

Attachment K. Updated Proposed Layout Impact Calculations

As described in Section 2 ‘Updated Proposed Layout’ of the Supplement to the Application, the Updated Proposed Layout includes minor shifts to inverter locations, access roads, and solar panel arrays from what was proposed in the Application. The calculations included in this document outline the impacts to limits of disturbance, land use acreages, tree clearing, and sensitive resources as a result of the Updated Proposed Layout design. Calculations that did not change from the initial Application have not been included in this document or have been noted as such.

General Project Information and Updates

	Updated Proposed Layout	Initial Application
Project Area	1,221 acres	1,221 acres
Study Area	19,141 acres	19,141 acres
Limits of Disturbance	565.43 acres	595.06 acres
Area inside Project fence line	465 acres	479 acres
Total Collection Line	7.78 miles	7.86 miles
Underground Collection Line	40,432 feet	40,885 feet
Horizontal Direction Drill (HDD) Collection Line	633 feet	638 feet
Collection Substation	0.85 acres	0.85 acres
Interconnection	Approximately 500-foot line	Approximately 500-foot line

Additional Project specific impact calculations are included in text and table format below with reference to the original location in which it was included in the Application.

Land Use (Exhibit 4)

Of the overall 1,221-acre Project Area assessed, only approximately 407.95 acres (38 percent) will be physically occupied by Project Components within a fenced area of approximately 465 acres to generate 90 MW of renewable energy (Exhibit 4(i)).

Additionally, although the Project is sited within mapped Agricultural Districts, the Facility will only occupy 0.26% of all lands designated as Agricultural Districts within Montgomery County and 1.9% of all lands designated as Agricultural Districts within the Town of Florida (Exhibit 4(a)(1)). Finally, within the Project Area, only 8.4 percent of land to be disturbed by construction and/or operation of the Project is classified as Prime Farmland (Exhibit 4 Introduction).

Updated Table 4-1. Updated Proposed Layout Impacts to Agricultural Districts and Prime Farmland (Exhibit 4(a)(1))

County	Agricultural District	Temporary Soil Impact	Soil Impact for Project Service Life	Percentage of Impact on Prime Farmland Within County
Montgomery	District 3	172.06 acres	373.30 acres	0.09%

Updated Table 4-4. Impacts to Land Use Types (Exhibit 4(i))

Land Use Type	Components Facility Area (acres)	Access Roads (acres)	Collection Lines (miles)	Substation (acres)
Agricultural	407.01	12.92	6.44	1.23
Roads	0.94	0.12	1.34	N/A
Total	407.95	13.04	7.78	1.23

Other Project Components on Agricultural Land include 99.1 percent of the access roads, and 82.8 percent of collection lines. Collection lines sited within Agricultural Land will be located underground (Exhibit 4(i)).

The total fenced-in area of Project Components to be located on agricultural land (465-acres) represents only 6.1 percent of all land identified as agriculture land by the NYSORPS within the two-mile Study Area (7,653 acres). This includes 0.4-percent of all land identified as agriculture land by NYSORPS within Montgomery County (118,064 acres). A total of 12.92 acres of access roads are proposed on land designated as Agricultural Land by NYSORPS (Exhibit 4(i)).

Approximately 6.44 miles of collection lines are sited within land designated as Agricultural Land and 1.34 miles overlapping roadways (Exhibit 4(k)).

Within the Project Area, the Limits of Disturbance include approximately 8.4 percent of land classified as Prime Farmland, 61.1 percent as Prime Farmland if Drained, 22.1 percent as Farmland of Statewide Importance, and 8.4 percent as Not Prime Farmland. Although the solar panels will cover 352 acres of agricultural land, only 0.31 acres of ground disturbance will occur on these lands. Ground disturbance associated with the solar panels is limited to installation of posts for racking systems (Exhibit 4(x)).

Of the 565 acres of disturbance, 47.4 acres will occur on land classified as Prime Farmland which is only 1.2-percent of all Prime Farmland within the Town of Florida (Exhibit 4(y)).

