

# Solar Glare Analysis: Heartwood Solar Hillsdale County, MI



## SOLAR GLARE ANALYSIS

Atwell, LLC (Atwell) has prepared this Solar Glare Analysis for Ranger Power, LLC (Ranger) regarding the proposed 150-megawatt solar energy generation facility, known as the Heartwood Solar Project (Project). Atwell used the ForgeSolar photovoltaic (PV) Planning and Glare analysis software, developed by Sandia National Laboratories for the U.S. Department of Energy, to assess potential for solar glint or glare from the project.<sup>1</sup> The ForgeSolar glare analysis, provided in Attachment A, identified concentrated solar glint or glare directed toward or onto properties or roadways adjacent to the project. With the growing numbers of solar energy installations throughout the United States, glare from PV arrays have received increased attention as a real hazard for pilots, air-traffic control personnel, motorists, and others. The ForgeSolar suite of tools provide a quantified assessment of:

1. When and where glare will occur throughout the year for a prescribed solar installation;
2. Potential effects on the human eye at locations where glare occurs; and
3. Annual energy production from the PV system so that alternative designs can be compared.

ForgeSolar employs an interactive Google map where the user can quickly locate a site, draw an outline of the proposed PV array(s), and specify observer locations or paths. Latitude, longitude, and elevation are automatically queried from Google, providing necessary information for sun position and vector calculations. Additional information regarding the orientation and tilt of the PV panels, reflectance, environment, and ocular factors are entered by the user.

If glare is found, the tool calculates the retinal irradiance and subtended angle (size/distance) of the glare source to predict potential ocular hazards ranging from temporary after-image to retinal burn. The results are presented in a simple, easy-to-interpret plot that specifies when glare will occur throughout the year, with color codes indicating the potential ocular hazard. The tool can also predict relative energy production while evaluating alternative designs, layouts, and locations to identify configurations that maximize energy production while mitigating the impacts of glare.

## FUNDAMENTALS

Glint is typically defined as a momentary flash of bright light, often caused by a reflection off a moving source. A typical example of glint is a momentary solar reflection from a moving car. Glare is defined as a continuous source of bright light. Glare is generally associated with stationary objects, which, due to the slow relative movement of the sun, reflect sunlight for a longer duration.

The difference between glint and glare is duration. Industry-standard glare analysis tools evaluate the occurrence of glare on a minute-by-minute basis; accordingly, they generally refer to solar hazards as 'glare'.

The ocular impact of solar glare is quantified into three categories<sup>1</sup>:

- Green - low potential to cause after-image (flash blindness)
- Yellow - potential to cause temporary after-image
- Red - potential to cause retinal burn (permanent eye damage)

These categories assume a typical blink response in the observer. Note that retinal burn is typically,

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<sup>1</sup> Ho, Clifford K., and Cianan A. Sims, Julius E. Yellowhair (Sandia National Laboratories). 2016. Solar Glare Hazard Analysis Tool (SGHAT) User's Manual v. 3.0. [https://www.forgesolar.com/static/docs/SGHAT3-GlareGauge\\_user\\_manual\\_v1.pdf](https://www.forgesolar.com/static/docs/SGHAT3-GlareGauge_user_manual_v1.pdf)

# SOLAR GLARE ANALYSIS

not possible for PV glare since PV modules do not focus reflected sunlight.

The ocular impact of glare is visualized with the Glare Hazard Plot and summarized for the entire project. The chart displays the ocular impact as a function of glare subtended source angle and retinal irradiance. Each minute of glare is displayed on the chart as a small circle in its respective hazard zone. For convenience, a reference point is provided which illustrates the hazard from viewing the sun without filtering, i.e. staring at the sun. Each plot includes predicted glare for one PV array and one receptor. The summary table identifies glare hazard for each PV array.

The resting angle of single axis trackers determines how the PV modules are modeled when the sun is past the rotation limit (60 degrees), in the early morning and late afternoon. The module position is adjusted to the resting position when the sun's position would put it outside the module's range of rotation. For example, at a resting angle of 50 degrees and rotation limit of 50 degrees, the modules lie flat in the morning until the sun reaches the position matching the 50-degree rotation. The modules are constantly rotating on the trackers throughout the day as it follows the sun from east to west. In the evening, once the sun moves past the corresponding 50-degree rotation position, the modules return to 0° again. This analysis usually represents the worst-case scenario for glare occurrence due to the sunlight glancing off the modules when they are flat, and the sun is low in the sky.

## RESULTS

Atwell performed a glare analysis using ForgeSolar PV Planning and Glare analysis software on the proposed project. The glare analysis modeled was a single axis tracking system with a tracker resting angle equal to 52° which yielded glare to nearby properties or roadways. See Figure 1 below for the location and vicinity of the proposed project used in the analysis and Attachment A for detailed results.

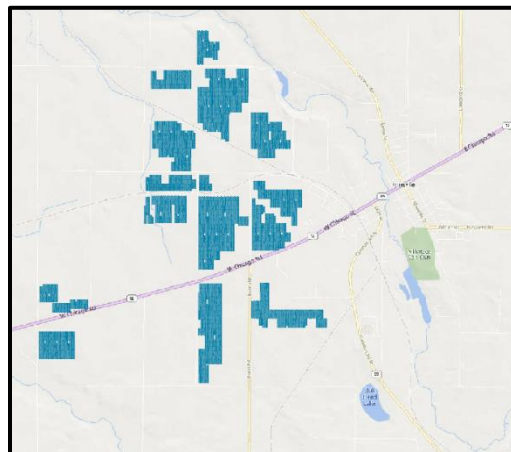


Figure 1. Project Location



# Ranger Power

## Ranger - Heartwood - 6ft at OPs - With Coating

Created April 29, 2022  
 Updated April 29, 2022  
 Time-step 1 minute  
 Timezone offset UTC-8  
 Site ID 68426.12083

Project type Advanced  
 Project status: active  
 Category 10 MW to 100 MW

### Misc. Analysis Settings

DNI: varies (1,000.0 W/m<sup>2</sup> peak)  
 Ocular transmission coefficient: 0.5  
 Pupil diameter: 0.002 m  
 Eye focal length: 0.017 m  
 Sun subtended angle: 9.3 mrad

#### Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

### Summary of Results Glare with low potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV1	SA tracking	SA tracking	0	0	1,470,000.0
PV10	SA tracking	SA tracking	0	0	1,533,000.0
PV11	SA tracking	SA tracking	0	0	1,438,000.0
PV12	SA tracking	SA tracking	0	0	1,511,000.0
PV13	SA tracking	SA tracking	0	0	1,507,000.0
PV14	SA tracking	SA tracking	0	0	1,573,000.0
PV2	SA tracking	SA tracking	0	0	1,501,000.0
PV3	SA tracking	SA tracking	0	0	1,474,000.0
PV4	SA tracking	SA tracking	319,734	0	1,608,000.0
PV5	SA tracking	SA tracking	0	0	1,443,000.0
PV6	SA tracking	SA tracking	0	0	1,448,000.0
PV7	SA tracking	SA tracking	0	0	1,466,000.0
PV8	SA tracking	SA tracking	0	0	1,547,000.0
PV9	SA tracking	SA tracking	0	0	1,524,000.0

## Component Data

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### PV Array(s)

Total PV footprint area: 1,015.2 acres

**Name:** PV1  
**Footprint area:** 35.2 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.969931	-84.728342	1119.05	5.15	1124.20
2	41.969933	-84.727760	1115.05	5.15	1120.20
3	41.970229	-84.727762	1118.05	5.15	1123.20
4	41.970237	-84.725157	1114.05	5.15	1119.20
5	41.967597	-84.725150	1119.05	5.15	1124.20
6	41.967604	-84.722767	1115.05	5.15	1120.20
7	41.968156	-84.722770	1111.05	5.15	1116.20
8	41.968166	-84.719584	1112.05	5.15	1117.20
9	41.966968	-84.719577	1115.05	5.15	1120.20
10	41.966958	-84.722819	1117.05	5.15	1122.20
11	41.966406	-84.722816	1116.05	5.15	1121.20
12	41.966396	-84.726002	1124.05	5.15	1129.21
13	41.967770	-84.726010	1126.05	5.15	1131.21
14	41.967763	-84.728329	1112.05	5.15	1117.20

**Name:** PV10  
**Footprint area:** 84.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.992533	-84.707345	1088.05	5.15	1093.20
2	41.992545	-84.703326	1111.05	5.15	1116.20
3	41.992249	-84.703325	1114.05	5.15	1119.20
4	41.992252	-84.702576	1110.05	5.15	1115.20
5	41.991281	-84.702571	1120.05	5.15	1125.20
6	41.991288	-84.700326	1105.05	5.15	1110.20
7	41.990992	-84.700324	1109.05	5.15	1114.20
8	41.990993	-84.699992	1108.05	5.15	1113.20
9	41.988882	-84.699981	1128.06	5.15	1133.21
10	41.988880	-84.700729	1121.05	5.15	1126.20
11	41.985788	-84.700713	1111.05	5.15	1116.20
12	41.985778	-84.704232	1103.05	5.15	1108.20
13	41.986975	-84.704238	1097.05	5.15	1102.20
14	41.986977	-84.703656	1095.05	5.15	1100.20
15	41.987662	-84.703660	1103.05	5.15	1108.20
16	41.987654	-84.706570	1091.05	5.15	1096.20
17	41.988863	-84.706577	1097.05	5.15	1102.20
18	41.988859	-84.707741	1088.05	5.15	1093.20
19	41.991266	-84.707754	1088.05	5.15	1093.20
20	41.991267	-84.707338	1096.05	5.15	1101.20

**Name:** PV11  
**Footprint area:** 68.6 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.993804	-84.689611	1114.05	5.15	1119.20
2	41.993813	-84.686590	1086.05	5.15	1091.20
3	41.992546	-84.686584	1104.05	5.15	1109.20
4	41.992553	-84.684089	1071.05	5.15	1076.20
5	41.991345	-84.684083	1086.05	5.15	1091.20
6	41.991347	-84.683335	1074.05	5.15	1079.20
7	41.990080	-84.683328	1095.05	5.15	1100.20
8	41.990083	-84.682497	1079.05	5.15	1084.20
9	41.988885	-84.682491	1090.05	5.15	1095.20
10	41.988877	-84.685318	1114.05	5.15	1119.20
11	41.987668	-84.685312	1115.05	5.15	1120.20
12	41.987659	-84.688332	1116.05	5.15	1121.20
13	41.988868	-84.688339	1111.05	5.15	1116.20
14	41.988865	-84.689586	1129.06	5.15	1134.21

**Name:** PV12  
**Footprint area:** 135.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999738	-84.698112	1095.05	5.15	1100.20
2	41.999748	-84.694508	1121.05	5.15	1126.20
3	41.998482	-84.694502	1118.05	5.15	1123.20
4	41.998484	-84.693670	1125.05	5.15	1130.21
5	41.998188	-84.693669	1126.05	5.15	1131.21
6	41.998189	-84.693280	1130.06	5.15	1135.21
7	41.998485	-84.693282	1130.06	5.15	1135.21
8	41.998488	-84.692284	1136.06	5.15	1141.21
9	41.999755	-84.692290	1130.06	5.15	1135.21
10	41.999760	-84.690267	1102.05	5.15	1107.20
11	41.995175	-84.690243	1104.05	5.15	1109.20
12	41.995171	-84.691491	1125.05	5.15	1130.21
13	41.993905	-84.691484	1137.06	5.15	1142.21
14	41.993898	-84.693646	1133.06	5.15	1138.21
15	41.993602	-84.693645	1129.06	5.15	1134.21
16	41.993602	-84.693811	1129.06	5.15	1134.21
17	41.989918	-84.693792	1109.05	5.15	1114.20
18	41.989916	-84.694318	1110.05	5.15	1115.20
19	41.990212	-84.694320	1109.05	5.15	1114.20
20	41.990210	-84.695068	1108.05	5.15	1113.20
21	41.991180	-84.695073	1102.05	5.15	1107.20
22	41.991179	-84.695738	1103.05	5.15	1108.20
23	41.991475	-84.695740	1100.05	5.15	1105.20
24	41.991473	-84.696128	1101.05	5.15	1106.20
25	41.991177	-84.696127	1105.05	5.15	1110.20
26	41.991173	-84.697651	1104.05	5.15	1109.20
27	41.991469	-84.697652	1103.05	5.15	1108.20
28	41.991467	-84.698401	1104.05	5.15	1109.20
29	41.992380	-84.698406	1105.05	5.15	1110.20
30	41.992377	-84.699403	1101.05	5.15	1106.20
31	41.997258	-84.699429	1093.05	5.15	1098.20
32	41.997265	-84.697267	1098.05	5.15	1103.20
33	41.998542	-84.697274	1093.05	5.15	1098.20
34	41.998540	-84.698105	1090.05	5.15	1095.20

**Name:** PV13  
**Footprint area:** 27.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



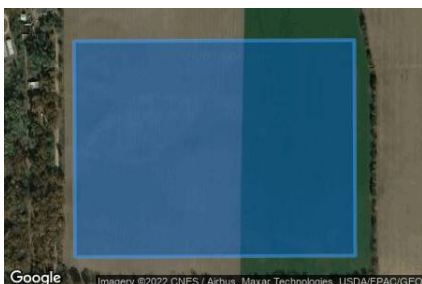
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.004972	-84.699577	1110.05	5.15	1115.20
2	42.004978	-84.697636	1108.05	5.15	1113.20
3	42.003712	-84.697630	1115.05	5.15	1120.20
4	42.003712	-84.697547	1115.05	5.15	1120.20
5	42.003477	-84.697545	1114.05	5.15	1119.20
6	42.003483	-84.695632	1106.05	5.15	1111.20
7	42.002285	-84.695626	1118.05	5.15	1123.20
8	42.002284	-84.695959	1115.05	5.15	1120.20
9	42.001075	-84.695952	1113.05	5.15	1118.20
10	42.001073	-84.696645	1108.05	5.15	1113.20
11	42.001369	-84.696647	1108.05	5.15	1113.20
12	42.001365	-84.698033	1103.05	5.15	1108.20
13	42.001304	-84.698033	1103.05	5.15	1108.20
14	42.001302	-84.698532	1099.05	5.15	1104.20
15	42.000389	-84.698527	1097.05	5.15	1102.20
16	42.000386	-84.699552	1095.05	5.15	1100.20

