NEXTera Energy- TO38 Core 3

Revision: 1

NEXTera Energy- TO38 Core 3 -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 252 East Garden City 345/138 kV Substation Upgrades	$ 169,585,051
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	$ 1,095,138
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	$ 322,019,268
Direct Labor, Material & Equipment Costs	12. Farragut 345kV Substation Expansion	$ 67,975,498
Direct Labor, Material & Equipment Costs	13 - Northport 345/138kV AIS & 138KV GIS Substation	$ 56,102,022
Direct Labor, Material & Equipment Costs	14.Pilgrim 138kV Substation Upgrades	$ 1,090,486
Direct Labor, Material & Equipment Costs	15. Exisitng Ruland Road 138 kV Substation Upgrades	$ 1,077,395
Direct Labor, Material & Equipment Costs	16. Existing East Garden City 138 kV Substation Upgrades	$ 15,046,417
	SUBTOTAL (Costs):	**$ 954,918,446**
	CONTRACTOR MARK-UP (OH&P)	**$ 153,400,520**
	SUBTOTAL (AFTER MU):	**$ 1,108,318,966**
	CONTINGENCY ON ENTIRE PROJECT	**$ 221,663,793**
	Substation TOTAL:	**$ 1,329,982,760**
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(Northport To Dunwoodie 345 kV)	$ 106,106,649
Direct Labor, Material & Equipment Costs	Comp 4C - Sprain Brook To New Rochelle Landing Onshore 345kV UG Cables -Dobule circuits(EGC To Sprain Brook 345 kV / Ruland To Sprain Brook 345 kV)	$ 195,310,866
Direct Labor, Material & Equipment Costs	Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables - Double circuits (two lines, single circuit each) EGC-SprainBrook 345KV/ Ruland-SprainBrook 345KV	$ 296,059,014
Direct Labor, Material & Equipment Costs	Comp 18. New Rochelle Landing to Northport Landing 345kV Offshore Submarine Cables - Single circuit EGC-SprainBrook 345KV/ Ruland-SprainBrook 345KV	$ 398,396,284
Direct Labor, Material & Equipment Costs	Comp 3 - East Garden City To Hempstead Harbor Landing 345kV Onshore UG Cables -Single circuit(EGC To Sprain Brook 345 kV)	$ 117,895,360
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 Graden City To Valley Stream 345kV Onshore UG Cables -Triple circuits	$ 222,396,395
Direct Labor, Material & Equipment Costs	Comp 8C - Rebuld: 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 249 - Jamaica To Farragut 345kV Onshore UG Cables -Single circuit(EGC-Farragut 345kv)	$ 131,952,439
Direct Labor, Material & Equipment Costs	Comp 247 - Jamaica to East Garden City 138 and 345kV Onshore UG Cables -Double & Single circuit(EGC-Jamaica 138kv & EGC-Farragut 345kv)	$ 235,289,469
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	$ 8,268,700
	SUBTOTAL (Costs):	**$ 2,079,419,001**
	CONTRACTOR MARK-UP (OH&P)	**$ 374,295,420**
	SUBTOTAL (AFTER MU):	**$ 2,453,714,421**
	CONTINGENCY ON ENTIRE PROJECT	**$ 490,742,884**
	Transmission Line TOTAL:	**$ 2,944,457,306**
	NEXTera Energy- TO38 Core 3Total Direct Cost	**$ 4,274,440,065**

NEXTera Energy- TO38 Core 3 -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 252 East Garden City 345/138 kV Substation Upgrades	$ 79,716,796
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	$ 334,752
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	$ 99,114,306
Indirect Costs	12. Farragut 345kV Substation Expansion	$ 18,896,969
Indirect Costs	13 - Northport 345/138kV AIS & 138KV GIS Substation	$ 15,146,144
Indirect Costs	14.Pilgrim 138kV Substation Upgrades	$ 347,380
Indirect Costs	15. Exisitng Ruland Road 138 kV Substation Upgrades	$ 356,246
Indirect Costs	16. Existing East Garden City 138 kV Substation Upgrades	$ 4,938,374
	SUBTOTAL (Costs):	**$ 312,501,123**
	CONTRACTOR MARK-UP (OH&P)	**$ 56,250,202**
	SUBTOTAL (AFTER MU):	**$ 368,751,325**
	CONTINGENCY ON ENTIRE PROJECT	**$ 73,750,265**
	Substation TOTAL:	**$ 442,501,590**
Transmission Line Indirect Costs		***Total Each Segment***
Indirect Costs	Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(Northport To Dunwoodie 345 kV)	$ 27,103,560
Indirect Costs	Comp 4C - Sprain Brook To New Rochelle Landing Onshore 345kV UG Cables -Dobule circuits(EGC To Sprain Brook 345 kV / Ruland To Sprain Brook 345 kV)	$ 49,373,632
Indirect Costs	Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables - Double circuits (two lines, single circuit each) EGC-SprainBrook 345KV/ Ruland-SprainBrook 345KV	$ 74,702,824
Indirect Costs	Comp 18. New Rochelle Landing to Northport Landing 345kV Offshore Submarine Cables - Single circuit EGC-SprainBrook 345KV/ Ruland-SprainBrook 345KV	$ 95,795,299
Indirect Costs	Comp 3 - East Garden City To Hempstead Harbor Landing 345kV Onshore UG Cables -Single circuit(EGC To Sprain Brook 345 kV)	$ 30,601,618
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 Graden City To Valley Stream 345kV Onshore UG Cables -Triple circuits	$ 56,015,535
Indirect Costs	Comp 8C - Rebuld: 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 249 - Jamaica To Farragut 345kV Onshore UG Cables -Single circuit(EGC-Farragut 345kv)	$ 34,205,384
Indirect Costs	Comp 247 - Jamaica to East Garden City 138 and 345kV Onshore UG Cables -Double & Single circuit(EGC-Jamaica 138kv & EGC-Farragut 345kv)	$ 59,676,335
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	$ 3,645,378
	SUBTOTAL (Costs):	**$ 525,377,130**
	CONTRACTOR MARK-UP (OH&P)	**$ 94,567,883**
	SUBTOTAL (AFTER MU):	**$ 619,945,013**
	CONTINGENCY ON ENTIRE PROJECT	**$ 123,989,003**
	Transmission Line TOTAL:	**$ 743,934,016**
	NEXTera Energy- TO38 Core 3 Total Indirect Cost	**$ 1,186,435,606**

NEXTera Energy- TO38 Core 3 Total	**$ 5,460,875,671**

NEXTera Energy- TO38 Core 3

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

Total: $ 130,328,792

NEXTera Energy- TO38 Core 3				
	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, and modification at exisitng 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
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**

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
1.19	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	$ -	$ -	$ -	**$ -**
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	$ -	$ -	$ -	**$ -**
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	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	-	EA				$ -	$ -	$ -	**$ -**
3.2	345kV, A Frame 70'	-	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	-	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	-	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	3	EA	8,346.00	5,758.74	3,839.16	$ 25,038	$ 17,276	$ 11,517	**$ 53,832**
3.11	345kV, CCVT	-	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	-	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	-	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	-	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
3.19	138kV, A Frame 50'	-	EA	33,000.00	19,800.00	13,200.00	$ -	$ -	$ -	**$ -**
3.20	345kV Gas-Insulated Bus Conductor	-	LF	550.00	275.00	82.50	$ -	$ -	$ -	**$ -**
3.21	345kV Gas-Insulated Bus Conductor-elbow	-	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**

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	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										
4.1	345kV, GIS air terminal	-	EA				$ -	$ -	$ -	**$ -**
4.2	345kV, GIS Cable sealing end	-	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	-	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	-	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	-	EA				$ -	$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker (GIS), outdoor rated-Line surge Arrester (3phase)	-	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	-	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.17	Transport & Testing- Phase Angle Regulating Transformer, 138kV	-	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	-	EA	920,000.00	13,559.00	5,811.00	$ -	$ -	$ -	**$ -**
4.20	138kV, Disconnect Switch	-	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	-	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	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60	4	EA	21,328.12	17,062.49	4,265.62	$ 85,312	$ 68,250	$ 17,062	**$ 170,625**
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**

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 Annu	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	3	EA	21,328.12	17,062.49	4,265.62	$ 63,984	$ 51,187	$ 12,797	**$ 127,969**
8.15	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**
8.16	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- TO38 Core 3

2.Station 252 East Garden City 345/138 kV Substation Upgrades

Total: $ 347,939,735

NEXTera Energy- TO38 Core 3				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
2.Station 252 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	$ 6,183,051	$ 6,672,230	$ 4,188,294	$ 17,043,576
3. SUBSTATION STRUCTURES	$ 2,079,686	$ 1,420,019	$ 821,171	$ 4,320,876
4. MAJOR EQUIPTMENT	$ 86,834,800	$ 16,766,972	$ 11,053,048	$ 114,654,820
5. LOW VOLTAGE & CONTROL CABLE	$ 138,265	$ 37,388	$ 7,478	$ 183,131
6. CONDUIT & CABLE TRENCH	$ 8,746,451	$ 4,970,057	$ 2,720,221	$ 16,436,729
7. GROUND GRID	$ 150,907	$ 108,737	$ 25,280	$ 284,924
8. CONTROL ENCLOSURE	$ 5,830,727	$ 4,413,122	$ 1,666,606	$ 11,910,455
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 11,154,293	$ 28,760,396	$ 39,802,107	$ 79,716,796
Turnkey cost (HVDC, GIS)	$ 17,610,000	$ 10,566,000	$ 7,044,000	$ 35,220,000
Non-Turnkey cost	$ 105,028,869	$ 54,574,217	$ 54,478,761	$ 214,081,847
SUBTOTAL (Costs):	$ 122,638,869	$ 65,140,217	$ 61,522,761	$ 249,301,847
CONTRACTOR MARK-UP (OH&P)	$ 19,961,796	$ 10,457,319	$ 10,228,817	$ 40,647,932
SUBTOTAL:	$ 142,600,665	$ 75,597,536	$ 71,751,578	$ 289,949,779
CONTINGENCY ON ENTIRE PROJECT	$ 28,520,133	$ 15,119,507	$ 14,350,316	$ 57,989,956
TOTAL:	$ 171,120,798	$ 90,717,043	$ 86,101,894	$ 347,939,735

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 252 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**

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
1.18	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	$ -	$ -	$ -	**$ -**
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**
2.15	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							$ 6,183,051	$ 6,672,230	$ 4,188,294	**$ 17,043,576**
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	1,900	LF	25.00	184.94	123.29	$ 47,500	$ 351,382	$ 234,255	**$ 633,137**
3.22	AL. Bus fittings	1	LS	57,000.00	57,000.00	45,000.00	$ 57,000	$ 57,000	$ 45,000	**$ 159,000**

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
3.23	Steel grating and support beams-transformer moat	476,080	LB	2.73	1.17	0.50	$ 1,300,564	$ 556,538	$ 238,516	**$ 2,095,617**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 2,079,686	$ 1,420,019	$ 821,171	$ 4,320,876
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-50MVAR	3	EA	2,138,451.50	3,520.00	880.00	$ 6,415,355	$ 10,560	$ 2,640	**$ 6,428,555**
4.10	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**
4.11	Transport & Testing- Shunt Reactor	7	EA		457,900.00	301,600.00	$ -	$ 3,205,300	$ 2,111,200	**$ 5,316,500**
4.12	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**
4.7	Transport & Testing- PAR	4	EA		615,400.00	406,600.00	$ -	$ 2,461,600	$ 1,626,400	**$ 4,088,000**
4.13	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**
4.14	345kV, Circuit Breaker (PASS)	0	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	6	EA	6,669.00	5,460.00	2,340.00	$ 40,014	$ 32,760	$ 14,040	**$ 86,814**
4.18	138kV, Phase Angle Regulator with oil containment	0	EA	10,366,370.00	3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.19	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		336,400.00	220,600.00	$ -	$ -	$ -	**$ -**
4.20	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.21	138kV, Circuit Breaker, Hybrid circuit breaker	0	EA		13,559.00	5,811.00	$ -	$ -	$ -	**$ -**
4.22	138kV, Disconnect Switch	0	EA		3,958.50	1,696.50	$ -	$ -	$ -	**$ -**
4.23	138kV, Cable sealing end	0	EA	11,600.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.24	138kV, CCVT	0	EA		7,970.08	3,415.75	$ -	$ -	$ -	**$ -**
4.25	138kV, Surge arrester	0	EA	4,446.00	4,200.00	1,800.00	$ -	$ -	$ -	**$ -**
4.26	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	$ 16,766,972	$ 11,053,048	$ 114,654,820
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	26,100	LF	5.30	1.43	0.29	$ 138,265	$ 37,388	$ 7,478	**$ 183,131**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 138,265	$ 37,388	$ 7,478	**$ 183,131**
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	5,400	LF	11.15	10.80	5.40	$ 60,210	$ 58,320	$ 29,160	**$ 147,690**
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	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	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							$ 8,746,451	$ 4,970,057	$ 2,720,221	**$ 16,436,729**
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	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
8.4	Backup Line Relays (87L): GE L90	11	EA	21,328.12	17,062.49	4,265.62	$ 234,609	$ 187,687	$ 46,922	**$ 469,219**
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	9	EA	21,328.12	17,062.49	4,265.62	$ 191,953	$ 153,562	$ 38,391	**$ 383,906**
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60	9	EA	21,328.12	17,062.49	4,265.62	$ 191,953	$ 153,562	$ 38,391	**$ 383,906**
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**
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 Annun	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							$ 5,830,727	$ 4,413,122	$ 1,666,606	$ 11,910,455
2.Station 252 East Garden City 345/138 kV Substation Upgrades							$ 111,484,576	$ 36,379,821	$ 21,720,654	$ 169,585,051
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		2,033,516.63	871,507.13	$ -	$ 2,033,517	$ 871,507	**$ 2,905,024**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		1,343,650.51		$ -	$ 1,343,651	$ -	**$ 1,343,651**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		5,374,602.02		$ -	$ 5,374,602	$ -	**$ 5,374,602**
9.4	Utility PM and Project Oversite	1	LS		1,343,650.51		$ -	$ 1,343,651	$ -	**$ 1,343,651**
9.5	Site Accommodation, Facilities, Storage	1	LS	1,343,650.51			$ 1,343,651	$ -	$ -	**$ 1,343,651**
	Engineering									
9.6	Design Engineering	1.00	LS		10,749,204.05		$ -	$ 10,749,204	$ -	**$ 10,749,204**
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		940,555.35		$ -	$ 940,555	$ -	**$ 940,555**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		5,038,689.40		$ -	$ 5,038,689	$ -	**$ 5,038,689**
	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		1,343,650.51		$ -	$ 1,343,651	$ -	**$ 1,343,651**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		403,095.15		$ -	$ 403,095	$ -	**$ 403,095**
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		-	$ 6,940,000	$ -	$ -	**$ 6,940,000**	**$ 6,940,000**
9.20	Sales Tax on Materials	8.80%	LS	111,484,575.51			$ 9,810,643	$ -	$ -	**$ 9,810,643**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		169,585.05		$ -	$ 169,585	$ -	**$ 169,585**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 11,154,293	$ 28,760,396	$ 39,802,107	**$ 79,716,796**