The Project Area for the High River Energy Center is 1,221 acres. Approximately 352 acres of the proposed buildable acres will be covered by solar panels and the fenced-in area of the Project will be 465 acres (Exhibit 4(z)).

The limit of disturbance (LOD) for the Project is approximately 565 acres. Based on the assumptions outlined in Table 22-2 (included below), approximately 16.46 acres within the LOD will be permanent impacts where soils are converted to access roads, array foundations (posts), and structures, while the remaining will be restored and stabilized following the completion of construction.

Impacts to land use due to the Updated Proposed Layout are similar to those presented in the proposed layout in the Application, with only a marginal increase to affected agricultural land.

Ecology (Exhibit 22)

As discussed in Exhibit 22 and updated with the Updated Proposed Layout, 14.9 of the 16 acres (93 percent) of wildlife habitat permanently lost as a result of the Project reside in active agricultural areas which already provide limited perpetual wildlife habitat due to the regular disturbances and anthropogenic pressures of active farming practices (Exhibit 22(f)(4)).

The Limit of Disturbance for the Project is approximately 565 acres, which represents approximately 46.6 percent of the Project Area.

Updated Table 22-1. Impact Assumptions (Exhibit 22(b)(1))

Project Components	Vegetative Clearing Area (acres)	Soil Disturbance Area (acres)	Area of Permanent Impact (acres)
Solar Panel Installations	363.6	11.78	0
Access Roads	24.16	24.16	14.94
Collection Lines	4.1	4.1	0
Collection Substation	1.74	1.74	1.4
Collection Substation/ Switchyard/ Inverters	34.3	34.3	0
Fence	1.78	1.78	0

Construction of the Project will result in a temporary disturbance of approximately 35 acres of vegetation associated with hayfields and pastures (Exhibit 22(b)(1)).

A total of approximately 457.5 acres of agricultural land will be employed for Project Components for the useful life of the Project. The construction of the Project will also result in the temporary disturbance of approximately 0.01 acre of successional shrubland communities, 0.0003 acre of successional old-field communities, and 2.8 acres of developed land communities (Exhibit 22(b)(1)).

Permanent loss will occur to approximately 0.3 acre of successional shrubland communities and 0.03 acre of developed land communities. Permanent loss of these cover types will occur from the siting of Project components (Exhibit 22(b)(1)).

Updated Table 22-3. Vegetation Impact Calculations (Exhibit 22(b)(1))

Cover Type/Habitat	Temporary Impact (Acres)	Permanent Loss (Acres)	Conversion (Acres)
Forestland	0.00	0.80	25.9
Successional Shrubland	0.01	0.3	4.2
Successional Old Field	0.0003	0.00	0.02
Open Water	0	0	0
Agricultural Land	35.10	14.9 (Useful Life of Project Only)	439 (Useful Life of Project Only)
Developed Land	2.82	0.03	0.40
Total	37.93	16.03	469.52

Updated Table 22-4. Summary Impact Table (Exhibit 22(c)(3))

Project Components	Agricultural Land			Successional Old Field			Successional Scrubland			Forestland		
	Temporary Impacts (acres)	Permanent Loss (acres)	Conversion (acres)	Temporary Impacts (acres)	Permanent Loss (acres)	Conversion (acres)	Temporary Impacts (acres)	Permanent Loss (acres)	Conversion (acres)	Temporary Impacts (acres)	Permanent Loss (acres)	Conversion (acres)
Solar Panel Installations	0	0	351.99	0	0	0	2.11	0	0.34	0	0	9.17 (0 acres of interior forest) ¹
Access Roads	0	11.96	9.66	0	0	0	0	0.24	0.24	0	0.81	1.05 (0 acres of interior forest)
Collection Lines	3.76	0	0	0.0003	0	0	0.04	0	0	0	0	0.33 (0 acres of interior forest)
Collection Substation/ Switchyard/ Inverters	0	1.39	0.34	0	0	0	0	0	0	0	0.006 (0 acres of interior forest)	0
Staging/ Laydown Area	34.34	0	0	0	0	0	0	0	0	0	0	0
Fence	0	0	1.53	0	0.003	0	0	0.04	0	0	0.2 (0 acres of interior forest)	0