**Name:** PV14  
**Footprint area:** 36.5 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999430	-84.708031	1108.05	5.15	1113.20
2	41.999433	-84.707172	1114.05	5.15	1119.20
3	41.998224	-84.707166	1096.05	5.15	1101.20
4	41.998228	-84.705696	1108.05	5.15	1113.20
5	41.999547	-84.705703	1116.05	5.15	1121.20
6	41.999561	-84.700769	1095.05	5.15	1100.20
7	41.997045	-84.700756	1096.05	5.15	1101.20
8	41.997023	-84.708018	1096.05	5.15	1101.20

**Name:** PV2  
**Footprint area:** 53.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with position?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.963734	-84.728441	1091.05	5.15	1096.20
2	41.963754	-84.722013	1128.06	5.15	1133.21
3	41.960081	-84.721993	1124.05	5.15	1129.21
4	41.960061	-84.728420	1082.05	5.15	1087.20

**Name:** PV3  
**Footprint area:** 104.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



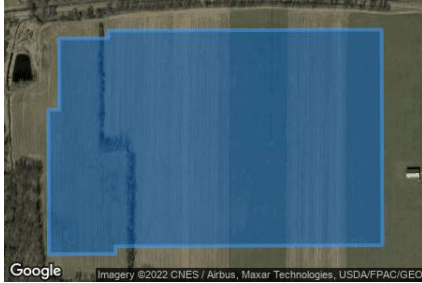
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970361	-84.699025	1124.05	5.15	1129.21
2	41.970373	-84.695008	1131.06	5.15	1136.21
3	41.959416	-84.694951	1138.06	5.15	1143.21
4	41.959409	-84.697361	1145.06	5.15	1150.21
5	41.956838	-84.697348	1130.06	5.15	1135.21
6	41.956833	-84.699037	1143.06	5.15	1148.21
7	41.961405	-84.699061	1142.06	5.15	1147.21
8	41.961409	-84.697897	1143.06	5.15	1148.21
9	41.963374	-84.697908	1138.06	5.15	1143.21
10	41.963371	-84.699155	1135.06	5.15	1140.21
11	41.964272	-84.699159	1128.06	5.15	1133.21
12	41.964274	-84.698744	1134.06	5.15	1139.21
13	41.965493	-84.698750	1127.05	5.15	1132.21
14	41.965492	-84.699166	1124.05	5.15	1129.21
15	41.969151	-84.699185	1125.05	5.15	1130.21
16	41.969152	-84.699019	1125.05	5.15	1130.21

**Name:** PV4  
**Footprint area:** 72.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970548	-84.687842	1150.06	5.15	1155.21
2	41.970553	-84.686319	1158.06	5.15	1163.21
3	41.966882	-84.686300	1167.06	5.15	1172.21
4	41.966910	-84.676325	1104.05	5.15	1109.20
5	41.965701	-84.676319	1107.05	5.15	1112.20
6	41.965703	-84.675654	1104.05	5.15	1109.20
7	41.964505	-84.675648	1105.05	5.15	1110.20
8	41.964500	-84.677504	1110.05	5.15	1115.20
9	41.965709	-84.677510	1109.05	5.15	1114.20
10	41.965704	-84.679312	1127.05	5.15	1132.21
11	41.964495	-84.679306	1110.05	5.15	1115.20
12	41.964480	-84.684652	1160.06	5.15	1165.21
13	41.965689	-84.684659	1165.06	5.15	1170.21
14	41.965684	-84.686543	1173.06	5.15	1178.21
15	41.964475	-84.686537	1160.06	5.15	1165.21
16	41.964473	-84.687395	1169.06	5.15	1174.21
17	41.964769	-84.687397	1171.06	5.15	1176.21
18	41.964767	-84.687979	1162.06	5.15	1167.21
19	41.965680	-84.687983	1171.06	5.15	1176.21
20	41.965676	-84.689396	1166.06	5.15	1171.21
21	41.968082	-84.689409	1148.06	5.15	1153.21
22	41.968087	-84.687829	1154.06	5.15	1159.21

**Name:** PV5  
**Footprint area:** 62.8 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982233	-84.708939	1094.05	5.15	1099.20
2	41.982236	-84.707804	1097.05	5.15	1102.20
3	41.982365	-84.707805	1097.05	5.15	1102.20
4	41.982384	-84.701542	1117.05	5.15	1122.20
5	41.978724	-84.701522	1135.06	5.15	1140.21
6	41.978706	-84.707646	1101.05	5.15	1106.20
7	41.978578	-84.707645	1102.05	5.15	1107.20
8	41.978573	-84.709169	1101.05	5.15	1106.20
9	41.981023	-84.709182	1097.05	5.15	1102.20
10	41.981024	-84.708933	1096.05	5.15	1101.20

**Name:** PV6  
**Footprint area:** 138.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982288	-84.699191	1116.05	5.15	1121.20
2	41.982309	-84.691930	1120.05	5.15	1125.20
3	41.979552	-84.691916	1124.05	5.15	1129.21
4	41.979557	-84.690170	1131.06	5.15	1136.21
5	41.978359	-84.690164	1132.06	5.15	1137.21
6	41.978352	-84.692741	1136.06	5.15	1141.21
7	41.974906	-84.692723	1143.06	5.15	1148.21
8	41.974898	-84.695384	1136.06	5.15	1141.21
9	41.973632	-84.695377	1134.06	5.15	1139.21
10	41.973628	-84.696541	1134.06	5.15	1139.21
11	41.972362	-84.696534	1134.06	5.15	1139.21
12	41.972354	-84.699138	1133.06	5.15	1138.21

**Name:** PV7  
**Footprint area:** 149.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984492	-84.689081	1125.05	5.15	1130.21
2	41.984498	-84.687141	1122.05	5.15	1127.21
3	41.983289	-84.687135	1128.06	5.15	1133.21
4	41.983308	-84.680317	1104.05	5.15	1109.20
5	41.980844	-84.680305	1122.05	5.15	1127.21
6	41.980841	-84.681220	1121.05	5.15	1126.20
7	41.978424	-84.681207	1141.06	5.15	1146.21
8	41.978420	-84.682400	1133.06	5.15	1138.21
9	41.976232	-84.682389	1143.06	5.15	1148.21
10	41.976229	-84.683470	1150.06	5.15	1155.21
11	41.975316	-84.683465	1153.06	5.15	1158.21
12	41.975313	-84.684546	1157.06	5.15	1162.21
13	41.975017	-84.684545	1157.06	5.15	1162.21
14	41.975004	-84.689310	1159.06	5.15	1164.21
15	41.982065	-84.689347	1151.06	5.15	1156.21
16	41.982066	-84.689068	1148.06	5.15	1153.21

**Name:** PV8  
**Footprint area:** 36.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984894	-84.708921	1093.05	5.15	1098.20
2	41.984896	-84.708238	1094.05	5.15	1099.20
3	41.985192	-84.708240	1094.05	5.15	1099.20
4	41.985198	-84.706217	1100.05	5.15	1105.20
5	41.983989	-84.706211	1100.05	5.15	1105.20
6	41.983994	-84.704641	1100.05	5.15	1105.20
7	41.985203	-84.704647	1102.05	5.15	1107.20
8	41.985215	-84.700611	1115.05	5.15	1120.20
9	41.984611	-84.700608	1114.05	5.15	1119.20
10	41.984611	-84.699842	1119.05	5.15	1124.20
11	41.983416	-84.699836	1110.05	5.15	1115.20
12	41.983413	-84.700602	1108.05	5.15	1113.20
13	41.983104	-84.700600	1105.05	5.15	1110.20
14	41.983079	-84.708911	1094.05	5.15	1099.20

**Name:** PV9  
**Footprint area:** 8.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985206	-84.699067	1128.06	5.15	1133.21
2	41.985210	-84.697460	1143.06	5.15	1148.21
3	41.984002	-84.697453	1129.06	5.15	1134.21
4	41.984003	-84.696871	1132.06	5.15	1137.21
5	41.983101	-84.696867	1115.05	5.15	1120.20
6	41.983095	-84.699056	1109.05	5.15	1114.20

### Route Receptor(s)

**Name:** Baker St  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982595	-84.675276	1110.87	6.00	1116.87
2	41.981678	-84.676059	1136.25	6.00	1142.25

**Name:** Baxter and Highland  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.983885	-84.678320	1116.05	6.00	1122.05
2	41.982952	-84.678910	1121.87	6.00	1127.87
3	41.982816	-84.678857	1122.26	6.00	1128.26
4	41.981636	-84.676024	1136.25	6.00	1142.25
5	41.981452	-84.676014	1137.22	6.00	1143.22
6	41.981117	-84.676604	1141.59	6.00	1147.59
7	41.980862	-84.676561	1138.96	6.00	1144.96
8	41.980160	-84.674683	1136.11	6.00	1142.11
9	41.979642	-84.673782	1123.98	6.00	1129.98
10	41.977913	-84.672905	1109.82	6.00	1115.82

**Name:** Bean Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.955879	-84.729038	1044.16	6.00	1050.17
2	41.956246	-84.709336	1134.38	6.00	1140.38
3	41.956262	-84.689831	1140.20	6.00	1146.20
4	41.956390	-84.670587	1096.54	6.00	1102.54

**Name:** Cronk Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.977130	-84.728899	1078.75	6.00	1084.75
2	41.964798	-84.728791	1090.12	6.00	1096.13
3	41.955799	-84.728834	1044.93	6.00	1050.93
4	41.952416	-84.728856	1114.49	6.00	1120.49

**Name:** Deal Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.974602	-84.684784	1154.83	6.00	1160.83
2	41.972480	-84.684720	1160.33	6.00	1166.33
3	41.971292	-84.682960	1153.32	6.00	1159.32
4	41.970789	-84.682821	1151.99	6.00	1157.99
5	41.967590	-84.682756	1163.50	6.00	1169.50

**Name:** Driveway  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.995767	-84.685119	1075.68	6.00	1081.68
2	41.995536	-84.684958	1069.15	6.00	1075.15
3	41.995026	-84.684808	1072.43	6.00	1078.43
4	41.993710	-84.684217	1076.47	6.00	1082.47
5	41.993272	-84.683692	1076.71	6.00	1082.71
6	41.992977	-84.683069	1082.67	6.00	1088.67
7	41.992674	-84.682512	1083.81	6.00	1089.81
8	41.992602	-84.681932	1087.25	6.00	1093.25
9	41.992458	-84.681868	1083.80	6.00	1089.80
10	41.990449	-84.681879	1077.65	6.00	1083.65
11	41.988368	-84.681825	1086.81	6.00	1092.81
12	41.987785	-84.681739	1093.08	6.00	1099.08
13	41.986932	-84.681921	1095.86	6.00	1101.86
14	41.986485	-84.681836	1096.56	6.00	1102.56
15	41.985489	-84.681921	1101.26	6.00	1107.26

**Name:** Genesee Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000030	-84.728922	1067.79	6.00	1073.79
2	41.999982	-84.709482	1103.57	6.00	1109.57
3	42.000014	-84.694728	1118.53	6.00	1124.53
4	42.000022	-84.691563	1117.63	6.00	1123.63
5	41.999982	-84.690007	1087.54	6.00	1093.54
6	41.999926	-84.689600	1076.43	6.00	1082.43
7	41.999671	-84.688430	1058.92	6.00	1064.92
8	41.999615	-84.687958	1054.68	6.00	1060.69
9	41.999599	-84.687336	1050.28	6.00	1056.28
10	41.999767	-84.685684	1044.03	6.00	1050.03
11	42.000006	-84.684278	1057.00	6.00	1063.00
12	41.999998	-84.684107	1059.16	6.00	1065.16
13	41.999464	-84.683034	1064.98	6.00	1070.98
14	41.995070	-84.669708	1092.21	6.00	1098.21

**Name:** Glasgow Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985527	-84.719331	1087.94	6.00	1093.94
2	41.977733	-84.719052	1103.71	6.00	1109.71
3	41.973266	-84.719030	1111.41	6.00	1117.41
4	41.966661	-84.719073	1113.17	6.00	1119.17

**Name:** Industrial Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968404	-84.682780	1160.58	6.00	1166.58
2	41.968492	-84.670957	1089.74	6.00	1095.74

**Name:** Jonesville Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985481	-84.728891	1100.67	6.00	1106.67
2	41.985513	-84.709429	1093.35	6.00	1099.35
3	41.985513	-84.699494	1123.99	6.00	1129.99
4	41.985481	-84.689924	1122.16	6.00	1128.16
5	41.985481	-84.681878	1101.02	6.00	1107.02
6	41.985497	-84.673295	1093.95	6.00	1099.95

**Name:** Murphy St  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985519	-84.686428	1115.99	6.00	1121.99
2	41.985288	-84.686342	1116.02	6.00	1122.02
3	41.985160	-84.686139	1117.25	6.00	1123.25
4	41.985176	-84.685731	1116.85	6.00	1122.85
5	41.985145	-84.683542	1114.66	6.00	1120.66
6	41.984841	-84.680860	1109.42	6.00	1115.42
7	41.984578	-84.679894	1100.91	6.00	1106.91
8	41.982760	-84.675614	1114.10	6.00	1120.10
9	41.981875	-84.673629	1101.83	6.00	1107.83
10	41.981588	-84.673200	1100.47	6.00	1106.47
11	41.979833	-84.671011	1093.58	6.00	1099.58

**Name:** N Bunn Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000012	-84.690061	1088.52	6.00	1094.52
2	41.985404	-84.689932	1121.82	6.00	1127.82
3	41.973156	-84.689868	1161.37	6.00	1167.37
4	41.956132	-84.689889	1139.26	6.00	1145.26
5	41.948026	-84.689954	1140.62	6.00	1146.62