NEXTera Energy- TO38 Core 3

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

Total: $ 143,522,216

NEXTera Energy- TO38 Core 3				
	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**

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
1.20	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	$ -	$ -	$ -	**$ -**
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**

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							$ 1,692,012	$ 862,489	$ 392,825	$ 2,947,326
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**

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
8.4	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**
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- TO38 Core 3

4.Barrett 138 kV Substation Upgrades

Total: $ 77,248,534

NEXTera Energy- TO38 Core 3				
	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	$ 1,965,399.86
2. SUBSTATION FOUNDATIONS	$ 710,473	$ 811,970	$ 507,481	$ 2,029,923.90
3. SUBSTATION STRUCTURES	$ 309,543	$ 377,952	$ 233,921	$ 921,415.76
4. MAJOR EQUIPTMENT	$ 17,187,548	$ 4,238,507	$ 2,776,589	$ 24,202,643.00
5. LOW VOLTAGE & CONTROL CABLE	$ 25,428	$ 6,876	$ 1,375	$ 33,679.20
6. CONDUIT & CABLE TRENCH	$ 3,912,346	$ 2,183,727	$ 1,172,833	$ 7,268,906.57
7. GROUND GRID	$ 75,572	$ 54,743	$ 12,811	$ 143,125.40
8. CONTROL ENCLOSURE	$ 2,347,937	$ 1,894,121	$ 702,815	$ 4,944,873.67
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**

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
1.18	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	$ -	$ -	$ -	**$ -**
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**

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							$ 309,543	$ 377,952	$ 233,921	**$ 921,416**
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	$ -	$ -	$ -	**$ -**
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**

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
8.5	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**
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 Annu	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- TO38 Core 3

5.Dunwoodie 345 kV GIS Substation

Total: $ 64,677,743

NEXTera Energy- TO38 Core 3				
	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**

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
1.20	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							$ 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**

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							$ 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	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**

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	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**
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- TO38 Core 3

6.Elwood 138 kV Substation Upgrades

Total: $ 7,946,839

NEXTera Energy- TO38 Core 3				
	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	$ -	$ -	$ -	$ -

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							$ -	$ 60,000	$ 40,000	**$ 100,000**
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	-	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**

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	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	$ -	$ -	$ -	**$ -**
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	$ -	$ -	$ -	**$ -**

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
8.6	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
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- TO38 Core 3

7.Jamaica 138 kV Substation Upgrades

Total: **Total: $ 2,024,724**

NEXTera Energy- TO38 Core 3				
	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	$ 8,137	$ 9,299	$ 5,812	$ 23,248
3. SUBSTATION STRUCTURES	$ 45,726	$ 32,857	$ 20,272	$ 98,855
4. MAJOR EQUIPTMENT	$ 385,838	$ 168,494	$ 68,991	$ 623,323
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	$ 127,969	$ 102,375	$ 25,594	$ 255,937
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 63,313	$ 223,938	$ 47,502	$ 334,752
SUBTOTAL (Costs):	$ 658,333	$ 579,029	$ 192,528	$ 1,429,890
CONTRACTOR MARK-UP (OH&P)	$ 118,500	$ 104,225	$ 34,655	$ 257,380
SUBTOTAL:	$ 776,832	$ 683,255	$ 227,183	$ 1,687,270
CONTINGENCY ON ENTIRE PROJECT	$ 155,366	$ 136,651	$ 45,437	$ 337,454
TOTAL:	$ 932,199	$ 819,906	$ 272,620	$ 2,024,724

Description of Work: Add an additional terminal 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	$ -	$ -	$ -	$ -

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							$ -	$ 30,000	$ 20,000	**$ 50,000**
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	-	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	$ -	$ -	$ -	**$ -**
2.23	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							$ 8,137	$ 9,299	$ 5,812	**$ 23,248**
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				$ -	$ -	$ -	**$ -**

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		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, AIS 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	3	EA	11,600.00	5,460.00	2,340.00	$ 34,800	$ 16,380	$ 7,020	**$ 58,200**
4.26	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	$ -
4.27	138kV, Surge arrester	3	EA	4,446.00	4,200.00	1,800.00	$ 13,338	$ 12,600	$ 5,400	**$ 31,338**
4.28	Station service transformers- 120/208v-250VA	0	EA		45,500.00	19,500.00	$ -	$ -	$ -	$ -
4.29	345/138kV Gas-Insulated Bus Conductor	246	LF	550.00	275.00	82.50	$ 135,300	$ 67,650	$ 20,295	**$ 223,245**
4.30	345/138kV Gas-Insulated Bus Conductor-elbow	6	EA	2,500.00	1,250.00	375.00	$ 15,000	$ 7,500	$ 2,250	**$ 24,750**
4.31	Transport & Testing- GIL	1	LS		27,054.00	18,036.00	$ -	$ 27,054	$ 18,036	**$ 45,090**
TOTAL - MAJOR EQUIPMENT							$ 385,838	$ 168,494	$ 68,991	**$ 623,323**
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		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										
6.15							$ -	$ -	$ -	$ -
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 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 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							$ 127,969	$ 102,375	$ 25,594	**$ 255,937**
7.Jamaica 138 kV Substation Upgrades							$ 595,020	$ 355,092	$ 145,026	**$ 1,095,138**
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		17,504.13	7,501.77	$ -	$ 17,504	$ 7,502	**$ 25,006**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		10,951.38		$ -	$ 10,951	$ -	**$ 10,951**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		43,805.51		$ -	$ 43,806	$ -	**$ 43,806**
9.4	Utility PM and Project Oversite	1	LS		10,951.38		$ -	$ 10,951	$ -	**$ 10,951**
9.5	Site Accommodation, Facilities, Storage	1	LS	10,951.38			$ 10,951	$ -	$ -	**$ 10,951**
	Engineering									
9.6	Design Engineering	1.00	LS		87,611.01		$ -	$ 87,611	$ -	**$ 87,611**
9.7	LiDAR /GPR	1.00	LS				$ -	$ -	$ -	**$ -**
9.8	Geotech	-	EA		2,730.00	1,820.00	$ -	$ -	$ -	**$ -**
9.9	Surveying/Staking	1.00	Site		7,665.96		$ -	$ 7,666	$ -	**$ 7,666**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		41,067.66		$ -	$ 41,068	$ -	**$ 41,068**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		-		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	-	LS		10,951.38		$ -	$ -	$ -	**$ -**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		3,285.41		$ -	$ 3,285	$ -	**$ 3,285**
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		-	$ 40,000	$ -	$ -	$ 40,000	**$ 40,000**
9.20	Sales Tax on Materials	8.80%	LS	595,019.53			$ 52,362	$ -	$ -	**$ 52,362**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		1,095.14		$ -	$ 1,095	$ -	**$ 1,095**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 63,313	$ 223,938	$ 47,502	**$ 334,752**

NEXTera Energy- TO38 Core 3

8.Newbridge 345/138 kV GIS Substation Upgrades

Total: $ 89,858,233

NEXTera Energy- TO38 Core 3				
	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

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	6	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	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**

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
8.5	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	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- TO38 Core 3

9.Rainey 345kV GIS Substation Upgrades

Total: $ 45,946,157

NEXTera Energy- TO38 Core 3				
	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	$ -	$ -	$ -	**$ -**

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							$ 311,324	$ 248,835	$ 141,711	**$ 701,870**
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	$ -	$ -	$ -	**$ -**

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 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	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**

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
8.6	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 Ann	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**
8.12	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- TO38 Core 3

10.Shore Road 138kV Substation Upgrades

Total: $ 13,943,860

NEXTera Energy- TO38 Core 3				
	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	$ 26,738
2. SUBSTATION FOUNDATIONS	$ 241,411	$ 275,899	$ 172,437	$ 689,747
3. SUBSTATION STRUCTURES	$ 135,326	$ 72,142	$ 35,749	$ 243,217
4. MAJOR EQUIPTMENT	$ 5,681,973	$ 251,002	$ 153,318	$ 6,086,293
5. LOW VOLTAGE & CONTROL CABLE	$ 61,981	$ 16,760	$ 3,352	$ 82,093
6. CONDUIT & CABLE TRENCH	$ 93,385	$ 39,180	$ 16,275	$ 148,840
7. GROUND GRID	$ 2,925	$ 2,335	$ 610	$ 5,871
8. CONTROL ENCLOSURE	$ 85,312	$ 68,250	$ 17,062	$ 170,625
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 630,011	$ 1,483,167	$ 280,758	$ 2,393,936
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	$ 2,323,977
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	$ -	$ -	$ -	**$ -**

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							$ 9,922	$ 10,764	$ 6,052	**$ 26,738**
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-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										

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	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	$ -	$ -	$ -	$ -

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	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	$ -	$ -	$ -	$ -
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- TO38 Core 3

11.Sprain Brook 345kV Substation Expansion

Total: $ 596,325,142

NEXTera Energy- TO38 Core 3				
	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	$ 1,920,956	$ 2,166,878	$ 1,355,611	$ 5,443,445
3. SUBSTATION STRUCTURES	$ 1,075,966	$ 901,681	$ 569,078	$ 2,546,726
4. MAJOR EQUIPTMENT	$ 10,402,779	$ 1,823,144	$ 1,072,736	$ 13,298,659
5. LOW VOLTAGE & CONTROL CABLE	$ 232,031	$ 62,744	$ 12,549	$ 307,323
6. CONDUIT & CABLE TRENCH	$ 627,979	$ 194,488	$ 70,492	$ 892,959
7. GROUND GRID	$ 167,706	$ 121,331	$ 28,363	$ 317,401
8. CONTROL ENCLOSURE	$ 1,339,823	$ 1,067,113	$ 384,209	$ 2,791,146
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 7,237,695	$ 73,613,826	$ 18,262,785	$ 99,114,306
SUBTOTAL (Costs):	$ 52,891,131	$ 204,429,946	$ 163,812,498	$ 421,133,575
CONTRACTOR MARK-UP (OH&P)	$ 9,520,404	$ 36,797,390	$ 29,486,250	$ 75,804,043
SUBTOTAL:	$ 62,411,534	$ 241,227,336	$ 193,298,748	$ 496,937,618
CONTINGENCY ON ENTIRE PROJECT	$ 12,482,307	$ 48,245,467	$ 38,659,750	$ 99,387,524
TOTAL:	$ 74,893,841	$ 289,472,804	$ 231,958,497	$ 596,325,142

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**

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
1.19	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**
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	350	CY	703.89	804.44	502.78	$ 246,360	$ 281,554	$ 175,971	**$ 703,885**
2.15	345kV, Shunt Reactor with oil containment-225MVAR	305	CY	703.89	804.44	502.78	$ 214,685	$ 245,354	$ 153,346	**$ 613,386**
2.16	345kV, Phase Angle Regulator with oil containment	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.17	345kV, Circuit Breaker	160	CY	703.89	804.44	502.78	$ 112,622	$ 128,710	$ 80,444	**$ 321,776**
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							$ 1,920,956	$ 2,166,878	$ 1,355,611	**$ 5,443,445**
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**

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
3.14	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	$ -	$ -	$ -	$ -
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	86,560	LB	2.73	1.17	0.50	$ 236,466	$ 101,189	$ 43,367	$ **381,021**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 1,075,966	$ 901,681	$ 569,078	$ **2,546,726**
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	1	EA	3,332,487.50	3,520.00	880.00	$ 3,332,488	$ 3,520	$ 880	$ **3,336,888**
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	2	EA		352,900.00	231,600.00	$ -	$ 705,800	$ 463,200	$ **1,169,000**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	$ -
4.12	345kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR	641,250.00	384,750.00	256,500.00	$ -	$ -	$ -	$ -
4.13	345kV, Circuit Breaker	8	EA	350,000.00	57,239.00	24,531.00	$ 2,800,000	$ 457,912	$ 196,248	$ **3,454,160**
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							$ 10,402,779	$ 1,823,144	$ 1,072,736	$ **13,298,659**
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	43,800	LF	5.30	1.43	0.29	$ 232,031	$ 62,744	$ 12,549	$ **307,323**
5.2			LF		-	-	$ -	$ -	$ -	$ -
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 232,031	$ 62,744	$ 12,549	$ **307,323**
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	8,100	LF	11.15	10.80	5.40	$ 90,315	$ 87,480	$ 43,740	$ **221,535**
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							$ 627,979	$ 194,488	$ 70,492	$ **892,959**

