458	$ 8,346	$ 5,564	**$ 28,368**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 516,796**	**$ 366,133**	**$ 210,329**	**$ 1,093,258**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 970,974**	**$ 1,111,049**	**$ 542,343**	**$ 2,624,365**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 49,602	$ 33,068	$ -	$ 49,602	$ 33,068	**$ 82,670**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		26,243.65		$ -	$ 26,244	$ -	**$ 26,244**
4.3	Construction Project Management / Supervision	1	LS		104,974.61		$ -	$ 104,975	$ -	**$ 104,975**
4.4	Utility PM and Project Oversite	1	LS		26,243.65		$ -	$ 26,244	$ -	**$ 26,244**
4.5	Site Accommodation, Facilities, Storage	1	LS	26,243.65			$ 26,244	$ -	$ -	**$ 26,244**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 131,218	$ -	$ -	$ 131,218	$ -	**$ 131,218**
4.7	LiDAR /GPR	1.0	LS		$ 4,724	$ 3,149	$ -	$ 4,724	$ 3,149	**$ 7,873**
4.8	Geotech	1.00	EA		2,730	1,820	$ -	$ 2,730	$ 1,820	**$ 4,550**
4.9	Surveying/Staking	1	LS		$ 11,022	$ 7,348	$ -	$ 11,022	$ 7,348	**$ 18,371**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ -		$ -	$ -	$ -	**$ -**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 26,244		$ -	$ 26,244	$ -	**$ 26,244**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 7,873		$ -	$ 7,873	$ -	**$ 7,873**
4.14	Laydown Lease & temporary easement	1	LS		$ 500,000		$ -	$ 500,000	$ -	**$ 500,000**
4.15	Real Estate (Acquisition)		LS				$ -	$ -	$ -	**$ -**
4.16	Legal Fees (Real estate)	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 106,000	$ -	$ -	$ 106,000	**$ 106,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 970,973.55			$ 86,222	$ -	$ -	**$ 86,222**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 2,624	$ -	$ -	$ 2,624	**$ 2,624**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 112,466**	**$ 890,875**	**$ 154,010**	**$ 1,157,351**

NEXTera Energy- TO44 Enhanced 2

Other Comp. 138kV Upgrades

Total: $ 15,958,202

Other Comp. 138kV Upgrades				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
Other Comp. 138kV Upgrades				
	$ -	$ -	$ -	$ -
2. Newbridge to Ruland 138kV (561Line OH reconductor)- Comp 97	$ 1,900,000	$ 950,000	$ 950,000	$ 3,800,000
3. Newbridge to Ruland 138kV (562Line OH reconductor)-Comp 98	$ 1,977,500	$ 988,750	$ 988,750	$ 3,955,000
	$ -	$ -	$ -	$ -
	$ -	$ -	$ -	$ -
	$ -	$ -	$ -	$ -
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	$ 421,872	$ 2,676,720	$ 416,325	$ 3,514,917
CONTRACTOR MARK-UP (OH&P)	$ 773,887	$ 830,785	$ 423,914	$ 2,028,585
SUBTOTAL:	$ 5,073,259	$ 5,446,255	$ 2,778,989	$ 13,298,502
CONTINGENCY ON ENTIRE PROJECT	$ 1,014,652	$ 1,089,251	$ 555,798	$ 2,659,700
TOTAL:	$ 6,087,911	$ 6,535,506	$ 3,334,786	$ 15,958,202

Description of Work: 5000KCMIL (Conductor size) (XLPE)armored cable buried below the Long Island Sound (buried 6' or protected by concrete mattresses or rock)

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Other Comp. 138kV Upgrades										
1.1	CT Replacement		EA	$ 18,000	$ 7,970	$ 3,416	$ -	$ -	$ -	$ -
1.2	CT Replacement-foundation		CY	$ 704	$ 804	$ 503	$ -	$ -	$ -	$ -
1.3	CT Replacement-structure		EA	$ 1,684	$ 1,178	$ 505	$ -	$ -	$ -	$ -
							$ -		$ -	$ -
							$ -	$ -	$ -	$ -
2. Newbridge to Ruland 138kV (561Line OH reconductor)- Comp 97										
2.1	138kV Line Upgrade	7.600	MI	$ 250,000	$ 125,000	$ 125,000	$ 1,900,000	$ 950,000	$ 950,000	$ 3,800,000
							$ -	$ -	$ -	$ -
TOTAL - Newbridge to Ruland 138kV (561Line OH reconductor) :							$ 1,900,000	$ 950,000	$ 950,000	$ 3,800,000
3. Newbridge to Ruland 138kV (562Line OH reconductor)-Comp 98										
3.1	138kV Line Upgrade	7.910	MI	$ 250,000	$ 125,000	$ 125,000	$ 1,977,500	$ 988,750	$ 988,750	$ 3,955,000
							$ -	$ -	$ -	$ -
TOTAL - Newbridge to Ruland 138kV (562Line OH reconductor) :							$ 1,977,500	$ 988,750	$ 988,750	$ 3,955,000
							$ -	$ -	$ -	$ -
							$ -	$ -	$ -	$ -
							$ -	$ -	$ -	$ -
							$ -	$ -	$ -	$ -
							$ -	$ -	$ -	$ -
							$ -	$ -	$ -	$ -
							$ -	$ -	$ -	$ -
							$ -	$ -	$ -	$ -
							$ -	$ -	$ -	$ -
Other Comp. 138kV Upgrades							$ 3,877,500.00	$ 1,938,750.00	$ 1,938,750.00	$ 7,755,000.00

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1.0	LS		$ 116,325	$ 77,550	$ -	$ 116,325	$ 77,550	**$ 193,875**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		77,550.00		$ -	$ 77,550	$ -	**$ 77,550**
4.3	Construction Project Management / Supervision	1	LS		310,200.00		$ -	$ 310,200	$ -	**$ 310,200**
4.4	Utility PM and Project Oversite	1	LS		77,550.00		$ -	$ 77,550	$ -	**$ 77,550**
4.5	Site Accommodation, Facilities, Storage	1	LS	77,550.00			$ 77,550	$ -	$ -	**$ 77,550**
	Engineering									
4.6	Design Engineering	1.00	LS		$ 387,750	$ -	$ -	$ 387,750	$ -	**$ 387,750**
4.7	LiDAR	1.00	LS		$ 13,959	$ 9,306	$ -	$ 13,959	$ 9,306	**$ 23,265**
4.8	Geotech	-	EA		$ 2,730	$ 1,820	$ -	$ -	$ -	**$ -**
4.9	Surveying/Staking	1.00	Site		$ 32,571	$ 21,714	$ -	$ 32,571	$ 21,714	**$ 54,285**
	Testing & Commissioning									
4.10	Testing & Commissioning of SS and Equipment	1.00	LS		$ 60,000		$ -	$ 60,000	$ -	**$ 60,000**
	Permitting and Additional Costs									
4.11	Physical Security	-	LS				$ -	$ -	$ -	**$ -**
4.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		$ 77,550		$ -	$ 77,550	$ -	**$ 77,550**
4.13	Environmental-special studies/investigation	-	LS		$ -		$ -	$ -	$ -	**$ -**
4.14	Warranties / LOC's	1.00	LS		$ 23,265		$ -	$ 23,265	$ -	**$ 23,265**
4.15	Laydown Lease & temporary easement	1	LS		$ 1,500,000		$ -	$ 1,500,000	$ -	**$ 1,500,000**
4.16	Real Estate (Acquisition)	1.00	LS				$ -	$ -	$ -	**$ -**
4.17	Legal Fees (Real estate)	1.00	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.19	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.20	Bonds	1	LS			$ 300,000	$ -	$ -	$ 300,000	**$ 300,000**
4.21	Sales Tax on Materials	8.88%	LS	$ 3,877,500.00			$ 344,322	$ -	$ -	**$ 344,322**
4.22	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS			$ 7,755	$ -	$ -	$ 7,755	**$ 7,755**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 421,872**	**$ 2,676,720**	**$ 416,325**	**$ 3,514,917**

NEXTera Energy- TO44 Enhanced 2
Comp 225&248 - Buchanan to Ramapo 345kV OH/UG Cables - Single circuit
(New Buchanan - Ramapo 345 kV)

Total: $ 274,923,153

NEXTera Energy- TO44 Enhanced 2	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 2,036,928	$ 10,011,877	$ 4,004,251	$ 16,053,056
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 16,530,595	$ 19,469,828	$ 15,001,405	$ 51,001,828
3. OH & ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 40,050,435	$ 28,189,765	$ 19,128,515	$ 87,368,715
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 6,749,511	$ 23,839,383	$ 9,142,277	$ 39,731,171
SUBTOTAL (Costs):	$ 65,367,468	$ 81,510,852	$ 47,276,449	$ 194,154,769
CONTRACTOR MARK-UP (OH&P)	$ 11,766,144	$ 14,671,953	$ 8,509,761	$ 34,947,858
SUBTOTAL:	$ 77,133,612	$ 96,182,806	$ 55,786,209	$ 229,102,628
CONTINGENCY ON ENTIRE PROJECT	$ 15,426,722	$ 19,236,561	$ 11,157,242	$ 45,820,526
TOTAL:	$ 92,560,335	$ 115,419,367	$ 66,943,451	$ 274,923,153

Description of Work: Buchanan to Ramapo 345kV, overhead portion 7.4 miles, and underground portion 8.17 miles (5000 kcmil copper XLPE, single cable per phase).

