

Exhibit F

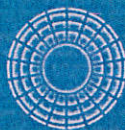
Brookview Solar Project

NextEra Energy Resources

Adams County, Pennsylvania

Glint & Glare Analysis

October 25, 2019



Capitol Airspace Group
capitolairspace.com
(703) 256 - 2485

Table of Contents

Summary	1
Methodology	2
Data	3
Results	37
Conclusion	38

Summary

NextEra Energy Resources is proposing to construct solar arrays near Waltz Airport (34PA) and Kingsdale Air Park (PA23), in Adams County, Pennsylvania (*Figure 1*). On behalf of NextEra Energy Resources, Capitol Airspace performed a Glint and Glare Analysis utilizing the Solar Glare Hazard Analysis Tool (SGHAT) in order to identify any potential impacts on Waltz Airport and Kingsdale Air Park operations. Specifically, this analysis considered the impact on aircraft approaching to land on Runways 17/35 at Waltz Airport and Runways 3/21 at Kingsdale Air Park. Since neither airport is a controlled airport, this analysis did not consider the potential for impact on air traffic personnel working in an air traffic control tower (ATCT). Additionally, this analysis considered impact on residents and vehicles.

The results of the study show that there is no predicted glare from the solar array for aircraft making approaches to Runways 17/35 at Waltz Airport and Runways 3/21 at Kingsdale Air Park. These results conform to, and are in accordance with, the FAA’s interim policy for *Solar Energy System Projects on Federally Obligated Airports*.

There is no predicted glare for single story or second story residences. There was also no predicted glare from the solar arrays along identified routes for cars and large trucks. Capitol Airspace has applied FAA’s glint and glare standards to residences and vehicular operations due to the absence of non-aviation regulatory guidelines.

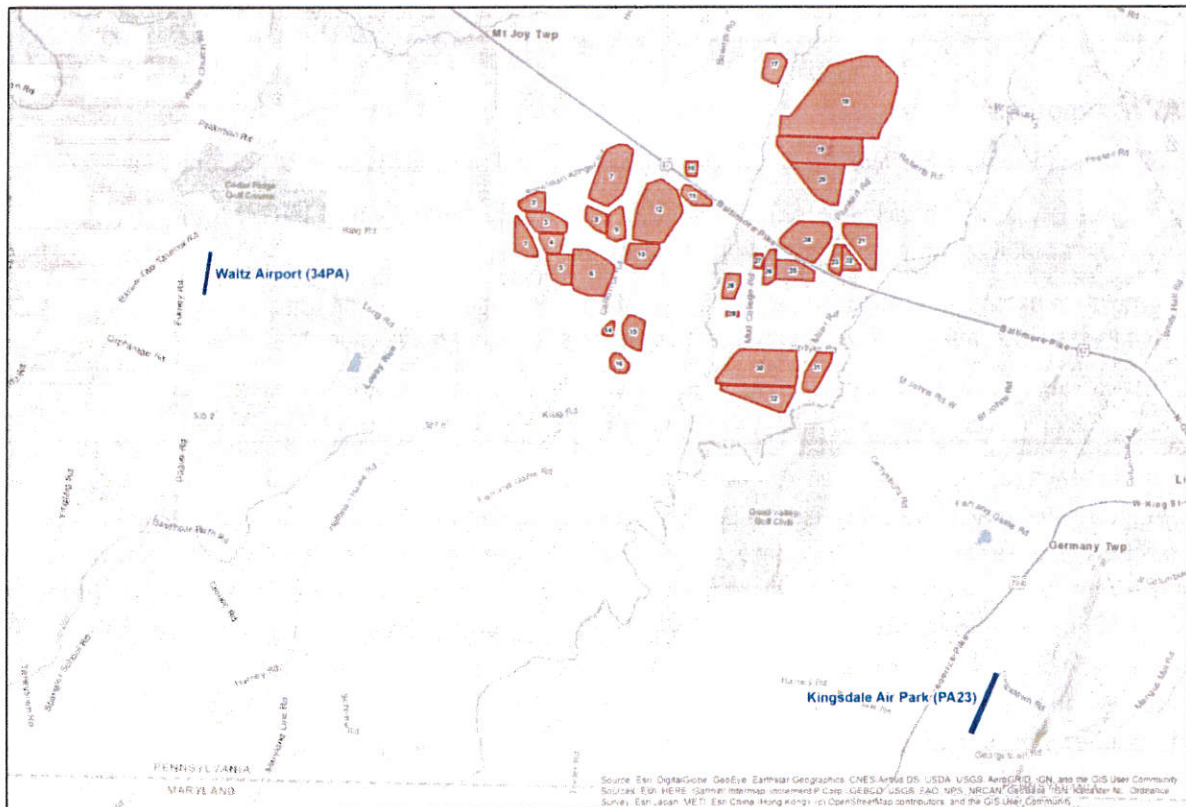


Figure 1: Location of Brookview Solar Project Solar project in Proximity to Local Airports

Methodology

The results of this analysis conform to, and are in accordance with, the FAA's interim policy for *Solar Energy System Projects on Federally Obligated Airports*.¹ The FAA adopted this interim policy in order to enhance safety by providing standards for measuring ocular impact of proposed solar energy systems on pilots and air traffic controllers. In cooperation with the Department of Energy (DOE), the FAA developed and validated the Sandia National Laboratories' "*Solar Glare Hazard Analysis Tool*" (SGHAT), now licensed through ForgeSolar. The FAA requires the use of the SGHAT to demonstrate compliance with the standards for measuring ocular impact.

In order for the FAA to approve a revised airport layout plan depicting a solar installation and/or issue a determination of no hazard, the airport sponsor is required to show that the solar installation meets the standards set forth in the interim policy. The interim policy states that a project:

1. Must not have a potential for glint or glare in the existing or planned ATCT cab, (Green, Yellow, or Red) and
2. Must not have a potential for glare (Yellow or Red) along the final approach path for any existing landing threshold or future landing thresholds (including any planned interim phases of the landing thresholds) as shown on the current FAA-approved Airport Layout Plan (ALP). An airport may have a "low potential for after image" (Green) within these areas. The final approach path is defined as two (2) miles from fifty (50) feet above the landing threshold using a standard three (3) degree glidepath.
3. Ocular impact must be analyzed over the entire calendar year in one (1) minute intervals from when the sun rises above the horizon until the sun sets below the horizon.

SGHAT Assumptions:

1. Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
2. Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover, and geographic obstructions.
3. The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values may differ.
4. Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.

Capitol Airspace utilized the SGHAT based guidance provided in User's Manual v.3. Solar array specifications were provided by NextEra Energy Resources. The Brookview Solar Project Arrays are single axis tracking solar arrays. Flight path data was developed by reviewing airport's specific operations before entering it into the SGHAT tool. Each flight path has configurable parameters and observation points. One of the configurable inputs allows for limiting the downward and azimuthal angles of view from the flight path to simulate a pilot's view out the window of the cockpit. NextEra Energy Resources specified that the analysis be conducted from the FAA's approved default settings in the SGHAT tool which utilizes the view from the pilot's perspective.