**Name:** Olde Street  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981436	-84.667386	1069.48	6.00	1075.48
2	41.979649	-84.665884	1068.73	6.00	1074.73
3	41.978325	-84.665841	1074.84	6.00	1080.84
4	41.977591	-84.666399	1077.45	6.00	1083.45
5	41.974800	-84.669574	1075.40	6.00	1081.40
6	41.973699	-84.670583	1073.92	6.00	1079.92
7	41.971976	-84.671505	1084.63	6.00	1090.63
8	41.969854	-84.671248	1091.59	6.00	1097.59
9	41.967126	-84.670604	1089.11	6.00	1095.11
10	41.963265	-84.669553	1112.18	6.00	1118.18
11	41.961111	-84.668630	1121.69	6.00	1127.69
12	41.957090	-84.665690	1119.18	6.00	1125.18

**Name:** Pine Dr  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.979915	-84.678553	1141.57	6.00	1147.57
2	41.979493	-84.679240	1138.15	6.00	1144.15
3	41.977076	-84.679251	1144.11	6.00	1150.11
4	41.976541	-84.678811	1142.07	6.00	1148.07

**Name:** Rainey Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.014437	-84.709545	1058.14	6.00	1064.14
2	41.999912	-84.709480	1103.34	6.00	1109.34
3	41.985479	-84.709416	1093.47	6.00	1099.47

**Name:** Sand Lake Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968772	-84.709415	1116.45	6.00	1122.45
2	41.956072	-84.709330	1136.41	6.00	1142.41

**Name:** Seneca  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981662	-84.673302	1100.66	6.00	1106.66
2	41.981183	-84.675072	1117.83	6.00	1123.83
3	41.980449	-84.675673	1128.01	6.00	1134.01

**Name:** W Chicago Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982786	-84.664363	1050.18	6.00	1056.18
2	41.977299	-84.677173	1141.86	6.00	1147.86
3	41.976071	-84.680134	1144.50	6.00	1150.50
4	41.974491	-84.685498	1156.34	6.00	1162.34
5	41.973183	-84.690047	1161.12	6.00	1167.12
6	41.970423	-84.700068	1123.07	6.00	1129.07
7	41.968190	-84.711827	1114.52	6.00	1120.52
8	41.966164	-84.721955	1115.01	6.00	1121.01
9	41.963020	-84.738027	1042.73	6.00	1048.73
10	41.962111	-84.742790	1092.27	6.00	1098.27

**Name:** Wise Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985561	-84.699581	1122.65	6.00	1128.65
2	41.970566	-84.699560	1122.83	6.00	1128.83
3	41.956255	-84.699560	1139.97	6.00	1145.97

## Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	41.978175	-84.679807	1141.09	6.00	1147.09
OP 2	41.975798	-84.679313	1144.60	6.00	1150.60
OP 3	41.975208	-84.681759	1153.05	6.00	1159.05
OP 4	41.976261	-84.681266	1145.06	6.00	1151.06
OP 5	41.974921	-84.682918	1152.21	6.00	1158.22
OP 6	41.974203	-84.687746	1163.33	6.00	1169.33
OP 7	41.974554	-84.690235	1162.54	6.00	1168.54
OP 8	41.976085	-84.690321	1143.82	6.00	1149.82
OP 9	41.977680	-84.690257	1137.12	6.00	1143.12
OP 10	41.973309	-84.690815	1157.87	6.00	1163.88
OP 11	41.980679	-84.690321	1139.57	6.00	1145.58
OP 12	41.984220	-84.685987	1124.66	6.00	1130.66
OP 13	41.985066	-84.699870	1121.90	6.00	1127.90
OP 14	41.970087	-84.699999	1124.74	6.00	1130.74
OP 15	41.963354	-84.700063	1132.45	6.00	1138.45
OP 16	41.958232	-84.700299	1138.00	6.00	1144.00
OP 17	41.954897	-84.697359	1135.26	6.00	1141.26
OP 18	41.962461	-84.689141	1165.78	6.00	1171.78
OP 19	41.968077	-84.685300	1156.35	6.00	1162.35
OP 20	41.967758	-84.677532	1136.06	6.00	1142.06
OP 21	41.965987	-84.670880	1095.40	6.00	1101.40
OP 22	41.990654	-84.690499	1134.11	6.00	1140.11
OP 23	41.994266	-84.690488	1125.73	6.00	1131.74
OP 24	41.999569	-84.693739	1125.58	6.00	1131.58
OP 25	42.000326	-84.697473	1103.37	6.00	1109.37
OP 26	42.000789	-84.695348	1115.64	6.00	1121.64
OP 27	41.999577	-84.706420	1121.12	6.00	1127.12
OP 28	41.997926	-84.709028	1092.76	6.00	1098.76
OP 29	41.985758	-84.708373	1093.45	6.00	1099.45
OP 30	41.984554	-84.704897	1101.04	6.00	1107.04
OP 31	41.985798	-84.705337	1102.99	6.00	1108.99
OP 32	41.981842	-84.699930	1117.21	6.00	1123.21
OP 33	41.979800	-84.700337	1138.94	6.00	1144.94
OP 34	41.965833	-84.720100	1115.44	6.00	1121.44
OP 35	41.964661	-84.725464	1118.03	6.00	1124.03
OP 36	41.962355	-84.729133	1079.68	6.00	1085.68
OP 37	41.970883	-84.728157	1118.47	6.00	1124.47
OP 38	41.986406	-84.688731	1131.28	6.00	1137.28
OP 39	41.998524	-84.698792	1093.02	6.00	1099.02
OP 40	41.984459	-84.680423	1107.73	6.00	1113.73

## Summary of PV Glare Analysis

*PV configuration and total predicted glare*

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV1	SA tracking	SA tracking	0	0	1,470,000.0	
PV10	SA tracking	SA tracking	0	0	1,533,000.0	
PV11	SA tracking	SA tracking	0	0	1,438,000.0	
PV12	SA tracking	SA tracking	0	0	1,511,000.0	
PV13	SA tracking	SA tracking	0	0	1,507,000.0	
PV14	SA tracking	SA tracking	0	0	1,573,000.0	
PV2	SA tracking	SA tracking	0	0	1,501,000.0	
PV3	SA tracking	SA tracking	0	0	1,474,000.0	
PV4	SA tracking	SA tracking	319,734	0	1,608,000.0	-
PV5	SA tracking	SA tracking	0	0	1,443,000.0	
PV6	SA tracking	SA tracking	0	0	1,448,000.0	
PV7	SA tracking	SA tracking	0	0	1,466,000.0	
PV8	SA tracking	SA tracking	0	0	1,547,000.0	
PV9	SA tracking	SA tracking	0	0	1,524,000.0	

### Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pv4 (green)	17330	17389	21772	23667	26737	26987	27343	25363	22022	20069	17240	16722
pv4 (yellow)	0	0	0	0	0	0	0	0	0	0	0	0

## PV & Receptor Analysis Results

*Results for each PV array and receptor*

**PV1** no glare found

Predicted energy output: 1,470,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV10** no glare found

Predicted energy output: 1,533,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV11** no glare found

Predicted energy output: 1,438,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV12** no glare found

Predicted energy output: 1,511,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV13** no glare found

Predicted energy output: 1,507,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV14** no glare found

Predicted energy output: 1,573,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV2** no glare found

Predicted energy output: 1,501,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV3** no glare found

Predicted energy output: 1,474,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV4** low potential for temporary after-image

Predicted energy output: 1,608,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0

OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	115792	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	203942	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

**PV4 - OP Receptor (OP 1)**

*No glare found*

**PV4 - OP Receptor (OP 2)**

*No glare found*

**PV4 - OP Receptor (OP 3)**

*No glare found*

**PV4 - OP Receptor (OP 4)**

*No glare found*

**PV4 - OP Receptor (OP 5)**

*No glare found*

**PV4 - OP Receptor (OP 6)**

*No glare found*

**PV4 - OP Receptor (OP 7)**

*No glare found*

**PV4 - OP Receptor (OP 8)**

*No glare found*

**PV4 - OP Receptor (OP 9)**

*No glare found*

**PV4 - OP Receptor (OP 10)**

*No glare found*

**PV4 - OP Receptor (OP 11)**

*No glare found*

**PV4 - OP Receptor (OP 12)**

*No glare found*

**PV4 - OP Receptor (OP 13)**

*No glare found*

**PV4 - OP Receptor (OP 14)**

*No glare found*

**PV4 - OP Receptor (OP 15)**

*No glare found*

**PV4 - OP Receptor (OP 16)**

*No glare found*

**PV4 - OP Receptor (OP 17)**

*No glare found*

**PV4 - OP Receptor (OP 18)**

*No glare found*

**PV4 - OP Receptor (OP 19)**

*No glare found*

**PV4 - OP Receptor (OP 20)**

*No glare found*

**PV4 - OP Receptor (OP 21)**

*No glare found*

**PV4 - OP Receptor (OP 22)**

*No glare found*

**PV4 - OP Receptor (OP 23)**

*No glare found*

**PV4 - OP Receptor (OP 24)**

*No glare found*

**PV4 - OP Receptor (OP 25)**

*No glare found*

**PV4 - OP Receptor (OP 26)**

*No glare found*

**PV4 - OP Receptor (OP 27)**

*No glare found*

**PV4 - OP Receptor (OP 28)**

*No glare found*

**PV4 - OP Receptor (OP 29)**

*No glare found*

**PV4 - OP Receptor (OP 30)**

*No glare found*

**PV4 - OP Receptor (OP 31)**

*No glare found*

**PV4 - OP Receptor (OP 32)**

*No glare found*

**PV4 - OP Receptor (OP 33)**

*No glare found*

**PV4 - OP Receptor (OP 34)**

*No glare found*

**PV4 - OP Receptor (OP 35)**

*No glare found*

**PV4 - OP Receptor (OP 36)**

*No glare found*

**PV4 - OP Receptor (OP 37)**

*No glare found*

**PV4 - OP Receptor (OP 38)**

*No glare found*

**PV4 - OP Receptor (OP 39)**

*No glare found*

**PV4 - OP Receptor (OP 40)**

*No glare found*

**PV4 - Route Receptor (Baker St)**

*No glare found*

**PV4 - Route Receptor (Baxter and Highland)**

*No glare found*

**PV4 - Route Receptor (Bean Rd)**

*No glare found*

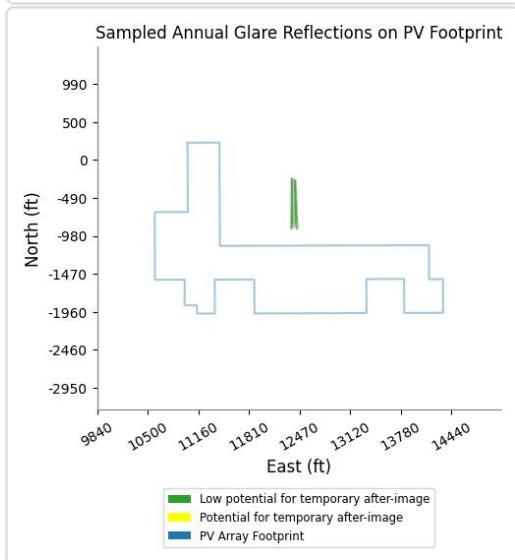
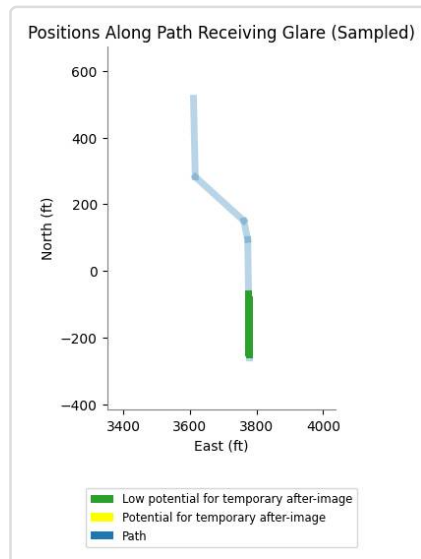
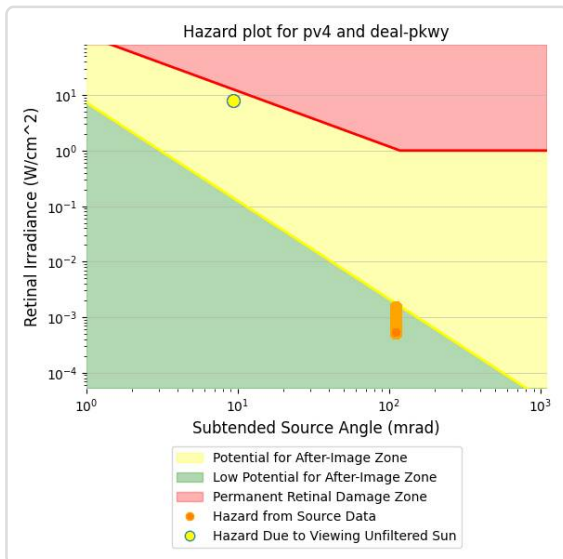
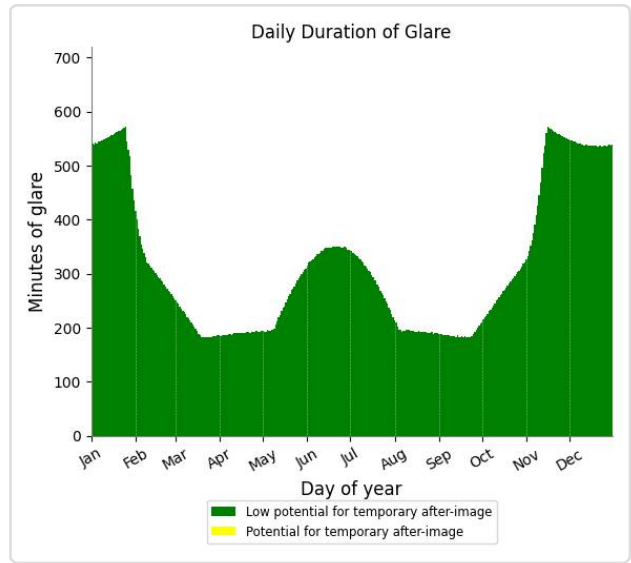
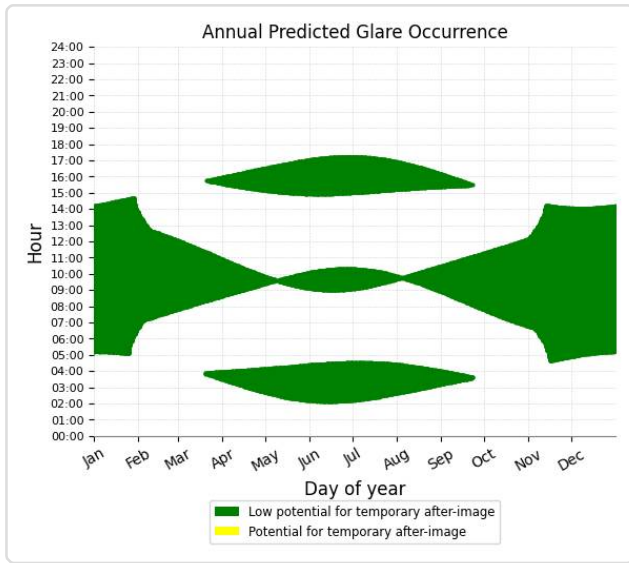
**PV4 - Route Receptor (Cronk Rd)**