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	8.17	Mile		$ 700,000	$ 300,000	$ -	$ 5,719,000	$ 2,451,000	**$ 8,170,000**
1.3	Flaggers	260	DAY	$ 1,600	$ 4,800	$ 1,600	$ 416,000	$ 1,248,000	$ 416,000	**$ 2,080,000**
1.4	K Rail / Lane Control / Metal Plates	43,138	LF	$ 30	$ 18	$ 12	$ 1,294,128	$ 776,477	$ 517,651	**$ 2,588,256**
1.5	Police Support	10,400.0	HR		$ 120	$ 27	$ -	$ 1,248,000	$ 280,800	**$ 1,528,800**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	40.0	DAY		$ 1,000	$ 300	$ -	$ 40,000	$ 12,000	**$ 52,000**
1.9	Existing Utility Protection	8.17	Mile	$ 40,000	$ 120,000	$ 40,000	$ 326,800	$ 980,400	$ 326,800	**$ 1,634,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 2,036,928**	**$ 10,011,877**	**$ 4,004,251**	**$ 16,053,056**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	8	Miles		$ 139,800	$ 93,200	$ -	$ 1,142,166	$ 761,444	**$ 1,903,610**
2.2	Formwork in Trench	303,501	SF	$ 2	$ 1.5	$ 0.5	$ 607,002	$ 455,251	$ 151,750	**$ 1,214,003**
2.3	Trench Excavation	15,175	CY		$ 17.5	$ 7.5	$ -	$ 265,563	$ 113,813	**$ 379,376**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	1,581	SF	$ 50	$ 25	$ 14	$ 79,037	$ 38,728	$ 22,130	**$ 139,895**
2.5	Supply & Install Thermal Backfill	13,278	CY	$ 350	$ 245	$ 105	$ 4,647,356	$ 3,253,149	$ 1,394,207	**$ 9,294,712**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	6,182	CY	$ 200	$ 125	$ 50	$ 1,236,344	$ 772,715	$ 309,086	**$ 2,318,145**
2.9	Conduit 8" SCH 40PVC	172,550	LF	$ 28.6	$ 5.7	$ 2.4	$ 4,934,941	$ 978,361	$ 419,297	**$ 6,332,600**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	86,275	LF	$ 3.5	$ 3.15	$ 1.4	$ 303,689	$ 271,767	$ 116,472	**$ 691,927**
2.12	Warning Tape	86,275	LF	$ 0.15	$ 0.25	$ 0.10	$ 12,941	$ 21,569	$ 8,628	**$ 43,138**
2.13	Trench Box Shoring (Vault)	23	EA	$ -	$ 18,079	$ 27,119	$ -	$ 415,819	$ 623,729	**$ 1,039,548**
2.14	Splice Vault Excavation	2,294	CY		$ 17.5	$ 7.5	$ -	$ 40,143	$ 17,204	**$ 57,347**
2.15	Splice Vault Supply & Installation	23	EA	$ 35,000	$ 16,500	$ 38,500	$ 805,000	$ 379,500	$ 885,500	**$ 2,070,000**
2.16	Splice Vault Backfill	688	CY		$ 14.0	$ 6.0	$ -	$ 9,634	$ 4,129	**$ 13,763**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.17	Jack and Bore along Route	410	LF	$ 800	$ 1,600	$ 1,600	$ 328,000	$ 656,000	$ 656,000	**$ 1,640,000**
2.18	HDD along Route	4,100	LF	$ 800	$ 1,600	$ 1,600	$ 3,280,000	$ 6,560,000	$ 6,560,000	**$ 16,400,000**
2.19	Air Test Ducts	258,826	LF			$ 0.25	$ -	$ -	$ 64,706	**$ 64,706**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	14,655	SY	$ 14.00	$ 14.00	$ 7.00	$ 205,177	$ 205,177	$ 102,588	**$ 512,941**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	4,071	CY	$ 22.38	$ 23.50	$ 10.07	$ 91,108	$ 95,664	$ 40,999	**$ 227,770**
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	62	EA		$ 400	$ 1,200	$ -	$ 24,727	$ 74,181	**$ 98,908**
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	62	EA		$ 10	$ 15	$ -	$ 618	$ 927	**$ 1,545**
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	133	EA		$ 400	$ 1,200	$ -	$ 53,113	$ 159,338	**$ 212,451**
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 448,266	$ 298,844	$ -	$ 448,266	$ 298,844	**$ 747,110**
2.26	Excess Materials Disposal to Certified Backfill	21,815	CY		$ 24.5	$ 10.5	$ -	$ 534,467	$ 229,057	**$ 763,524**
2.27	Rock Excavation and Removal	11,646	CY		$ 243	$ 162	$ -	$ 2,829,963	$ 1,886,642	**$ 4,716,605**
2.28	Dewatering	23	EA			$ 4,000	$ -	$ -	$ 92,000	**$ 92,000**
2.29	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.30	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.31	Excavated material - stockpile management	17,469	CF		$ 1.0	$ 0.5	$ -	$ 17,469	$ 8,734	**$ 26,203**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 16,530,595**	**$ 19,469,828**	**$ 15,001,405**	**$ 51,001,828**
3. OH & ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 345kV 5000 kcmil copper XLPE	135,883	FT	$ 167	$ 100	$ 67	$ 22,692,534	$ 13,615,521	$ 9,077,014	**$ 45,385,069**
3.2	Circuit #1- Cable Splicing- 345kV 5000 kcmil copper XLPE	69	EA	$ 11,722	$ 9,846	$ 2,813	$ 808,818	$ 679,407	$ 194,116	**$ 1,682,341**
3.3	Circuit #1- Cable Termination- 345kV 5000 kcmil copper XLPE	6	EA	$ 27,805	$ 9,846	$ 2,813	$ 166,830	$ 59,079	$ 16,880	**$ 242,789**
3.4	Circuit #2- Procurement & Installation- 345kV 5000 kcmil copper XLPE		FT	$ 167	$ 100	$ 67	$ -	$ -	$ -	**$ -**
3.5	Circuit #2- Cable Splicing- 345kV 5000 kcmil copper XLPE		EA	$ 11,722	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.6	Circuit #2- Cable Termination- 345kV 5000 kcmil copper XLPE		EA	$ 27,805	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.7	Circuit #3- Procurement & Installation- 345kV 5000 kcmil copper XLPE		FT	$ 167	$ 100	$ 67	$ -	$ -	$ -	**$ -**
3.8	Circuit #3- Cable Splicing- 345kV 5000 kcmil copper XLPE		EA	$ 11,722	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.9	Circuit #3- Cable Termination- 345kV 5000 kcmil copper XLPE		EA	$ 27,805	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.10	Link Box & MH racking	23	EA	$ 28,548	$ 17,129	$ 11,419	$ 656,614	$ 393,969	$ 262,646	**$ 1,313,229**
3.11	Fiber Optic Cable	45,294	FT	$ 7	$ 3	$ 2	$ 335,043	$ 150,858	$ 100,572	**$ 586,473**
3.12	Ground Continuity Conductor	45,294	FT	$ 13	$ 8	$ 5	$ 590,595	$ 340,932	$ 227,288	**$ 1,158,814**
3.13	**345kv OH transmission line**	7.4	Miles	$ 2,000,000	$ 1,750,000	$ 1,250,000	$ 14,800,000	$ 12,950,000	$ 9,250,000	$ 37,000,000
TOTAL - INSULATORS, FITTINGS, HARDWARE:							**$ 40,050,435**	**$ 28,189,765**	**$ 19,128,515**	**$ 87,368,715**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 58,617,957**	**$ 57,671,469**	**$ 38,134,172**	**$ 154,423,598**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 2,874,169	$ 1,916,113	$ -	$ 2,874,169	$ 1,916,113	**$ 4,790,282**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		1,544,235.98		$ -	$ 1,544,236	$ -	**$ 1,544,236**
4.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		6,176,943.93		$ -	$ 6,176,944	$ -	**$ 6,176,944**
4.4	Utility PM and Project Oversite	1	LS		1,544,235.98		$ -	$ 1,544,236	$ -	**$ 1,544,236**
4.5	Site Accommodation, Facilities, Storage	1	LS	1,544,235.98			$ 1,544,236	$ -	$ -	**$ 1,544,236**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 7,721,180	$ -	$ -	$ 7,721,180	$ -	**$ 7,721,180**
4.7	LiDAR /GPR	1.0	LS		$ 277,962	$ 185,308	$ -	$ 277,962	$ 185,308	**$ 463,271**
4.8	Geotech	9.00	EA		2,730.00	1,820.00	$ -	$ 24,570	$ 16,380	**$ 40,950**
4.9	Surveying/Staking	1	LS		$ 648,579	$ 432,386	$ -	$ 648,579	$ 432,386	**$ 1,080,965**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ 20,000		$ -	$ 20,000	$ -	**$ 20,000**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 1,544,236		$ -	$ 1,544,236	$ -	**$ 1,544,236**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 463,271		$ -	$ 463,271	$ -	**$ 463,271**
4.14	Laydown Lease & temporary easement	1	LS		$ 1,000,000		$ -	$ 1,000,000	$ -	**$ 1,000,000**
4.15	Real Estate (Acquisition)	1	LS			$ 929,773	$ -	$ -	$ 929,773	**$ 929,773**
4.16	Legal Fees (Real estate)	1.00	LS		-	27,893.19	$ -	$ -	$ 27,893	**$ 27,893**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 5,480,000	$ -	$ -	$ 5,480,000	**$ 5,480,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 58,617,957.43			$ 5,205,275	$ -	$ -	**$ 5,205,275**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 154,424	$ -	$ -	$ 154,424	**$ 154,424**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 6,749,511**	**$ 23,839,383**	**$ 9,142,277**	**$ 39,731,171**

NEXTera Energy- TO44 Enhanced 2

Comp 226 & 227. Offshore Platform HSA to Buchanan Landing 320kV #1, #2 DC Offshore Submarine Cables - Double circuits (Hudson South OSW platform #1 & #2- Buchanan HVDC #1 &#2 320 kV)

Total: ############

omp 226 & 227. Offshore Platform HSA to Buchanan Landing 320kV #1, #2 DC Offshore Submarine Cables - Double circuits(Hudson South OSW platform #1 & #2- Buchanan HVDC #1 &#2 320 kV)	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp 226 & 227. Offshore Platform HSA to Buchanan Landing 320kV #1, #2 DC Offshore Submarine Cables - Double circuits (Hudson South OSW platform #1 & #2- Buchanan HVDC #1 &#2 320 kV)				
1. SUBMARINE CABLE	$ 633,661,222	$ 1,284,605,789	$ 809,554,812	$ 2,727,821,823
2. TRANSITION STATION	$ 1,058,356,000	$ 635,122,881	$ 423,509,037	$ 2,116,987,918
3. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	$ 197,345,613	$ 642,200,076	$ 169,792,630	$ 1,009,338,319
SUBTOTAL (Costs):	$ 1,889,362,835	$ 2,561,928,746	$ 1,402,856,479	$ 5,854,148,060
CONTRACTOR MARK-UP (OH&P)	$ 340,085,310	$ 461,147,174	$ 252,514,166	$ 1,053,746,651
SUBTOTAL:	$ 2,229,448,146	$ 3,023,075,920	$ 1,655,370,645	$ 6,907,894,711
CONTINGENCY ON ENTIRE PROJECT	$ 445,889,629	$ 604,615,184	$ 331,074,129	$ 1,381,578,942
TOTAL:	$ 2,675,337,775	$ 3,627,691,104	$ 1,986,444,774	$ 8,289,473,653