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. 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**
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	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 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	6	EA	21,328.12	17,062.49	4,265.62	$ 127,969	$ 102,375	$ 25,594	**$ 255,937**
8.10	Backup Bus Differential Relays: GE B90	6	EA	21,328.12	17,062.49	4,265.62	$ 127,969	$ 102,375	$ 25,594	**$ 255,937**
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							$ 1,339,823	$ 1,067,113	$ 384,209	**$ 2,791,146**
11.Sprain Brook 345kV Substation Expansion							$ 45,653,436	$ 130,816,120	$ 145,549,713	**$ 322,019,268**
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		9,672,804.15	4,145,487.49	$ -	$ 9,672,804	$ 4,145,487	**$ 13,818,292**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		3,220,192.68		$ -	$ 3,220,193	$ -	**$ 3,220,193**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		12,880,770.74		$ -	$ 12,880,771	$ -	**$ 12,880,771**
9.4	Utility PM and Project Oversite	1	LS		3,220,192.68		$ -	$ 3,220,193	$ -	**$ 3,220,193**
9.5	Site Accommodation, Facilities, Storage	1	LS	3,220,192.68			$ 3,220,193	$ -	$ -	**$ 3,220,193**
	Engineering									
9.6	Design Engineering	1.00	LS		25,761,541.47		$ -	$ 25,761,541	$ -	**$ 25,761,541**
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		2,254,134.88		$ -	$ 2,254,135	$ -	**$ 2,254,135**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		12,075,722.57		$ -	$ 12,075,723	$ -	**$ 12,075,723**
	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		3,220,192.68		$ -	$ 3,220,193	$ -	**$ 3,220,193**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		966,057.81		$ -	$ 966,058	$ -	**$ 966,058**
9.15	Laydown Lease	-	LS				$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	1.00	LS		-	2,124,464.00	$ -	$ -	$ 2,124,464	**$ 2,124,464**
9.17	Legal Fees (Real estate)	1.00	LS		-	63,733.92	$ -	$ -	$ 63,734	**$ 63,734**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 11,920,000	$ -	$ -	$ 11,920,000	**$ 11,920,000**
9.20	Sales Tax on Materials	8.80%	LS	45,653,435.63			$ 4,017,502	$ -	$ -	**$ 4,017,502**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		322,019.27		$ -	$ 322,019	$ -	**$ 322,019**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 7,237,695	$ 73,613,826	$ 18,262,785	**$ 99,114,306**

NEXTera Energy- TO38 Core 3

12. Farragut 345kV Substation Expansion

Total: $ 121,533,973

NEXTera Energy- TO38 Core 3				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
12. Farragut 345kV Substation Expansion				
1. MARINE CONSTRUCITON CIVIL	$ 15,364,664	$ 17,326,648	$ 14,501,686	$ 47,192,999
2. SUBSTATION FOUNDATIONS	$ 645,162	$ 683,178	$ 429,480	$ 1,757,821
3. SUBSTATION STRUCTURES	$ 118,233	$ 50,594	$ 21,683	$ 190,511
4. MAJOR EQUIPTMENT	$ 7,759,517	$ 3,374,420	$ 2,244,480	$ 13,378,417
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	$ 2,516,145	$ 1,907,422	$ 727,723	$ 5,151,291
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 2,919,583	$ 12,927,931	$ 3,049,455	$ 18,896,969
Turnkey cost (HVDC, GIS)	$ 5,130,000	$ 3,078,000	$ 2,052,000	$ 10,260,000
Non-Turnkey cost	$ 24,408,083	$ 33,263,982	$ 18,940,401	$ 76,612,467
SUBTOTAL (Costs):	$ 29,538,083	$ 36,341,982	$ 20,992,401	$ 86,872,467
CONTRACTOR MARK-UP (OH&P)	$ 4,701,255	$ 6,172,197	$ 3,532,392	$ 14,405,844
SUBTOTAL:	$ 34,239,338	$ 42,514,179	$ 24,524,793	$ 101,278,311
CONTINGENCY ON ENTIRE PROJECT	$ 6,847,868	$ 8,502,836	$ 4,904,959	$ 20,255,662
TOTAL:	$ 41,087,206	$ 51,017,015	$ 29,429,752	$ 121,533,973

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
12. 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	$ -	$ -	$ -	**$ -**

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
1.11	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	$ -	$ -	$ -	$ -
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-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-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	554	CY	703.89	804.44	502.78	$ 389,854	$ 445,547	$ 278,467	**$ 1,113,868**
2.32	Precast Firewall for transformer, PARs, reactors	3,990	SF	25.00	15.00	10.00	$ 99,750	$ 59,850	$ 39,900	**$ 199,500**
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							$ 645,162	$ 683,178	$ 429,480	**$ 1,757,821**
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	-	-	-	$ -	$ -	$ -	$ -

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
3.23	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							$ 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		$ -	$ -	**$ -**
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	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-100MVAR	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.10	Transport & Testing- Shunt Reactor	1	EA		292,900.00	191,600.00	$ -	$ 292,900	$ 191,600	**$ 484,500**
4.11	345kV, Phase Angle Regulator with oil containment	0	EA		3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.12	345kV, Gas Insulated Switchgear, BAAH Arrangement	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							$ 7,759,517	$ 3,374,420	$ 2,244,480	$ 13,378,417
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	3	EA	41,575.50	33,260.40	8,315.10	$ 124,727	$ 99,781	$ 24,945	**$ 249,453**
8.4	Backup Line Relays (87L): GE L90	3	EA	41,575.50	33,260.40	8,315.10	$ 124,727	$ 99,781	$ 24,945	**$ 249,453**
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**

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
8.6	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	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**
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	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							$ 2,516,145	$ 1,907,422	$ 727,723	$ 5,151,291
12. Farragut 345kV Substation Expansion							$ 26,618,500	$ 23,414,051	$ 17,942,946	$ 67,975,498
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		1,447,494.90	620,354.96	$ -	$ 1,447,495	$ 620,355	**$ 2,067,850**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		577,154.98		$ -	$ 577,155	$ -	**$ 577,155**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		2,308,619.90		$ -	$ 2,308,620	$ -	**$ 2,308,620**
9.4	Utility PM and Project Oversite	1	LS		577,154.98		$ -	$ 577,155	$ -	**$ 577,155**
9.5	Site Accommodation, Facilities, Storage	1	LS	577,154.98			$ 577,155	$ -	$ -	**$ 577,155**
	Engineering									
9.6	Design Engineering	1.00	LS		4,617,239.80		$ -	$ 4,617,240	$ -	**$ 4,617,240**
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		404,008.48		$ -	$ 404,008	$ -	**$ 404,008**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		2,164,331.16		$ -	$ 2,164,331	$ -	**$ 2,164,331**
	Permitting and Additional Costs									
9.11	Physical Security	-	LS		6,546.96		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		577,154.98		$ -	$ 577,155	$ -	**$ 577,155**
9.13	Environmental-special studies/investigation		LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		173,146.49		$ -	$ 173,146	$ -	**$ 173,146**
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		-	$ 2,420,000	$ -	$ -	**$ 2,420,000**	**$ 2,420,000**
9.20	Sales Tax on Materials	8.80%	LS	26,618,500.43			$ 2,342,428	$ -	$ -	**$ 2,342,428**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		67,975.50		$ -	$ 67,975	$ -	**$ 67,975**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 2,919,583	$ 12,927,931	$ 3,049,455	**$ 18,896,969**

NEXTera Energy- TO38 Core 3

13 - Northport 345/138kV AIS & 138KV GIS Substation

Total: $ 98,823,883

NEXTera Energy- TO38 Core 3				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
13 - Northport 345/138kV AIS & 138KV GIS Substation				
1. SITE PREP/ GRADING/ FENCING / CIVIL	**$ 1,397,996**	**$ 1,110,321**	**$ 635,009**	**$ 3,143,325**
2. SUBSTATION FOUNDATIONS	**$ 1,906,076**	**$ 1,924,785**	**$ 1,173,176**	**$ 5,004,037**
3. SUBSTATION STRUCTURES	**$ 190,975**	**$ 109,615**	**$ 73,077**	**$ 373,667**
4. MAJOR EQUIPTMENT	**$ 23,681,938**	**$ 6,693,277**	**$ 4,293,523**	**$ 34,668,738**
5. LOW VOLTAGE & CONTROL CABLE	**$ 122,372**	**$ 33,091**	**$ 6,618**	**$ 162,081**
6. CONDUIT & CABLE TRENCH	**$ 3,507,324**	**$ 1,775,983**	**$ 885,857**	**$ 6,169,163**
7. GROUND GRID	**$ 267,816**	**$ 193,605**	**$ 45,270**	**$ 506,690**
8. CONTROL ENCLOSURE	**$ 2,808,956**	**$ 2,333,642**	**$ 931,722**	**$ 6,074,320**
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	**$ 3,399,464**	**$ 8,853,148**	**$ 2,893,532**	**$ 15,146,144**
Turnkey cost (HVDC, GIS)	**$ 7,165,000**	**$ 4,299,000**	**$ 2,866,000**	**$ 14,330,000**
Non-Turnkey cost	**$ 30,117,917**	**$ 18,728,466**	**$ 8,071,783**	**$ 56,918,166**
SUBTOTAL (Costs):	**$ 37,282,917**	**$ 23,027,466**	**$ 10,937,783**	**$ 71,248,166**
CONTRACTOR MARK-UP (OH&P)	**$ 5,851,125**	**$ 3,629,064**	**$ 1,624,881**	**$ 11,105,070**
SUBTOTAL:	**$ 43,134,042**	**$ 26,656,529**	**$ 12,562,664**	**$ 82,353,236**
CONTINGENCY ON ENTIRE PROJECT	**$ 8,626,808**	**$ 5,331,306**	**$ 2,512,533**	**$ 16,470,647**
TOTAL:	**$ 51,760,850**	**$ 31,987,835**	**$ 15,075,197**	**$ 98,823,883**

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 345/138kV transformers, 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
13 - Northport 345/138kV AIS & 138KV GIS Substation										
1. SITE PREP/ GRADING/ FENCING / CIVIL										
1.1	Site Clearing	4.0	ACRE	-	21,000.00	14,000.00	$ -	$ 84,000	$ 56,000	**$ 140,000**
1.2	Demolition	0	ACRE	-	-	-	$ -	$ -	$ -	**$ -**
1.3	New Access Road - 20'	4,489	SY	4.85	7.20	4.80	$ 21,771	$ 32,320	$ 21,547	**$ 75,638**
1.4	Strip and Dispose Top Soil	6,453	CY		24.50	10.50	$ -	$ 158,107	$ 67,760	**$ 225,867**
1.5	Site Grading- Excavation for Substation Pad	19,360	CY		9.00	6.00	$ -	$ 174,240	$ 116,160	**$ 290,400**
1.6	Site Grading- Excavation for Substation Pad-Hauling and disposal	10,454	CY		21.00	9.00	$ -	$ 219,542.40	$ 94,089.60	**$ 313,632.00**
1.7	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	15,682	CY		2.40	1.60	$ -	$ 37,636	$ 25,091	**$ 62,726**
1.8	Site Grading -Fill for Substation Pad (import, compacted in place)	10,454	CY	25.00	2.40	1.60	$ 261,360	$ 25,091	$ 16,727	**$ 303,178**
1.9	Install substation 8" pad base	9,680	SY	11.00	6.00	4.00	$ 106,480	$ 58,080	$ 38,720	**$ 203,280**
1.10	Site Surfacing - Aggregate 6" Thick	14,520	SY	16.50	4.50	3.00	$ 239,580	$ 65,340	$ 43,560	**$ 348,480**
1.11	7' Station Fence w/ Barbed Wire & Grounding	1,992	LF	13.85	13.85	6.92	$ 27,585	$ 27,585	$ 13,793	**$ 68,963**
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	670,464.00	172,800.00	114,156.00	$ 670,464	$ 172,800	$ 114,156	**$ 957,420**
1.15	Seeding	16,800	SF	1.50	1.50	1.00	$ 25,200	$ 25,200	$ 16,800	**$ 67,200**
1.16	Erosion Control-Silt fence install & remove	3,287	LF	2.41	3.16	0.72	$ 7,921	$ 10,386	$ 2,366	**$ 20,674**
1.17	Temporary fencing	2,191	LF	7.50	5.25	2.25	$ 16,434	$ 11,504	$ 4,930	**$ 32,868**
1.18	Substation entrance with asphalt		SY	19.50	26.00	19.50	$ -	$ -	$ -	**$ -**

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
1.19	Concrete curb		LF	26.00	27.30	11.70	$ -	$ -	$ -	$ -
TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL							$ 1,397,996	$ 1,110,321	$ 635,009	$ 3,143,325
2. SUBSTATION FOUNDATIONS										
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	11	CY	703.89	804.44	502.78	$ 7,532	$ 8,608	$ 5,380	**$ 21,519**
2.12	345kV, CCVT	16	CY	703.89	804.44	502.78	$ 11,297	$ 12,911	$ 8,070	**$ 32,278**
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 560MVA Power Transformer with oil containmenet	656	CY	703.89	804.44	502.78	$ 461,749	$ 527,713	$ 329,820	**$ 1,319,282**
2.16	345kV, Shunt Reactor with oil containment-350MVAR	450	CY	703.89	804.44	502.78	$ 316,748	$ 361,998	$ 226,249	**$ 904,995**
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	40	CY	703.89	804.44	502.78	$ 28,155	$ 32,178	$ 20,111	**$ 80,444**
2.20	345kV, Circuit Breaker (GIS), outdoor rated	-	CY	703.89	804.44	502.78	$ -	$ -	$ -	**$ -**
2.21	345kV, Surge arrester	16	CY	703.89	804.44	502.78	$ 11,297	$ 12,911	$ 8,070	**$ 32,278**
2.22	345/138 Kv, Control Enclosure-BLDG with generator pad	262	CY	703.89	804.44	502.78	$ 184,418	$ 210,763	$ 131,727	**$ 526,908**
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	48	CY	703.89	804.44	502.78	$ 34,124	$ 38,999	$ 24,375	**$ 97,498**
2.30	138kV, Cable sealing end	24	CY	703.89	804.44	502.78	$ 17,062	$ 19,500	$ 12,187	**$ 48,749**
2.31	138kV, Surge arrester	32	CY	703.89	804.44	502.78	$ 22,595	$ 25,823	$ 16,139	**$ 64,556**
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	129,840	LB	2.73	1.17	0.50	$ 354,699	$ 151,783	$ 65,050	**$ 571,532**
TOTAL - 345KV FOUNDATION							$ 1,906,076	$ 1,924,785	$ 1,173,176	**$ 5,004,037**
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	1	EA	8,346.00	5,758.74	3,839.16	$ 8,346	$ 5,759	$ 3,839	**$ 17,944**
3.11	345kV, Cable sealing end	3	EA	8,346.00	5,758.74	3,839.16	$ 25,038	$ 17,276	$ 11,517	**$ 53,832**
3.12	345kV, CCVT	3	EA	4,810.00	2,886.00	1,924.00	$ 14,430	$ 8,658	$ 5,772	**$ 28,860**
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	3	EA	4,810.00	2,886.00	1,924.00	$ 14,430	$ 8,658	$ 5,772	**$ 28,860**
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	2	EA							
3.19	138kV, Cable sealing end	2	EA	4,066.40	1,443.00	962.00	$ 8,133	$ 2,886	$ 1,924	**$ 12,943**
3.20	138kV, Surge arrester	6	EA	4,066.40	1,443.00	962.00	$ 24,398	$ 8,658	$ 5,772	**$ 38,828**
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							$ 190,975	$ 109,615	$ 73,077	$ 373,667