*No glare found*

### PV4 - Route Receptor (Deal Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 115,792 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Driveway)

No glare found

### PV4 - Route Receptor (Genesse Rd)

No glare found

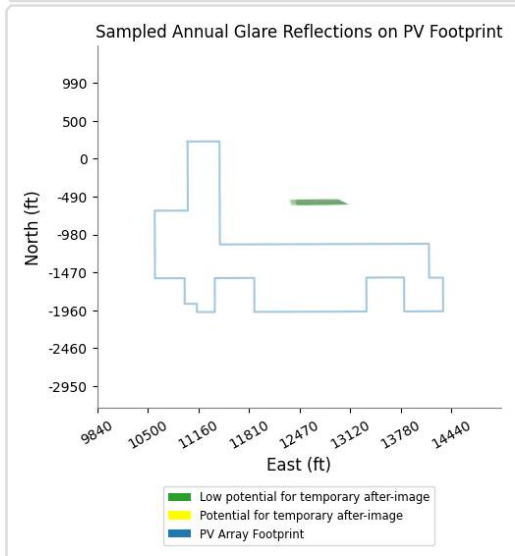
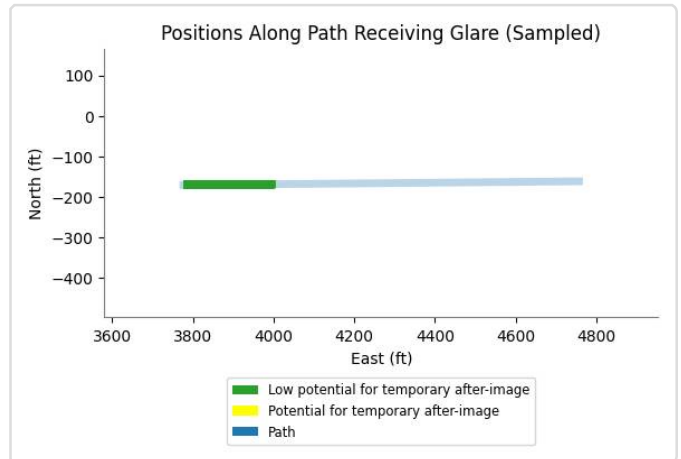
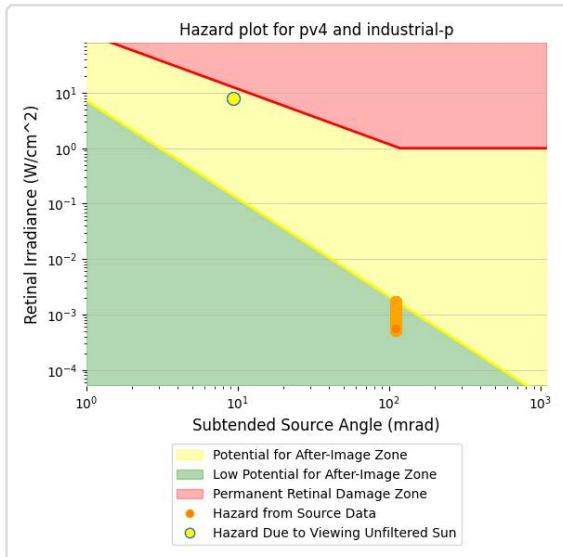
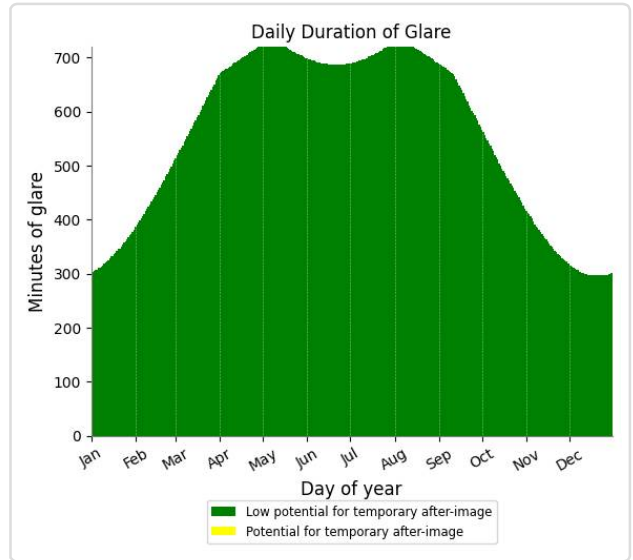
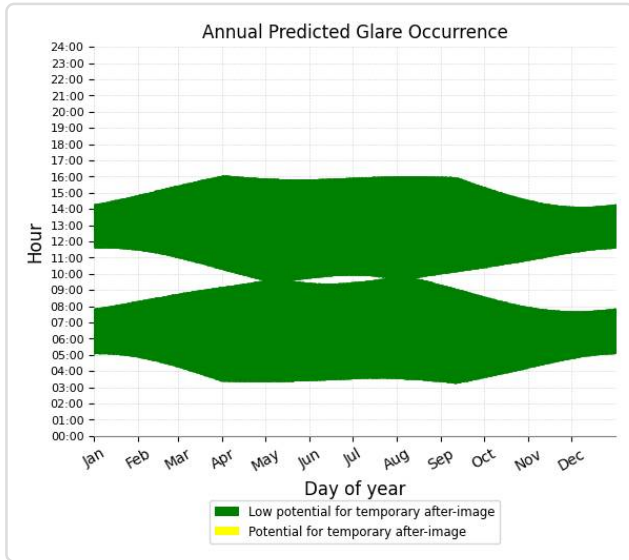
### PV4 - Route Receptor (Glasgow Rd)

No glare found

### PV4 - Route Receptor (Industrial Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 203,942 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Jonesville Rd)

No glare found

**PV4 - Route Receptor (Murphy St)**

*No glare found*

**PV4 - Route Receptor (N Bunn Rd)**

*No glare found*

**PV4 - Route Receptor (Olde Street)**

*No glare found*

**PV4 - Route Receptor (Pine Dr)**

*No glare found*

**PV4 - Route Receptor (Rainey Rd)**

*No glare found*

**PV4 - Route Receptor (Sand Lake Rd)**

*No glare found*

**PV4 - Route Receptor (Seneca)**

*No glare found*

**PV4 - Route Receptor (W Chicago Rd)**

*No glare found*

**PV4 - Route Receptor (Wise Rd)**

*No glare found*

**PV5** no glare found

Predicted energy output: 1,443,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV6** no glare found

Predicted energy output: 1,448,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV7** no glare found

Predicted energy output: 1,466,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV8** no glare found

Predicted energy output: 1,547,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

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**PV9** no glare found

Predicted energy output: 1,524,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

## Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- 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.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.



# Ranger Power

## Ranger - Heartwood - 6ft at OPs - Without ARC

**Created** April 29, 2022  
**Updated** April 29, 2022  
**Time-step** 1 minute  
**Timezone offset** UTC-8  
**Site ID** 68426.12083

**Project type** Advanced  
**Project status:** active  
**Category** 10 MW to 100 MW

### Misc. Analysis Settings

**DNI: varies (1,000.0 W/m<sup>2</sup> peak)**  
**Ocular transmission coefficient: 0.5**  
**Pupil diameter: 0.002 m**  
**Eye focal length: 0.017 m**  
**Sun subtended angle: 9.3 mrad**

#### Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

## Summary of Results Glare with potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV1	SA tracking	SA tracking	0	0	1,470,000.0
PV10	SA tracking	SA tracking	0	0	1,533,000.0
PV11	SA tracking	SA tracking	0	0	1,438,000.0
PV12	SA tracking	SA tracking	0	0	1,511,000.0
PV13	SA tracking	SA tracking	0	0	1,507,000.0
PV14	SA tracking	SA tracking	0	0	1,573,000.0
PV2	SA tracking	SA tracking	0	0	1,501,000.0
PV3	SA tracking	SA tracking	0	0	1,474,000.0
PV4	SA tracking	SA tracking	241,367	74,794	1,608,000.0
PV5	SA tracking	SA tracking	0	0	1,443,000.0
PV6	SA tracking	SA tracking	0	0	1,448,000.0
PV7	SA tracking	SA tracking	0	0	1,466,000.0
PV8	SA tracking	SA tracking	0	0	1,547,000.0
PV9	SA tracking	SA tracking	0	0	1,524,000.0

## Component Data

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### PV Array(s)

Total PV footprint area: 1,015.2 acres

**Name:** PV1  
**Footprint area:** 35.2 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.969931	-84.728342	1119.05	5.15	1124.20
2	41.969933	-84.727760	1115.05	5.15	1120.20
3	41.970229	-84.727762	1118.05	5.15	1123.20
4	41.970237	-84.725157	1114.05	5.15	1119.20
5	41.967597	-84.725150	1119.05	5.15	1124.20
6	41.967604	-84.722767	1115.05	5.15	1120.20
7	41.968156	-84.722770	1111.05	5.15	1116.20
8	41.968166	-84.719584	1112.05	5.15	1117.20
9	41.966968	-84.719577	1115.05	5.15	1120.20
10	41.966958	-84.722819	1117.05	5.15	1122.20
11	41.966406	-84.722816	1116.05	5.15	1121.20
12	41.966396	-84.726002	1124.05	5.15	1129.21
13	41.967770	-84.726010	1126.05	5.15	1131.21
14	41.967763	-84.728329	1112.05	5.15	1117.20

**Name:** PV10  
**Footprint area:** 84.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.992533	-84.707345	1088.05	5.15	1093.20
2	41.992545	-84.703326	1111.05	5.15	1116.20
3	41.992249	-84.703325	1114.05	5.15	1119.20
4	41.992252	-84.702576	1110.05	5.15	1115.20
5	41.991281	-84.702571	1120.05	5.15	1125.20
6	41.991288	-84.700326	1105.05	5.15	1110.20
7	41.990992	-84.700324	1109.05	5.15	1114.20
8	41.990993	-84.699992	1108.05	5.15	1113.20
9	41.988882	-84.699981	1128.06	5.15	1133.21
10	41.988880	-84.700729	1121.05	5.15	1126.20
11	41.985788	-84.700713	1111.05	5.15	1116.20
12	41.985778	-84.704232	1103.05	5.15	1108.20
13	41.986975	-84.704238	1097.05	5.15	1102.20
14	41.986977	-84.703656	1095.05	5.15	1100.20
15	41.987662	-84.703660	1103.05	5.15	1108.20
16	41.987654	-84.706570	1091.05	5.15	1096.20
17	41.988863	-84.706577	1097.05	5.15	1102.20
18	41.988859	-84.707741	1088.05	5.15	1093.20
19	41.991266	-84.707754	1088.05	5.15	1093.20
20	41.991267	-84.707338	1096.05	5.15	1101.20

**Name:** PV11  
**Footprint area:** 68.6 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.993804	-84.689611	1114.05	5.15	1119.20
2	41.993813	-84.686590	1086.05	5.15	1091.20
3	41.992546	-84.686584	1104.05	5.15	1109.20
4	41.992553	-84.684089	1071.05	5.15	1076.20
5	41.991345	-84.684083	1086.05	5.15	1091.20
6	41.991347	-84.683335	1074.05	5.15	1079.20
7	41.990080	-84.683328	1095.05	5.15	1100.20
8	41.990083	-84.682497	1079.05	5.15	1084.20
9	41.988885	-84.682491	1090.05	5.15	1095.20
10	41.988877	-84.685318	1114.05	5.15	1119.20
11	41.987668	-84.685312	1115.05	5.15	1120.20
12	41.987659	-84.688332	1116.05	5.15	1121.20
13	41.988868	-84.688339	1111.05	5.15	1116.20
14	41.988865	-84.689586	1129.06	5.15	1134.21

**Name:** PV12  
**Footprint area:** 135.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999738	-84.698112	1095.05	5.15	1100.20
2	41.999748	-84.694508	1121.05	5.15	1126.20
3	41.998482	-84.694502	1118.05	5.15	1123.20
4	41.998484	-84.693670	1125.05	5.15	1130.21
5	41.998188	-84.693669	1126.05	5.15	1131.21
6	41.998189	-84.693280	1130.06	5.15	1135.21
7	41.998485	-84.693282	1130.06	5.15	1135.21
8	41.998488	-84.692284	1136.06	5.15	1141.21
9	41.999755	-84.692290	1130.06	5.15	1135.21
10	41.999760	-84.690267	1102.05	5.15	1107.20
11	41.995175	-84.690243	1104.05	5.15	1109.20
12	41.995171	-84.691491	1125.05	5.15	1130.21
13	41.993905	-84.691484	1137.06	5.15	1142.21
14	41.993898	-84.693646	1133.06	5.15	1138.21
15	41.993602	-84.693645	1129.06	5.15	1134.21
16	41.993602	-84.693811	1129.06	5.15	1134.21
17	41.989918	-84.693792	1109.05	5.15	1114.20
18	41.989916	-84.694318	1110.05	5.15	1115.20
19	41.990212	-84.694320	1109.05	5.15	1114.20
20	41.990210	-84.695068	1108.05	5.15	1113.20
21	41.991180	-84.695073	1102.05	5.15	1107.20
22	41.991179	-84.695738	1103.05	5.15	1108.20
23	41.991475	-84.695740	1100.05	5.15	1105.20
24	41.991473	-84.696128	1101.05	5.15	1106.20
25	41.991177	-84.696127	1105.05	5.15	1110.20
26	41.991173	-84.697651	1104.05	5.15	1109.20
27	41.991469	-84.697652	1103.05	5.15	1108.20
28	41.991467	-84.698401	1104.05	5.15	1109.20
29	41.992380	-84.698406	1105.05	5.15	1110.20
30	41.992377	-84.699403	1101.05	5.15	1106.20
31	41.997258	-84.699429	1093.05	5.15	1098.20
32	41.997265	-84.697267	1098.05	5.15	1103.20
33	41.998542	-84.697274	1093.05	5.15	1098.20
34	41.998540	-84.698105	1090.05	5.15	1095.20