Description of Work: Part of Offshore Platform HSA to Buchanan 320kV #1, #2 HVDC project segment, 5000kCMIL, Cu, Single Core, XLPE, submarine cable (122.5 miles)

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 226 & 227. Offshore Platform HSA to Buchanan Landing 320kV #1, #2 DC Offshore Submarine Cables - Double circuits(Hudson South OSW platform #1 & #2- Buchanan HVDC #1 &#2 320 kV)										
1. SUBMARINE CABLE										
1.1	Submarine Cable - 320kV DC, 5000kCMIL, Cu, Single Core, XLPE, Submarine	2,845,920	FT	$ 212	$ 400	$ 250	$ 603,335,040	$ 1,138,368,000	$ 711,480,000	**$ 2,453,183,040**
1.2	Submarine Cable- transportation from manufacture location to site	1	LS		$ 144,042,360	$ 96,028,240	$ -	$ 144,042,360	$ 96,028,240	**$ 240,070,600**
1.3	Submarine Cable Splicing if Required 1600 mm2 Tri-Core	-	EA				$ -	$ -	$ -	**$ -**
1.4	Cable Transition Splice	8	EA	$ 27,911	$ 37,214	$ 27,911	$ 223,286	$ 297,715	$ 223,286	**$ 744,286**
1.5	Outdoor Termination	8	EA	$ 27,911	$ 37,214	$ 27,911	$ 223,286	$ 297,715	$ 223,286	**$ 744,286**
1.6	"Shore End" (shallow) Diver Cable Install						$ -	$ -	$ -	**$ -**
1.7	Fiber Optic Cable	1,422,960	FT	$ 7			$ 10,525,635	$ -	$ -	**$ 10,525,635**
1.8	Ground Continuity Conductor	1,422,960	FT	$ 13			$ 18,553,975	$ -	$ -	**$ 18,553,975**
1.9							$ -	$ -	$ -	**$ -**
1.10	Jack and Bore along Route	0	LF	$ 1,600	$ 3,200	$ 3,200	$ -	$ -	$ -	**$ -**
1.11	HDD along Route	1,000	LF	$ 800	$ 1,600	$ 1,600	$ 800,000	$ 1,600,000	$ 1,600,000	**$ 4,000,000**
TOTAL - Submarine cable:							$ 633,661,222	$ 1,284,605,789	$ 809,554,812	**$ 2,727,821,823**
2. TRANSITION STATION										
2.1	Site Clearing	0.0	ACRE	-	10,800.00	7,200.00	$ -	$ -	$ -	**$ -**
2.2	Demolition	0	LS	-	60,000.00	40,000.00	$ -	$ -	$ -	**$ -**
2.3	Strip and Dispose Top Soil	0	CY		24.50	10.50	$ -	$ -	$ -	**$ -**
2.4	Site Grading- Excavation for Substation Pad	0	CY		9.00	6.00	$ -	$ -	$ -	**$ -**
2.5	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	0	CY		21.00	9.00	$ -	$ -	$ -	**$ -**
2.6	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	0	CY		2.40	1.60	$ -	$ -	$ -	**$ -**
2.7	Site Grading -Fill for Substation Pad (import, compacted in place)	0	CY	25.00	2.40	1.60	$ -	$ -	$ -	**$ -**
2.8	Install substation 8" pad base	0	SY	11.00	6.00	4.00	$ -	$ -	$ -	**$ -**
2.9	Site Surfacing - Aggregate 6" Thick	0	SY	16.50	4.50	3.00	$ -	$ -	$ -	**$ -**
2.10	7' Station Fence w/ Barbed Wire & Grounding	0	LF	13.85	13.85	6.92	$ -	$ -	$ -	**$ -**
2.11	20' Slide Gate & Grounding	0	EA	8,100.00	3,245.00	1,305.00	$ -	$ -	$ -	**$ -**
2.12	4' Pedestrian gate	0	EA	2,500.00	1,000.00	350.00	$ -	$ -	$ -	**$ -**
2.13	Erosion Control-Silt fence install & remove	0	LF	2.41	3.16	0.72	$ -	$ -	$ -	**$ -**
2.14	Temporary fencing	0	LF	7.50	5.25	2.25	$ -	$ -	$ -	**$ -**
2.15	345kV, Cable sealing end - 3 Ph	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.16	345kV, lighting arrester	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Cable sealing end - 3 Ph	0	EA	8,346.00	5,758.74	3,839.16	$ -	$ -	$ -	**$ -**
2.18	345kV, lighting arrester	0	EA	4,810.00	2,886.00	1,924.00	$ -	$ -	$ -	**$ -**
2.19	AL. Bus Tubing, 5" SCH 80	0	LF	25.00	184.94	123.29	$ -	$ -	$ -	**$ -**
2.20	AL. Bus fittings	0	LS	-	-	-	$ -	$ -	$ -	**$ -**
2.21	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	0	LF	2.09	-	-	$ -	$ -	$ -	**$ -**
2.22	Caweld, DSA, 4/0 , T, CROSS	0	EA	165.00	75.00		$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.23	Ground Rod, 3/4" x 15'	0	EA	135.00	67.50	7.50	$ -	$ -	$ -	$ -
2.24	Trench Box Shoring (Vault)	2	EA	$ -	$ 18,079	$ 27,119	$ -	$ 36,158	$ 54,237	$ 90,395
2.25	Splice Vault Excavation	863	CY		$ 17.5	$ 7.5	$ -	$ 15,099	$ 6,471	$ 21,570
2.26	Splice Vault Supply & Installation	2	EA	$ 45,500	$ 21,450	$ 50,050	$ 91,000	$ 42,900	$ 100,100	$ 234,000
2.27	Splice Vault Backfill	259	CY		$ 14.0	$ 6.0	$ -	$ 3,624	$ 1,553	$ 5,177
2.28	Restoration (incl. Paving)	1	LS	$ 15,000.00	$ 20,000.00	$ 15,000.00	$ 15,000	$ 20,000	$ 15,000	$ 50,000
2.29	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 35,000	$ 15,000	$ -	$ 35,000	$ 15,000	$ 50,000
2.30	Excess Materials Disposal to Certified Backfill	785	CY		$ 24.5	$ 10.5	$ -	$ 19,236	$ 8,244	$ 27,481
2.31	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	$ -
2.32	Dewatering	2	EA			$ 4,000	$ -	$ -	$ 8,000	$ 8,000
2.33	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	$ -
2.34	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	$ -
2.35	Excavated material - stockpile management	863	CF		$ 1.0	$ 0.5	$ -	$ 863	$ 431	$ 1,294
2.36	Offshore HVDC Platform	2	EA	$ 363,750,000	$ 218,250,000.0	$ 145,500,000.0	$ 727,500,000	$ 436,500,000	$ 291,000,000	$ 1,455,000,000
2.37	Offshore_HVDC 1200MW Monopoles	2.0	EA	165,375,000.00	99,225,000.00	66,150,000.00	$ 330,750,000.00	$ 198,450,000.00	$ 132,300,000.00	$ 661,500,000
TOTAL - Transition station :							$ 1,058,356,000	$ 635,122,881	$ 423,509,037	$ 2,116,987,918
Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables							$ 1,692,017,222	$ 1,919,728,670	$ 1,233,063,849	$ 4,844,809,741
3. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization									
3.1	Mob / Demob	1	LS		$ 6,000,000	$ 4,000,000	$ -	$ 6,000,000	$ 4,000,000	$ 10,000,000
	Project Management, Material Handling & Amenities									
3.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		48,448,097.41		$ -	$ 48,448,097	$ -	$ 48,448,097
3.3	Construction Project Management / Supervision	1	LS		193,792,389.64		$ -	$ 193,792,390	$ -	$ 193,792,390
3.4	Utility PM and Project Oversite	1	LS		48,448,097.41		$ -	$ 48,448,097	$ -	$ 48,448,097
3.5	Site Accommodation, Facilities, Storage	1	LS	48,448,097.41			$ 48,448,097	$ -	$ -	$ 48,448,097
	Engineering									
3.6	Design Engineering	1	LS		$ 242,240,487		$ -	$ 242,240,487	$ -	$ 242,240,487
3.7	Surveying/Staking	1	LS		$ 33,913,668		$ -	$ 33,913,668	$ -	$ 33,913,668
3.8	Geotech	-	EA		2,730.00	1,820.00	$ -	$ -	$ -	$ -
	Testing & Commissioning / Inspection									
3.9	Testing & Commissioning / End to End Testing of Subsea Cable	2	EA		$ 80,000		$ -	$ 160,000	$ -	$ 160,000
3.10	Post Cable-Lay Inspection		EA				$ -	$ -	$ -	$ -
	Permitting and Additional Costs									
3.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 48,448,097		$ -	$ 48,448,097	$ -	$ 48,448,097
3.12	Environmental-special studies/investigation	1	LS		$ 870,000		$ -	$ 870,000	$ -	$ 870,000
3.13	Warranties / LOC's	1	LS		$ 14,534,429		$ -	$ 14,534,429	$ -	$ 14,534,429
3.14	Laydown Lease & temporary easement	1	LS		$ 500,000		$ -	$ 500,000	$ -	$ 500,000
3.15	Real Estate (Acquisition)	1	LS		$ -	$ 12,262	$ -	$ -	$ 12,262	$ 12,262
3.16	Legal Fees (Real estate)	1.00	LS		-	367.86	$ -	$ -	$ 368	$ 368
3.17	Insurance	-	LS		-	-	$ -	$ -	$ -	$ -
3.18	Insurance (specialty, e.g. railroad)		Crossing				$ -	$ -	$ -	$ -
3.19	Sales Tax on Materials	8.8%	LS	$ 1,692,017,222			$ 148,897,516	$ -	$ -	$ 148,897,516
3.20	Contractor Permits	1	LS		$ 4,844,810		$ -	$ 4,844,810	$ -	$ 4,844,810
3.21	Payment & Performance Bond	1	LS			$ 165,780,000	$ -	$ -	$ 165,780,000	$ 165,780,000
3.22	Marine / Specialty Insurance		LS				$ -	$ -	$ -	$ -
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 197,345,613	$ 642,200,076	$ 169,792,630	$ 1,009,338,319