¹ 73 FR 63275, 10/23/2013

Data

Solar Array

NextEra Energy Resources provided the data for the array, based on the input parameters defined in the SGHAT User's Manual v.3.



Figure 2: Overview of Brookview Solar Project Solar project

The data for the Brookview Solar Project Arrays is as follows:

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 1: Brookview Solar Project Array 1 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.764074	-77.161158	568.3	7	575.3
2	39.763286	-77.160382	568.26	7	575.26
3	39.762499	-77.159685	575.39	7	582.39
4	39.761303	-77.158991	582.48	7	589.48
5	39.760928	-77.158994	582.26	7	589.26
6	39.760933	-77.160035	585.04	7	592.04
7	39.761348	-77.161361	578.29	7	585.29
8	39.762916	-77.161426	574.03	7	581.03
9	39.764075	-77.161416	569.56	7	576.56

Table 2: Brookview Solar Project Array 1 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 3: Brookview Solar Project Array 2 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.765604	-77.160229	567.32	7	574.33
2	39.765974	-77.15913	573.09	7	580.09
3	39.76597	-77.158381	578.26	7	585.26
4	39.765186	-77.15831	576.77	7	583.77
5	39.764435	-77.158316	579.31	7	586.31
6	39.764447	-77.160709	562.4	7	569.4
7	39.764824	-77.161097	561.38	7	568.38
8	39.7652	-77.161093	557.26	7	564.26

Table 4: Brookview Solar Project Array 2 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 5: Brookview Solar Project Array 3 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.7644	-77.157926	579.68	7	586.68
2	39.764019	-77.156911	582.3	7	589.3
3	39.763606	-77.156054	581.15	7	588.15
4	39.763231	-77.156058	583.88	7	590.88
5	39.762856	-77.156139	587.48	7	594.48
6	39.762872	-77.159235	575.87	7	582.87
7	39.763249	-77.159623	570.81	7	577.81
8	39.764037	-77.160321	563.65	7	570.65
9	39.764412	-77.160318	563.01	7	570.01

Table 6: Brookview Solar Project Array 3 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 7: Brookview Solar Project Array 4 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.762751	-77.156375	587.77	7	594.77
2	39.762376	-77.156378	590.44	7	597.44
3	39.761218	-77.156701	590.57	7	597.57
4	39.761226	-77.158133	581.81	7	588.81
5	39.762012	-77.158674	578.87	7	585.88
6	39.762389	-77.158906	577.53	7	584.53
7	39.762764	-77.158902	576.74	7	583.74

Table 8: Brookview Solar Project Array 4 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 9: Brookview Solar Project Array 5 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.761179	-77.155449	586.95	7	593.95
2	39.758828	-77.15547	585.7	7	592.7
3	39.758833	-77.156432	588.48	7	595.48
4	39.759213	-77.157446	592.87	7	599.87
5	39.760817	-77.158058	583.1	7	590.1
6	39.761192	-77.158055	582.25	7	589.25

Table 10: Brookview Solar Project Array 5 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 11: Brookview Solar Project Array 6 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.761579	-77.153803	584.26	7	591.26
2	39.761165	-77.152711	586.77	7	593.77
3	39.760785	-77.151853	589.79	7	596.79
4	39.760373	-77.151153	590.93	7	597.93
5	39.759997	-77.151156	588.81	7	595.81
6	39.758808	-77.151714	587.13	7	594.13
7	39.758026	-77.152112	584.67	7	591.67
8	39.758035	-77.153857	581.11	7	588.12
9	39.758418	-77.155184	583.09	7	590.09
10	39.758827	-77.155415	585.77	7	592.77
11	39.761587	-77.155391	587.91	7	594.91

Table 12: Brookview Solar Project Array 6 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	10.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 13: Brookview Solar Project Array 7 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.769758	-77.151154	566.2	7	573.2
2	39.769753	-77.150191	578.02	7	585.02
3	39.769375	-77.149568	577.47	7	584.47
4	39.768999	-77.149572	578.89	7	585.89
5	39.768012	-77.149815	583.96	7	590.96
6	39.767026	-77.150058	589.26	7	596.26
7	39.766244	-77.150378	590.62	7	597.62
8	39.765869	-77.150616	589.54	7	596.54
9	39.765392	-77.151325	588.74	7	595.74
10	39.764986	-77.151955	586.14	7	593.14
11	39.764988	-77.152213	585.31	7	592.31
12	39.765403	-77.15354	575.77	7	582.77
13	39.765568	-77.153929	573.1	7	580.11
14	39.765943	-77.153926	569.32	7	576.32
15	39.768127	-77.152968	563.64	7	570.64
16	39.768981	-77.152491	562.1	7	569.1
17	39.769388	-77.152174	561.29	7	568.29

Table 14: Brookview Solar Project Array 7 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 15: Brookview Solar Project Array 8 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.764323	-77.152021	586.98	7	593.98
2	39.76354	-77.152028	591.4	7	598.4
3	39.762758	-77.152035	587.57	7	594.57
4	39.762758	-77.152058	587.1	7	594.1
5	39.76311	-77.15314	584.57	7	591.57
6	39.763867	-77.154218	577.64	7	584.64
7	39.764618	-77.154212	573.97	7	580.97
8	39.764979	-77.154064	573.59	7	580.59

Table 16: Brookview Solar Project Array 8 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 17: Brookview Solar Project Array 9 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.764769	-77.151143	586.82	7	593.82
2	39.765027	-77.150756	587.95	7	594.95
3	39.764933	-77.150468	588.59	7	595.59
4	39.763249	-77.150121	592.78	7	599.78
5	39.762498	-77.150127	593.32	7	600.32
6	39.762252	-77.151099	591.79	7	598.79
7	39.762534	-77.151988	587.31	7	594.31
8	39.762909	-77.151985	588.52	7	595.52
9	39.76422	-77.151871	587.25	7	594.25
10	39.764525	-77.151652	585.84	7	592.84

Table 18: Brookview Solar Project Array 9 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 19: Brookview Solar Project Array 10 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.768591	-77.142902	570.04	7	577.04
2	39.76784	-77.142909	568.22	7	575.22
3	39.767432	-77.142991	567.32	7	574.32
4	39.767437	-77.143953	574.7	7	581.7
5	39.767865	-77.144106	577.61	7	584.61
6	39.768597	-77.144099	580.31	7	587.31

Table 20: Brookview Solar Project Array 10 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 21: Brookview Solar Project Array 11 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.76674	-77.143675	570.06	7	577.06
2	39.765947	-77.142038	556.71	7	563.71
3	39.76554	-77.141337	550.19	7	557.19
4	39.765165	-77.141341	549.93	7	556.93
5	39.765176	-77.143321	560.81	7	567.81
6	39.765968	-77.144487	568.99	7	575.99
7	39.766344	-77.144484	576.19	7	583.19
8	39.766743	-77.144246	576.96	7	583.96