**Name:** PV13  
**Footprint area:** 27.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



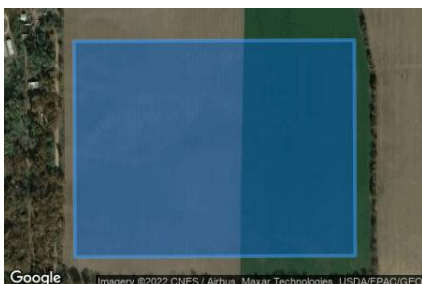
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.004972	-84.699577	1110.05	5.15	1115.20
2	42.004978	-84.697636	1108.05	5.15	1113.20
3	42.003712	-84.697630	1115.05	5.15	1120.20
4	42.003712	-84.697547	1115.05	5.15	1120.20
5	42.003477	-84.697545	1114.05	5.15	1119.20
6	42.003483	-84.695632	1106.05	5.15	1111.20
7	42.002285	-84.695626	1118.05	5.15	1123.20
8	42.002284	-84.695959	1115.05	5.15	1120.20
9	42.001075	-84.695952	1113.05	5.15	1118.20
10	42.001073	-84.696645	1108.05	5.15	1113.20
11	42.001369	-84.696647	1108.05	5.15	1113.20
12	42.001365	-84.698033	1103.05	5.15	1108.20
13	42.001304	-84.698033	1103.05	5.15	1108.20
14	42.001302	-84.698532	1099.05	5.15	1104.20
15	42.000389	-84.698527	1097.05	5.15	1102.20
16	42.000386	-84.699552	1095.05	5.15	1100.20

**Name:** PV14  
**Footprint area:** 36.5 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999430	-84.708031	1108.05	5.15	1113.20
2	41.999433	-84.707172	1114.05	5.15	1119.20
3	41.998224	-84.707166	1096.05	5.15	1101.20
4	41.998228	-84.705696	1108.05	5.15	1113.20
5	41.999547	-84.705703	1116.05	5.15	1121.20
6	41.999561	-84.700769	1095.05	5.15	1100.20
7	41.997045	-84.700756	1096.05	5.15	1101.20
8	41.997023	-84.708018	1096.05	5.15	1101.20

**Name:** PV2  
**Footprint area:** 53.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with position?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.963734	-84.728441	1091.05	5.15	1096.20
2	41.963754	-84.722013	1128.06	5.15	1133.21
3	41.960081	-84.721993	1124.05	5.15	1129.21
4	41.960061	-84.728420	1082.05	5.15	1087.20

**Name:** PV3  
**Footprint area:** 104.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



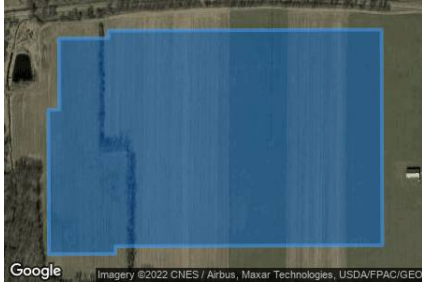
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970361	-84.699025	1124.05	5.15	1129.21
2	41.970373	-84.695008	1131.06	5.15	1136.21
3	41.959416	-84.694951	1138.06	5.15	1143.21
4	41.959409	-84.697361	1145.06	5.15	1150.21
5	41.956838	-84.697348	1130.06	5.15	1135.21
6	41.956833	-84.699037	1143.06	5.15	1148.21
7	41.961405	-84.699061	1142.06	5.15	1147.21
8	41.961409	-84.697897	1143.06	5.15	1148.21
9	41.963374	-84.697908	1138.06	5.15	1143.21
10	41.963371	-84.699155	1135.06	5.15	1140.21
11	41.964272	-84.699159	1128.06	5.15	1133.21
12	41.964274	-84.698744	1134.06	5.15	1139.21
13	41.965493	-84.698750	1127.05	5.15	1132.21
14	41.965492	-84.699166	1124.05	5.15	1129.21
15	41.969151	-84.699185	1125.05	5.15	1130.21
16	41.969152	-84.699019	1125.05	5.15	1130.21

**Name:** PV4  
**Footprint area:** 72.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970548	-84.687842	1150.06	5.15	1155.21
2	41.970553	-84.686319	1158.06	5.15	1163.21
3	41.966882	-84.686300	1167.06	5.15	1172.21
4	41.966910	-84.676325	1104.05	5.15	1109.20
5	41.965701	-84.676319	1107.05	5.15	1112.20
6	41.965703	-84.675654	1104.05	5.15	1109.20
7	41.964505	-84.675648	1105.05	5.15	1110.20
8	41.964500	-84.677504	1110.05	5.15	1115.20
9	41.965709	-84.677510	1109.05	5.15	1114.20
10	41.965704	-84.679312	1127.05	5.15	1132.21
11	41.964495	-84.679306	1110.05	5.15	1115.20
12	41.964480	-84.684652	1160.06	5.15	1165.21
13	41.965689	-84.684659	1165.06	5.15	1170.21
14	41.965684	-84.686543	1173.06	5.15	1178.21
15	41.964475	-84.686537	1160.06	5.15	1165.21
16	41.964473	-84.687395	1169.06	5.15	1174.21
17	41.964769	-84.687397	1171.06	5.15	1176.21
18	41.964767	-84.687979	1162.06	5.15	1167.21
19	41.965680	-84.687983	1171.06	5.15	1176.21
20	41.965676	-84.689396	1166.06	5.15	1171.21
21	41.968082	-84.689409	1148.06	5.15	1153.21
22	41.968087	-84.687829	1154.06	5.15	1159.21

**Name:** PV5  
**Footprint area:** 62.8 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982233	-84.708939	1094.05	5.15	1099.20
2	41.982236	-84.707804	1097.05	5.15	1102.20
3	41.982365	-84.707805	1097.05	5.15	1102.20
4	41.982384	-84.701542	1117.05	5.15	1122.20
5	41.978724	-84.701522	1135.06	5.15	1140.21
6	41.978706	-84.707646	1101.05	5.15	1106.20
7	41.978578	-84.707645	1102.05	5.15	1107.20
8	41.978573	-84.709169	1101.05	5.15	1106.20
9	41.981023	-84.709182	1097.05	5.15	1102.20
10	41.981024	-84.708933	1096.05	5.15	1101.20

**Name:** PV6  
**Footprint area:** 138.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982288	-84.699191	1116.05	5.15	1121.20
2	41.982309	-84.691930	1120.05	5.15	1125.20
3	41.979552	-84.691916	1124.05	5.15	1129.21
4	41.979557	-84.690170	1131.06	5.15	1136.21
5	41.978359	-84.690164	1132.06	5.15	1137.21
6	41.978352	-84.692741	1136.06	5.15	1141.21
7	41.974906	-84.692723	1143.06	5.15	1148.21
8	41.974898	-84.695384	1136.06	5.15	1141.21
9	41.973632	-84.695377	1134.06	5.15	1139.21
10	41.973628	-84.696541	1134.06	5.15	1139.21
11	41.972362	-84.696534	1134.06	5.15	1139.21
12	41.972354	-84.699138	1133.06	5.15	1138.21

**Name:** PV7  
**Footprint area:** 149.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984492	-84.689081	1125.05	5.15	1130.21
2	41.984498	-84.687141	1122.05	5.15	1127.21
3	41.983289	-84.687135	1128.06	5.15	1133.21
4	41.983308	-84.680317	1104.05	5.15	1109.20
5	41.980844	-84.680305	1122.05	5.15	1127.21
6	41.980841	-84.681220	1121.05	5.15	1126.20
7	41.978424	-84.681207	1141.06	5.15	1146.21
8	41.978420	-84.682400	1133.06	5.15	1138.21
9	41.976232	-84.682389	1143.06	5.15	1148.21
10	41.976229	-84.683470	1150.06	5.15	1155.21
11	41.975316	-84.683465	1153.06	5.15	1158.21
12	41.975313	-84.684546	1157.06	5.15	1162.21
13	41.975017	-84.684545	1157.06	5.15	1162.21
14	41.975004	-84.689310	1159.06	5.15	1164.21
15	41.982065	-84.689347	1151.06	5.15	1156.21
16	41.982066	-84.689068	1148.06	5.15	1153.21

**Name:** PV8  
**Footprint area:** 36.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984894	-84.708921	1093.05	5.15	1098.20
2	41.984896	-84.708238	1094.05	5.15	1099.20
3	41.985192	-84.708240	1094.05	5.15	1099.20
4	41.985198	-84.706217	1100.05	5.15	1105.20
5	41.983989	-84.706211	1100.05	5.15	1105.20
6	41.983994	-84.704641	1100.05	5.15	1105.20
7	41.985203	-84.704647	1102.05	5.15	1107.20
8	41.985215	-84.700611	1115.05	5.15	1120.20
9	41.984611	-84.700608	1114.05	5.15	1119.20
10	41.984611	-84.699842	1119.05	5.15	1124.20
11	41.983416	-84.699836	1110.05	5.15	1115.20
12	41.983413	-84.700602	1108.05	5.15	1113.20
13	41.983104	-84.700600	1105.05	5.15	1110.20
14	41.983079	-84.708911	1094.05	5.15	1099.20

**Name:** PV9  
**Footprint area:** 8.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985206	-84.699067	1128.06	5.15	1133.21
2	41.985210	-84.697460	1143.06	5.15	1148.21
3	41.984002	-84.697453	1129.06	5.15	1134.21
4	41.984003	-84.696871	1132.06	5.15	1137.21
5	41.983101	-84.696867	1115.05	5.15	1120.20
6	41.983095	-84.699056	1109.05	5.15	1114.20

### Route Receptor(s)

**Name:** Baker St  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982595	-84.675276	1110.87	6.00	1116.87
2	41.981678	-84.676059	1136.25	6.00	1142.25

**Name:** Baxter and Highland  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.983885	-84.678320	1116.05	6.00	1122.05
2	41.982952	-84.678910	1121.87	6.00	1127.87
3	41.982816	-84.678857	1122.26	6.00	1128.26
4	41.981636	-84.676024	1136.25	6.00	1142.25
5	41.981452	-84.676014	1137.22	6.00	1143.22
6	41.981117	-84.676604	1141.59	6.00	1147.59
7	41.980862	-84.676561	1138.96	6.00	1144.96
8	41.980160	-84.674683	1136.11	6.00	1142.11
9	41.979642	-84.673782	1123.98	6.00	1129.98
10	41.977913	-84.672905	1109.82	6.00	1115.82

**Name:** Bean Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.955879	-84.729038	1044.16	6.00	1050.17
2	41.956246	-84.709336	1134.38	6.00	1140.38
3	41.956262	-84.689831	1140.20	6.00	1146.20
4	41.956390	-84.670587	1096.54	6.00	1102.54

**Name:** Cronk Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.977130	-84.728899	1078.75	6.00	1084.75
2	41.964798	-84.728791	1090.12	6.00	1096.13
3	41.955799	-84.728834	1044.93	6.00	1050.93
4	41.952416	-84.728856	1114.49	6.00	1120.49

**Name:** Deal Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.974602	-84.684784	1154.83	6.00	1160.83
2	41.972480	-84.684720	1160.33	6.00	1166.33
3	41.971292	-84.682960	1153.32	6.00	1159.32
4	41.970789	-84.682821	1151.99	6.00	1157.99
5	41.967590	-84.682756	1163.50	6.00	1169.50

**Name:** Driveway  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.995767	-84.685119	1075.68	6.00	1081.68
2	41.995536	-84.684958	1069.15	6.00	1075.15
3	41.995026	-84.684808	1072.43	6.00	1078.43
4	41.993710	-84.684217	1076.47	6.00	1082.47
5	41.993272	-84.683692	1076.71	6.00	1082.71
6	41.992977	-84.683069	1082.67	6.00	1088.67
7	41.992674	-84.682512	1083.81	6.00	1089.81
8	41.992602	-84.681932	1087.25	6.00	1093.25
9	41.992458	-84.681868	1083.80	6.00	1089.80
10	41.990449	-84.681879	1077.65	6.00	1083.65
11	41.988368	-84.681825	1086.81	6.00	1092.81
12	41.987785	-84.681739	1093.08	6.00	1099.08
13	41.986932	-84.681921	1095.86	6.00	1101.86
14	41.986485	-84.681836	1096.56	6.00	1102.56
15	41.985489	-84.681921	1101.26	6.00	1107.26

**Name:** Genesee Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000030	-84.728922	1067.79	6.00	1073.79
2	41.999982	-84.709482	1103.57	6.00	1109.57
3	42.000014	-84.694728	1118.53	6.00	1124.53
4	42.000022	-84.691563	1117.63	6.00	1123.63
5	41.999982	-84.690007	1087.54	6.00	1093.54
6	41.999926	-84.689600	1076.43	6.00	1082.43
7	41.999671	-84.688430	1058.92	6.00	1064.92
8	41.999615	-84.687958	1054.68	6.00	1060.69
9	41.999599	-84.687336	1050.28	6.00	1056.28
10	41.999767	-84.685684	1044.03	6.00	1050.03
11	42.000006	-84.684278	1057.00	6.00	1063.00
12	41.999998	-84.684107	1059.16	6.00	1065.16
13	41.999464	-84.683034	1064.98	6.00	1070.98
14	41.995070	-84.669708	1092.21	6.00	1098.21