NEXTera Energy- TO44 Enhanced 2
Comp 254 - Sprain Brook To New Rochelle Landing Onshore 320kV DC UG Cables - Double circuits
(Hudson South OSW platform #1 & #2- Buchanan HVDC #1 &#2 320 kV)

Total: $ 46,564,185

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
Comp 4C - Sprain Brook To New Rochelle Landing Onshore 345kV UG Cables -Double circuits(EGC To Sprain Brook 345 kV / Ruland To Sprain Brook 345 kV)				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 425,600	$ 2,180,560	$ 831,440	$ 3,437,600
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 3,083,818	$ 3,112,181	$ 2,240,355	$ 8,436,354
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 7,390,470	$ 4,131,620	$ 2,559,359	$ 14,081,449
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 1,227,464	$ 4,345,372	$ 1,356,072	$ 6,928,909
SUBTOTAL (Costs):	$ 12,127,352	$ 13,769,733	$ 6,987,226	$ 32,884,312
CONTRACTOR MARK-UP (OH&P)	$ 2,182,923	$ 2,478,552	$ 1,257,701	$ 5,919,176
SUBTOTAL:	$ 14,310,275	$ 16,248,285	$ 8,244,927	$ 38,803,488
CONTINGENCY ON ENTIRE PROJECT	$ 2,862,055	$ 3,249,657	$ 1,648,985	$ 7,760,698
TOTAL:	$ 17,172,330	$ 19,497,942	$ 9,893,912	$ 46,564,185

Description of Work: Part of Offshore Platform HSA to Buchanan 320kV #1, #2 HVDC project segment, 320 DCkV 5000 kcmil copper XLPE (1.5 miles)

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 4C - Sprain Brook To New Rochelle Landing Onshore 345kV UG Cables -Double circuits(EGC To Sprain Brook 345 kV / Ruland To Sprain Brook 345 kV)										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	1.50	Mile		$ 700,000	$ 300,000	$ -	$ 1,050,000	$ 450,000	**$ 1,500,000**
1.3	Flaggers	80	DAY	$ 1,600	$ 4,800	$ 1,600	$ 128,000	$ 384,000	$ 128,000	**$ 640,000**
1.4	K Rail / Lane Control / Metal Plates	7,920	LF	$ 30	$ 18	$ 12	$ 237,600	$ 142,560	$ 95,040	**$ 475,200**
1.5	Police Support	3,200.0	HR		$ 120	$ 27	$ -	$ 384,000	$ 86,400	**$ 470,400**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	40.0	DAY		$ 1,000	$ 300	$ -	$ 40,000	$ 12,000	**$ 52,000**
1.9	Existing Utility Protection	1.50	Mile	$ 40,000	$ 120,000	$ 40,000	$ 60,000	$ 180,000	$ 60,000	**$ 300,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 425,600**	**$ 2,180,560**	**$ 831,440**	**$ 3,437,600**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	1.5	Miles		$ 139,800	$ 93,200	$ -	$ 209,700	$ 139,800	**$ 349,500**
2.2	Formwork in Trench	63,360	SF	$ 2	$ 1.5	$ 0.5	$ 126,720	$ 95,040	$ 31,680	**$ 253,440**
2.3	Trench Excavation	3,168	CY		$ 17.5	$ 7.5	$ -	$ 55,440	$ 23,760	**$ 79,200**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	330	SF	$ 50	$ 25	$ 14	$ 16,500	$ 8,085	$ 4,620	**$ 29,205**
2.5	Supply & Install Thermal Backfill	1,907	CY	$ 350	$ 245	$ 105	$ 667,282	$ 467,097	$ 200,185	**$ 1,334,564**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	1,928	CY	$ 200	$ 125	$ 50	$ 385,616	$ 241,010	$ 96,404	**$ 723,030**
2.9	Conduit 8" SCH 40PVC	47,520	LF	$ 28.6	$ 5.7	$ 2.4	$ 1,359,072	$ 269,438	$ 115,474	**$ 1,743,984**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	31,680	LF	$ 3.5	$ 3.15	$ 1.4	$ 111,514	$ 99,792	$ 42,768	**$ 254,074**
2.12	Warning Tape	15,840	LF	$ 0.15	$ 0.25	$ 0.10	$ 2,376	$ 3,960	$ 1,584	**$ 7,920**
2.13	Trench Box Shoring (Vault)	10	EA	$ -	$ 18,079	$ 27,119	$ -	$ 180,791	$ 271,186	**$ 451,977**
2.14	Splice Vault Excavation	821	CY		$ 17.5	$ 7.5	$ -	$ 14,373	$ 6,160	**$ 20,533**
2.15	Splice Vault Supply & Installation	10	EA	$ 35,000	$ 16,500	$ 38,500	$ 350,000	$ 165,000	$ 385,000	**$ 900,000**
2.16	Splice Vault Backfill	246	CY		$ 14.0	$ 6.0	$ -	$ 3,450	$ 1,478	**$ 4,928**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.17	Jack and Bore along Route		LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.18	HDD along Route		LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.19	Air Test Ducts	79,200	LF			$ 0.25	$ -	$ -	$ 19,800	**$ 19,800**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	3,202	SY	$ 14.00	$ 14.00	$ 7.00	$ 44,831	$ 44,831	$ 22,416	**$ 112,078**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	890	CY	$ 22.38	$ 23.50	$ 10.07	$ 19,907	$ 20,903	$ 8,958	**$ 49,768**
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	19	EA		$ 400	$ 1,200	$ -	$ 7,712	$ 23,137	**$ 30,849**
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	19	EA		$ 10	$ 15	$ -	$ 193	$ 289	**$ 482**
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	19	EA		$ 400	$ 1,200	$ -	$ 7,626	$ 22,878	**$ 30,504**
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 448,266	$ 298,844	$ -	$ 448,266	$ 298,844	**$ 747,110**
2.26	Excess Materials Disposal to Certified Backfill	4,866	CY		$ 24.5	$ 10.5	$ -	$ 119,212	$ 51,091	**$ 170,303**
2.27	Rock Excavation and Removal	2,660	CY		$ 243	$ 162	$ -	$ 646,272	$ 430,848	**$ 1,077,120**
2.28	Dewatering	10	EA			$ 4,000	$ -	$ -	$ 40,000	**$ 40,000**
2.29	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.30	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.31	Excavated material - stockpile management	3,989	CF		$ 1.0	$ 0.5	$ -	$ 3,989	$ 1,995	**$ 5,984**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 3,083,818**	**$ 3,112,181**	**$ 2,240,355**	**$ 8,436,354**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 320 DCkV 5000 kcmil copper XLPE	16,632	FT	$ 166	$ 100	$ 66	$ 2,760,912	$ 1,656,547	$ 1,104,365	**$ 5,521,824**
3.2	Circuit #1- Cable Splicing- 320 DCkV 5000 kcmil copper XLPE	20	EA	$ 19,349	$ 9,846	$ 2,813	$ 386,980	$ 196,930	$ 56,266	**$ 640,175**
3.3	Circuit #1- Cable Termination- 320 DCkV 5000 kcmil copper XLPE	6	EA	$ 45,410	$ 9,846	$ 2,813	$ 272,460	$ 59,079	$ 16,880	**$ 348,419**
3.4	Circuit #2- Procurement & Installation- 320 DCkV 5000 kcmil copper XLPE	16,632	FT	$ 166	$ 100	$ 66	$ 2,760,912	$ 1,656,547	$ 1,104,365	**$ 5,521,824**
3.5	Circuit #2- Cable Splicing- 320 DCkV 5000 kcmil copper XLPE	20	EA	$ 19,349	$ 9,846	$ 2,813	$ 386,980	$ 196,930	$ 56,266	**$ 640,175**
3.6	Circuit #2- Cable Termination- 320 DCkV 5000 kcmil copper XLPE	6	EA	$ 45,410	$ 9,846	$ 2,813	$ 272,460	$ 59,079	$ 16,880	**$ 348,419**
3.7	Circuit #3- Procurement & Installation- 320 DCkV 5000 kcmil copper XLPE		FT	$ 166	$ 100	$ 66	$ -	$ -	$ -	**$ -**
3.8	Circuit #3- Cable Splicing- 320 DCkV 5000 kcmil copper XLPE		EA	$ 19,349	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.9	Circuit #3- Cable Termination- 320 DCkV 5000 kcmil copper XLPE		EA	$ 45,410	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.10	Link Box & MH racking	10	EA	$ 20,987	$ 12,592	$ 8,395	$ 209,875	$ 125,925	$ 83,950	**$ 419,749**
3.11	Fiber Optic Cable	16,632	FT	$ 7	$ 3	$ 2	$ 123,027	$ 55,395	$ 36,930	**$ 215,351**
3.12	Ground Continuity Conductor	16,632	FT	$ 13	$ 8	$ 5	$ 216,865	$ 125,189	$ 83,459	**$ 425,513**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 7,390,470**	**$ 4,131,620**	**$ 2,559,359**	**$ 14,081,449**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 10,899,888**	**$ 9,424,361**	**$ 5,631,154**	**$ 25,955,403**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 451,665	$ 301,110	$ -	$ 451,665	$ 301,110	**$ 752,776**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		259,554.03		$ -	$ 259,554	$ -	**$ 259,554**
4.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		1,038,216.11		$ -	$ 1,038,216	$ -	**$ 1,038,216**
4.4	Utility PM and Project Oversite	1	LS		259,554.03		$ -	$ 259,554	$ -	**$ 259,554**
4.5	Site Accommodation, Facilities, Storage	1	LS	259,554.03			$ 259,554	$ -	$ -	**$ 259,554**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 1,297,770	$ -	$ -	$ 1,297,770	$ -	**$ 1,297,770**
4.7	LiDAR /GPR	1.0	LS		$ 46,720	$ 31,146	$ -	$ 46,720	$ 31,146	**$ 77,866**
4.8	Geotech	2.00	EA		2,730.00	1,820.00	$ -	$ 5,460	$ 3,640	**$ 9,100**
4.9	Surveying/Staking	1	LS		$ 109,013	$ 72,675	$ -	$ 109,013	$ 72,675	**$ 181,688**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ 40,000		$ -	$ 40,000	$ -	**$ 40,000**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 259,554		$ -	$ 259,554	$ -	**$ 259,554**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 77,866		$ -	$ 77,866	$ -	**$ 77,866**
4.14	Laydown Lease & temporary easement	1	LS		$ 500,000		$ -	$ 500,000	$ -	**$ 500,000**
4.15	Real Estate (Acquisition)	1	LS			$ 1,500	$ -	$ -	$ 1,500	**$ 1,500**
4.16	Legal Fees (Real estate)	1.00	LS		-	45.00	$ -	$ -	$ 45	**$ 45**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 920,000	$ -	$ -	$ 920,000	**$ 920,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 10,899,887.91			$ 967,910	$ -	$ -	**$ 967,910**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 25,955	$ -	$ -	$ 25,955	**$ 25,955**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 1,227,464**	**$ 4,345,372**	**$ 1,356,072**	**$ 6,928,909**