Table 22: Brookview Solar Project Array 11 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 23: Brookview Solar Project Array 12 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.767139	-77.146747	590.93	7	597.93
2	39.767138	-77.14641	590.02	7	597.02
3	39.766346	-77.14493	578.74	7	585.74
4	39.764937	-77.144317	564.39	7	571.39
5	39.764561	-77.14432	564.1	7	571.1
6	39.762238	-77.146219	576	7	583
7	39.762244	-77.147416	579.87	7	586.87
8	39.762434	-77.149371	587.65	7	594.65
9	39.763185	-77.149364	590.62	7	597.62
10	39.764751	-77.149037	591.01	7	598.01
11	39.765158	-77.148877	591.01	7	598.01
12	39.766771	-77.148012	591.63	7	598.63

Table 24: Brookview Solar Project Array 12 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 25: Brookview Solar Project Array 13 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.762131	-77.146608	581.26	7	588.26
2	39.761755	-77.146611	577.82	7	584.82
3	39.761381	-77.146849	579.02	7	586.02
4	39.760194	-77.147799	580.14	7	587.14
5	39.760201	-77.149074	583.54	7	590.54
6	39.760615	-77.150088	592.09	7	599.09
7	39.76099	-77.150085	592.59	7	599.59
8	39.762147	-77.149683	591.26	7	598.26

Table 26: Brookview Solar Project Array 13 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 27: Brookview Solar Project Array 14 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.75611	-77.151342	579.49	7	586.49
2	39.756108	-77.151006	577.27	7	584.27
3	39.755732	-77.151009	576.14	7	583.14
4	39.754949	-77.151172	574.01	7	581.01
5	39.754952	-77.151744	578.02	7	585.02
6	39.755057	-77.152212	580.55	7	587.55
7	39.755433	-77.152209	581.33	7	588.33

Table 28: Brookview Solar Project Array 14 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 29: Brookview Solar Project Array 15 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.756597	-77.149585	581.67	7	588.67
2	39.756595	-77.14917	579.75	7	586.75
3	39.75618	-77.147922	563.63	7	570.63
4	39.755805	-77.147925	562.18	7	569.18
5	39.75543	-77.148007	559	7	566
6	39.753863	-77.148255	552.03	7	559.03
7	39.753865	-77.148592	556.5	7	563.51
8	39.754246	-77.149606	569.44	7	576.44
9	39.754656	-77.149993	572.63	7	579.63
10	39.755499	-77.15022	575.62	7	582.62
11	39.755874	-77.150217	576.82	7	583.82

Table 30: Brookview Solar Project Array 15 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 31: Brookview Solar Project Array 16 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.753633	-77.150401	570.86	7	577.86
2	39.752843	-77.149391	562	7	569
3	39.752468	-77.149394	561.52	7	568.52
4	39.752094	-77.149711	565.7	7	572.7
5	39.752099	-77.150673	571.85	7	578.85
6	39.752478	-77.151296	575.13	7	582.13
7	39.752887	-77.15137	573.97	7	580.97
8	39.753262	-77.151367	574.44	7	581.44
9	39.753636	-77.151051	576.59	7	583.59

Table 32: Brookview Solar Project Array 16 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 33: Brookview Solar Project Array 17 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.777104	-77.13463	566.95	7	573.95
2	39.776623	-77.134008	560.95	7	567.95
3	39.776247	-77.134011	561.05	7	568.05
4	39.77516	-77.134569	557.86	7	564.86
5	39.774786	-77.134807	559.37	7	566.37
6	39.77479	-77.135573	561.56	7	568.56
7	39.775171	-77.136508	569.62	7	576.62
8	39.775546	-77.136505	572.49	7	579.49
9	39.776737	-77.136259	576.82	7	583.82
10	39.777112	-77.1361	578.73	7	585.73

Table 34: Brookview Solar Project Array 17 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	10.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 35: Brookview Solar Project Array 18 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.776996	-77.126465	595.27	7	602.27
2	39.777071	-77.125917	605.12	7	612.12
3	39.777064	-77.124641	609.27	7	616.27
4	39.775896	-77.12293	613.81	7	620.81
5	39.775463	-77.122464	612.32	7	619.32
6	39.774712	-77.122471	609.47	7	616.48
7	39.773064	-77.122953	597.51	7	604.51
8	39.772657	-77.123114	594.96	7	601.96
9	39.77148	-77.123988	595.91	7	602.91
10	39.770676	-77.124308	593.25	7	600.25
11	39.770732	-77.134584	552.1	7	559.1
12	39.771483	-77.134577	556.9	7	563.9
13	39.772266	-77.134492	554.52	7	561.52
14	39.772261	-77.133529	557.54	7	564.54
15	39.776285	-77.129525	578.71	7	585.71

Table 36: Brookview Solar Project Array 18 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 37: Brookview Solar Project Array 19 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.770652	-77.125952	602.44	7	609.44
2	39.76939	-77.125885	598.39	7	605.39
3	39.769014	-77.125889	595.18	7	602.18
4	39.768608	-77.126284	597.95	7	604.95
5	39.768647	-77.133429	559.1	7	566.1
6	39.769058	-77.133895	555.99	7	562.99
7	39.769949	-77.134826	550.52	7	557.52
8	39.7707	-77.134819	550.98	7	557.98

Table 38: Brookview Solar Project Array 19 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 39: Brookview Solar Project Array 20 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.765484	-77.128342	584.11	7	591.11
2	39.765488	-77.129148	590.69	7	597.69
3	39.765904	-77.130402	590.37	7	597.37
4	39.766282	-77.130946	583.58	7	590.59
5	39.76707	-77.1318	568.68	7	575.68
6	39.768647	-77.133429	559.1	7	566.1
7	39.768616	-77.127693	600.48	7	607.48

Table 40: Brookview Solar Project Array 20 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 41: Brookview Solar Project Array 21 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.76405	-77.124285	556.55	7	563.56
2	39.763266	-77.124214	548.4	7	555.4
3	39.761731	-77.124228	536.16	7	543.16
4	39.760506	-77.124239	528.7	7	535.7
5	39.76051	-77.124888	527.62	7	534.62
6	39.76253	-77.126983	562.08	7	569.08
7	39.762908	-77.127371	565.99	7	573
8	39.763318	-77.127758	570.73	7	577.73
9	39.764069	-77.127751	575.24	7	582.24

Table 42: Brookview Solar Project Array 21 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 43: Brookview Solar Project Array 22 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.76241	-77.127493	563.32	7	570.32
2	39.762033	-77.127106	559.44	7	566.45
3	39.760842	-77.125786	533.52	7	540.52
4	39.760467	-77.12579	531.28	7	538.28
5	39.760447	-77.127746	553.88	7	560.88
6	39.762412	-77.127728	565.32	7	572.32

Table 44: Brookview Solar Project Array 22 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	10.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 45: Brookview Solar Project Array 23 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.762412	-77.127728	565.32	7	572.32
2	39.760447	-77.127746	553.88	7	560.88
3	39.760039	-77.127906	550.32	7	557.32
4	39.760041	-77.128165	550.57	7	557.57
5	39.760454	-77.1291	556.46	7	563.46
6	39.76083	-77.129096	561.21	7	568.21
7	39.762416	-77.128534	574.01	7	581.01