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 indoor	0	EA				$ -	$ -	$ -	$ -
4.2	345kV, GIS air terminal	0	EA				$ -	$ -	$ -	$ -
4.3	345kV, GIS- Cable sealing end	0	EA				$ -	$ -	$ -	$ -
4.4	345kV, CCVT	3	EA	4,810.00	2,886.00	1,924.00	$ 14,430	$ 8,658	$ 5,772	**$ 28,860**
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 560MVA Power Transformer with oil containmenet	2	EA	5,220,000.00	3,520.00	880.00	$ 10,440,000	$ 7,040	$ 1,760	**$ 10,448,800**
4.8	Transport & Testing- Transformer	2	EA		771,400.00	510,600.00	$ -	$ 1,542,800	$ 1,021,200	**$ 2,564,000**
4.9	345kV, Shunt Reactor with oil containment-350MVAR	1	EA	4,310,025.00	3,520.00	880.00	$ 4,310,025	$ 3,520	$ 880	**$ 4,314,425**
4.10	345kV, Shunt Reactor with oil containment-100MVAR	0	EA		374,020.00	247,880.00	$ -	$ -	$ -	$ -
4.11	Transport & Testing- Shunt Reactor	1	EA		339,150.00	145,350.00	$ -	$ 339,150	$ 145,350	**$ 484,500**
4.12	345kV, Phase Angle Regulator	0	EA		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	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, surge Arrester	3	EA	6,669.00	5,460.00	2,340.00	$ 20,007	$ 16,380	$ 7,020	**$ 43,407**
4.17	345kV, GIS Cable sealing end	0	EA				$ -	$ -	$ -	$ -
4.18	345kV, Cable sealing end	3	EA	17,400.00	5,460.00	2,340.00	$ 52,200	$ 16,380	$ 7,020	**$ 75,600**
4.19	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**
4.20	138kV, Phase Angle Regulator	0	EA	11,902,178.00	3,520.00	880.00	$ -	$ -	$ -	$ -
4.21	Transport & Testing- Phase Angle Regulating Transformer, 138kV	0	EA		701,400.00	300,600.00	$ -	$ -	$ -	$ -
4.22	138kV, Dead-Tank Breaker	0	EA	183,000.00	13,559.00	5,811.00	$ -	$ -	$ -	$ -
4.23	138kV, Disconnect Switch	2	EA	37,700.00	11,875.50	5,089.50	$ 75,400	$ 23,751	$ 10,179	**$ 109,330**
4.24	138kV, Cable sealing end	6	EA	11,600.00	5,460.00	2,340.00	$ 69,600	$ 32,760	$ 14,040	**$ 116,400**
4.25	138kV, Surge arrester	6	EA	4,446.00	4,200.00	1,800.00	$ 26,676	$ 25,200	$ 10,800	**$ 62,676**
4.26	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**
4.27	345kV Gas-Insulated Bus Conductor (Ourdoor)		LF	550.00	275.00	82.50	$ -	$ -	$ -	$ -
4.28	345kV Gas-Insulated Bus Conductor-elbow (Ourdoor)		EA	2,500.00	1,250.00	375.00	$ -	$ -	$ -	$ -
4.29	Transport & Testing- GIL		LS		-	-	$ -	$ -	$ -	$ -
TOTAL - MAJOR EQUIPMENT							$ 23,681,938	$ 6,693,277	$ 4,293,523	**$ 34,668,738**
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	5.30	1.43	0.29	$ -	$ -	$ -	$ -
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	4,650	LF	11.15	10.80	5.40	$ 51,848	$ 50,220	$ 25,110	**$ 127,178**
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	1,113	LF	266.50	53.04	13.26	$ 296,481	$ 59,007	$ 14,752	**$ 370,240**
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	48	EA	27,805.00	9,846.48	2,813.28	$ 1,334,640	$ 472,631	$ 135,037	**$ 1,942,308**
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							$ 3,507,324	$ 1,775,983	$ 885,857	**$ 6,169,163**
7. GROUND GRID										
7.1	Cable, 4/0 AWG Bare Copper, 7 Strand Ground Conductor	27,485	LF	2.09	3.42	1.46	$ 57,471	$ 93,870	$ 40,230	**$ 191,570**
7.2	Caweld, DSA, 4/0 , T, CROSS	725	EA	165.00	75.00		$ 119,625	$ 54,375	$ -	**$ 174,000**
7.3	Ground Rod, 3/4" x 15'	672	EA	135.00	67.50	7.50	$ 90,720	$ 45,360	$ 5,040	**$ 141,120**
TOTAL - GROUND GRID							$ 267,816	$ 193,605	$ 45,270	**$ 506,690**
8. CONTROL ENCLOSURE										
8.1	345/138 Kv, Control Enclosure-BLDG with generator pad	1	EA	384,814.39	346,332.95	230,888.63	$ 384,814	$ 346,333	$ 230,889	**$ 962,036**
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	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	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	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	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**

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
8.13	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	6	EA	21,328.12	17,062.49	4,265.62	$ 127,969	$ 102,375	$ 25,594	**$ 255,937**
8.15	Backup Line Relays (87L): GE L90	6	EA	21,328.12	17,062.49	4,265.62	$ 127,969	$ 102,375	$ 25,594	**$ 255,937**
8.16	Primary Bay Control: SEL-451	5	EA	21,328.12	17,062.49	4,265.62	$ 106,641	$ 85,312	$ 21,328	**$ 213,281**
8.17	Backup Bay Control: SEL-451	5	EA	21,328.12	17,062.49	4,265.62	$ 106,641	$ 85,312	$ 21,328	**$ 213,281**
8.18	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**
8.19	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**
8.20	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**
8.21	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**
8.22	HMI Panel	1	EA	12,500.00	10,000.00	2,500.00	$ 12,500	$ 10,000	$ 2,500	**$ 25,000**
8.23	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**
8.24	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**
8.25	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**
8.26	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**
8.27	125VDC Battery System	4	LS	25,000.00	22,750.00	9,750.00	$ 100,000	$ 91,000	$ 39,000	**$ 230,000**
8.28	Control house AC Panel	2	EA	65,000.00	91,000.00	39,000.00	$ 130,000	$ 182,000	$ 78,000	**$ 390,000**
8.29	Control House DC Panel	2	EA	65,000.00	91,000.00	39,000.00	$ 130,000	$ 182,000	$ 78,000	**$ 390,000**
8.30	Generator	1	EA	130,000.00	72,800.00	31,200.00	$ 130,000	$ 72,800	$ 31,200	**$ 234,000**
TOTAL - CONTROL ENCLOSURE							$ 2,808,956	$ 2,333,642	$ 931,722	**$ 6,074,320**
13 - Northport 345/138kV AIS & 138KV GIS Substation							$ 33,883,453	$ 14,174,317	$ 8,044,251	$ 56,102,022
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		526,874.91	225,803.53	$ -	$ 526,875	$ 225,804	**$ 752,678**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		417,720.22		$ -	$ 417,720	$ -	**$ 417,720**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		1,670,880.87		$ -	$ 1,670,881	$ -	**$ 1,670,881**
9.4	Utility PM and Project Oversite	1	LS		417,720.22		$ -	$ 417,720	$ -	**$ 417,720**
9.5	Site Accommodation, Facilities, Storage	1	LS	417,720.22			$ 417,720	$ -	$ -	**$ 417,720**
	Engineering									
9.6	Design Engineering	1.00	LS		3,341,761.74		$ -	$ 3,341,762	$ -	**$ 3,341,762**
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		292,404.15		$ -	$ 292,404	$ -	**$ 292,404**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		1,566,450.81		$ -	$ 1,566,451	$ -	**$ 1,566,451**
	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		417,720.22		$ -	$ 417,720	$ -	**$ 417,720**
9.13	Environmental-special studies/investigation		LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		125,316.07		$ -	$ 125,316	$ -	**$ 125,316**
9.15	Laydown Lease		LS		-		$ -	$ -	$ -	**$ -**
9.16	Real Estate (Acquisition)	1.00	LS		-	678,280.00	$ -	$ -	$ 678,280	**$ 678,280**
9.17	Legal Fees (Real estate)	1.00	LS		-	20,348.40	$ -	$ -	$ 20,348	**$ 20,348**
9.18	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
9.19	Bonds	1	LS		-	$ 1,960,000	$ -	$ -	**$ 1,960,000**	**$ 1,960,000**
9.20	Sales Tax on Materials	8.80%	LS	33,883,452.91			$ 2,981,744	$ -	$ -	**$ 2,981,744**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		56,102.02		$ -	$ 56,102	$ -	**$ 56,102**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 3,399,464	$ 8,853,148	$ 2,893,532	**$ 15,146,144**

NEXTera Energy- TO38 Core 3

14.Pilgrim 138kV Substation Upgrades

Total: $ 2,036,018

NEXTera Energy- TO38 Core 3				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
14.Pilgrim 138kV Substation Upgrades				
1. SITE PREP/ GRADING/ FENCING / CIVIL	$ -	$ 24,000	$ 16,000	$ 40,000
2. SUBSTATION FOUNDATIONS	$ 34,758	$ 39,723	$ 24,827	$ 99,308
3. SUBSTATION STRUCTURES	$ 45,630	$ 59,338	$ 37,176	$ 142,144
4. MAJOR EQUIPTMENT	$ 234,399	$ 58,019	$ 25,896	$ 318,314
5. LOW VOLTAGE & CONTROL CABLE	$ 27,017	$ 7,306	$ 1,461	$ 35,784
6. CONDUIT & CABLE TRENCH	$ 76,660	$ 22,980	$ 8,175	$ 107,815
7. GROUND GRID	$ 2,925	$ 2,335	$ 610	$ 5,871
8. CONTROL ENCLOSURE	$ 170,625	$ 136,500	$ 34,125	$ 341,250
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 63,002	$ 233,261	$ 51,117	$ 347,380
SUBTOTAL (Costs):	$ 655,016	$ 583,463	$ 199,387	$ 1,437,866
CONTRACTOR MARK-UP (OH&P)	$ 117,903	$ 105,023	$ 35,890	$ 258,816
SUBTOTAL:	$ 772,919	$ 688,486	$ 235,277	$ 1,696,682
CONTINGENCY ON ENTIRE PROJECT	$ 154,584	$ 137,697	$ 47,055	$ 339,336
TOTAL:	$ 927,503	$ 826,183	$ 282,333	$ 2,036,018

Description of Work: Add 1 terminal to Pilgrim 138kV substation to accommodate the new transmission line

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	1	LS		24,000.00	16,000.00	$ -	$ 24,000	$ 16,000	$ 40,000
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	0	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	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	$ -	$ -	$ -	$ -

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							$ -	$ 24,000	$ 16,000	**$ 40,000**
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	-	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,	4	CY	703.89	804.44	502.78	$ 3,132	$ 3,580	$ 2,237	**$ 8,949**
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	12	CY	703.89	804.44	502.78	$ 8,531	$ 9,750	$ 6,094	**$ 24,375**
2.27	138kV, Cable sealing end	6	CY	703.89	804.44	502.78	$ 4,266	$ 4,875	$ 3,047	**$ 12,187**
2.28	138kV, Surge arrester	16	CY	703.89	804.44	502.78	$ 11,297	$ 12,911	$ 8,070	**$ 32,278**
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							$ 34,758	$ 39,723	$ 24,827	**$ 99,308**
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	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**
3.18	138kV, Surge arrester	3	EA	4,810.00	2,886.00	1,924.00	$ 14,430	$ 8,658	$ 5,772	**$ 28,860**
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	150	LF	25.00	184.94	123.29	$ 3,750	$ 27,741	$ 18,494	**$ 49,985**
3.22	AL. Bus fittings	1	LS	4,500.00	4,500.00	2,250.00	$ 4,500	$ 4,500	$ 2,250	**$ 11,250**
3.23	Steel grating and support beams-transformer moat	0	LB	2.73	1.17	0.50	$ -	$ -	$ -	**$ -**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ 45,630	$ 59,338	$ 37,176	**$ 142,144**
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	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, 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	3	EA	11,600.00	5,460.00	2,340.00	$ 34,800	$ 16,380	$ 7,020	**$ 58,200**
4.26	138kV, CCVT	0	EA	3,206.67	1,924.00	1,282.67	$ -	$ -	$ -	**$ -**
4.27	138kV, Surge arrester	3	EA	4,066.40	1,443.00	962.00	$ 12,199	$ 4,329	$ 2,886	**$ 19,414**
4.28	Station service transformers- 120/208v-250VA	0	EA		45,500.00	19,500.00	$ -	$ -	$ -	**$ -**
TOTAL - MAJOR EQUIPMENT							$ 234,399	$ 58,019	$ 25,896	$ 318,314
5. LOW VOLTAGE & CONTROL CABLE										
5.1	Control Cables	5,100	LF	5.30	1.43	0.29	$ 27,017	$ 7,306	$ 1,461	**$ 35,784**
5.2			LF		-	-	$ -	$ -	$ -	**$ -**
TOTAL - LOW VOLTAGE & CONTROL CABLE							$ 27,017	$ 7,306	$ 1,461	$ 35,784
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	900	LF	11.15	10.80	5.40	$ 10,035	$ 9,720	$ 4,860	**$ 24,615**
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							$ 76,660	$ 22,980	$ 8,175	$ 107,815
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	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 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**