NEXTera Energy- TO39 Core 4
Comp 85 - Sprain Brook Sub to Sprain Brook Landing 345kV Onshore UG Cables -Single circuit - Single circuit
Farragut-Sprain Brook 345KV

Total: $ 72,630,069

NEXTera Energy- TO39 Core 4	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp XX - Ruland Road - Newbridge138 kV #3 (567 Line) Onshore UG Cables -Single circuit				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 802,816	$ 3,964,730	$ 1,586,886	$ 6,354,432
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 5,504,698	$ 5,167,046	$ 3,326,770	$ 13,998,514
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 10,234,014	$ 6,167,008	$ 3,965,048	$ 20,366,071
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 1,876,078	$ 6,488,998	$ 2,208,328	$ 10,573,404
SUBTOTAL (Costs):	$ 18,417,606	$ 21,787,782	$ 11,087,033	$ 51,292,421
CONTRACTOR MARK-UP (OH&P)	$ 3,315,169	$ 3,921,801	$ 1,995,666	$ 9,232,636
SUBTOTAL:	$ 21,732,776	$ 25,709,583	$ 13,082,699	$ 60,525,057
CONTINGENCY ON ENTIRE PROJECT	$ 4,346,555	$ 5,141,917	$ 2,616,540	$ 12,105,011
TOTAL:	$ 26,079,331	$ 30,851,499	$ 15,699,239	$ 72,630,069

Description of Work: Part of Farragut-Sprain Brook 345kV segment -UG cable

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp XX - Ruland Road - Newbridge138 kV #3 (567 Line) Onshore UG Cables -Single circuit										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	3.24	Mile		$ 700,000	$ 300,000	$ -	$ 2,268,000	$ 972,000	**$ 3,240,000**
1.3	Flaggers	100	DAY	$ 1,600	$ 4,800	$ 1,600	$ 160,000	$ 480,000	$ 160,000	**$ 800,000**
1.4	K Rail / Lane Control / Metal Plates	17,107	LF	$ 30	$ 18	$ 12	$ 513,216	$ 307,930	$ 205,286	**$ 1,026,432**
1.5	Police Support	4,000.0	HR		$ 120	$ 27	$ -	$ 480,000	$ 108,000	**$ 588,000**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	40.0	DAY		$ 1,000	$ 300	$ -	$ 40,000	$ 12,000	**$ 52,000**
1.9	Existing Utility Protection	3.24	Mile	$ 40,000	$ 120,000	$ 40,000	$ 129,600	$ 388,800	$ 129,600	**$ 648,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 802,816**	**$ 3,964,730**	**$ 1,586,886**	**$ 6,354,432**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	3.24	Miles		$ 139,800	$ 93,200	$ -	$ 452,952	$ 301,968	**$ 754,920**
2.2	Formwork in Trench	134,218	SF	$ 2	$ 1.5	$ 0.5	$ 268,435	$ 201,326	$ 67,109	**$ 536,870**
2.3	Trench Excavation	6,711	CY		$ 17.5	$ 7.5	$ -	$ 117,440	$ 50,332	**$ 167,772**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	699	SF	$ 50	$ 25	$ 14	$ 34,953	$ 17,127	$ 9,787	**$ 61,866**
2.5	Supply & Install Thermal Backfill	5,872	CY	$ 350	$ 245	$ 105	$ 2,055,207	$ 1,438,645	$ 616,562	**$ 4,110,414**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	2,734	CY	$ 200	$ 125	$ 50	$ 546,750	$ 341,719	$ 136,688	**$ 1,025,157**
2.9	Conduit 8" SCH 40PVC	68,429	LF	$ 28.6	$ 5.7	$ 2.4	$ 1,957,064	$ 387,991	$ 166,282	**$ 2,511,337**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	34,214	LF	$ 3.5	$ 3.15	$ 1.4	$ 120,435	$ 107,775	$ 46,189	**$ 274,399**
2.12	Warning Tape	34,214	LF	$ 0.15	$ 0.25	$ 0.10	$ 5,132	$ 8,554	$ 3,421	**$ 17,107**
2.13	Trench Box Shoring (Vault)	11	EA	$ -	$ 18,079	$ 27,119	$ -	$ 198,870	$ 298,305	**$ 497,175**
2.14	Splice Vault Excavation	1,097	CY		$ 17.5	$ 7.5	$ -	$ 19,199	$ 8,228	**$ 27,427**
2.15	Splice Vault Supply & Installation	11	EA	$ 35,000	$ 16,500	$ 38,500	$ 385,000	$ 181,500	$ 423,500	**$ 990,000**
2.16	Splice Vault Backfill	329	CY		$ 14.0	$ 6.0	$ -	$ 4,608	$ 1,975	**$ 6,582**
2.17	Jack and Bore along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.18	HDD along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.19	Air Test Ducts	102,643	LF			$ 0.25	$ -	$ -	$ 25,661	**$ 25,661**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	6,516	SY	$ 14.00	$ 14.00	$ 7.00	$ 91,218	$ 91,218	$ 45,609	**$ 228,044**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	1,810	CY	$ 22.38	$ 23.50	$ 10.07	$ 40,505	$ 42,530	$ 18,227	**$ 101,262**
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	27	EA		$ 400	$ 1,200	$ -	$ 10,935	$ 32,805	**$ 43,740**
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	27	EA		$ 10	$ 15	$ -	$ 273	$ 410	**$ 683**
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	59	EA		$ 400	$ 1,200	$ -	$ 23,488	$ 70,464	**$ 93,952**
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 10,000	$ 10,000	$ -	$ 10,000	$ 10,000	**$ 20,000**
2.26	Excess Materials Disposal to Certified Backfill	9,722	CY		$ 24.5	$ 10.5	$ -	$ 238,201	$ 102,086	**$ 340,287**
2.27	Rock Excavation and Removal	5,205	CY		$ 243	$ 162	$ -	$ 1,264,887	$ 843,258	**$ 2,108,146**
2.28	Dewatering	11	EA			$ 4,000	$ -	$ -	$ 44,000	**$ 44,000**
2.29	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.30	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.31	Excavated material - stockpile management	7,808	CF		$ 1.0	$ 0.5	$ -	$ 7,808	$ 3,904	**$ 11,712**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 5,504,698**	**$ 5,167,046**	**$ 3,326,770**	**$ 13,998,514**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 345kV 5000 kcmil copper XLPE	53,888	FT	$ 167	$ 100	$ 67	$ 8,999,243	$ 5,399,546	$ 3,599,697	**$ 17,998,485**
3.2	Circuit #1- Cable Splicing- 345kV 5000 kcmil copper XLPE	33	EA	$ 11,722	$ 9,846	$ 2,813	$ 386,826	$ 324,934	$ 92,838	**$ 804,598**
3.3	Circuit #1- Cable Termination- 345kV 5000 kcmil copper XLPE	6	EA	$ 27,805	$ 9,846	$ 2,813	$ 166,830	$ 59,079	$ 16,880	**$ 242,789**
3.4	Circuit #2- Procurement & Installation- 345kV 5000 kcmil copper XLPE		FT	$ 167	$ 100	$ 67	$ -	$ -	$ -	**$ -**
3.5	Circuit #2- Cable Splicing- 345kV 5000 kcmil copper XLPE		EA	$ 11,722	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.6	Circuit #2- Cable Termination- 345kV 5000 kcmil copper XLPE		EA	$ 27,805	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.7	Circuit #3- Procurement & Installation- 345kV 5000 kcmil copper XLPE		FT	$ 167	$ 100	$ 67	$ -	$ -	$ -	**$ -**
3.8	Circuit #3- Cable Splicing- 345kV 5000 kcmil copper XLPE		EA	$ 11,722	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.9	Circuit #3- Cable Termination- 345kV 5000 kcmil copper XLPE		EA	$ 27,805	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.10	Link Box & MH racking	11	EA	$ 28,548	$ 17,129	$ 11,419	$ 314,033	$ 188,420	$ 125,613	**$ 628,066**
3.11	Fiber Optic Cable	17,963	FT	$ 7	$ 3	$ 2	$ 132,869	$ 59,826	$ 39,884	**$ 232,579**
3.12	Ground Continuity Conductor	17,963	FT	$ 13	$ 8	$ 5	$ 234,214	$ 135,204	$ 90,136	**$ 459,554**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 10,234,014**	**$ 6,167,008**	**$ 3,965,048**	**$ 20,366,071**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 16,541,529**	**$ 15,298,784**	**$ 8,878,705**	**$ 40,719,017**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 725,325	$ 483,550	$ -	$ 725,325	$ 483,550	**$ 1,208,874**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		407,190.17		$ -	$ 407,190	$ -	**$ 407,190**
4.3	Construction Project Management / Supervision	1	LS		1,628,760.69		$ -	$ 1,628,761	$ -	**$ 1,628,761**
4.4	Utility PM and Project Oversite	1	LS		407,190.17		$ -	$ 407,190	$ -	**$ 407,190**
4.5	Site Accommodation, Facilities, Storage	1	LS	407,190.17			$ 407,190	$ -	$ -	**$ 407,190**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 2,035,951	$ -	$ -	$ 2,035,951	$ -	**$ 2,035,951**
4.7	LiDAR /GPR	1.0	LS		$ 73,294	$ 48,863	$ -	$ 73,294	$ 48,863	**$ 122,157**
4.8	Geotech	4.00	EA		2,730	1,820	$ -	$ 10,920	$ 7,280	**$ 18,200**
4.9	Surveying/Staking	1	LS		$ 171,020	$ 114,013	$ -	$ 171,020	$ 114,013	**$ 285,033**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ -		$ -	$ -	$ -	**$ -**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 407,190		$ -	$ 407,190	$ -	**$ 407,190**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 122,157		$ -	$ 122,157	$ -	**$ 122,157**
4.14	Laydown Lease & temporary easement	1	LS		$ 500,000		$ -	$ 500,000	$ -	**$ 500,000**
4.15	Real Estate (Acquisition)	1	LS			$ 71,751	$ -	$ -	$ 71,751	**$ 71,751**
4.16	Legal Fees (Real estate)	1.00	LS		-	2,152.53	$ -	$ -	$ 2,153	**$ 2,153**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 1,440,000	$ -	$ -	$ 1,440,000	**$ 1,440,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 16,541,528.51			$ 1,468,888	$ -	$ -	**$ 1,468,888**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 40,719	$ -	$ -	$ 40,719	**$ 40,719**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 1,876,078**	**$ 6,488,998**	**$ 2,208,328**	**$ 10,573,404**