Note: Project Components may overlap, therefore the values in this table overestimate the impacts to each community type

1. Additional forestland conversion will occur outside of Project Components, to prevent shading

Approximately 35 acres of wildlife habitat will be temporarily impacted during construction of the Project. However, only approximately 16 acres of potential wildlife habitat will be permanently lost due to the placement of Project components. Moreover, 14.9 of the 16 acres of potential wildlife habitat permanently impacted, along with all 35.1 acres temporarily impacted, are currently active agricultural areas that are regularly disturbed and which provide limited perpetual habitat for wildlife due to these regular disturbances and anthropogenic pressures of active farming practices (Exhibit 22(f)(4)).

Specifically, it is anticipated that approximately 0.01 acre of successional scrubland, 0.0003 acre of successional old fields, and 35.1 acres of active agricultural lands will be temporarily disturbed during construction. No temporary disturbance will occur within forestland. Concurrently, approximately 0.8 acre of forestland, 0.3 acre of successional scrubland, and 14.9 acres of active agricultural lands will be permanently impacted due to the Project (Exhibit 22(f)(4)).

Updated Table 22-10. Impacts to Wildlife Habitat (Exhibit 22(f)(8))

Wildlife Habitat	Conversion (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Total Impact (acres)
Agricultural Land	439	35.10	14.9	489
Successional Old Field	0.02	0.0003	0	0.0203
Successional Shrubland	4.2	0.01	0.3	4.51
Forestland	25.9	0	0.80	26.7
Total	469.12	35.11	16.00	520.23

A direct and permanent loss of approximately 16 acres of wildlife habitat will occur as a result of the Project. Total habitat loss represents 1.31 percent of the total 1,221 acres included in the Project Area. Of this percentage, approximately 5 percent of the loss is to forestland, 1.9 percent is to successional shrublands, while the vast majority, 93.1 percent, is to active agriculture. Approximately 25.9 acres of forest land will also be converted into successional communities, which are of value to several wildlife species within the Project Area (Exhibit 22(f)(9)).

Forested area comprises approximately 17.7 percent of land cover within the Project Area. Forestland within the Project Area has been previously cleared for agriculture, resulting in small,

non-contiguous fragments. Approximately 182.1 acres, or 84.4 percent of the forestland at the Project Area, can be classified as edge forest (Exhibit 22(f)(9)).

Components (access roads, collection lines, and laydown areas) associated with the Project may remove up to 26.7 forested acres, reducing the amount of forest land from 215 to 188.3 acres within the Project Area. This would be a relatively minor reduction, amounting to a loss of 12.4 percent of forestland within the Project Area (Exhibit 22(f)(9)).

Impacts to wildlife habitat and vegetative communities are similar to those presented in the Application. Total acreage of impacts to wildlife habitat has decreased by approximately 15 acres with the Update Proposed Layout design, by decreasing agricultural land and forested land conversion.

Wetlands and Streams:

Updated Table 22-11. Temporary and Permanent Wetland Impacts (Exhibit 22(m))

Wetland ID	Cover Class	NYSDEC Wetland ID	Preliminary Design Drawing Page	Temporary Impact (square feet)	Permanent Loss (square feet)	Permanent Conversion	Temporary 100-ft Adjacent Area Impact	Permanent 100-ft Adjacent Area Impact	Impact Type
W-ARS-07	PSS	-	C-053	551.70	2,889.40	-	-	-	Access Road
W-WSB-03	PSS	-	C-051	740.06	0	3,490.65	-	-	Fence, Array

The Updated Proposed Layout decreases the temporary impact and permanent conversion of wetlands compared to the layout proposed in the Application, specifically with regards to Wetland W-WSB-03.