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
8.9	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	$ -	$ -	$ -	**$ -**
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							$ 170,625	$ 136,500	$ 34,125	**$ 341,250**
10.Shore Road 138kV Substation Upgrades							$ 592,014	$ 350,201	$ 148,270	**$ 1,090,486**
9. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
9.1	Mob / Demob	1.0	LS		17,446.51	7,477.08	$ -	$ 17,447	$ 7,477	**$ 24,924**
	Project Management, Material Handling & Amenities									
9.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		10,904.86		$ -	$ 10,905	$ -	**$ 10,905**
9.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		43,619.43		$ -	$ 43,619	$ -	**$ 43,619**
9.4	Utility PM and Project Oversite	1	LS		10,904.86		$ -	$ 10,905	$ -	**$ 10,905**
9.5	Site Accommodation, Facilities, Storage	1	LS	10,904.86			$ 10,905	$ -	$ -	**$ 10,905**
	Engineering									
9.6	Design Engineering	1.00	LS		87,238.86		$ -	$ 87,239	$ -	**$ 87,239**
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		7,633.40		$ -	$ 1,527	$ -	**$ 1,527**
	Testing & Commissioning									
9.10	Testing & Commissioning of SS and Equipment	1.00	LS		40,893.21		$ -	$ 40,893	$ -	**$ 40,893**
	Permitting and Additional Costs									
9.11	Physical Security	1.00	LS		-		$ -	$ -	$ -	**$ -**
9.12	Environmental Licensing & Permitting Costs & related legal cost	1.00	LS		10,904.86		$ -	$ 10,905	$ -	**$ 10,905**
9.13	Environmental-special studies/investigation	-	LS		-		$ -	$ -	$ -	**$ -**
9.14	Warranties / LOC's	1.00	LS		3,271.46		$ -	$ 3,271	$ -	**$ 3,271**
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		-	$ 40,000	$ -	$ -	**$ 40,000**	**$ 40,000**
9.20	Sales Tax on Materials	8.80%	LS	592,014.04			$ 52,097	$ -	$ -	**$ 52,097**
9.21	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS		1,090.49		$ -	$ 1,090	$ -	**$ 1,090**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 63,002	$ 233,261	$ 51,117	**$ 347,380**

NEXTera Energy- TO38 Core 3

15. Exisitng Ruland Road 138 kV Substation Upgrades

Total: $ 2,030,035

NEXTera Energy- TO38 Core 3				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
15. Exisitng Ruland Road 138 kV Substation Upgrades				
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 exisitng 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
15. Exisitng Ruland Road 138 kV Substation Upgrades										
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	$ -	$ -	$ -	$ -

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							$ -	$ -	$ -	$ -
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	$ -	$ -	$ -	**$ -**
=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	0	LF	25.00	184.94	123.29	$ -	$ -	$ -	**$ -**
3.23	AL. Bus fittings	0	LS	58,500.00	58,500.00	29,250.00	$ -	$ -	$ -	**$ -**
3.24	Steel grating and support beams-transformer moat	0	LB	2.73	1.17	0.50	$ -	$ -	$ -	**$ -**
TOTAL - SUBSTATION STRUCTURES & GAS-INSULATED CONDUCTOR							$ -	$ -	$ -	$ -
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	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	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	0	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	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	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	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 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	0	EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	$ -
8.4	Backup Line Relays (87L): GE L90	0	EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	$ -
8.5	Primary Bay Control: SEL-451	0	EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	$ -
8.6	Backup Bay Control: SEL-451	0	EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	$ -
8.7	Primary Transformer/Reactor/PAR Differential Relays: SEL-487E	0	EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	$ -
8.8	Backup Transformer/Reactor/PAR Differential Relays: GE T60	0	EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	$ -
8.9	Primary Bus Differential Relays: SEL-487B	0	EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	$ -
8.10	Backup Bus Differential Relays: GE B90	0	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 Ann	0	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 Annnunciator	0	EA	12,500.00	10,000.00	2,500.00	$ -	$ -	$ -	$ -
8.13	HMI Panel	0	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**

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	0	EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.17	Backup Bay Control: SEL-451	0	EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.18	Primary Bus Differential Relays: SEL-487B	0	EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.19	Backup Bus Differential Relays: GE B90	0	EA	21,328.12	17,062.49	4,265.62	$ -	$ -	$ -	**$ -**
8.20	125VDC Battery System	0	LS	25,000.00	22,750.00	9,750.00	$ -	$ -	$ -	**$ -**
8.21	Control house AC Panel	0	EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.22	Control House DC Panel	0	EA	65,000.00	91,000.00	39,000.00	$ -	$ -	$ -	**$ -**
8.23	Generator	0	EA	130,000.00	72,800.00	31,200.00	$ -	$ -	$ -	**$ -**
TOTAL - CONTROL ENCLOSURE		0					$ 42,656	$ 34,125	$ 8,531	$ 85,312
15. Exisitng Ruland Road 138 kV Substation Upgrades							$ 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- TO38 Core 3

16. Existing East Garden City 138 kV Substation Upgrades

Total: $ 28,298,464

NEXTera Energy- TO38 Core 3				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
16. 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 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
16. 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	$ -	$ -	$ -	$ -

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							$ -	$ -	$ -	$ -
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	$ -	$ -	$ -	**$ -**
2.15	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				$ -	$ -	$ -	**$ -**

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	0	EA	3,026,425.00	3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.9	345kV, Shunt Reactor with oil containment-50MVAR	0	EA	2,138,451.50	3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.10	345kV, Shunt Reactor with oil containment-25MVAR	0	EA	1,900,130.50	3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.11	Transport & Testing- Shunt Reactor	0	EA		457,900.00	301,600.00	$ -	$ -	$ -	**$ -**
4.12	345kV, Phase Angle Regulator with oil containment	0	EA	12,882,000.00	3,520.00	880.00	$ -	$ -	$ -	**$ -**
4.7	Transport & Testing- PAR	0	EA		615,400.00	406,600.00	$ -	$ -	$ -	**$ -**
4.13	345kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR	838,571.43	503,142.86	335,428.57	$ -	$ -	$ -	**$ -**
4.14	345kV, Circuit Breaker (PASS)	0	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	6,669.00	5,460.00	2,340.00	$ -	$ -	$ -	**$ -**
4.18	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**
4.19	Transport & Testing- Phase Angle Regulating Transformer, 138kV	1	EA		336,400.00	220,600.00	$ -	$ 336,400	$ 220,600	**$ 557,000**
4.20	138kV, Gas Insulated Switchgear, BAAH Arrangement	0	BKR		205,800.00	4,200.00	$ -	$ -	$ -	**$ -**
4.21	138kV, Circuit Breaker, Hybrid circuit breaker	0	EA		13,559.00	5,811.00	$ -	$ -	$ -	**$ -**
4.22	138kV, Disconnect Switch	3	EA	37,700.00	11,875.50	5,089.50	$ 113,100	$ 35,627	$ 15,269	**$ 163,995**
4.23	138kV, Cable sealing end	6	EA	11,600.00	5,460.00	2,340.00	$ 69,600	$ 32,760	$ 14,040	**$ 116,400**
4.24	138kV, CCVT	0	EA		7,970.08	3,415.75	$ -	$ -	$ -	**$ -**
4.25	138kV, Surge arrester	12	EA	4,446.00	4,200.00	1,800.00	$ 53,352	$ 50,400	$ 21,600	**$ 125,352**
4.26	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	$ -	$ -	$ -	**$ -**

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		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 Annnunciator		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
16. 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- TO38 Core 3
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit
(Northport To Dunwoodie 345 kV)

Total: $ 188,625,656

NEXTera Energy- TO38 Core 3	*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**
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**

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
2.20	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- TO38 Core 3
Comp 4C - Sprain Brook To New Rochelle Landing Onshore 345kV UG Cables -Dobule circuits
(EGC To Sprain Brook 345 kV / Ruland To Sprain Brook 345 kV)

Total: $ 346,473,248

NEXTera Energy- TO38 Core 3				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
Comp 4C - Sprain Brook To New Rochelle Landing Onshore 345kV UG Cables -Dobule circuits				
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 -Dobule 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 -Dobule circuits(EGC To Sprain Brook 345 kV / Ruland To Sprain Brook 345							**$ 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- TO38 Core 3

Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables - Double circuits (two lines, single circuit each)
EGC-SprainBrook 345KV/ Ruland-SprainBrook 345KV

Total: $ 524,998,762

NEXTEra Energy 0- T038 Core 3				
	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-SprainBrook 345KV/ Ruland-SprainBrook 345KV				
1. SUBMARINE CABLE	$ 116,979,561	$ 104,729,644	$ 71,163,184	$ 292,872,389
2. TRANSITION STATION	$ 920,987	$ 1,160,115	$ 1,105,523	$ 3,186,625
3. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	$ 13,335,838	$ 46,001,031	$ 15,365,954	$ 74,702,824
SUBTOTAL (Costs):	$ 131,236,386	$ 151,890,790	$ 87,634,662	$ 370,761,837
CONTRACTOR MARK-UP (OH&P)	$ 23,622,549	$ 27,340,342	$ 15,774,239	$ 66,737,131
SUBTOTAL:	$ 154,858,935	$ 179,231,132	$ 103,408,901	$ 437,498,968
CONTINGENCY ON ENTIRE PROJECT	$ 30,971,787	$ 35,846,226	$ 20,681,780	$ 87,499,794
TOTAL:	$ 185,830,722	$ 215,077,358	$ 124,090,681	$ 524,998,762