**Name:** Glasgow Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985527	-84.719331	1087.94	6.00	1093.94
2	41.977733	-84.719052	1103.71	6.00	1109.71
3	41.973266	-84.719030	1111.41	6.00	1117.41
4	41.966661	-84.719073	1113.17	6.00	1119.17

**Name:** Industrial Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968404	-84.682780	1160.58	6.00	1166.58
2	41.968492	-84.670957	1089.74	6.00	1095.74

**Name:** Jonesville Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985481	-84.728891	1100.67	6.00	1106.67
2	41.985513	-84.709429	1093.35	6.00	1099.35
3	41.985513	-84.699494	1123.99	6.00	1129.99
4	41.985481	-84.689924	1122.16	6.00	1128.16
5	41.985481	-84.681878	1101.02	6.00	1107.02
6	41.985497	-84.673295	1093.95	6.00	1099.95

**Name:** Murphy St  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985519	-84.686428	1115.99	6.00	1121.99
2	41.985288	-84.686342	1116.02	6.00	1122.02
3	41.985160	-84.686139	1117.25	6.00	1123.25
4	41.985176	-84.685731	1116.85	6.00	1122.85
5	41.985145	-84.683542	1114.66	6.00	1120.66
6	41.984841	-84.680860	1109.42	6.00	1115.42
7	41.984578	-84.679894	1100.91	6.00	1106.91
8	41.982760	-84.675614	1114.10	6.00	1120.10
9	41.981875	-84.673629	1101.83	6.00	1107.83
10	41.981588	-84.673200	1100.47	6.00	1106.47
11	41.979833	-84.671011	1093.58	6.00	1099.58

**Name:** N Bunn Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000012	-84.690061	1088.52	6.00	1094.52
2	41.985404	-84.689932	1121.82	6.00	1127.82
3	41.973156	-84.689868	1161.37	6.00	1167.37
4	41.956132	-84.689889	1139.26	6.00	1145.26
5	41.948026	-84.689954	1140.62	6.00	1146.62

**Name:** Olde Street  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981436	-84.667386	1069.48	6.00	1075.48
2	41.979649	-84.665884	1068.73	6.00	1074.73
3	41.978325	-84.665841	1074.84	6.00	1080.84
4	41.977591	-84.666399	1077.45	6.00	1083.45
5	41.974800	-84.669574	1075.40	6.00	1081.40
6	41.973699	-84.670583	1073.92	6.00	1079.92
7	41.971976	-84.671505	1084.63	6.00	1090.63
8	41.969854	-84.671248	1091.59	6.00	1097.59
9	41.967126	-84.670604	1089.11	6.00	1095.11
10	41.963265	-84.669553	1112.18	6.00	1118.18
11	41.961111	-84.668630	1121.69	6.00	1127.69
12	41.957090	-84.665690	1119.18	6.00	1125.18

**Name:** Pine Dr  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.979915	-84.678553	1141.57	6.00	1147.57
2	41.979493	-84.679240	1138.15	6.00	1144.15
3	41.977076	-84.679251	1144.11	6.00	1150.11
4	41.976541	-84.678811	1142.07	6.00	1148.07

**Name:** Rainey Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.014437	-84.709545	1058.14	6.00	1064.14
2	41.999912	-84.709480	1103.34	6.00	1109.34
3	41.985479	-84.709416	1093.47	6.00	1099.47

**Name:** Sand Lake Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968772	-84.709415	1116.45	6.00	1122.45
2	41.956072	-84.709330	1136.41	6.00	1142.41

**Name:** Seneca  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981662	-84.673302	1100.66	6.00	1106.66
2	41.981183	-84.675072	1117.83	6.00	1123.83
3	41.980449	-84.675673	1128.01	6.00	1134.01

**Name:** W Chicago Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982786	-84.664363	1050.18	6.00	1056.18
2	41.977299	-84.677173	1141.86	6.00	1147.86
3	41.976071	-84.680134	1144.50	6.00	1150.50
4	41.974491	-84.685498	1156.34	6.00	1162.34
5	41.973183	-84.690047	1161.12	6.00	1167.12
6	41.970423	-84.700068	1123.07	6.00	1129.07
7	41.968190	-84.711827	1114.52	6.00	1120.52
8	41.966164	-84.721955	1115.01	6.00	1121.01
9	41.963020	-84.738027	1042.73	6.00	1048.73
10	41.962111	-84.742790	1092.27	6.00	1098.27

**Name:** Wise Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985561	-84.699581	1122.65	6.00	1128.65
2	41.970566	-84.699560	1122.83	6.00	1128.83
3	41.956255	-84.699560	1139.97	6.00	1145.97

## Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	41.978175	-84.679807	1141.09	6.00	1147.09
OP 2	41.975798	-84.679313	1144.60	6.00	1150.60
OP 3	41.975208	-84.681759	1153.05	6.00	1159.05
OP 4	41.976261	-84.681266	1145.06	6.00	1151.06
OP 5	41.974921	-84.682918	1152.21	6.00	1158.22
OP 6	41.974203	-84.687746	1163.33	6.00	1169.33
OP 7	41.974554	-84.690235	1162.54	6.00	1168.54
OP 8	41.976085	-84.690321	1143.82	6.00	1149.82
OP 9	41.977680	-84.690257	1137.12	6.00	1143.12
OP 10	41.973309	-84.690815	1157.87	6.00	1163.88
OP 11	41.980679	-84.690321	1139.57	6.00	1145.58
OP 12	41.984220	-84.685987	1124.66	6.00	1130.66
OP 13	41.985066	-84.699870	1121.90	6.00	1127.90
OP 14	41.970087	-84.699999	1124.74	6.00	1130.74
OP 15	41.963354	-84.700063	1132.45	6.00	1138.45
OP 16	41.958232	-84.700299	1138.00	6.00	1144.00
OP 17	41.954897	-84.697359	1135.26	6.00	1141.26
OP 18	41.962461	-84.689141	1165.78	6.00	1171.78
OP 19	41.968077	-84.685300	1156.35	6.00	1162.35
OP 20	41.967758	-84.677532	1136.06	6.00	1142.06
OP 21	41.965987	-84.670880	1095.40	6.00	1101.40
OP 22	41.990654	-84.690499	1134.11	6.00	1140.11
OP 23	41.994266	-84.690488	1125.73	6.00	1131.74
OP 24	41.999569	-84.693739	1125.58	6.00	1131.58
OP 25	42.000326	-84.697473	1103.37	6.00	1109.37
OP 26	42.000789	-84.695348	1115.64	6.00	1121.64
OP 27	41.999577	-84.706420	1121.12	6.00	1127.12
OP 28	41.997926	-84.709028	1092.76	6.00	1098.76
OP 29	41.985758	-84.708373	1093.45	6.00	1099.45
OP 30	41.984554	-84.704897	1101.04	6.00	1107.04
OP 31	41.985798	-84.705337	1102.99	6.00	1108.99
OP 32	41.981842	-84.699930	1117.21	6.00	1123.21
OP 33	41.979800	-84.700337	1138.94	6.00	1144.94
OP 34	41.965833	-84.720100	1115.44	6.00	1121.44
OP 35	41.964661	-84.725464	1118.03	6.00	1124.03
OP 36	41.962355	-84.729133	1079.68	6.00	1085.68
OP 37	41.970883	-84.728157	1118.47	6.00	1124.47
OP 38	41.986406	-84.688731	1131.28	6.00	1137.28
OP 39	41.998524	-84.698792	1093.02	6.00	1099.02
OP 40	41.984459	-84.680423	1107.73	6.00	1113.73

## Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV1	SA tracking	SA tracking	0	0	1,470,000.0	
PV10	SA tracking	SA tracking	0	0	1,533,000.0	
PV11	SA tracking	SA tracking	0	0	1,438,000.0	
PV12	SA tracking	SA tracking	0	0	1,511,000.0	
PV13	SA tracking	SA tracking	0	0	1,507,000.0	
PV14	SA tracking	SA tracking	0	0	1,573,000.0	
PV2	SA tracking	SA tracking	0	0	1,501,000.0	
PV3	SA tracking	SA tracking	0	0	1,474,000.0	
PV4	SA tracking	SA tracking	241,367	74,794	1,608,000.0	-
PV5	SA tracking	SA tracking	0	0	1,443,000.0	
PV6	SA tracking	SA tracking	0	0	1,448,000.0	
PV7	SA tracking	SA tracking	0	0	1,466,000.0	
PV8	SA tracking	SA tracking	0	0	1,547,000.0	
PV9	SA tracking	SA tracking	0	0	1,524,000.0	

### Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pv4 (green)	17330	17389	21772	14499	10563	11402	11157	10491	21762	20069	17240	16722
pv4 (yellow)	0	0	0	9168	16174	15585	16186	14872	260	0	0	0

## PV & Receptor Analysis Results

Results for each PV array and receptor

**PV1** no glare found

Predicted energy output: 1,470,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

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**PV10** no glare found

Predicted energy output: 1,533,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

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**PV11** no glare found

Predicted energy output: 1,438,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

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**PV12** no glare found

Predicted energy output: 1,511,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

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**PV13** no glare found

Predicted energy output: 1,507,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

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**PV14** no glare found

Predicted energy output: 1,573,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV2** no glare found

Predicted energy output: 1,501,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV3** no glare found

Predicted energy output: 1,474,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV4** potential temporary after-image

Predicted energy output: 1,608,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0

OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	107666	6019
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	133701	68775
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