Table 46: Brookview Solar Project Array 23 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 47: Brookview Solar Project Array 24 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.76412	-77.129344	587.92	7	594.92
2	39.763709	-77.128878	586.56	7	593.56
3	39.762959	-77.128885	585.16	7	592.16
4	39.762515	-77.129147	583.74	7	590.74
5	39.76097	-77.130625	582.5	7	589.5
6	39.760972	-77.130961	587.45	7	594.45
7	39.761387	-77.132131	577.41	7	584.41
8	39.761767	-77.132989	569.31	7	576.31
9	39.762406	-77.134235	560.25	7	567.25
10	39.762781	-77.134232	562.79	7	569.79
11	39.763359	-77.133522	568.15	7	575.15
12	39.763732	-77.133049	568.82	7	575.82
13	39.764137	-77.13242	572.44	7	579.44

Table 48: Brookview Solar Project Array 24 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 49: Brookview Solar Project Array 25 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.761128	-77.132654	574.36	7	581.36
2	39.760747	-77.13164	579.57	7	586.57
3	39.760333	-77.130627	573.39	7	580.39
4	39.759582	-77.130634	575.85	7	582.85
5	39.759603	-77.13457	554.18	7	561.19
6	39.761138	-77.134556	558.21	7	565.21

Table 50: Brookview Solar Project Array 25 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	10.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 51: Brookview Solar Project Array 26 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.761922	-77.134603	555.89	7	562.89
2	39.759604	-77.134624	554.18	7	561.19
3	39.759199	-77.135332	549.35	7	556.35
4	39.759202	-77.135903	547.25	7	554.25
5	39.759577	-77.1359	548.54	7	555.55
6	39.761145	-77.135808	549.73	7	556.73
7	39.761925	-77.135253	552.92	7	559.92

Table 52: Brookview Solar Project Array 26 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 53: Brookview Solar Project Array 27 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.761585	-77.135983	549.44	7	556.44
2	39.760425	-77.135993	549.77	7	556.77
3	39.76043	-77.136878	544.77	7	551.77
4	39.761589	-77.136867	545.48	7	552.48

Table 54: Brookview Solar Project Array 27 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 55: Brookview Solar Project Array 28 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.759978	-77.138209	540.63	7	547.63
2	39.759227	-77.138216	539.45	7	546.45
3	39.758038	-77.138774	537.32	7	544.32
4	39.758045	-77.14005	539.42	7	546.42
5	39.75842	-77.140046	534.05	7	541.05
6	39.759986	-77.139719	540.82	7	547.82

Table 56: Brookview Solar Project Array 28 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 57: Brookview Solar Project Array 29 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.757059	-77.138279	539.07	7	546.07
2	39.756684	-77.138283	537.43	7	544.43
3	39.75669	-77.139558	532.07	7	539.07
4	39.757066	-77.139555	532.23	7	539.23

Table 58: Brookview Solar Project Array 29 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 59: Brookview Solar Project Array 30 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.754136	-77.132256	541.67	7	548.67
2	39.752943	-77.13211	530.71	7	537.71
3	39.752192	-77.132117	525.86	7	532.86
4	39.751409	-77.132281	524.07	7	531.08
5	39.751453	-77.140468	523.37	7	530.37
6	39.751829	-77.140465	522.5	7	529.5
7	39.752982	-77.139359	529.09	7	536.09
8	39.753762	-77.138648	534.94	7	541.94
9	39.754167	-77.138019	544.89	7	551.89

Table 60: Brookview Solar Project Array 30 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	5.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 61: Brookview Solar Project Array 31 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.754056	-77.128542	525.27	7	532.27
2	39.75368	-77.128545	524.36	7	531.36
3	39.753272	-77.128676	520.9	7	527.9
4	39.751337	-77.130051	519.37	7	526.37
5	39.750964	-77.130448	520.51	7	527.51
6	39.750968	-77.131332	519.08	7	526.08
7	39.751165	-77.131567	517.83	7	524.83
8	39.751541	-77.131564	518.8	7	525.8
9	39.752503	-77.131318	524.52	7	531.52
10	39.754064	-77.13013	529.6	7	536.6

Table 62: Brookview Solar Project Array 31 Vertices

Parameter	Value
Axis tracking:	Single-axis rotation
Tracking axis orientation:	180.0°
Tracking axis tilt:	0.0°
Max tracking angle:	60.0°
Resting angle:	10.0°
Panel material:	Smooth glass with AR coating
Reflectivity:	Vary with sun
Slope error:	Correlate with material

Table 63: Brookview Solar Project Array 32 Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	39.751304	-77.13236	524.87	7	531.87
2	39.750929	-77.132363	520.73	7	527.73
3	39.749367	-77.133316	516.63	7	523.63
4	39.74937	-77.133887	521.51	7	528.52
5	39.749787	-77.135527	522.62	7	529.62
6	39.75097	-77.139976	526.02	7	533.02
7	39.751345	-77.139972	528.43	7	535.44