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-SprainBrook 345KV/ Ru										
1. SUBMARINE CABLE										
1.1	Submarine Cable - 1600 mm2 Tri-Core + Vessel Install	200,260	FT	$ 537	$ 400	$ 250	$ 107,539,534	$ 80,103,936	$ 50,064,960	**$ 237,708,430**
1.2	Submarine Cable- transportation from manufacture location to site	1	LS		$ 10,135,879	$ 6,757,252	$ -	$ 10,135,879	$ 6,757,252	**$ 16,893,131**
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	100,130	FT	$ 7			$ 740,661	$ -	$ -	**$ 740,661**
1.8	Ground Continuity Conductor	100,130	FT	$ 13			$ 1,305,594	$ -	$ -	**$ 1,305,594**
1.9							$ -	$ -	$ -	**$ -**
1.10	Jack and Bore along Route	0	LF	$ 1,600	$ 3,200	$ 3,200	$ -	$ -	$ -	**$ -**
1.11	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:							$ 116,979,561	$ 104,729,644	$ 71,163,184	**$ 292,872,389**
2. TRANSITION STATION										
2.1	Site Clearing	1.0	ACRE	-	10,800.00	7,200.00	$ -	$ 10,800	$ 7,200	**$ 18,000**
2.2	Demolition	0	LS	-	60,000.00	40,000.00	$ -	$ -	$ -	**$ -**
2.3	Strip and Dispose Top Soil	1,613	CY		24.50	10.50	$ -	$ 39,527	$ 16,940	**$ 56,467**
2.4	Site Grading- Excavation for Substation Pad	4,840	CY		9.00	6.00	$ -	$ 43,560	$ 29,040	**$ 72,600**
2.5	Site Grading- Excavation for Substation Pad-Rock excavation-Hauling and disposal	2,614	CY		21.00	9.00	$ -	$ 54,885.60	$ 23,522.40	**$ 78,408.00**
2.6	Site Grading- Fill for Substation Pad (site borrow, compacted in place)	3,920	CY		2.40	1.60	$ -	$ 9,409	$ 6,273	**$ 15,682**
2.7	Site Grading -Fill for Substation Pad (import, compacted in place)	2,614	CY	25.00	2.40	1.60	$ 65,340	$ 6,273	$ 4,182	**$ 75,794**
2.8	Install substation 8" pad base	4,840	SY	11.00	6.00	4.00	$ 53,240	$ 29,040	$ 19,360	**$ 101,640**
2.9	Site Surfacing - Aggregate 6" Thick	4,840	SY	16.50	4.50	3.00	$ 79,860	$ 21,780	$ 14,520	**$ 116,160**
2.10	7' Station Fence w/ Barbed Wire & Grounding	900	LF	13.85	13.85	6.92	$ 12,463	$ 12,463	$ 6,232	**$ 31,158**
2.11	20' Slide Gate & Grounding	2	EA	8,100.00	3,245.00	1,305.00	$ 16,200	$ 6,490	$ 2,610	**$ 25,300**
2.12	4' Pedestrian gate	2	EA	2,500.00	1,000.00	350.00	$ 5,000	$ 2,000	$ 700	**$ 7,700**
2.13	Erosion Control-Silt fence install & remove	1,500	LF	2.41	3.16	0.72	$ 3,615	$ 4,740	$ 1,080	**$ 9,435**
2.14	Temporary fencing	1,000	LF	7.50	5.25	2.25	$ 7,500	$ 5,250	$ 2,250	**$ 15,000**
2.15	345kV, Cable sealing end - 3 Ph	$ 64	CY	703.89	804.44	502.78	$ 45,189	$ 51,645	$ 32,278	**$ 129,113**
2.16	345kV, lighting arrester	64	CY	703.89	804.44	502.78	$ 45,189	$ 51,645	$ 32,278	**$ 129,113**
2.17	345kV, Cable sealing end - 3 Ph	12	EA	8,346.00	5,758.74	3,839.16	$ 100,152	$ 69,105	$ 46,070	**$ 215,327**
2.18	345kV, lighting arrester	12	EA	4,810.00	2,886.00	1,924.00	$ 57,720	$ 34,632	$ 23,088	**$ 115,440**
2.19	AL. Bus Tubing, 5" SCH 80	420	LF	25.00	184.94	123.29	$ 10,500	$ 77,674	$ 51,783	**$ 139,957**
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	267	LF	2.09	-	-	$ 558	$ -	$ -	**$ 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
2.22	Caweld, DSA, 4/0 , T, CROSS	133	EA	165.00	75.00		$ 22,000	$ 10,000	$ -	**$ 32,000**
2.23	Ground Rod, 3/4" x 15'	36	EA	135.00	67.50	7.50	$ 4,860	$ 2,430	$ 270	**$ 7,560**
2.24	Trench Box Shoring (Vault)	8	EA	$ -	$ 18,079	$ 27,119	$ -	$ 144,633	$ 216,949	**$ 361,582**
2.25	Splice Vault Excavation	5,177	CY		$ 17.5	$ 7.5	$ -	$ 90,596	$ 38,827	**$ 129,422**
2.26	Splice Vault Supply & Installation	8	EA	$ 45,500	$ 21,450	$ 50,050	$ 364,000	$ 171,600	$ 400,400	**$ 936,000**
2.27	Splice Vault Backfill	1,553	CY		$ 14.0	$ 6.0	$ -	$ 21,743	$ 9,318	**$ 31,061**
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	4,711	CY		$ 24.5	$ 10.5	$ -	$ 115,419	$ 49,465	**$ 164,884**
2.31	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	**$ -**
2.32	Dewatering	8	EA			$ 4,000	$ -	$ -	$ 32,000	**$ 32,000**
2.33	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.34	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.35	Excavated material - stockpile management	5,177	CF		$ 1.0	$ 0.5	$ -	$ 5,177	$ 2,588	**$ 7,765**
2.36							$ -	$ -	$ -	**$ -**
TOTAL - Transition station :							$ 920,987	$ 1,160,115	$ 1,105,523	**$ 3,186,625**
Comp 17. New Rochelle Landing to Hempstead Harbor Landing (Shore Road) 345kV Offshore Submarine Cables							$ 117,900,548	$ 105,889,759	$ 72,268,707	**$ 296,059,014**
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		2,960,590.14		$ -	$ 2,960,590	$ -	**$ 2,960,590**
3.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		11,842,360.55		$ -	$ 11,842,361	$ -	**$ 11,842,361**
3.4	Utility PM and Project Oversite	1	LS		2,960,590.14		$ -	$ 2,960,590	$ -	**$ 2,960,590**
3.5	Site Accommodation, Facilities, Storage	1	LS	2,960,590.14			$ 2,960,590	$ -	$ -	**$ 2,960,590**
	Engineering									
3.6	Design Engineering	1	LS		$ 14,802,951		$ -	$ 14,802,951	$ -	**$ 14,802,951**
3.7	Surveying/Staking	1	LS		$ 2,072,413		$ -	$ 2,072,413	$ -	**$ 2,072,413**
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									
3.11	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 2,960,590		$ -	$ 2,960,590	$ -	**$ 2,960,590**
3.12	Environmental-special studies/investigation	1	LS		$ 370,000		$ -	$ 370,000	$ -	**$ 370,000**
3.13	Warranties / LOC's	1	LS		$ 888,177		$ -	$ 888,177	$ -	**$ 888,177**
3.14	Laydown Lease & temporary easement	1	LS		$ 500,000		$ -	$ 500,000	$ -	**$ 500,000**
3.15	Real Estate (Acquisition)	1	LS		$ -	$ 842,480	$ -	$ -	$ 842,480	**$ 842,480**
3.16	Legal Fees (Real estate)	1.00	LS		-	25,274.40	$ -	$ -	$ 25,274	**$ 25,274**
3.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
3.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
3.19	Sales Tax on Materials	8.8%	LS	$ 117,900,548			$ 10,375,248	$ -	$ -	**$ 10,375,248**
3.20	Contractor Permits	1	LS		$ 296,059		$ -	$ 296,059	$ -	**$ 296,059**
3.21	Payment & Performance Bond	1	LS			$ 10,480,000	$ -	$ -	$ 10,480,000	**$ 10,480,000**
3.22	Marine / Specialty Insurance		LS				$ -	$ -	$ -	**$ -**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 13,335,838	$ 46,001,031	$ 15,365,954	**$ 74,702,824**

NEXTera Energy- TO38 Core 3

Comp 18. New Rochelle Landing to Northport Landing 345kV Offshore Submarine Cables - Single circuit
EGC-SprainBrook 345KV/ Ruland-SprainBrook 345KV

Total: $ 699,775,281

NEXTEra Energy 0- T038 Core 3	*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-SprainBrook 345KV/ Ruland-SprainBrook 345KV				
1. SUBMARINE CABLE	$ 165,374,873	$ 140,494,560	$ 91,110,953	$ 396,980,386
2. TRANSITION STATION	$ 416,351	$ 564,240	$ 435,307	$ 1,415,898
3. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	$ 18,573,591	$ 59,107,213	$ 18,114,495	$ 95,795,299
SUBTOTAL (Costs):	$ 184,364,814	$ 200,166,013	$ 109,660,755	$ 494,191,582
CONTRACTOR MARK-UP (OH&P)	$ 33,185,667	$ 36,029,882	$ 19,738,936	$ 88,954,485
SUBTOTAL:	$ 217,550,481	$ 236,195,896	$ 129,399,691	$ 583,146,067
CONTINGENCY ON ENTIRE PROJECT	$ 43,510,096	$ 47,239,179	$ 25,879,938	$ 116,629,213
TOTAL:	$ 261,060,577	$ 283,435,075	$ 155,279,629	$ 699,775,281

Description of Work: Part of any Dunwoodie to Northport 345 kV project segment (Include HDD's to get onshore at both ends of route)

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-SprainBrook 345KV/ Rula										
1. SUBMARINE CABLE										
1.1	Submarine Cable - 1600 mm2 Tri-Core + Vessel Install	295,046	FT	$ 537	$ 400	$ 250	$ 158,439,917	$ 118,018,560	$ 73,761,600	**$ 350,220,077**
1.2	Submarine Cable- transportation from manufacture location to site	1	LS		$ 14,933,371	$ 9,955,581	$ -	$ 14,933,371	$ 9,955,581	**$ 24,888,952**
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	147,523	FT	$ 7			$ 1,091,229	$ -	$ -	**$ 1,091,229**
1.8	Ground Continuity Conductor	147,523	FT	$ 13			$ 1,923,555	$ -	$ -	**$ 1,923,555**
1.9							$ -	$ -	$ -	**$ -**
1.10	Jack and Bore along Route	0	LF	$ 1,600	$ 3,200	$ 3,200	$ -	$ -	$ -	**$ -**
1.11	HDD along Route	4,342	LF	$ 800	$ 1,600	$ 1,600	$ 3,473,600	$ 6,947,200	$ 6,947,200	**$ 17,368,000**
TOTAL - Submarine cable:							$ 165,374,873	$ 140,494,560	$ 91,110,953	**$ 396,980,386**
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							$ 165,791,224	$ 141,058,800	$ 91,546,260	**$ 398,396,284**
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		3,983,962.84		$ -	$ 3,983,963	$ -	**$ 3,983,963**
3.3	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		15,935,851.34		$ -	$ 15,935,851	$ -	**$ 15,935,851**
3.4	Utility PM and Project Oversite	1	LS		3,983,962.84		$ -	$ 3,983,963	$ -	**$ 3,983,963**
3.5	Site Accommodation, Facilities, Storage	1	LS	3,983,962.84			$ 3,983,963	$ -	$ -	**$ 3,983,963**
	Engineering									
3.6	Design Engineering	1	LS		$ 19,919,814		$ -	$ 19,919,814	$ -	**$ 19,919,814**
3.7	Surveying/Staking	1	LS		$ 2,788,774		$ -	$ 2,788,774	$ -	**$ 2,788,774**
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		$ 20,000		$ -	$ 20,000	$ -	**$ 20,000**
3.10	Post Cable-Lay Inspection		EA				$ -	$ -	$ -	**$ -**
	Permitting and Additional Costs									
3.10	Environmental Licensing & Permitting Costs & related legal cost	1	LS		$ 3,983,963		$ -	$ 3,983,963	$ -	**$ 3,983,963**
3.11	Environmental-special studies/investigation	1	LS		$ 370,000		$ -	$ 370,000	$ -	**$ 370,000**
3.12	Warranties / LOC's	1	LS		$ 1,195,189		$ -	$ 1,195,189	$ -	**$ 1,195,189**
3.13	Laydown Lease & temporary easement	1	LS		$ 500,000		$ -	$ 500,000	$ -	**$ 500,000**
3.14	Real Estate (Acquisition)	1	LS		$ -	$ 112,908	$ -	$ -	$ 112,908	**$ 112,908**
3.15	Legal Fees (Real estate)	1.00	LS		-	3,387.24	$ -	$ -	$ 3,387	**$ 3,387**
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	$ 165,791,224			$ 14,589,628	$ -	$ -	**$ 14,589,628**
3.21	Contractor Permits	1	LS		$ 398,396		$ -	$ 398,396	$ -	**$ 398,396**
3.22	Payment & Performance Bond	1	LS			$ 13,980,000	$ -	$ -	$ 13,980,000	**$ 13,980,000**
3.23	Marine / Specialty Insurance		LS				$ -	$ -	$ -	**$ -**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							$ 18,573,591	$ 59,107,213	$ 18,114,495	**$ 95,795,299**

NEXTera Energy- TO38 Core 3

Comp 3 - East Garden City To Hempstead Harbor Landing 345kV Onshore UG Cables -Single circuit (EGC To Sprain Brook 345 kV)

Total: $ 210,271,720

NEXTera Energy- TO38 Core 3	*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	$ 2,537,664	$ 12,454,558	$ 4,987,906	$ 19,980,128
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 15,557,491	$ 11,869,190	$ 7,439,973	$ 34,866,655
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 31,593,752	$ 19,088,955	$ 12,365,870	$ 63,048,577
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 5,591,329	$ 18,784,725	$ 6,225,565	$ 30,601,618
SUBTOTAL (Costs):	$ 55,280,235	$ 62,197,429	$ 31,019,314	$ 148,496,978
CONTRACTOR MARK-UP (OH&P)	$ 9,950,442	$ 11,195,537	$ 5,583,476	$ 26,729,456
SUBTOTAL:	$ 65,230,678	$ 73,392,966	$ 36,602,790	$ 175,226,434
CONTINGENCY ON ENTIRE PROJECT	$ 13,046,136	$ 14,678,593	$ 7,320,558	$ 35,045,287
TOTAL:	$ 78,276,813	$ 88,071,559	$ 43,923,348	$ 210,271,720

Description of Work: East Garden City - Hempstead Harbor Landing (Shore Road, single 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	320	DAY	$ 1,600	$ 4,800	$ 1,600	$ 512,000	$ 1,536,000	$ 512,000	**$ 2,560,000**
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	12,800.0	HR		$ 120	$ 27	$ -	$ 1,536,000	$ 345,600	**$ 1,881,600**
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	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:							**$ 2,537,664**	**$ 12,454,558**	**$ 4,987,906**	**$ 19,980,128**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
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	351,053	SF	$ 2	$ 1.5	$ 0.5	$ 702,106	$ 526,579	$ 175,526	**$ 1,404,211**
2.3	Trench Excavation	29,254	CY		$ 17.5	$ 7.5	$ -	$ 511,952	$ 219,408	**$ 731,360**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	1,828	SF	$ 50	$ 25	$ 14	$ 91,420	$ 44,796	$ 25,598	**$ 161,813**
2.5	Supply & Install Thermal Backfill	15,359	CY	$ 350	$ 245	$ 105	$ 5,375,496	$ 3,762,847	$ 1,612,649	**$ 10,750,992**
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	7,150	CY	$ 200	$ 125	$ 50	$ 1,430,053	$ 893,783	$ 357,513	**$ 2,681,349**
2.9	Conduit 8" SCH 40PVC	215,635	LF	$ 28.6	$ 5.7	$ 2.4	$ 6,167,167	$ 1,222,652	$ 523,994	**$ 7,913,812**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	107,818	LF	$ 3.5	$ 3.15	$ 1.4	$ 379,518	$ 339,625	$ 145,554	**$ 864,697**
2.12	Warning Tape	107,818	LF	$ 0.15	$ 0.25	$ 0.10	$ 16,173	$ 26,954	$ 10,782	**$ 53,909**
2.13	Trench Box Shoring (Vault)	30	EA	$ -	$ 18,079	$ 27,119	$ -	$ 542,373	$ 813,559	**$ 1,355,932**
2.14	Splice Vault Excavation	4,987	CY		$ 17.5	$ 7.5	$ -	$ 87,267	$ 37,400	**$ 124,667**