**PV4 - OP Receptor (OP 1)**

*No glare found*

**PV4 - OP Receptor (OP 2)**

*No glare found*

**PV4 - OP Receptor (OP 3)**

*No glare found*

**PV4 - OP Receptor (OP 4)**

*No glare found*

**PV4 - OP Receptor (OP 5)**

*No glare found*

**PV4 - OP Receptor (OP 6)**

*No glare found*

**PV4 - OP Receptor (OP 7)**

*No glare found*

**PV4 - OP Receptor (OP 8)**

*No glare found*

**PV4 - OP Receptor (OP 9)**

*No glare found*

**PV4 - OP Receptor (OP 10)**

*No glare found*

**PV4 - OP Receptor (OP 11)**

*No glare found*

**PV4 - OP Receptor (OP 12)**

*No glare found*

**PV4 - OP Receptor (OP 13)**

*No glare found*

**PV4 - OP Receptor (OP 14)**

*No glare found*

**PV4 - OP Receptor (OP 15)**

*No glare found*

**PV4 - OP Receptor (OP 16)**

*No glare found*

**PV4 - OP Receptor (OP 17)**

*No glare found*

**PV4 - OP Receptor (OP 18)**

*No glare found*

**PV4 - OP Receptor (OP 19)**

*No glare found*

**PV4 - OP Receptor (OP 20)**

*No glare found*

**PV4 - OP Receptor (OP 21)**

*No glare found*

**PV4 - OP Receptor (OP 22)**

*No glare found*

**PV4 - OP Receptor (OP 23)**

*No glare found*

**PV4 - OP Receptor (OP 24)**

*No glare found*

**PV4 - OP Receptor (OP 25)**

*No glare found*

**PV4 - OP Receptor (OP 26)**

*No glare found*

**PV4 - OP Receptor (OP 27)**

*No glare found*

**PV4 - OP Receptor (OP 28)**

*No glare found*

**PV4 - OP Receptor (OP 29)**

*No glare found*

**PV4 - OP Receptor (OP 30)**

*No glare found*

**PV4 - OP Receptor (OP 31)**

*No glare found*

**PV4 - OP Receptor (OP 32)**

*No glare found*

**PV4 - OP Receptor (OP 33)**

*No glare found*

**PV4 - OP Receptor (OP 34)**

*No glare found*

**PV4 - OP Receptor (OP 35)**

*No glare found*

**PV4 - OP Receptor (OP 36)**

*No glare found*

**PV4 - OP Receptor (OP 37)**

*No glare found*

**PV4 - OP Receptor (OP 38)**

*No glare found*

**PV4 - OP Receptor (OP 39)**

*No glare found*

**PV4 - OP Receptor (OP 40)**

*No glare found*

**PV4 - Route Receptor (Baker St)**

*No glare found*

**PV4 - Route Receptor (Baxter and Highland)**

*No glare found*

**PV4 - Route Receptor (Bean Rd)**

*No glare found*

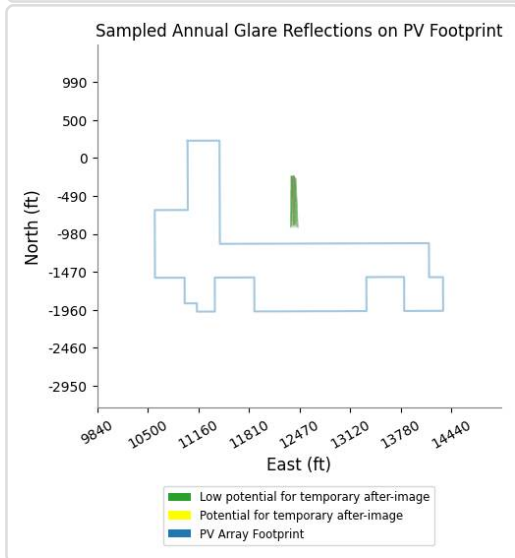
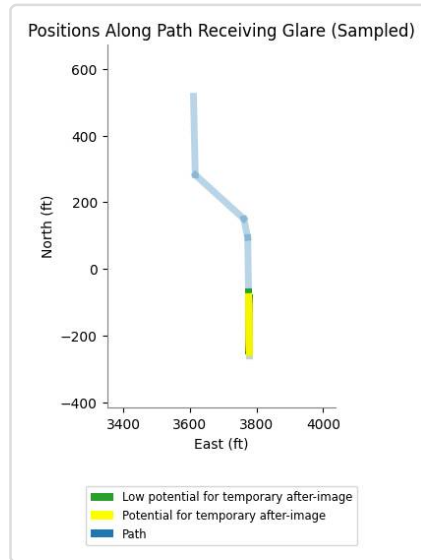
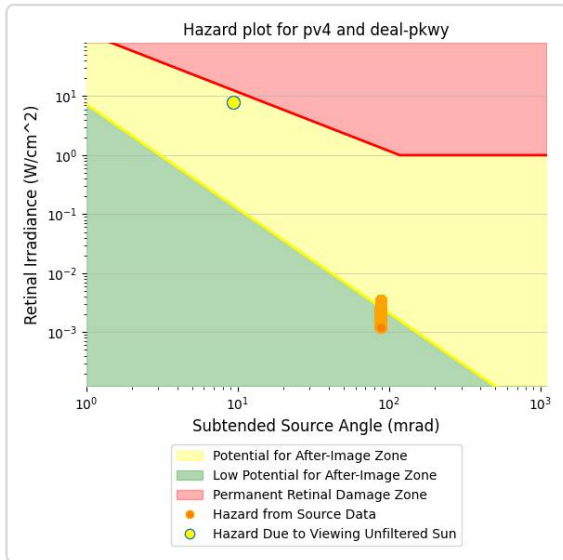
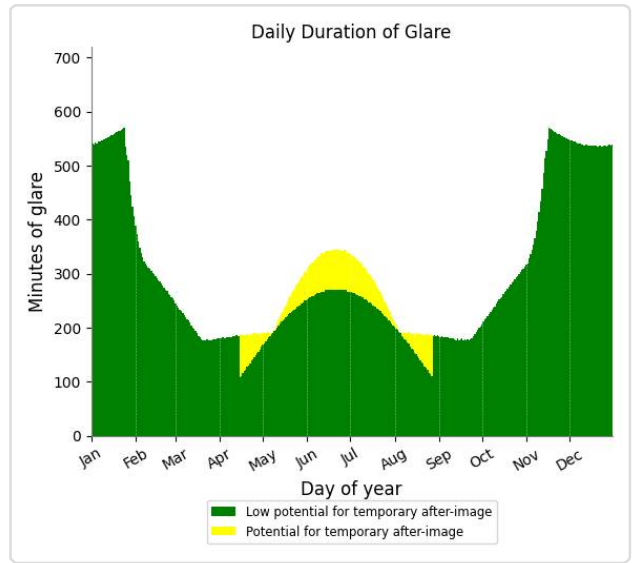
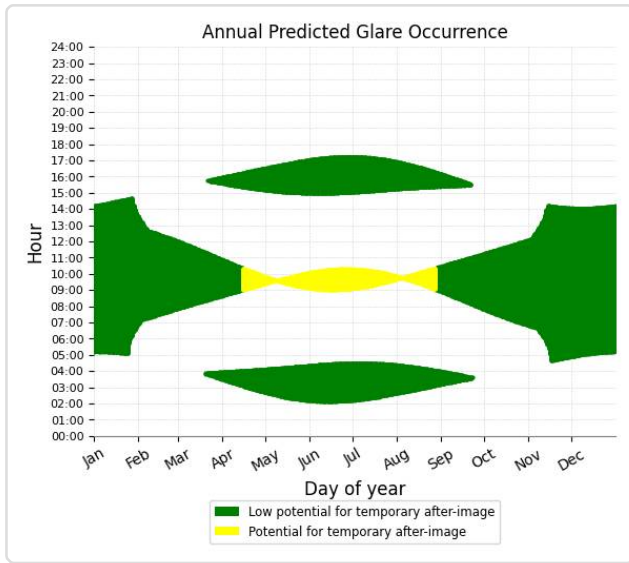
**PV4 - Route Receptor (Cronk Rd)**

*No glare found*

### PV4 - Route Receptor (Deal Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 107,666 minutes of "green" glare with low potential to cause temporary after-image.
- 6,019 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Driveway)

No glare found

### PV4 - Route Receptor (Genesse Rd)

No glare found

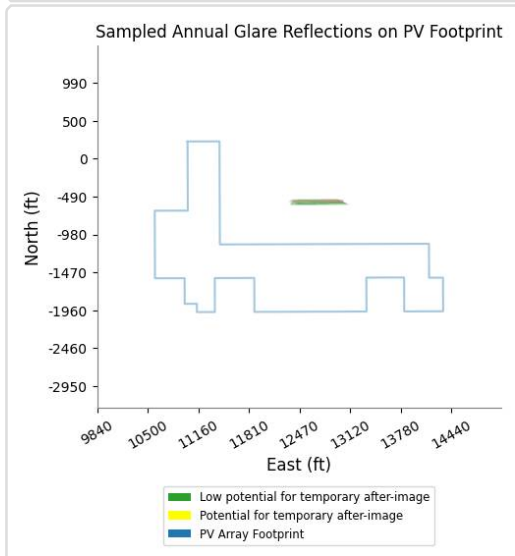
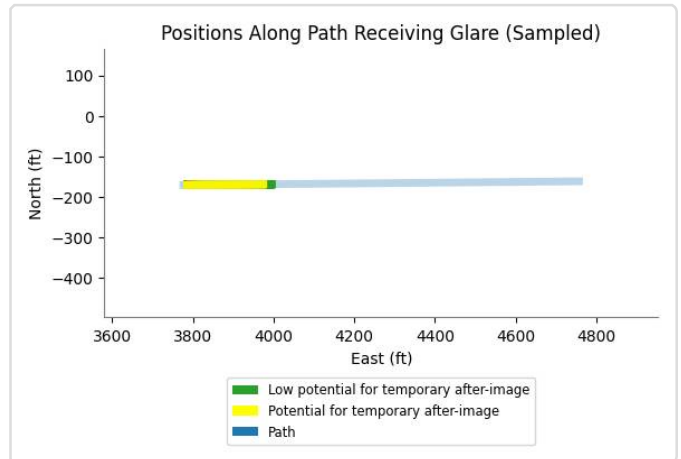
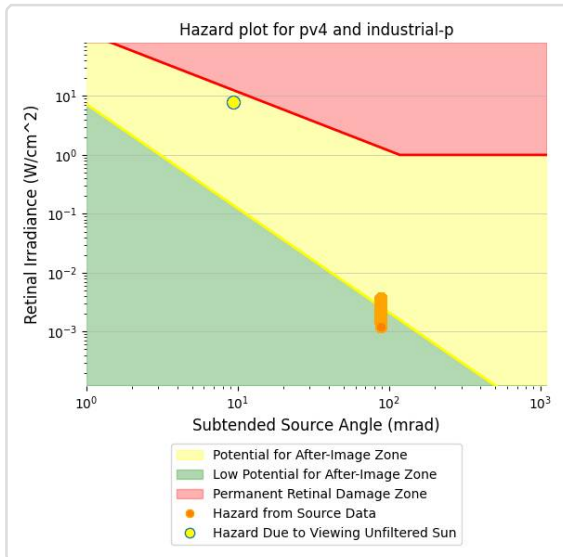
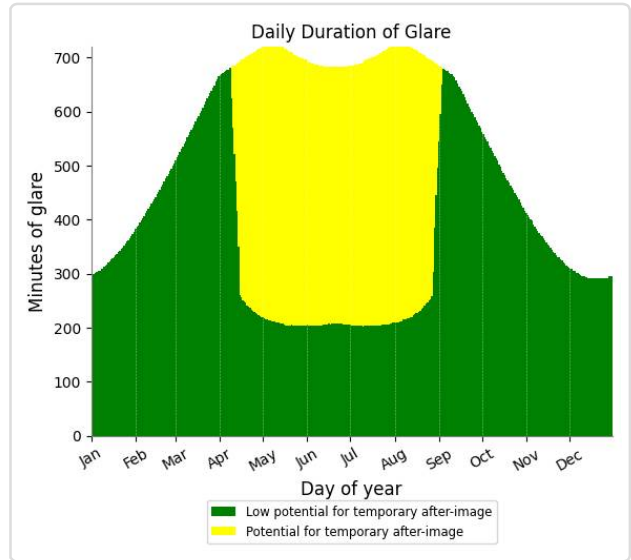
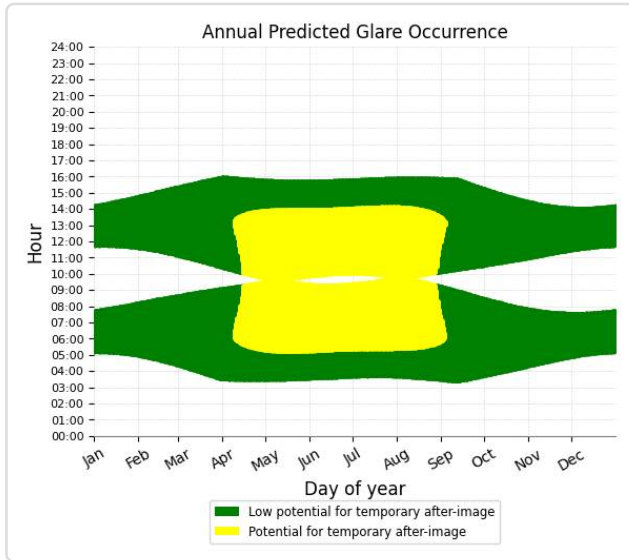
### PV4 - Route Receptor (Glasgow Rd)

No glare found

### PV4 - Route Receptor (Industrial Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 133,701 minutes of "green" glare with low potential to cause temporary after-image.
- 68,775 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Jonesville Rd)

No glare found

**PV4 - Route Receptor (Murphy St)**

*No glare found*

**PV4 - Route Receptor (N Bunn Rd)**

*No glare found*

**PV4 - Route Receptor (Olde Street)**

*No glare found*

**PV4 - Route Receptor (Pine Dr)**

*No glare found*

**PV4 - Route Receptor (Rainey Rd)**

*No glare found*

**PV4 - Route Receptor (Sand Lake Rd)**

*No glare found*

**PV4 - Route Receptor (Seneca)**

*No glare found*

**PV4 - Route Receptor (W Chicago Rd)**

*No glare found*

**PV4 - Route Receptor (Wise Rd)**

*No glare found*

**PV5** no glare found

Predicted energy output: 1,443,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV6** no glare found

Predicted energy output: 1,448,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV7** no glare found

Predicted energy output: 1,466,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV8** no glare found

Predicted energy output: 1,547,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV9** no glare found

Predicted energy output: 1,524,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

## Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- 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.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.



# Ranger Power

## Ranger - Heartwood - 20ft at OPs - With Coating

**Created** April 29, 2022  
**Updated** April 29, 2022  
**Time-step** 1 minute  
**Timezone offset** UTC-8  
**Site ID** 68426.12083

**Project type** Advanced  
**Project status:** active  
**Category** 10 MW to 100 MW

### Misc. Analysis Settings

**DNI: varies (1,000.0 W/m<sup>2</sup> peak)**  
**Ocular transmission coefficient: 0.5**  
**Pupil diameter: 0.002 m**  
**Eye focal length: 0.017 m**  
**Sun subtended angle: 9.3 mrad**

#### Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

### Summary of Results Glare with low potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV1	SA tracking	SA tracking	0	0	1,470,000.0
PV10	SA tracking	SA tracking	0	0	1,533,000.0
PV11	SA tracking	SA tracking	0	0	1,438,000.0
PV12	SA tracking	SA tracking	0	0	1,511,000.0
PV13	SA tracking	SA tracking	0	0	1,507,000.0
PV14	SA tracking	SA tracking	0	0	1,573,000.0
PV2	SA tracking	SA tracking	0	0	1,501,000.0
PV3	SA tracking	SA tracking	0	0	1,474,000.0
PV4	SA tracking	SA tracking	319,734	0	1,608,000.0
PV5	SA tracking	SA tracking	0	0	1,443,000.0
PV6	SA tracking	SA tracking	0	0	1,448,000.0
PV7	SA tracking	SA tracking	0	0	1,466,000.0
PV8	SA tracking	SA tracking	0	0	1,547,000.0
PV9	SA tracking	SA tracking	0	0	1,524,000.0

## Component Data

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### PV Array(s)

Total PV footprint area: 1,015.2 acres

**Name:** PV1  
**Footprint area:** 35.2 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.969931	-84.728342	1119.05	5.15	1124.20
2	41.969933	-84.727760	1115.05	5.15	1120.20
3	41.970229	-84.727762	1118.05	5.15	1123.20
4	41.970237	-84.725157	1114.05	5.15	1119.20
5	41.967597	-84.725150	1119.05	5.15	1124.20
6	41.967604	-84.722767	1115.05	5.15	1120.20
7	41.968156	-84.722770	1111.05	5.15	1116.20
8	41.968166	-84.719584	1112.05	5.15	1117.20
9	41.966968	-84.719577	1115.05	5.15	1120.20
10	41.966958	-84.722819	1117.05	5.15	1122.20
11	41.966406	-84.722816	1116.05	5.15	1121.20
12	41.966396	-84.726002	1124.05	5.15	1129.21
13	41.967770	-84.726010	1126.05	5.15	1131.21
14	41.967763	-84.728329	1112.05	5.15	1117.20

**Name:** PV10  
**Footprint area:** 84.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.992533	-84.707345	1088.05	5.15	1093.20
2	41.992545	-84.703326	1111.05	5.15	1116.20
3	41.992249	-84.703325	1114.05	5.15	1119.20
4	41.992252	-84.702576	1110.05	5.15	1115.20
5	41.991281	-84.702571	1120.05	5.15	1125.20
6	41.991288	-84.700326	1105.05	5.15	1110.20
7	41.990992	-84.700324	1109.05	5.15	1114.20
8	41.990993	-84.699992	1108.05	5.15	1113.20
9	41.988882	-84.699981	1128.06	5.15	1133.21
10	41.988880	-84.700729	1121.05	5.15	1126.20
11	41.985788	-84.700713	1111.05	5.15	1116.20
12	41.985778	-84.704232	1103.05	5.15	1108.20
13	41.986975	-84.704238	1097.05	5.15	1102.20
14	41.986977	-84.703656	1095.05	5.15	1100.20
15	41.987662	-84.703660	1103.05	5.15	1108.20
16	41.987654	-84.706570	1091.05	5.15	1096.20
17	41.988863	-84.706577	1097.05	5.15	1102.20
18	41.988859	-84.707741	1088.05	5.15	1093.20
19	41.991266	-84.707754	1088.05	5.15	1093.20
20	41.991267	-84.707338	1096.05	5.15	1101.20