Table 64: Brookview Solar Project Array 32 Vertices

Runway 03/21

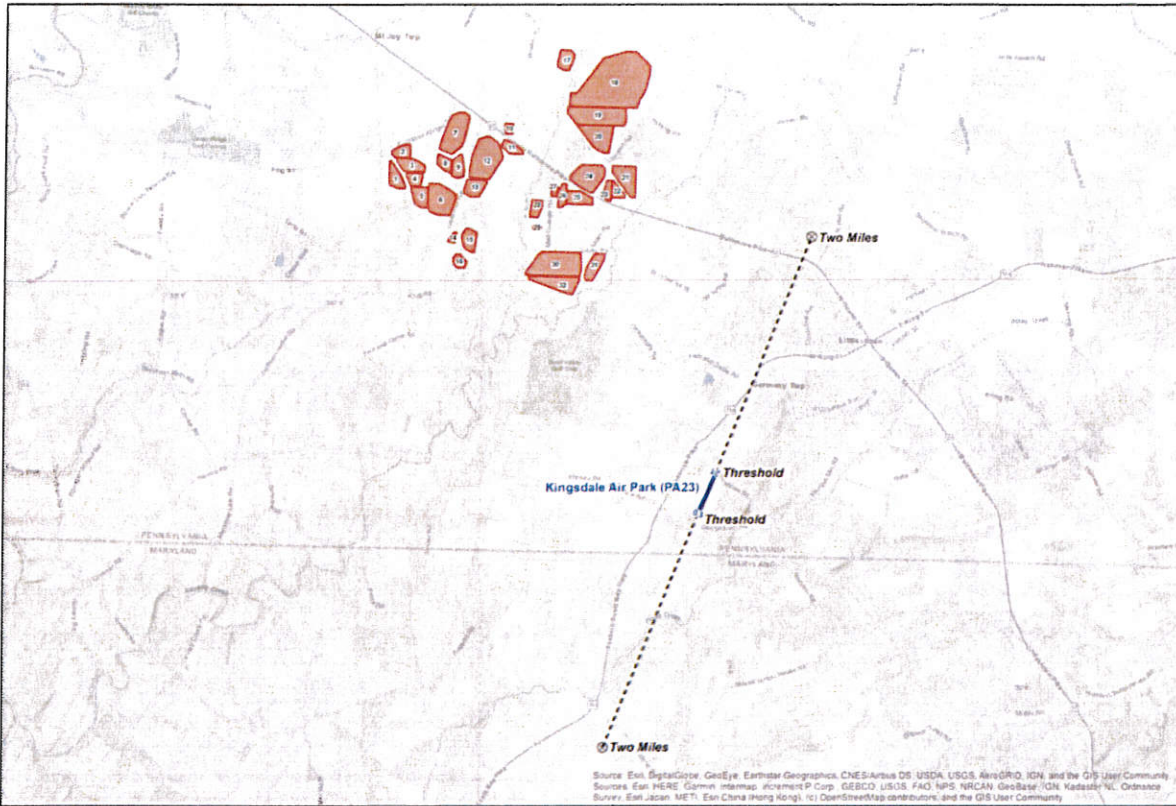


Figure 3: Runway 03/21 SGHAT flight path and Brookview Solar Project Solar project

Parameter	Runway 03	Runway 21
Threshold height (ft)	50.0	50.0
Direction (deg)	21.0	201.0
Glide slope (deg)	3.0	3.0
Consider pilot visibility from cockpit	Yes	Yes

Table 65 Runway 03/21 flight path and viewing parameters

Runway	Observation Point	Latitude	Longitude	Ground Elevation (feet)	Height above ground (feet)	Total Elevation (feet)
03	Threshold	39.729496	-77.11092	585.91	50	635.91
	Two-mile	39.756488	-77.097432	563.82	625.55	1189.37
21	Threshold	39.724933	-77.113329	561.77	50	611.78
	Two-mile	39.69794	-77.126816	531.04	634.19	1165.23

Table 66: Runway 03/21 flight path observation points

Runway 17/35

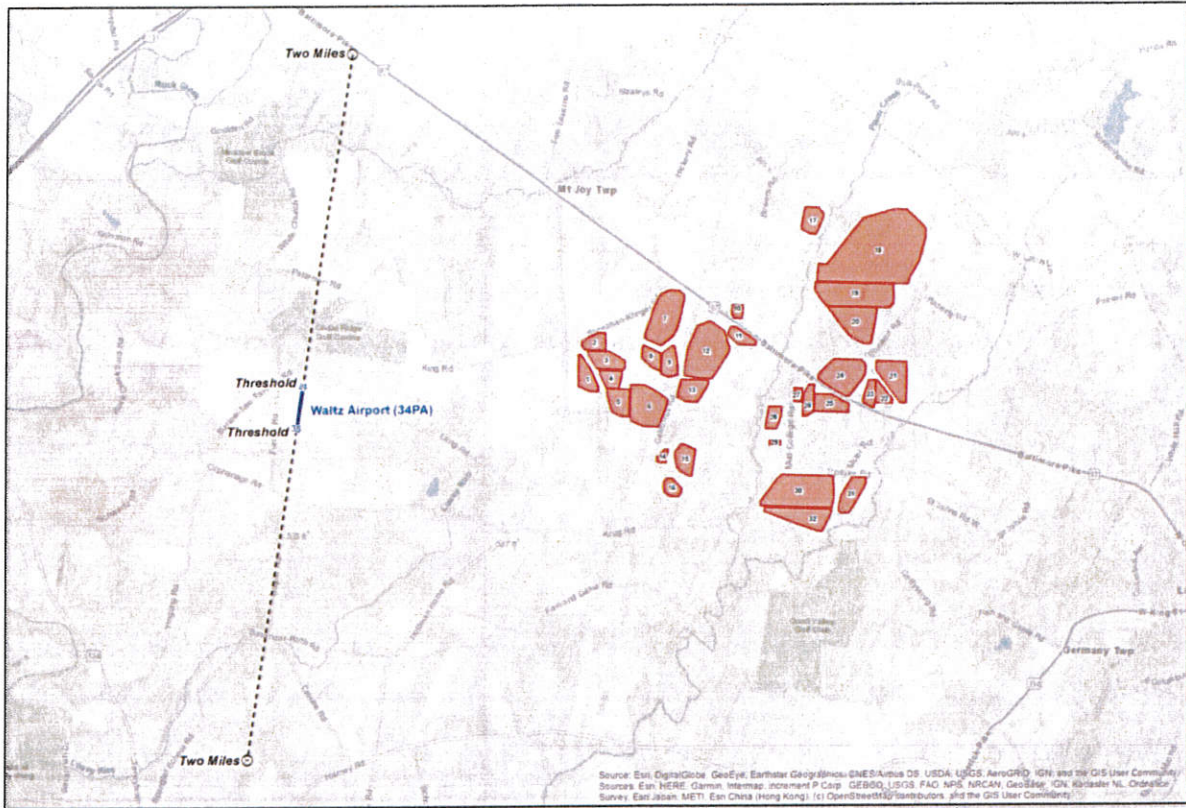


Figure 4: Runway 17/35 SGHAT flight path and Brookview Solar Project solar project

Parameter	Runway 17	Runway 35
Threshold height (ft)	50.0	50.0
Direction (deg)	187.0	7.0
Glide slope (deg)	3.0	3.0
Consider pilot visibility from cockpit	Yes	Yes

Table 67: Runway 17/35 flight path and viewing parameters

Runway	Observation Point	Latitude	Longitude	Ground Elevation (feet)	Height above ground (feet)	Total Elevation (feet)
17	Threshold	39.760667	-77.192455	526.68	50	576.68
	Two-mile	39.789364	-77.187865	519.29	610.85	1130.14
35	Threshold	39.757462	-77.192998	527.07	50	577.07
	Two-mile	39.728765	-77.197587	517.93	612.6	1130.53

Table 68: Runway 17/35 flight path observation points

Brookview Solar Project Solar Discrete Observation Points - Residents



Figure 5: Location of Brookview Solar Project Arrays Discrete Observation Points - Residents