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 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	1,496	CY		$ 14.0	$ 6.0	$ -	$ 20,944	$ 8,976	**$ 29,920**
2.17	Jack and Bore along Route	0	LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.18	HDD along Route		LF	$ 800	$ 1,600	$ 1,600	$ -	$ -	$ -	**$ -**
2.19	Air Test Ducts	323,453	LF			$ 0.25	$ -	$ -	$ 80,863	**$ 80,863**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	17,093	SY	$ 14.00	$ 14.00	$ 7.00	$ 239,299	$ 239,299	$ 119,650	**$ 598,248**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	4,748	CY	$ 22.38	$ 23.50	$ 10.07	$ 106,260	$ 111,573	$ 47,817	**$ 265,651**
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	72	EA		$ 400	$ 1,200	$ -	$ 28,601	$ 85,803	**$ 114,404**
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	72	EA		$ 10	$ 15	$ -	$ 715	$ 1,073	**$ 1,788**
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	154	EA		$ 400	$ 1,200	$ -	$ 61,434	$ 184,303	**$ 245,737**
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	42,569	CY		$ 24.5	$ 10.5	$ -	$ 1,042,930	$ 446,970	**$ 1,489,901**
2.27	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	**$ -**
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	34,241	CF		$ 1.0	$ 0.5	$ -	$ 34,241	$ 17,121	**$ 51,362**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 15,557,491**	**$ 11,869,190**	**$ 7,439,973**	**$ 34,866,655**
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		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	56,604	FT	$ 7	$ 3	$ 2	$ 418,702	$ 188,526	$ 125,684	**$ 732,912**
3.12	Ground Continuity Conductor	56,604	FT	$ 13	$ 8	$ 5	$ 738,063	$ 426,060	$ 284,040	**$ 1,448,163**
TOTAL - INSULATORS, FITTINGS, HARDWARE:							**$ 31,593,752**	**$ 19,088,955**	**$ 12,365,870**	**$ 63,048,577**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 49,688,907**	**$ 43,412,704**	**$ 24,793,749**	**$ 117,895,360**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 2,046,194	$ 1,364,129	$ -	$ 2,046,194	$ 1,364,129	**$ 3,410,323**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		1,178,953.60		$ -	$ 1,178,954	$ -	**$ 1,178,954**
4.3	Construction Project Management / Supervision	1	LS		4,715,814.38		$ -	$ 4,715,814	$ -	**$ 4,715,814**
4.4	Utility PM and Project Oversite	1	LS		1,178,953.60		$ -	$ 1,178,954	$ -	**$ 1,178,954**
4.5	Site Accommodation, Facilities, Storage	1	LS	1,178,953.60			$ 1,178,954	$ -	$ -	**$ 1,178,954**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 5,894,768	$ -	$ -	$ 5,894,768	$ -	**$ 5,894,768**
4.7	LiDAR /GPR	1.0	LS		$ 212,212	$ 141,474	$ -	$ 212,212	$ 141,474	**$ 353,686**
4.8	Geotech	11.00	EA		2,730.00	1,820.00	$ -	$ 30,030	$ 20,020	**$ 50,050**
4.9	Surveying/Staking	1	LS		$ 495,161	$ 330,107	$ -	$ 495,161	$ 330,107	**$ 825,268**
	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		$ 1,178,954		$ -	$ 1,178,954	$ -	**$ 1,178,954**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 353,686		$ -	$ 353,686	$ -	**$ 353,686**
4.14	Laydown Lease & temporary easement	1	LS		$ 1,500,000		$ -	$ 1,500,000	$ -	**$ 1,500,000**
4.15	Real Estate (Acquisition)	1	LS			$ 50,426	$ -	$ -	$ 50,426	**$ 50,426**
4.16	Legal Fees (Real estate)	1.00	LS		-	1,512.78	$ -	$ -	$ 1,513	**$ 1,513**
4.17	Insurance	-	LS		-	-	$ -	$ -	$ -	**$ -**
4.18	Insurance (specialty, e.g. railroad)		Crossing			$ 1,000	$ -	$ -	$ -	**$ -**
4.19	Bonds	1	LS		-	$ 4,200,000	$ -	$ -	$ 4,200,000	**$ 4,200,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 49,688,906.93			$ 4,412,375	$ -	$ -	**$ 4,412,375**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 117,895	$ -	$ -	$ 117,895	**$ 117,895**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 5,591,329**	**$ 18,784,725**	**$ 6,225,565**	**$ 30,601,618**

NEXTera Energy- TO38 Core 3

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- TO38 Core 3				
	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**
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**

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	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- TO38 Core 3

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

Total: $ 133,317,472

NEXTera Energy- TO38 Core 3	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp 8C - Rebuld: 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 - Rebuld: 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	$ -	CY		$ 14.0	$ 6.0	$ -	$ -	$ -	**$ -**
2.17	Jack and Bore along Route	0	LF	$ 2,400	$ 4,800	$ 4,800	$ -	$ -	$ -	**$ -**

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	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- TO38 Core 3

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

Total: $ 394,231,294

NEXTera Energy- TO38 Core 3				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
Comp 10A - East Graden 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 Graden 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 CONDUITS & VAULTS 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- TO38 Core 3

Comp 11 - Pilgram to Northport 138kV Onshore UG Cables -Single circuit
(Pilgram to Northport kV)

Total: $ 165,653,108

NEXTera Energy- TO38 Core 3				
	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
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- TO38 Core 3

Comp 249 - Jamaica To Farragut 345kV Onshore UG Cables -Single circuit (EGC-Farragut 345kv)

Total: $ 235,279,477

NEXTera Energy- TO38 Core 3				
	Material Supply	*Labor Supply*	*Equip Supply*	*Total*
Comp 249 - Jamaica To Farragut 345kV Onshore UG Cables -Single circuit(EGC-Farragut 345kv)				
1. SITE PREP/ACCESS/TRAFFIC MANAGEMENT	$ 2,686,464	$ 13,140,838	$ 5,290,426	$ 21,117,728
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION	$ 18,736,904	$ 14,861,575	$ 9,340,154	$ 42,938,633
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 34,016,741	$ 20,570,670	$ 13,308,667	$ 67,896,078
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 6,242,606	$ 20,847,264	$ 7,115,514	$ 34,205,384
SUBTOTAL (Costs):	$ 61,682,715	$ 69,420,347	$ 35,054,761	$ 166,157,823
CONTRACTOR MARK-UP (OH&P)	$ 11,102,889	$ 12,495,662	$ 6,309,857	$ 29,908,408
SUBTOTAL:	$ 72,785,604	$ 81,916,010	$ 41,364,618	$ 196,066,231
CONTINGENCY ON ENTIRE PROJECT	$ 14,557,121	$ 16,383,202	$ 8,272,924	$ 39,213,246
TOTAL:	$ 87,342,724	$ 98,299,212	$ 49,637,541	$ 235,279,477

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 - Jamaica To Farragut 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	10.96	Mile		$ 700,000	$ 300,000	$ -	$ 7,672,000	$ 3,288,000	**$ 10,960,000**
1.3	Flaggers	320	DAY	$ 1,600	$ 4,800	$ 1,600	$ 512,000	$ 1,536,000	$ 512,000	**$ 2,560,000**
1.4	K Rail / Lane Control / Metal Plates	57,869	LF	$ 30	$ 18	$ 12	$ 1,736,064	$ 1,041,638	$ 694,426	**$ 3,472,128**
1.5	Police Support	12,800.0	HR		$ 120	$ 27	$ -	$ 1,536,000	$ 345,600	**$ 1,881,600**
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	10.96	Mile	$ 40,000	$ 120,000	$ 40,000	$ 438,400	$ 1,315,200	$ 438,400	**$ 2,192,000**
TOTAL - SITE PREP/ACCESS/TRAFFIC MANAGEMENT/ ACCESS:							**$ 2,686,464**	**$ 13,140,838**	**$ 5,290,426**	**$ 21,117,728**
2. ONSHORE CABLE CONDUITS & VAULTS INSTALLATION										
2.1	Trench Box Shoring & Trench Box Install Crew	10.96	Miles		$ 139,800	$ 93,200	$ -	$ 1,532,208	$ 1,021,472	**$ 2,553,680**
2.2	Formwork in Trench	452,030	SF	$ 2	$ 1.5	$ 0.5	$ 904,061	$ 678,046	$ 226,015	**$ 1,808,122**
2.3	Trench Excavation	37,669	CY		$ 17.5	$ 7.5	$ -	$ 659,211	$ 282,519	**$ 941,730**
2.4	Supply & Install 6" Sand Bedding for direct bury conduits	2,354	SF	$ 50	$ 25	$ 14	$ 117,716	$ 57,681	$ 32,961	**$ 208,358**
2.5	Supply & Install Thermal Backfill	19,776	CY	$ 350	$ 245	$ 105	$ 6,921,716	$ 4,845,201	$ 2,076,515	**$ 13,843,431**
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	9,207	CY	$ 200	$ 125	$ 50	$ 1,841,396	$ 1,150,873	$ 460,349	**$ 3,452,618**
2.9	Conduit 8" SCH 40PVC	231,475	LF	$ 28.6	$ 5.7	$ 2.4	$ 6,620,191	$ 1,312,464	$ 562,485	**$ 8,495,140**
2.10	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.11	Conduit 2" SCH 40PVC	115,738	LF	$ 3.5	$ 3.15	$ 1.4	$ 407,396	$ 364,573	$ 156,246	**$ 928,216**
2.12	Warning Tape	115,738	LF	$ 0.15	$ 0.25	$ 0.10	$ 17,361	$ 28,934	$ 11,574	**$ 57,869**
2.13	Trench Box Shoring (Vault)	34	EA	$ -	$ 18,079	$ 27,119	$ -	$ 614,689	$ 922,034	**$ 1,536,723**
2.14	Splice Vault Excavation	5,652	CY		$ 17.5	$ 7.5	$ -	$ 98,902	$ 42,387	**$ 141,289**
2.15	Splice Vault Supply & Installation	34	EA	$ 35,000	$ 16,500	$ 38,500	$ 1,190,000	$ 561,000	$ 1,309,000	**$ 3,060,000**
2.16	Splice Vault Backfill	$ 1,695	CY		$ 14.0	$ 6.0	$ -	$ 23,737	$ 10,173	**$ 33,909**

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	347,213	LF			$ 0.25	$ -	$ -	$ 86,803	**$ 86,803**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	21,817	SY	$ 14.00	$ 14.00	$ 7.00	$ 305,439	$ 305,439	$ 152,719	**$ 763,596**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	6,060	CY	$ 22.38	$ 23.50	$ 10.07	$ 135,629	$ 142,411	$ 61,033	**$ 339,073**
2.22	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	92	EA		$ 400	$ 1,200	$ -	$ 36,828	$ 110,484	**$ 147,312**
2.23	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	92	EA		$ 10	$ 15	$ -	$ 921	$ 1,381	**$ 2,302**
2.24	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	198	EA		$ 400	$ 1,200	$ -	$ 79,105	$ 237,316	**$ 316,421**
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	54,113	CY		$ 24.5	$ 10.5	$ -	$ 1,325,765	$ 568,185	**$ 1,893,951**
2.27	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	**$ -**
2.28	Dewatering	34	EA			$ 4,000	$ -	$ -	$ 136,000	**$ 136,000**
2.29	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.30	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.31	Excavated material - stockpile management	43,321	CF		$ 1.0	$ 0.5	$ -	$ 43,321	$ 21,660	**$ 64,981**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 18,736,904**	**$ 14,861,575**	**$ 9,340,154**	**$ 42,938,633**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 345kV 5000 kcmil copper XLPE	182,287	FT	$ 167	$ 100	$ 67	$ 30,441,882	$ 18,265,129	$ 12,176,753	**$ 60,883,764**
3.2	Circuit #1- Cable Splicing- 345kV 5000 kcmil copper XLPE	102	EA	$ 11,722	$ 9,846	$ 2,813	$ 1,195,644	$ 1,004,341	$ 286,955	**$ 2,486,940**
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	34	EA	$ 28,548	$ 17,129	$ 11,419	$ 970,647	$ 582,388	$ 388,259	**$ 1,941,295**
3.11	Fiber Optic Cable	60,762	FT	$ 7	$ 3	$ 2	$ 449,458	$ 202,375	$ 134,916	**$ 786,749**
3.12	Ground Continuity Conductor	60,762	FT	$ 13	$ 8	$ 5	$ 792,279	$ 457,357	$ 304,905	**$ 1,554,541**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							**$ 34,016,741**	**$ 20,570,670**	**$ 13,308,667**	**$ 67,896,078**
Comp 4 - Dunwoodie To New Rochelle Landing 345kV Onshore UG Cables -single circuit(EGC To Dunwoodie 345 kV)							**$ 55,440,109**	**$ 48,573,083**	**$ 27,939,247**	**$ 131,952,439**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 2,295,370	$ 1,530,247	$ -	$ 2,295,370	$ 1,530,247	**$ 3,825,616**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		1,319,524.39		$ -	$ 1,319,524	$ -	**$ 1,319,524**
4.3	Construction Project Management / Supervision	1	LS		5,278,097.54		$ -	$ 5,278,098	$ -	**$ 5,278,098**
4.4	Utility PM and Project Oversite	1	LS		1,319,524.39		$ -	$ 1,319,524	$ -	**$ 1,319,524**
4.5	Site Accommodation, Facilities, Storage	1	LS	1,319,524.39			$ 1,319,524	$ -	$ -	**$ 1,319,524**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 6,597,622	$ -	$ -	$ 6,597,622	$ -	**$ 6,597,622**
4.7	LiDAR /GPR	1.0	LS		$ 237,514	$ 158,343	$ -	$ 237,514	$ 158,343	**$ 395,857**
4.8	Geotech	11.00	EA		2,730.00	1,820.00	$ -	$ 30,030	$ 20,020	**$ 50,050**
4.9	Surveying/Staking	1	LS		$ 554,200	$ 369,467	$ -	$ 554,200	$ 369,467	**$ 923,667**
	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		$ 1,319,524		$ -	$ 1,319,524	$ -	**$ 1,319,524**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 395,857		$ -	$ 395,857	$ -	**$ 395,857**
4.14	Laydown Lease & temporary easement	1	LS		$ 1,500,000		$ -	$ 1,500,000	$ -	**$ 1,500,000**
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		-	$ 4,700,000	$ -	$ -	**$ 4,700,000**	**$ 4,700,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 55,440,108.80			$ 4,923,082	$ -	$ -	**$ 4,923,082**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 131,952	$ -	$ -	$ 131,952	**$ 131,952**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 6,242,606**	**$ 20,847,264**	**$ 7,115,514**	**$ 34,205,384**

NEXTera Energy- TO38 Core 3

Comp 247 - Jamaica to East Garden City 138 and 345kV Onshore UG Cables -Double & Single circuit (EGC-Jamaica 138kv & EGC-Farragut 345kv)