NEXTera Energy- TO39 Core 4

Comp 87. Farragut to Sprain Brook Landing 345kV Offshore Submarine Cables - Single circuit

Farragut-Sprain Brook 345KV

Total: $ 588,938,916

Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables - Three circuits (three lines, single circuit each)EGC-Dunwoodie 345KV / EGC-Spra	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables - Three circuits (three lines, single circuit each) EGC-Dunwoodie 345KV / EGC-Sprain Brook 345KV/ Ruland-Sprain Brook 345KV				
1. SUBMARINE CABLE	$ 139,758,995	$ 117,082,632	$ 74,945,444	$ 331,787,071
2. TRANSITION STATION	$ 416,351	$ 564,240	$ 435,307	$ 1,415,898
3. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	$ 15,667,460	$ 50,496,889	$ 16,549,995	$ 82,714,345
SUBTOTAL (Costs):	$ 155,842,806	$ 168,143,761	$ 91,930,747	$ 415,917,314
CONTRACTOR MARK-UP (OH&P)	$ 28,051,705	$ 30,265,877	$ 16,547,534	$ 74,865,116
SUBTOTAL:	$ 183,894,511	$ 198,409,638	$ 108,478,282	$ 490,782,430
CONTINGENCY ON ENTIRE PROJECT	$ 36,778,902	$ 39,681,928	$ 21,695,656	$ 98,156,486
TOTAL:	$ 220,673,413	$ 238,091,565	$ 130,173,938	$ 588,938,916

Description of Work: Part of Farragut-Sprain Brook 345kV segment (Include HDD's to get onshore at both ends of route)-submarine cable

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp										
1. SUBMARINE CABLE										
1.1	Submarine Cable - 1600 mm2 Tri-Core + Vessel Install	252,067	FT	$ 537	$ 400	$ 250	$ 135,360,086	$ 100,826,880	$ 63,016,800	**$ 299,203,766**
1.2	Submarine Cable- transportation from manufacture location to site	1	LS		$ 12,758,038	$ 8,505,358	$ -	$ 12,758,038	$ 8,505,358	**$ 21,263,396**
1.3	Submarine Cable Splicing if Required 1600 mm2 Tri-Core	-	EA				$ -	$ -	$ -	**$ -**
1.4	Cable Transition Splice	4	EA	$ 27,911	$ 37,214	$ 27,911	$ 111,643	$ 148,857	$ 111,643	**$ 372,143**
1.5	Outdoor Termination	4	EA	$ 27,911	$ 37,214	$ 27,911	$ 111,643	$ 148,857	$ 111,643	**$ 372,143**
1.6	"Shore End" (shallow) Diver Cable Install						$ -	$ -	$ -	**$ -**
1.7	Fiber Optic Cable	126,034	FT	$ 7			$ 932,271	$ -	$ -	**$ 932,271**
1.8	Ground Continuity Conductor	126,034	FT	$ 13			$ 1,643,352	$ -	$ -	**$ 1,643,352**
1.9							$ -	$ -	$ -	**$ -**
1.10	Jack and Bore along Route	0	LF	$ 1,600	$ 3,200	$ 3,200	$ -	$ -	$ -	**$ -**
1.11	HDD along Route	2,000	LF	$ 800	$ 1,600	$ 1,600	$ 1,600,000	$ 3,200,000	$ 3,200,000	**$ 8,000,000**
TOTAL - Submarine cable:							$ 139,758,995	$ 117,082,632	$ 74,945,444	**$ 331,787,071**
2. TRANSITION STATION										
2.1	Site Clearing	0.5	ACRE	-	10,800.00	7,200.00	$ -	$ 5,400	$ 3,600	**$ 9,000**
2.2	Demolition	0	LS	-	60,000.00	40,000.00	$ -	$ -	$ -	**$ -**
2.3	Strip and Dispose Top Soil	807	CY		24.50	10.50	$ -	$ 19,763	$ 8,470	**$ 28,233**
2.4	Site Grading- Excavation for Substation Pad	2,420	CY		9.00	6.00	$ -	$ 21,780	$ 14,520	**$ 36,300**
2.5	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	1,307	CY		21.00	9.00	$ -	$ 27,442.80	$ 11,761.20	**$ 39,204.00**
2.6	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	1,960	CY		2.40	1.60	$ -	$ 4,704	$ 3,136	**$ 7,841**
2.7	Site Grading -Fill for Substation Pad (import, compacted in place)	1,307	CY	25.00	2.40	1.60	$ 32,670	$ 3,136	$ 2,091	**$ 37,897**
2.8	Install substation 8" pad base	2,420	SY	11.00	6.00	4.00	$ 26,620	$ 14,520	$ 9,680	**$ 50,820**
2.9	Site Surfacing - Aggregate 6" Thick	2,420	SY	16.50	4.50	3.00	$ 39,930	$ 10,890	$ 7,260	**$ 58,080**
2.10	7' Station Fence w/ Barbed Wire & Grounding	450	LF	13.85	13.85	6.92	$ 6,232	$ 6,232	$ 3,116	**$ 15,579**
2.11	20' Slide Gate & Grounding	1	EA	8,100.00	3,245.00	1,305.00	$ 8,100	$ 3,245	$ 1,305	**$ 12,650**
2.12	4' Pedestrian gate	1	EA	2,500.00	1,000.00	350.00	$ 2,500	$ 1,000	$ 350	**$ 3,850**
2.13	Erosion Control-Silt fence install & remove	750	LF	2.41	3.16	0.72	$ 1,808	$ 2,370	$ 540	**$ 4,718**
2.14	Temporary fencing	500	LF	7.50	5.25	2.25	$ 3,750	$ 2,625	$ 1,125	**$ 7,500**
2.15	345kV, Cable sealing end - 3 Ph	32	CY	703.89	804.44	502.78	$ 22,595	$ 25,823	$ 16,139	**$ 64,556**
2.16	345kV, lighting arrester	32	CY	703.89	804.44	502.78	$ 22,595	$ 25,823	$ 16,139	**$ 64,556**
2.17	345kV, Cable sealing end - 3 Ph	6	EA	8,346.00	5,758.74	3,839.16	$ 50,076	$ 34,552	$ 23,035	**$ 107,663**
2.18	345kV, lighting arrester	6	EA	4,810.00	2,886.00	1,924.00	$ 28,860	$ 17,316	$ 11,544	**$ 57,720**
2.19	AL. Bus Tubing, 5" SCH 80	630	LF	25.00	184.94	123.29	$ 15,750	$ 116,511	$ 77,674	**$ 209,935**
2.20	AL. Bus fittings	1	LS	12,600.00	12,600.00	6,300.00	$ 12,600	$ 12,600	$ 6,300	**$ 31,500**
2.21	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	400	LF	2.09	-	-	$ 836	$ -	$ -	**$ 836**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.22	Caweld, DSA, 4/0 , T, CROSS	200	EA	165.00	75.00		$ 33,000	$ 15,000	$ -	**$ 48,000**
2.23	Ground Rod, 3/4" x 15'	18	EA	135.00	67.50	7.50	$ 2,430	$ 1,215	$ 135	**$ 3,780**
2.24	Trench Box Shoring (Vault)	2	EA	$ -	$ 18,079	$ 27,119	$ -	$ 36,158	$ 54,237	**$ 90,395**
2.25	Splice Vault Excavation	1,294	CY		$ 17.5	$ 7.5	$ -	$ 22,649	$ 9,707	**$ 32,356**
2.26	Splice Vault Supply & Installation	2	EA	$ 45,500	$ 21,450	$ 50,050	$ 91,000	$ 42,900	$ 100,100	**$ 234,000**
2.27	Splice Vault Backfill	388	CY		$ 14.0	$ 6.0	$ -	$ 5,436	$ 2,330	**$ 7,765**
2.28	Restoration (incl. Paving)	1	LS	$ 15,000.00	$ 20,000.00	$ 15,000.00	$ 15,000	$ 20,000	$ 15,000	**$ 50,000**
2.29	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 35,000	$ 15,000	$ -	$ 35,000	$ 15,000	**$ 50,000**
2.30	Excess Materials Disposal to Certified Backfill	1,178	CY		$ 24.5	$ 10.5	$ -	$ 28,855	$ 12,366	**$ 41,221**
2.31	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	**$ -**
2.32	Dewatering	2	EA			$ 4,000	$ -	$ -	$ 8,000	**$ 8,000**
2.33	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.34	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.35	Excavated material - stockpile management	1,294	CF		$ 1.0	$ 0.5	$ -	$ 1,294	$ 647	**$ 1,941**
2.36							$ -	$ -	$ -	**$ -**
TOTAL - Transition station :							$ 416,351	$ 564,240	$ 435,307	**$ 1,415,898**
Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables							$ 140,175,346	$ 117,646,872	$ 75,380,752	**$ 333,202,969**
3. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization									
3.1	Mob / Demob	1	LS		$ 6,000,000	$ 4,000,000	$ -	$ 6,000,000	$ 4,000,000	**$ 10,000,000**
	Project Management, Material Handling & Amenities									
3.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		3,332,029.69		$ -	$ 3,332,030	$ -	**$ 3,332,030**
3.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		13,328,118.77		$ -	$ 13,328,119	$ -	**$ 13,328,119**
3.4	Utility PM and Project Oversite	1	LS		3,332,029.69		$ -	$ 3,332,030	$ -	**$ 3,332,030**
3.5	Site Accommodation, Facilities, Storage	1	LS	3,332,029.69			$ 3,332,030	$ -	$ -	**$ 3,332,030**
	Engineering									
3.6	Design Engineering	1	LS		$ 16,660,148		$ -	$ 16,660,148	$ -	**$ 16,660,148**
3.7	Surveying/Staking	1	LS		$ 2,332,421		$ -	$ 2,332,421	$ -	**$ 2,332,421**
3.8	Geotech	10.00	EA		2,730.00	1,820.00	$ -	$ 27,300	$ 18,200	**$ 45,500**
	Testing & Commissioning / Inspection									
3.9	Testing & Commissioning / End to End Testing of Subsea Cable	4	EA		$ 80,000		$ -	$ 320,000	$ -	**$ 320,000**
3.10	Post Cable-Lay Inspection		EA				$ -	$ -	$ -	**$ -**
	Permitting and Additional Costs									
3.10	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 3,332,030		$ -	$ 3,332,030	$ -	**$ 3,332,030**
3.11	Environmental-special studies/investigation	-	LS				$ -	$ -	$ -	**$ -**
3.12	Warranties / LOC's	1	LS		$ 999,609		$ -	$ 999,609	$ -	**$ 999,609**
3.13	Laydown Lease & temporary easement	1	LS		$ 500,000		$ -	$ 500,000	$ -	**$ 500,000**
3.14	Real Estate (Acquisition)	1	LS		$ -	$ 749,316	$ -	$ -	$ 749,316	**$ 749,316**
3.15	Legal Fees (Real estate)	1.00	LS		-	22,479.48	$ -	$ -	$ 22,479	**$ 22,479**
3.16	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
3.17	Insurance (specialty, e.g. railroad)		Crossing				$ -	$ -	$ -	**$ -**
3.19	Allowance for Funds Used During Construction (AFUDC)		LS				$ -	$ -	$ -	**$ -**
3.20	Sales Tax on Materials	8.8%	LS	$ 140,175,346			$ 12,335,430	$ -	$ -	**$ 12,335,430**
3.21	Contractor Permits	1	LS		$ 333,203		$ -	$ 333,203	$ -	**$ 333,203**
3.22	Payment & Performance Bond	1	LS			$ 11,760,000	$ -	$ -	$ 11,760,000	**$ 11,760,000**
3.23	Marine / Specialty Insurance		LS				$ -	$ -	$ -	**$ -**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 15,667,460	$ 50,496,889	$ 16,549,995	**$ 82,714,345**