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground - Single Story (feet)	Total Elevation - Single Story	Height Above Ground - Second Story (feet)	Total Elevation - Second Story
OP 1	39.76485	-77.162542	564.46	8	572.46	16	580.46
OP 2	39.763848	-77.162051	568.79	8	576.79	16	584.79
OP 3	39.763172	-77.162008	568.86	8	576.86	16	584.86
OP 4	39.762117	-77.162137	570.01	8	578.01	16	586.01
OP 5	39.760266	-77.163158	581.39	8	589.39	16	597.42
OP 6	39.759572	-77.162021	587.35	8	595.35	16	603.35
OP 7	39.758464	-77.162573	593.1	8	601.1	16	609.1
OP 8	39.756043	-77.152549	584.11	8	592.11	16	600.11
OP 9	39.75509	-77.153322	586.66	8	594.66	16	602.66
OP 10	39.750324	-77.157101	563.97	8	571.97	16	579.97
OP 11	39.749356	-77.154352	569.56	8	577.56	16	585.56
OP 12	39.749026	-77.147575	546.12	8	554.12	16	562.12
OP 13	39.748698	-77.144705	521.24	8	529.24	16	537.24
OP 14	39.750551	-77.143219	523.45	8	531.45	16	539.45
OP 15	39.750223	-77.142127	524.75	8	532.75	16	540.75
OP 16	39.756278	-77.143242	550.97	8	558.97	16	566.97
OP 17	39.7544	-77.138604	539.33	8	547.33	16	555.33
OP 18	39.754858	-77.137558	549.18	8	557.18	16	565.18
OP 19	39.755829	-77.134798	552.24	8	560.24	16	568.24
OP 20	39.754941	-77.135481	556.54	8	564.54	16	572.54
OP 21	39.755097	-77.132429	550.59	8	558.59	16	566.59
OP 22	39.760398	-77.138443	542.17	8	550.17	16	558.17
OP 23	39.760996	-77.138877	545.35	8	553.35	16	561.35
OP 24	39.761871	-77.143229	555.41	8	563.41	16	571.41
OP 25	39.766499	-77.160904	571.86	8	579.86	16	587.86
OP 26	39.766961	-77.158522	576.58	8	584.58	16	592.58
OP 27	39.765588	-77.157315	584.06	8	592.06	16	600.06
OP 28	39.766136	-77.155765	580.98	8	588.98	16	596.98
OP 29	39.768053	-77.154354	570.75	8	578.75	16	586.75
OP 30	39.769883	-77.149644	581.26	8	589.26	16	597.26
OP 31	39.770464	-77.150804	567.98	8	575.98	16	583.98
OP 32	39.770698	-77.151419	564.74	8	572.74	16	580.74
OP 33	39.77029	-77.149676	579.14	8	587.14	16	595.14

Table 69: Brookview Solar Project Arrays Discrete Observation Receptors – Set A

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground - Single Story (feet)	Total Elevation - Single Story	Height Above Ground - Second Story (feet)	Total Elevation - Second Story
OP 34	39.769405	-77.148588	585.3	8	593.3	16	601.3
OP 35	39.76894	-77.14818	586.29	8	594.29	16	602.29
OP 36	39.768927	-77.147665	588.86	8	596.86	16	604.86
OP 37	39.768226	-77.14839	592.51	8	600.51	16	608.51
OP 38	39.764919	-77.14038	549.79	8	557.79	16	565.79
OP 39	39.765511	-77.140158	555.32	8	563.32	16	571.32
OP 40	39.763885	-77.13808	546.33	8	554.33	16	562.33
OP 41	39.76273	-77.136639	553.6	8	561.6	16	569.6
OP 42	39.763222	-77.135782	556.76	8	564.76	16	572.76
OP 43	39.761519	-77.134003	567.62	8	575.62	16	583.62
OP 44	39.759861	-77.127416	554.34	8	562.34	16	570.34
OP 45	39.758475	-77.12332	532.11	8	540.11	16	548.11
OP 46	39.754745	-77.128474	529.3	8	537.3	16	545.3
OP 47	39.755508	-77.129375	537.95	8	545.95	16	553.95
OP 48	39.756127	-77.133721	557.64	8	565.64	16	573.64
OP 49	39.75642	-77.128624	534.01	8	542.01	16	550.01
OP 50	39.75503	-77.130647	535.82	8	543.82	16	551.82
OP 51	39.757772	-77.131745	567.45	8	575.45	16	583.45
OP 52	39.756205	-77.1383	539.7	8	547.7	16	555.7
OP 53	39.756246	-77.136771	550.63	8	558.63	16	566.63
OP 54	39.757158	-77.13764	545.78	8	553.78	16	561.78
OP 55	39.759458	-77.137546	546.32	8	554.32	16	562.32
OP 56	39.759718	-77.137507	548.11	8	556.11	16	564.11
OP 57	39.759923	-77.13665	551.51	8	559.51	16	567.51
OP 58	39.773099	-77.135779	563.64	8	571.64	16	579.64
OP 59	39.775672	-77.137624	585.62	8	593.62	16	601.62
OP 60	39.780531	-77.127923	585.82	8	593.82	16	601.82
OP 61	39.780558	-77.137503	613.69	8	621.69	16	629.69
OP 62	39.774761	-77.121581	612.9	8	620.9	16	628.9
OP 63	39.768386	-77.14665	592.44	8	600.44	16	608.44
OP 64	39.768015	-77.146216	596.87	8	604.87	16	612.87
OP 65	39.764433	-77.133057	573.99	8	581.99	16	589.99

Table 70: Brookview Solar Project Arrays Discrete Observation Receptors – Set B

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground - Single Story (feet)	Total Elevation - Single Story	Height Above Ground – Second Story (feet)	Total Elevation - Second Story
OP 66	39.764602	-77.131134	595.94	8	603.94	16	611.94
OP 67	39.764617	-77.12879	588.75	8	596.75	16	604.75
OP 68	39.766971	-77.126456	593.73	8	601.73	16	609.73
OP 69	39.768163	-77.125147	590.62	8	598.62	16	606.62
OP 70	39.769322	-77.124536	591.47	8	599.47	16	607.47
OP 71	39.77107	-77.123329	592.42	8	600.42	16	608.42
OP 72	39.772847	-77.12194	605.81	8	613.81	16	621.81
OP 73	39.749958	-77.139575	527.95	8	535.95	16	543.95
OP 74	39.750429	-77.130972	520.4	8	528.4	16	536.4
OP 75	39.761505	-77.150568	598.02	8	606.02	16	614.02
OP 76	39.762667	-77.155695	587.73	8	595.73	16	603.73
OP 77	39.774905	-77.140066	587.73	8	595.73	16	603.73
OP 78	39.779127	-77.141225	598.44	8	606.44	16	614.44
OP 79	39.770296	-77.125185	605.92	8	613.92	16	621.92
OP 80	39.75462	-77.129975	535.99	8	543.99	16	551.99
OP 81	39.749135	-77.134485	537.67	8	545.67	16	553.67
OP 82	39.75693	-77.15112	585.03	8	593.03	16	601.03