Total: $ 417,671,578

NEXTera Energy- TO38 Core 3	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Comp 247 - Jamaica to East Garden City 138 and 345kV Onshore UG Cables -Double & Single circuit (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	$ 37,471,503	$ 27,164,952	$ 17,236,589	$ 81,873,044
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION	$ 65,241,174	$ 39,963,042	$ 25,809,297	$ 131,013,513
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS	$ 11,726,279	$ 35,817,102	$ 12,132,954	$ 59,676,335
SUBTOTAL (Costs):	$ 117,282,412	$ 116,894,409	$ 60,788,982	$ 294,965,804
CONTRACTOR MARK-UP (OH&P)	$ 21,110,834	$ 21,040,994	$ 10,942,017	$ 53,093,845
SUBTOTAL:	$ 138,393,246	$ 137,935,403	$ 71,730,999	$ 348,059,648
CONTINGENCY ON ENTIRE PROJECT	$ 27,678,649	$ 27,587,081	$ 14,346,200	$ 69,611,930
TOTAL:	$ 166,071,896	$ 165,522,484	$ 86,077,199	$ 417,671,578

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 & Single circuit(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**
Single Circuit Conduit Trench										
2.13	Trench Excavation	1,792	CY		$ 17.5	$ 7.5	$ -	$ 31,360	$ 13,440	**$ 44,800**

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
2.14	Supply & Install 6" Sand Bedding for direct bury conduits	$ 112	SF	$ 50	$ 25	$ 14	$ 5,600	$ 2,744	$ 1,568	**$ 9,912**
2.15	Supply & Install Thermal Backfill	896	CY	$ 350	$ 245	$ 105	$ 313,600	$ 219,520	$ 94,080	**$ 627,200**
2.16	Supply & Install Concrete Cap (6")	0	CY	$ 200	$ 125	$ 50	$ -	$ -	$ -	**$ -**
2.17	Native Backfill -direct bury conduits sys Trench	1,114	CY		$ 14.0	$ 6.0	$ -	$ 15,596	$ 6,684	**$ 22,281**
2.18	Supply & Install Ductbank Concrete	438	CY	$ 200	$ 125	$ 50	$ 87,599	$ 54,749	$ 21,900	**$ 164,248**
2.19	Conduit 8" SCH 40PVC	10,752	LF	$ 28.6	$ 5.7	$ 2.4	$ 307,507	$ 60,964	$ 26,127	**$ 394,598**
2.20	Conduit 4" SCH 40PVC	0	LF	$ 9.8	$ 4.20	$ 1.8	$ -	$ -	$ -	**$ -**
2.21	Conduit 2" SCH 40PVC	5,376	LF	$ 3.5	$ 3.15	$ 1.4	$ 18,924	$ 16,934	$ 7,258	**$ 43,116**
2.22	Warning Tape	2,688	LF	$ 0.15	$ 0.25	$ 0.10	$ 403	$ 672	$ 269	**$ 1,344**
138 KV Splice Vault										
2.12	Trench Box Shoring (Vault)	36	EA	$ -	$ 18,079	$ 27,119	$ -	$ 650,847	$ 976,271	**$ 1,627,119**
2.13	Splice Vault Excavation	4,928	CY		$ 17.5	$ 7.5	$ -	$ 86,240	$ 36,960	**$ 123,200**
2.14	Splice Vault Supply & Installation	36	EA	$ 35,000	$ 16,500	$ 38,500	$ 1,260,000	$ 594,000	$ 1,386,000	**$ 3,240,000**
2.15	Splice Vault Backfill	1,478	CY		$ 14.0	$ 6.0	$ -	$ 20,698	$ 8,870	**$ 29,568**
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	750,470	LF			$ 0.25	$ -	$ -	$ 187,618	**$ 187,618**
2.20	PVMT, ASPHALT, 2" SURFACE COURSE	36,670	SY	$ 14.00	$ 14.00	$ 7.00	$ 513,377	$ 513,377	$ 256,689	**$ 1,283,443**
2.21	PVMT, AGGREGATE, 10", BASE COURSE	10,186	CY	$ 22.38	$ 23.50	$ 10.07	$ 227,964	$ 239,362	$ 102,584	**$ 569,910**
2.20	Concrete Ductbank Thermal Resistivity Testing (every 100CY of concrete poured)	184	EA		$ 400	$ 1,200	$ -	$ 73,525	$ 220,575	**$ 294,099**
2.21	Concrete Ductbank Compressive Strength Testing (every 100CY of concrete poured)	184	EA		$ 10	$ 15	$ -	$ 1,838	$ 2,757	**$ 4,595**
2.22	Backfill Thermal Resistivity Testing (every 100CY of backfill placed)	394	EA		$ 400	$ 1,200	$ -	$ 157,642	$ 472,926	**$ 630,568**
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	106,029	CY		$ 24.5	$ 10.5	$ -	$ 2,597,716	$ 1,113,307	**$ 3,711,023**
2.25	Rock Excavation and Removal	1	LS				$ -	$ -	$ -	**$ -**
2.26	Dewatering	71	EA			$ 4,000	$ -	$ -	$ 284,000	**$ 284,000**
2.27	Contaminated Water Treatment and Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.28	Contaminated Spoils Disposal	1	LS				$ -	$ -	$ -	**$ -**
2.29	Excavated material - stockpile management	85,899	CF		$ 1.0	$ 0.5	$ -	$ 85,899	$ 42,949	**$ 128,848**
TOTAL - ONSHORE CABLE CONDUITS & VAULTS INSTALLATION:							**$ 37,471,503**	**$ 27,164,952**	**$ 17,236,589**	**$ 81,873,044**
3. ONSHORE CABLE PROCUREMENT AND INSTALLATION										
3.1	Circuit #1- Procurement & Installation- 138kV 5000 kcmil copper XLPE	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	108	EA	$ 5,898	$ 9,846	$ 2,813	$ 636,984	$ 1,063,420	$ 303,834	**$ 2,004,238**
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	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		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)	36	EA	$ 26,659	$ 15,995	$ 10,664	$ 959,724	$ 575,834	$ 383,890	**$ 1,919,448**
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	125,687	FT	$ 7	$ 3	$ 2	$ 929,709	$ 418,614	$ 279,076	**$ 1,627,399**
3.11	Ground Continuity Conductor	125,687	FT	$ 13	$ 8	$ 5	$ 1,638,837	$ 946,048	$ 630,699	**$ 3,215,584**
TOTAL - ONSHORE CABLE PROCUREMENT AND INSTALLATION							$ 65,241,174	$ 39,963,042	$ 25,809,297	**$ 131,013,513**
Comp 247 - Jamaica to East Garden City 138 and 345kV Onshore UG Cables -Double & Single circuit(EGC-Jamaica 138kv & EGC-Farragut 345kv)							$ 105,556,133	$ 81,077,308	$ 48,656,028	**$ 235,289,469**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization									
4.1	Mob / Demob	1	LS		$ 3,892,000	$ 2,594,667	$ -	$ 3,892,000	$ 2,594,667	**$ 6,486,667**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		2,352,894.69		$ -	$ 2,352,895	$ -	**$ 2,352,895**
4.3	Construction Project Management / Supervision	1	LS		9,411,578.75		$ -	$ 9,411,579	$ -	**$ 9,411,579**
4.4	Utility PM and Project Oversite	1	LS		2,352,894.69		$ -	$ 2,352,895	$ -	**$ 2,352,895**
4.5	Site Accommodation, Facilities, Storage	1	LS	2,352,894.69			$ 2,352,895	$ -	$ -	**$ 2,352,895**
	Engineering									
4.6	Design Engineering	1.0	LS		$ 11,764,473	$ -	$ -	$ 11,764,473	$ -	**$ 11,764,473**

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		$ 423,521	$ 282,347	$ -	$ 423,521	$ 282,347	**$ 705,868**
4.8	Geotech	12.00	EA		2,730.00	1,820.00	$ -	$ 32,760	$ 21,840	**$ 54,600**
4.9	Surveying/Staking	1	LS		$ 988,216	$ 658,811	$ -	$ 988,216	$ 658,811	**$ 1,647,026**
	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		$ 2,352,895		$ -	$ 2,352,895	$ -	**$ 2,352,895**
4.12	Environmental-special studies/investigation		LS		$ -		$ -	$ -	$ -	**$ -**
4.13	Warranties / LOC's	1	LS		$ 705,868		$ -	$ 705,868	$ -	**$ 705,868**
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		-	$ 8,340,000	$ -	$ -	**$ 8,340,000**	**$ 8,340,000**
4.20	Sales Tax on Materials	8.88%	% of material cost	$ 105,556,132.87			$ 9,373,385	$ -	$ -	**$ 9,373,385**
4.21	Fees for permits, including roadway, railroad, building or other local permits	1	LS			$ 235,289	$ -	$ -	$ 235,289	**$ 235,289**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 11,726,279**	**$ 35,817,102**	**$ 12,132,954**	**$ 59,676,335**

NEXTera Energy- TO38 Core 3

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

Total: $ 5,354,910

NEXTera Energy- TO38 Core 3	*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**
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	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- TO38 Core 3

Other Comp. 138kV Upgrades

Total: $ 16,870,335

Other Comp. 138kV Upgrades	*Material Supply*	*Labor Supply*	*Equip Supply*	*Total*
Other Comp. 138kV Upgrades				
1. West Bus-Kings CT Upgrade	$ 278,435	$ 158,049	$ 77,216	$ 513,700
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:	$ 451,734	$ 2,750,045	$ 443,599	$ 3,645,378
CONTRACTOR MARK-UP (OH&P)	$ 829,380	$ 872,432	$ 442,722	$ 2,144,534
SUBTOTAL:	$ 5,437,050	$ 5,719,276	$ 2,902,287	$ 14,058,612
CONTINGENCY ON ENTIRE PROJECT	$ 1,087,410	$ 1,143,855	$ 580,457	$ 2,811,722
TOTAL:	$ 6,524,459	$ 6,863,131	$ 3,482,744	$ 16,870,335

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. West Bus-Kings CT Upgrade										
1.1	CT Replacement	12	EA	$ 18,000	$ 7,970	$ 3,416	$ 216,000	$ 95,641	$ 40,989	**$ 352,630**
1.2	CT Replacement-foundation	60	CY	$ 704	$ 804	$ 503	$ 42,233	$ 48,266	$ 30,167	**$ 120,666**
1.3	CT Replacement-structure	12	EA	$ 1,684	$ 1,178	$ 505	$ 20,202	$ 14,141	$ 6,061	**$ 40,404**
									$ -	**$ -**
TOTAL - West Bus-Kings-Pligrim CT Upgrade :							$ 278,435	$ 158,049	$ 77,216	**$ 513,700**
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							$ 4,155,935.10	$ 2,096,798.80	$ 2,015,966.10	**$ 8,268,700.00**
4. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization									

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
4.1	Mob / Demob	1.0	LS		$ 123,383	$ 82,255	$ -	$ 123,383	$ 82,255	**$ 205,638**
	Project Management, Material Handling & Amenities									
4.2	Preconstruction Supervision (Engineering, Permitting, Procurement)	1	LS		82,687.00		$ -	$ 82,687	$ -	**$ 82,687**
4.3	Construction Project Management / Supervision	1	LS		330,748.00		$ -	$ 330,748	$ -	**$ 330,748**
4.4	Utility PM and Project Oversite	1	LS		82,687.00		$ -	$ 82,687	$ -	**$ 82,687**
4.5	Site Accommodation, Facilities, Storage	1	LS	82,687.00			$ 82,687	$ -	$ -	**$ 82,687**
	Engineering									
4.6	Design Engineering	1.00	LS		$ 413,435	$ -	$ -	$ 413,435	$ -	**$ 413,435**
4.7	LiDAR	1.00	LS		$ 14,884	$ 9,922	$ -	$ 14,884	$ 9,922	**$ 24,806**
4.8	Geotech	-	EA		$ 2,730	$ 1,820	$ -	$ -	$ -	**$ -**
4.9	Surveying/Staking	1.00	Site		$ 34,729	$ 23,152	$ -	$ 34,729	$ 23,152	**$ 57,881**
	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		$ 82,687		$ -	$ 82,687	$ -	**$ 82,687**
4.13	Environmental-special studies/investigation	-	LS		$ -		$ -	$ -	$ -	**$ -**
4.14	Warranties / LOC's	1.00	LS		$ 24,806		$ -	$ 24,806	$ -	**$ 24,806**
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		-	$ 320,000	$ -	$ -	**$ 320,000**	**$ 320,000**
4.21	Sales Tax on Materials	8.88%	LS	$ 4,155,935.10			$ 369,047	$ -	$ -	**$ 369,047**
4.22	Fees for permits, including roadway, railroad, building or other local permits	1.00	LS			$ 8,269	$ -	$ -	$ 8,269	**$ 8,269**
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:							**$ 451,734**	**$ 2,750,045**	**$ 443,599**	**$ 3,645,378**

	NEXTera Energy- TO38 Core 3
	ESTIMATE ASSUMPTIONS & CLARIFICATIONS
	General assumptions/clarifications
1	This TO37 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	Cost s 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
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	Assume the cable trench in between transition manholes and transition station will be covered by submarine cable supplier/contractor
42	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.
43	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 -	
44	Site grading: Excavation quantity in substations is based on 3', fill quantity is based on 60% site borrow and 40% import.
45	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.
46	Substation pad is based on 8" base and 6" surfacing rock.
47	If required, the firewalls for transformers/PAR/Reactors are assumed 30' tall.
48	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.
49	Substation quantity takeoff is based on the plot and one line drawings provided, takeoff assumptions details please see each tab
50	All substation segments construction period is based on milestone schedule provided
51	Assume concrete cantilever retaining wall for Sprain Brook expansion, the assumed dimension details please see the tab
52	Assume 70% rock for Sprain brook 345kV expansion excavation