NEXTera Energy- TO44 Enhanced 2
Comp 210 - Holbrook -Pilgrim 138 kV Onshore UG Cables -Single circuit
(Holbrook -Pilgrim 138kv)

Total: $ 238,775,725

NEXTera Energy- TO44 Enhanced 2				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
Comp 210 - Holbrook -Pilgrim 138 kV Onshore UG Cables -Single circuit(Holbrook -Pilgrim 138kv)				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 2,897,280	$ 14,241,968	$ 5,708,112	$ 22,847,360
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 20,396,697	$ 16,629,197	$ 10,827,799	$ 47,853,693
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 31,216,810	$ 19,377,857	$ 12,479,700	$ 63,074,366
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 6,178,312	$ 21,187,728	$ 7,485,465	$ 34,851,505
SUBTOTAL (Costs):	$ 60,689,100	$ 71,436,750	$ 36,501,075	$ 168,626,925
CONTRACTOR MARK-UP (OH&P)	$ 10,924,038	$ 12,858,615	$ 6,570,193	$ 30,352,846
SUBTOTAL:	$ 71,613,137	$ 84,295,365	$ 43,071,268	$ 198,979,771
CONTINGENCY ON ENTIRE PROJECT	$ 14,322,627	$ 16,859,073	$ 8,614,254	$ 39,795,954
TOTAL:	$ 85,935,765	$ 101,154,438	$ 51,685,522	$ 238,775,725

Description of Work: Holbrook to Pilgrim. 5000 kcmil copper XLPE, single cable per phase.

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
Comp 210 - Holbrook -Pilgrim 138 kV Onshore UG Cables -Single circuit(Holbrook -Pilgrim 138kv)										
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT										
1.1	Environmental BMPs / SWPPP Installation, Maintenance & Repairs	0	LF	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
1.2	Existing Utility Conflict and Relocation	11.70	Mile		$ 700,000	$ 300,000	$ -	$ 8,190,000	$ 3,510,000	**$ 11,700,000**
1.3	Flaggers	360	DAY	$ 1,600	$ 4,800	$ 1,600	$ 576,000	$ 1,728,000	$ 576,000	**$ 2,880,000**
1.4	K Rail / Lane Control / Metal Plates	61,776	LF	$ 30	$ 18	$ 12	$ 1,853,280	$ 1,111,968	$ 741,312	**$ 3,706,560**
1.5	Police Support	14,400.0	HR		$ 120	$ 27	$ -	$ 1,728,000	$ 388,800	**$ 2,116,800**
1.6	Additional Traffic Management		LS				$ -	$ -	$ -	**$ -**
1.7	Access / Clearing Costs		LS				$ -	$ -	$ -	**$ -**
1.8	Snow Removal	80.0	DAY		$ 1,000	$ 300	$ -	$ 80,000	$ 24,000	**$ 104,000**
1.9	Existing Utility Protection	11.70	Mile	$ 40,000	$ 120,000	$ 40,000	$ 468,000	$ 1,404,000	$ 468,000	**$ 2,340,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 2,897,280**	**$ 14,241,968**	**$ 5,708,112**	**$ 22,847,360**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	11.70	Miles		$ 139,800	$ 93,200	$ -	$ 1,635,660	$ 1,090,440	**$ 2,726,100**
2.2	Formwork in Trench	479,784	SF	$ 2	$ 1.5	$ 0.5	$ 959,568	$ 719,676	$ 239,892	**$ 1,919,136**
2.3	Trench Excavation	39,982	CY		$ 17.5	$ 7.5	$ -	$ 699,685	$ 299,865	**$ 999,550**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	2,499	SF	$ 50	$ 25	$ 14	$ 124,944	$ 61,222	$ 34,984	**$ 221,150**
2.5	Supply & Install Thermal Backfill	20,991	CY	$ 350	$ 245	$ 105	$ 7,346,693	$ 5,142,685	$ 2,204,008	**$ 14,693,385**
2.6	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.7	Native Backfill -direct bury conduits sys Trench	0	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.8	Supply & Install Ductbank Concrete	9,772	CY	$ 200	$ 125	$ 50	$ 1,954,453	$ 1,221,533	$ 488,613	**$ 3,664,600**
2.9	Conduit 8" SCH 40PVC	247,104	LF	$ 28.6	$ 5.7	$ 2.4	$ 7,067,174	$ 1,401,080	$ 600,463	**$ 9,068,717**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	123,552	LF	$ 3.5	$ 3.15	$ 1.4	$ 434,903	$ 389,189	$ 166,795	**$ 990,887**
2.12	Warning Tape	123,552	LF	$ 0.15	$ 0.25	$ 0.10	$ 18,533	$ 30,888	$ 12,355	**$ 61,776**
2.13	Trench Box Shoring (Vault)	37	EA	$ -	$ 18,079	$ 27,119	$ -	$ 668,927	$ 1,003,390	**$ 1,672,316**
2.14	Splice Vault Excavation	5,065	CY		$ 17.5	$ 7.5	$ -	$ 88,636	$ 37,987	**$ 126,622**
2.15	Splice Vault Supply & Installation	37	EA	$ 35,000	$ 16,500	$ 38,500	$ 1,295,000	$ 610,500	$ 1,424,500	**$ 3,330,000**