Table 71: Brookview Solar Project Arrays Discrete Observation Receptors – Set C

Brookview Solar Project Solar Discrete Observation Points - Routes

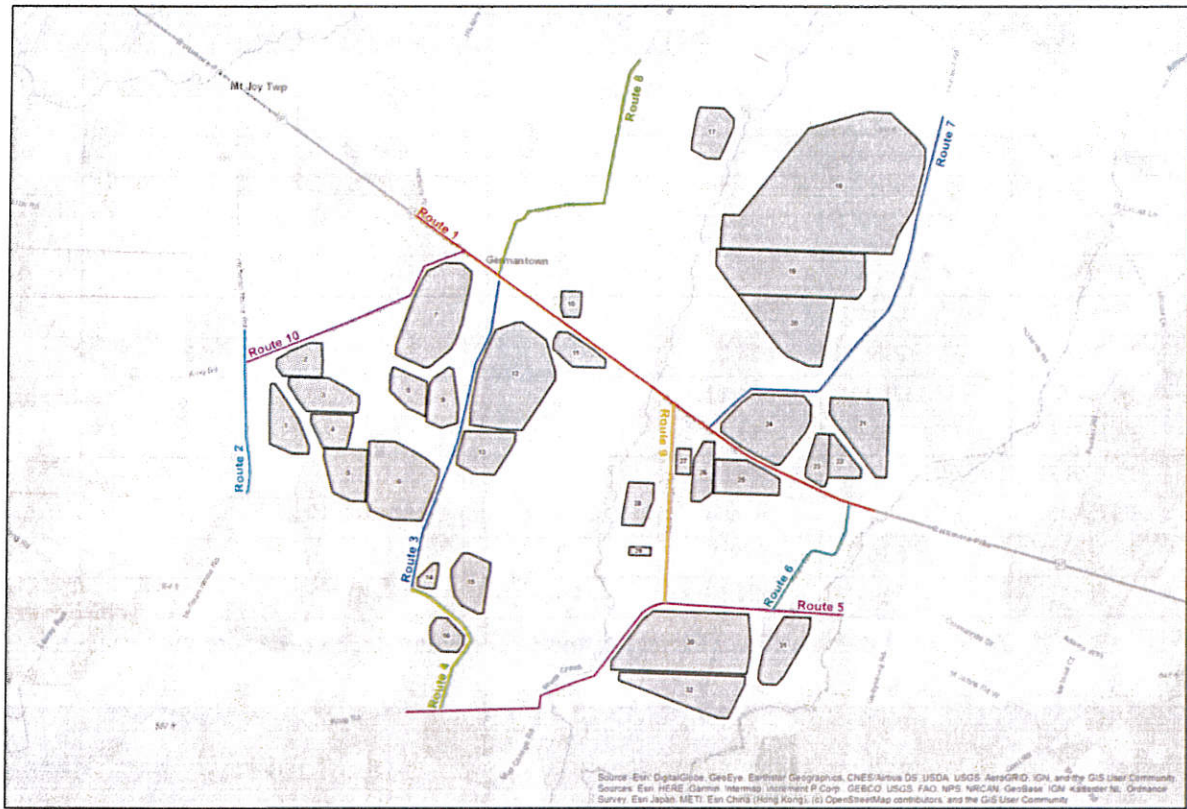


Figure 6: Location of Brookview Solar Project Arrays Discrete Observation Points - Routes

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground – Cars (feet)	Total Elevation - Cars	Height Above Ground – Trucks (feet)	Total Elevation - Trucks
1	39.771872	-77.153038	546.97	4	550.97	8	554.97
2	39.76905	-77.147585	584.85	4	588.85	8	592.85
3	39.767444	-77.144476	580.6	4	584.6	8	588.6
4	39.765904	-77.141507	553.75	4	557.75	8	561.75
5	39.763785	-77.137422	543.25	4	547.25	8	551.25
6	39.762475	-77.134879	556.23	4	560.23	8	564.23
7	39.761536	-77.133041	563.71	4	567.71	8	571.71
8	39.761139	-77.132085	565.31	4	569.31	8	573.31
9	39.760789	-77.13109	564.13	4	568.13	8	572.13
10	39.760117	-77.129068	554.19	4	558.19	8	562.19
11	39.759777	-77.128051	546.06	4	550.06	8	554.06
12	39.759466	-77.127035	540.03	4	544.03	8	548.03
13	39.759221	-77.126039	529.4	4	533.4	8	537.4
14	39.758997	-77.124908	526.62	4	530.62	8	534.62

Table 72: Brookview Solar Project Arrays Observation Receptors Route 1

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground – Cars (feet)	Total Elevation - Cars	Height Above Ground – Trucks (feet)	Total Elevation - Trucks
1	39.766499	-77.163128	540.57	4	544.57	8	548.57
2	39.764864	-77.16304	551.62	4	555.62	8	559.62
3	39.761614	-77.162827	565.98	4	569.98	8	573.98
4	39.760705	-77.162618	574.04	4	578.04	8	582.04
5	39.760252	-77.162545	579.85	4	583.85	8	587.85
6	39.759783	-77.162551	584.71	4	588.71	8	592.71
7	39.759051	-77.162647	589.76	4	593.76	8	597.76

Table 73: Brookview Solar Project Arrays Observation Receptors Route 2

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground – Cars (feet)	Total Elevation - Cars	Height Above Ground – Trucks (feet)	Total Elevation - Trucks
1	39.769009	-77.147901	586.1	4	590.1	8	594.1
2	39.766682	-77.148311	591.91	4	595.91	8	599.91
3	39.766327	-77.148477	593.35	4	597.35	8	601.35
4	39.765181	-77.149185	594.48	4	598.48	8	602.48
5	39.76375	-77.149561	592.11	4	596.11	8	600.11
6	39.761841	-77.150065	594.2	4	598.2	8	602.2
7	39.761189	-77.150325	592.52	4	596.52	8	600.52
8	39.76055	-77.150612	589.98	4	593.98	8	597.98
9	39.757468	-77.152053	584.97	4	588.97	8	592.97
10	39.75501	-77.152586	580.07	4	584.07	8	588.07

Table 74: Brookview Solar Project Arrays Observation Receptors Route 3

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground – Cars (feet)	Total Elevation - Cars	Height Above Ground – Trucks (feet)	Total Elevation - Trucks
1	39.754912	-77.152519	579.88	4	583.88	8	587.88
2	39.754599	-77.151555	575.06	4	579.06	8	583.06
3	39.753406	-77.149493	560.24	4	564.24	8	568.24
4	39.752994	-77.149116	554.89	4	558.89	8	562.89
5	39.752676	-77.148896	557.31	4	561.31	8	565.31
6	39.752487	-77.148974	556.68	4	560.68	8	564.68
7	39.752123	-77.149297	559.63	4	563.63	8	567.63
8	39.751646	-77.149737	562.92	4	566.92	8	570.92
9	39.751313	-77.149979	560.93	4	564.93	8	568.93
10	39.749415	-77.150663	560.6	4	564.6	8	568.6

Table 75: Brookview Solar Project Arrays Observation Receptors Route 4

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground – Cars (feet)	Total Elevation - Cars	Height Above Ground – Trucks (feet)	Total Elevation - Trucks
1	39.749315	-77.152694	564.65	4	568.65	8	572.65
2	39.749378	-77.151111	563.07	4	567.07	8	571.07
3	39.749622	-77.144753	519.94	4	523.94	8	527.94
4	39.750195	-77.14469	514.66	4	518.66	8	522.66
5	39.750858	-77.142612	519.58	4	523.58	8	527.58
6	39.751155	-77.141496	518.51	4	522.51	8	526.51
7	39.754057	-77.138739	534.43	4	538.43	8	542.43
8	39.754391	-77.138101	539.34	4	543.34	8	547.34
9	39.754544	-77.137457	548.12	4	552.12	8	556.12
10	39.754208	-77.126638	515.09	4	519.09	8	523.09

Table 76: Brookview Solar Project Arrays Observation Receptors Route 5

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground – Cars (feet)	Total Elevation - Cars	Height Above Ground – Trucks (feet)	Total Elevation - Trucks
1	39.754354	-77.130808	531.61	4	535.61	8	539.61
2	39.755732	-77.129768	537.13	4	541.13	8	545.13
3	39.756421	-77.129232	535.29	4	539.29	8	543.29
4	39.756801	-77.128919	534.06	4	538.06	8	542.06
5	39.756937	-77.128767	533	4	537	8	541
6	39.757053	-77.128605	532.04	4	536.04	8	540.04
7	39.757081	-77.128426	531.38	4	535.38	8	539.38
8	39.757063	-77.128247	529.54	4	533.54	8	537.54
9	39.756996	-77.127889	527.45	4	531.45	8	535.45
10	39.756933	-77.127527	526.27	4	530.27	8	534.27
11	39.756929	-77.127326	527.63	4	531.63	8	535.63
12	39.757017	-77.127167	531.37	4	535.37	8	539.37
13	39.75803	-77.126636	531.74	4	535.74	8	539.74
14	39.759267	-77.126493	532.85	4	536.85	8	540.85

Table 77: Brookview Solar Project Arrays Observation Receptors Route 6

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground – Cars (feet)	Total Elevation - Cars	Height Above Ground – Trucks (feet)	Total Elevation - Trucks
1	39.762588	-77.134934	556.24	4	560.24	8	564.24
2	39.763506	-77.133735	565.46	4	569.46	8	573.46
3	39.764369	-77.132487	571.06	4	575.06	8	579.06
4	39.764322	-77.12862	580.17	4	584.17	8	588.17
5	39.764392	-77.128389	581.85	4	585.85	8	589.85
6	39.765642	-77.127197	585.54	4	589.54	8	593.54
7	39.766839	-77.125929	586.71	4	590.71	8	594.71
8	39.768	-77.124527	576.13	4	580.13	8	584.13
9	39.768288	-77.124312	575.7	4	579.7	8	583.7
10	39.769154	-77.123867	582.29	4	586.29	8	590.29
11	39.769981	-77.123464	587.78	4	591.78	8	595.78
12	39.770841	-77.123207	587.86	4	591.86	8	595.86
13	39.77149	-77.123022	586.75	4	590.75	8	594.75
14	39.77223	-77.122917	591.7	4	595.7	8	599.7
15	39.776939	-77.121496	615.72	4	619.72	8	623.72

Table 78: Brookview Solar Project Arrays Observation Receptors Route 7

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground – Cars (feet)	Total Elevation - Cars	Height Above Ground – Trucks (feet)	Total Elevation - Trucks
1	39.769287	-77.147899	585	4	589	8	593
2	39.77054	-77.147465	577.6	4	581.6	8	585.6
3	39.77173	-77.146931	580.8	4	584.8	8	588.8
4	39.771835	-77.146505	578.05	4	582.05	8	586.05
5	39.772179	-77.146247	576.42	4	580.42	8	584.42
6	39.772536	-77.143887	580.61	4	584.61	8	588.61
7	39.77256	-77.14279	588.34	4	592.34	8	596.34
8	39.772631	-77.141714	592.05	4	596.05	8	600.05
9	39.777467	-77.140657	603.56	4	607.56	8	611.56
10	39.778633	-77.140346	600.29	4	604.29	8	608.29
11	39.779171	-77.139803	598.93	4	602.93	8	606.93

Table 79: Brookview Solar Project Arrays Observation Receptors Route 8

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground – Cars (feet)	Total Elevation - Cars	Height Above Ground – Trucks (feet)	Total Elevation - Trucks
1	39.763578	-77.137111	546.18	4	550.18	8	554.18
2	39.754563	-77.137315	549.04	4	553.04	8	557.04

Table 80: Brookview Solar Project Arrays Observation Receptors Route 9

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground – Cars (feet)	Total Elevation - Cars	Height Above Ground – Trucks (feet)	Total Elevation - Trucks
1	39.765023	-77.162937	551.79	4	555.79	8	559.79
2	39.766969	-77.156789	573.02	4	577.02	8	581.02
3	39.768232	-77.153227	559.79	4	563.79	8	567.79
4	39.768885	-77.152854	556.3	4	560.3	8	564.3
5	39.769229	-77.152682	560.32	4	564.32	8	568.32
6	39.769521	-77.152455	560.37	4	564.37	8	568.37
7	39.76993	-77.15128	561.32	4	565.32	8	569.32
8	39.77031	-77.150084	571.06	4	575.06	8	579.06

Table 81: Brookview Solar Project Arrays Observation Receptors Route 10

Results

Capitol Airspace utilized the above specified inputs to analyze potential glint and glare at various points along the flight paths. Runway end coordinates were obtained from the FAA National Flight Data Center (NFDC) National Airspace System Resources (NASR) dataset. SGHAT uses this information to analyze each flight path between a two-mile final and the runway threshold.

If glare is detected, “Glare Occurrence Plots” are generated by SGHAT. The plots show when glare can occur (as viewed from the prescribed observation point) throughout the year. The color indicates the potential ocular hazard. The colors are defined as:

- **Green:** Low potential for temporary after-image glare
- **Yellow:** Potential for temporary after-image glare
- **Red:** Potential for permanent eye damage glare

The results of this analysis predicted no glare for any receptor (*Table 82*).

Receptor	Green Glare (minutes / year)	Yellow Glare (minutes / year)	Red Glare (minutes / year)
Runway 17	0	0	0
Runway 35	0	0	0
Runway 3	0	0	0
Runway 21	0	0	0
Residences Single Story	0	0	0
Residences Two Story	0	0	0
Route Cars	0	0	0
Route Trucks	0	0	0

Table 82: Brookview Solar Project Glint and Glare Summary

Conclusion

The SGHAT analyzed the expected total footprints of the arrays for the Brookview Solar Project. The SGHAT findings indicated that no glare is predicted from the project arrays for the approaches to Runways 17/35 at Waltz Airport and Runways 3/21 at Kingsdale Air Park. The findings show that the project is compliant with the FAA interim policy for *Solar Energy System Projects on Federally Obligated Airports*.

There is no predicted glare for residences with an estimated single story viewing height of 8 feet and a second story viewing height of 16 feet. Additionally, there was no predicted glare from the solar arrays along the routes for cars with an estimated viewing height of 4 feet and large trucks with an estimated viewing height of 8 feet. Capitol Airspace has applied FAA's glint and glare standards to vehicular operations due to the absence of non-aviation regulatory guidelines.

If you have any questions regarding the findings in this analysis, please contact [Rick Coles](#) at (703) 256-2485.