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Labor Supply Rate	Const. Equipment Rate	Material Supply Cost	Labor Supply Cost	Const. Equipment Cost	TOTAL
2.16	Splice Vault Backfill	1,519	CY		$ 14.0	$ 6.0	$ -	$ 21,273	$ 9,117	**$ 30,389**
2.17	Jack and Bore along Route	915	LF	$ 800	$ 1,600	$ 1,600	$ 732,000	$ 1,464,000	$ 1,464,000	**$ 3,660,000**
2.18	HDD along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.19	Air Test Ducts	370,656	LF			$ 0.25	$ -	$ -	$ 92,664	**$ 92,664**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	22,923	SY	$ 14.00	$ 14.00	$ 7.00	$ 320,924	$ 320,924	$ 160,462	**$ 802,310**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	6,368	CY	$ 22.38	$ 23.50	$ 10.07	$ 142,506	$ 149,631	$ 64,127	**$ 356,264**
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	98	EA		$ 400	$ 1,200	$ -	$ 39,089	$ 117,267	**$ 156,356**
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	98	EA		$ 10	$ 15	$ -	$ 977	$ 1,466	**$ 2,443**
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	210	EA		$ 400	$ 1,200	$ -	$ 83,962	$ 251,887	**$ 335,849**
2.25	Additional misc. testing allowance (Native Backfill, Asphalt Density, Concrete Curb etc.)	1	LS		$ 448,266	$ 298,844	$ -	$ 448,266	$ 298,844	**$ 747,110**
2.26	Excess Materials Disposal to Certified Backfill	56,586	CY		$ 24.5	$ 10.5	$ -	$ 1,386,348	$ 594,149	**$ 1,980,498**
2.27	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	**$ -**
2.28	Dewatering	37	EA			$ 4,000	$ -	$ -	$ 148,000	**$ 148,000**
2.29	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.30	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.31	Excavated material - stockpile management	45,047	CF		$ 1.0	$ 0.5	$ -	$ 45,047	$ 22,523	**$ 67,570**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 20,396,697**	**$ 16,629,197**	**$ 10,827,799**	**$ 47,853,693**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 138kV 5000 kcmil copper XLPE	194,594	FT	$ 145	$ 87	$ 58	$ 28,216,188	$ 16,929,713	$ 11,286,475	**$ 56,432,376**
3.2	Circuit #1- Cable Splicing- 138kV 5000 kcmil copper XLPE	111	EA	$ 5,898	$ 9,846	$ 2,813	$ 654,678	$ 1,092,959	$ 312,274	**$ 2,059,911**
3.3	Circuit #1- Cable Termination- 138kV 5000 kcmil copper XLPE	6	EA	$ 5,664	$ 9,846	$ 2,813	$ 33,984	$ 59,079	$ 16,880	**$ 109,943**
3.4	Circuit #2- Procurement & Installation- 138kV 5000 kcmil copper XLPE		FT	$ 145	$ 87	$ 58	$ -	$ -	$ -	**$ -**
3.5	Circuit #2- Cable Splicing- 138kV 5000 kcmil copper XLPE		EA	$ 5,898	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.6	Circuit #2- Cable Termination- 138kV 5000 kcmil copper XLPE		EA	$ 5,664	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.7	Circuit #3- Procurement & Installation- 138kV 5000 kcmil copper XLPE		FT	$ 145	$ 87	$ 58	$ -	$ -	$ -	**$ -**
3.8	Circuit #3- Cable Splicing- 138kV 5000 kcmil copper XLPE		EA	$ 5,898	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.9	Circuit #3- Cable Termination- 138kV 5000 kcmil copper XLPE		EA	$ 5,664	$ 9,846	$ 2,813	$ -	$ -	$ -	**$ -**
3.10	Link Box & MH racking	37	EA	$ 26,659	$ 15,995	$ 10,664	$ 986,383	$ 591,830	$ 394,553	**$ 1,972,766**
3.11	Fiber Optic Cable	64,865	FT	$ 7	$ 3	$ 2	$ 479,805	$ 216,039	$ 144,026	**$ 839,869**
3.12	Ground Continuity Conductor	64,865	FT	$ 13	$ 8	$ 5	$ 845,772	$ 488,237	$ 325,492	**$ 1,659,501**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 31,216,810**	**$ 19,377,857**	**$ 12,479,700**	**$ 63,074,366**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 54,510,787**	**$ 50,249,022**	**$ 29,015,610**	**$ 133,775,420**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 2,377,939	$ 1,585,293	$ -	$ 2,377,939	$ 1,585,293	**$ 3,963,232**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		1,337,754.20		$ -	$ 1,337,754	$ -	**$ 1,337,754**
4.3	Construction Project Management / Supervision	1	LS		5,351,016.79		$ -	$ 5,351,017	$ -	**$ 5,351,017**
4.4	Utility PM and Project Oversite	1	LS		1,337,754.20		$ -	$ 1,337,754	$ -	**$ 1,337,754**
4.5	Site Accommodation, Facilities, Storage	1	LS	1,337,754.20			$ 1,337,754	$ -	$ -	**$ 1,337,754**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 6,688,771	$ -	$ -	$ 6,688,771	$ -	**$ 6,688,771**
4.7	LiDAR /GPR	1.0	LS		$ 240,796	$ 160,531	$ -	$ 240,796	$ 160,531	**$ 401,326**
4.8	Geotech	12.00	EA		2,730.00	1,820.00	$ -	$ 32,760	$ 21,840	**$ 54,600**
4.9	Surveying/Staking	1	LS		$ 561,857	$ 374,571	$ -	$ 561,857	$ 374,571	**$ 936,428**
	Testing & Commissioning									
4.10	Testing & Commissioning of T-Line and Equipment	1	EA		$ 20,000		$ -	$ 20,000	$ -	**$ 20,000**
	Permitting, Indirects and Additional Costs									
4.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 1,337,754		$ -	$ 1,337,754	$ -	**$ 1,337,754**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 401,326		$ -	$ 401,326	$ -	**$ 401,326**
4.14	Laydown Lease & temporary easement	1	LS		$ 1,500,000		$ -	$ 1,500,000	$ -	**$ 1,500,000**
4.15	Real Estate (Acquisition)	1	LS			$ 436,364	$ -	$ -	$ 436,364	**$ 436,364**
4.16	Legal Fees (Real estate)	1.00	LS		-	13,090.92	$ -	$ -	$ 13,091	**$ 13,091**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS			$ 4,760,000	$ -	$ -	$ 4,760,000	**$ 4,760,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 54,510,787.43			$ 4,840,558	$ -	$ -	**$ 4,840,558**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 133,775	$ -	$ -	$ 133,775	**$ 133,775**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 6,178,312**	**$ 21,187,728**	**$ 7,485,465**	**$ 34,851,505**

NEXTera Energy- TO44 Enhanced 2	
ESTIMATE ASSUMPTIONS & CLARIFICATIONS	
General assumptions/clarifications	
1	This TO44 estimating workbook includes the substation and transmission line components listed in the sheet.
2	Based on 2022 pricing
3	The estimate contains 20% contingency amount. To cover unknow risk allowance. Costs include contractor mark-up (6%-trunkey cost (i.e. HVDC, GIS), 18%-others) for OH and profit
4	Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). Major equipment pricing is based on budgetary quotes from equipment suppliers. However, we have not engaged any subcontractors or material venders for formal quotes for minor materials.
5	Cost for dust control is excluded, we assume that water trucks for construction are not required.
6	Excavation currently excludes rock. More detail required to quantify rock, as well as construction means and methods allowed. Rock adder is approximately $405/CY for standard rock excavation.
7	Work schedule assumes working 5 days per week, 10 hours per day. The construction durations for each segment are based on Attachment B.04.1_Addendum Construction Schedule Revision 0.
8	Pricing assumes union labor will be required.
9	In indirect section, we assume that these construction contracts will be let on an EPC type basis (perhaps progressive design-build or similar contracting model) and that the construction contractor would have significant input into the pre-con planning stage. The project management staffing make up is based on the project scope and duration, for the substation interconnection/upgrade project only assume one construction manager and one environmental coordinator to meet EMCP requirement.
10	Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tippy facility. Since there is not enough information to provide a quantified estimate for this item, allowance is included in the contingency monies.
11	An allowance of 5% for transmission design and engineering is included in indirect section, cost of turnkey GIS and HVDC excluded
12	An allowance of 8% for substation design and engineering is included in indirect section, cost of turnkey GIS and HVDC excluded
13	An allowance of 0.3% for GPR of the transmission line is included in indirect section
14	An allowance of 0.7% for survey and staking of the tline and substation layout is included in indirect section, cost of turnkey GIS and HVDC excluded for substations.
15	An allowance of 3.75% for substation testing and commissioning is included in indirect section, cost of turnkey GIS and HVDC excluded
16	An allowance of $20,000 per circuit for transmission line testing and commissioning is included in indirect section
17	An allowance of 1% for environmental Licensing & Permitting Costs & related legal cost is included in indirect section; and cost for environmental-special studies/investigation is quantified and included for required segment. Cost of turnkey GIS and HVDC excluded for substations.
18	The estimate does not include cost for insurance, assume it will be provided by he owner (i.e. OCIP) . The estimate includes cost for bond (2% of the total contract value)
19	New York State sales tax of 8.8% is included for all material pricing
20	A mob of 3% and demob of 2% has been included per segment (percentage is based on construction labor and equipment costs), except submarine segment.
21	An allowance of 1% for Preconstruction Supervision (Engineering, Permitting, Procurement) is included in indirect section.
22	An allowance of 4% for Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) is included in indirect section.
23	An allowance of 1% for Utility PM and Project Oversite is included in indirect section.
24	An allowance of 1% for Site Accommodation, Facilities, Storage is included in indirect section.
25	An allowance of 3% of the real estate acquisition cost is included for real estate legal fees.
Tline assumptions/clarifications	
26	Assumed all UG conduits are installed with concrete encasement and no splicing point included inside substations. The conduit trench details please refer to each tab.
27	Not enough detail to quantify existing utility relocation. A plug of $1M per mile has been included for relocation of existing utilities and $200K / mile for protection of existing utilities.
28	Traffic control allows for k-rail, metal sheet plates and lane control for underground sections. We have not included for construction of new roads or any permanent traffic measures.
29	The trench excavation width and depth assumed details are shown in each tab.
30	The MH counts are based on our field and desktop review
31	Assumes that 30% of native spoils from vault excavation will be used as backfill.
32	Off haul / disposal spoils quantity includes a 1.3X multiplier for truck load.
33	Assumed asphalt paving repair includes a 2" surfacing course pavement
34	Additional 5% of route length is added to UG cable length, 10% of route length added to submarine cable length
35	All Tline segments construction period is based on milestone schedule provided
36	Spare conduit has been added to all UG conduit system
37	The HDD, jack&bore quantity is based on information provided by the developer.
38	Existing 138/345kv UG upgrade, assumed no work is required for existing conduit systems, the splice quantity is pending on when the existing splice vault quantity is provided. The 138KV UG conductor cost is based on 4000 kcmil XLPE cable.
39	Assume the cable trench in between transition manholes and transition station will be covered by submarine cable supplier/contractor
40	Please also refer to each tab for component specific assumptions and clarifications
41	The submarine cable quantity and cost are calculated based on # of passes and the total cable length. We assume i.e 3 circuits, 2 cable per circuit, so there are 6 passes.
42	For transmission lines that are routed on the west side of the LI Sound (Bronx and Westchester County) assume 40% rock excavation.
Substation assumptions/clarifications -	
43	Site grading: Excavation quantity in substations is based on 3', fill quantity is based on 60% site borrow and 40% import.
44	Substation new access road access road quantity is based on interior access road only, no new exterior access roads are required based on the plot drawings provided.
45	Substation pad is based on 8" base and 6" surfacing rock.
46	If required, the firewalls for transformers/PAR/Reactors are assumed 30' tall.
47	All of the enclosure buildings are based on dimensions shown on the site plot plan, cost includes pre-engineered building structure, HVAC, mechanical, fire protection.
48	Substation quantity takeoff is based on the plot and one line drawings provided, takeoff assumptions details please see each tab
49	Assume concrete cantilever retaining wall for Sprain Brook expansion, the assumed dimension details please see the tab
50	Assume 70% rock for Sprain brook 345kV expansion excavation
51	Assume 90% rock for new Sprain brook HVDC yard excavation