**Name:** PV11  
**Footprint area:** 68.6 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.993804	-84.689611	1114.05	5.15	1119.20
2	41.993813	-84.686590	1086.05	5.15	1091.20
3	41.992546	-84.686584	1104.05	5.15	1109.20
4	41.992553	-84.684089	1071.05	5.15	1076.20
5	41.991345	-84.684083	1086.05	5.15	1091.20
6	41.991347	-84.683335	1074.05	5.15	1079.20
7	41.990080	-84.683328	1095.05	5.15	1100.20
8	41.990083	-84.682497	1079.05	5.15	1084.20
9	41.988885	-84.682491	1090.05	5.15	1095.20
10	41.988877	-84.685318	1114.05	5.15	1119.20
11	41.987668	-84.685312	1115.05	5.15	1120.20
12	41.987659	-84.688332	1116.05	5.15	1121.20
13	41.988868	-84.688339	1111.05	5.15	1116.20
14	41.988865	-84.689586	1129.06	5.15	1134.21

**Name:** PV12  
**Footprint area:** 135.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999738	-84.698112	1095.05	5.15	1100.20
2	41.999748	-84.694508	1121.05	5.15	1126.20
3	41.998482	-84.694502	1118.05	5.15	1123.20
4	41.998484	-84.693670	1125.05	5.15	1130.21
5	41.998188	-84.693669	1126.05	5.15	1131.21
6	41.998189	-84.693280	1130.06	5.15	1135.21
7	41.998485	-84.693282	1130.06	5.15	1135.21
8	41.998488	-84.692284	1136.06	5.15	1141.21
9	41.999755	-84.692290	1130.06	5.15	1135.21
10	41.999760	-84.690267	1102.05	5.15	1107.20
11	41.995175	-84.690243	1104.05	5.15	1109.20
12	41.995171	-84.691491	1125.05	5.15	1130.21
13	41.993905	-84.691484	1137.06	5.15	1142.21
14	41.993898	-84.693646	1133.06	5.15	1138.21
15	41.993602	-84.693645	1129.06	5.15	1134.21
16	41.993602	-84.693811	1129.06	5.15	1134.21
17	41.989918	-84.693792	1109.05	5.15	1114.20
18	41.989916	-84.694318	1110.05	5.15	1115.20
19	41.990212	-84.694320	1109.05	5.15	1114.20
20	41.990210	-84.695068	1108.05	5.15	1113.20
21	41.991180	-84.695073	1102.05	5.15	1107.20
22	41.991179	-84.695738	1103.05	5.15	1108.20
23	41.991475	-84.695740	1100.05	5.15	1105.20
24	41.991473	-84.696128	1101.05	5.15	1106.20
25	41.991177	-84.696127	1105.05	5.15	1110.20
26	41.991173	-84.697651	1104.05	5.15	1109.20
27	41.991469	-84.697652	1103.05	5.15	1108.20
28	41.991467	-84.698401	1104.05	5.15	1109.20
29	41.992380	-84.698406	1105.05	5.15	1110.20
30	41.992377	-84.699403	1101.05	5.15	1106.20
31	41.997258	-84.699429	1093.05	5.15	1098.20
32	41.997265	-84.697267	1098.05	5.15	1103.20
33	41.998542	-84.697274	1093.05	5.15	1098.20
34	41.998540	-84.698105	1090.05	5.15	1095.20

**Name:** PV13  
**Footprint area:** 27.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



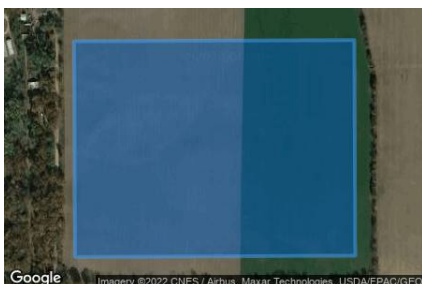
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.004972	-84.699577	1110.05	5.15	1115.20
2	42.004978	-84.697636	1108.05	5.15	1113.20
3	42.003712	-84.697630	1115.05	5.15	1120.20
4	42.003712	-84.697547	1115.05	5.15	1120.20
5	42.003477	-84.697545	1114.05	5.15	1119.20
6	42.003483	-84.695632	1106.05	5.15	1111.20
7	42.002285	-84.695626	1118.05	5.15	1123.20
8	42.002284	-84.695959	1115.05	5.15	1120.20
9	42.001075	-84.695952	1113.05	5.15	1118.20
10	42.001073	-84.696645	1108.05	5.15	1113.20
11	42.001369	-84.696647	1108.05	5.15	1113.20
12	42.001365	-84.698033	1103.05	5.15	1108.20
13	42.001304	-84.698033	1103.05	5.15	1108.20
14	42.001302	-84.698532	1099.05	5.15	1104.20
15	42.000389	-84.698527	1097.05	5.15	1102.20
16	42.000386	-84.699552	1095.05	5.15	1100.20

**Name:** PV14  
**Footprint area:** 36.5 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999430	-84.708031	1108.05	5.15	1113.20
2	41.999433	-84.707172	1114.05	5.15	1119.20
3	41.998224	-84.707166	1096.05	5.15	1101.20
4	41.998228	-84.705696	1108.05	5.15	1113.20
5	41.999547	-84.705703	1116.05	5.15	1121.20
6	41.999561	-84.700769	1095.05	5.15	1100.20
7	41.997045	-84.700756	1096.05	5.15	1101.20
8	41.997023	-84.708018	1096.05	5.15	1101.20

**Name:** PV2  
**Footprint area:** 53.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.963734	-84.728441	1091.05	5.15	1096.20
2	41.963754	-84.722013	1128.06	5.15	1133.21
3	41.960081	-84.721993	1124.05	5.15	1129.21
4	41.960061	-84.728420	1082.05	5.15	1087.20

**Name:** PV3  
**Footprint area:** 104.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



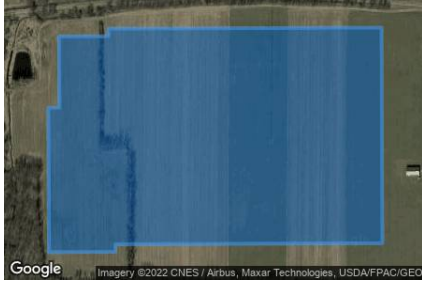
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970361	-84.699025	1124.05	5.15	1129.21
2	41.970373	-84.695008	1131.06	5.15	1136.21
3	41.959416	-84.694951	1138.06	5.15	1143.21
4	41.959409	-84.697361	1145.06	5.15	1150.21
5	41.956838	-84.697348	1130.06	5.15	1135.21
6	41.956833	-84.699037	1143.06	5.15	1148.21
7	41.961405	-84.699061	1142.06	5.15	1147.21
8	41.961409	-84.697897	1143.06	5.15	1148.21
9	41.963374	-84.697908	1138.06	5.15	1143.21
10	41.963371	-84.699155	1135.06	5.15	1140.21
11	41.964272	-84.699159	1128.06	5.15	1133.21
12	41.964274	-84.698744	1134.06	5.15	1139.21
13	41.965493	-84.698750	1127.05	5.15	1132.21
14	41.965492	-84.699166	1124.05	5.15	1129.21
15	41.969151	-84.699185	1125.05	5.15	1130.21
16	41.969152	-84.699019	1125.05	5.15	1130.21

**Name:** PV4  
**Footprint area:** 72.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970548	-84.687842	1150.06	5.15	1155.21
2	41.970553	-84.686319	1158.06	5.15	1163.21
3	41.966882	-84.686300	1167.06	5.15	1172.21
4	41.966910	-84.676325	1104.05	5.15	1109.20
5	41.965701	-84.676319	1107.05	5.15	1112.20
6	41.965703	-84.675654	1104.05	5.15	1109.20
7	41.964505	-84.675648	1105.05	5.15	1110.20
8	41.964500	-84.677504	1110.05	5.15	1115.20
9	41.965709	-84.677510	1109.05	5.15	1114.20
10	41.965704	-84.679312	1127.05	5.15	1132.21
11	41.964495	-84.679306	1110.05	5.15	1115.20
12	41.964480	-84.684652	1160.06	5.15	1165.21
13	41.965689	-84.684659	1165.06	5.15	1170.21
14	41.965684	-84.686543	1173.06	5.15	1178.21
15	41.964475	-84.686537	1160.06	5.15	1165.21
16	41.964473	-84.687395	1169.06	5.15	1174.21
17	41.964769	-84.687397	1171.06	5.15	1176.21
18	41.964767	-84.687979	1162.06	5.15	1167.21
19	41.965680	-84.687983	1171.06	5.15	1176.21
20	41.965676	-84.689396	1166.06	5.15	1171.21
21	41.968082	-84.689409	1148.06	5.15	1153.21
22	41.968087	-84.687829	1154.06	5.15	1159.21

**Name:** PV5  
**Footprint area:** 62.8 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982233	-84.708939	1094.05	5.15	1099.20
2	41.982236	-84.707804	1097.05	5.15	1102.20
3	41.982365	-84.707805	1097.05	5.15	1102.20
4	41.982384	-84.701542	1117.05	5.15	1122.20
5	41.978724	-84.701522	1135.06	5.15	1140.21
6	41.978706	-84.707646	1101.05	5.15	1106.20
7	41.978578	-84.707645	1102.05	5.15	1107.20
8	41.978573	-84.709169	1101.05	5.15	1106.20
9	41.981023	-84.709182	1097.05	5.15	1102.20
10	41.981024	-84.708933	1096.05	5.15	1101.20

**Name:** PV6  
**Footprint area:** 138.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982288	-84.699191	1116.05	5.15	1121.20
2	41.982309	-84.691930	1120.05	5.15	1125.20
3	41.979552	-84.691916	1124.05	5.15	1129.21
4	41.979557	-84.690170	1131.06	5.15	1136.21
5	41.978359	-84.690164	1132.06	5.15	1137.21
6	41.978352	-84.692741	1136.06	5.15	1141.21
7	41.974906	-84.692723	1143.06	5.15	1148.21
8	41.974898	-84.695384	1136.06	5.15	1141.21
9	41.973632	-84.695377	1134.06	5.15	1139.21
10	41.973628	-84.696541	1134.06	5.15	1139.21
11	41.972362	-84.696534	1134.06	5.15	1139.21
12	41.972354	-84.699138	1133.06	5.15	1138.21

**Name:** PV7  
**Footprint area:** 149.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984492	-84.689081	1125.05	5.15	1130.21
2	41.984498	-84.687141	1122.05	5.15	1127.21
3	41.983289	-84.687135	1128.06	5.15	1133.21
4	41.983308	-84.680317	1104.05	5.15	1109.20
5	41.980844	-84.680305	1122.05	5.15	1127.21
6	41.980841	-84.681220	1121.05	5.15	1126.20
7	41.978424	-84.681207	1141.06	5.15	1146.21
8	41.978420	-84.682400	1133.06	5.15	1138.21
9	41.976232	-84.682389	1143.06	5.15	1148.21
10	41.976229	-84.683470	1150.06	5.15	1155.21
11	41.975316	-84.683465	1153.06	5.15	1158.21
12	41.975313	-84.684546	1157.06	5.15	1162.21
13	41.975017	-84.684545	1157.06	5.15	1162.21
14	41.975004	-84.689310	1159.06	5.15	1164.21
15	41.982065	-84.689347	1151.06	5.15	1156.21
16	41.982066	-84.689068	1148.06	5.15	1153.21

**Name:** PV8  
**Footprint area:** 36.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984894	-84.708921	1093.05	5.15	1098.20
2	41.984896	-84.708238	1094.05	5.15	1099.20
3	41.985192	-84.708240	1094.05	5.15	1099.20
4	41.985198	-84.706217	1100.05	5.15	1105.20
5	41.983989	-84.706211	1100.05	5.15	1105.20
6	41.983994	-84.704641	1100.05	5.15	1105.20
7	41.985203	-84.704647	1102.05	5.15	1107.20
8	41.985215	-84.700611	1115.05	5.15	1120.20
9	41.984611	-84.700608	1114.05	5.15	1119.20
10	41.984611	-84.699842	1119.05	5.15	1124.20
11	41.983416	-84.699836	1110.05	5.15	1115.20
12	41.983413	-84.700602	1108.05	5.15	1113.20
13	41.983104	-84.700600	1105.05	5.15	1110.20
14	41.983079	-84.708911	1094.05	5.15	1099.20

**Name:** PV9  
**Footprint area:** 8.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985206	-84.699067	1128.06	5.15	1133.21
2	41.985210	-84.697460	1143.06	5.15	1148.21
3	41.984002	-84.697453	1129.06	5.15	1134.21
4	41.984003	-84.696871	1132.06	5.15	1137.21
5	41.983101	-84.696867	1115.05	5.15	1120.20
6	41.983095	-84.699056	1109.05	5.15	1114.20

Route Receptor(s)

Name: Baker St  
 Route type Two-way  
 View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982595	-84.675276	1110.87	10.00	1120.87
2	41.981678	-84.676059	1136.25	10.00	1146.25

Name: Baxter and Highland  
 Route type Two-way  
 View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.983885	-84.678320	1116.05	10.00	1126.05
2	41.982952	-84.678910	1121.87	10.00	1131.87
3	41.982816	-84.678857	1122.26	10.00	1132.26
4	41.981636	-84.676024	1136.25	10.00	1146.25
5	41.981452	-84.676014	1137.22	10.00	1147.22
6	41.981117	-84.676604	1141.59	10.00	1151.59
7	41.980862	-84.676561	1138.96	10.00	1148.96
8	41.980160	-84.674683	1136.11	10.00	1146.11
9	41.979642	-84.673782	1123.98	10.00	1133.98
10	41.977913	-84.672905	1109.82	10.00	1119.82

Name: Bean Rd  
 Route type Two-way  
 View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.955879	-84.729038	1044.16	10.00	1054.17
2	41.956246	-84.709336	1134.38	10.00	1144.38
3	41.956262	-84.689831	1140.20	10.00	1150.20
4	41.956390	-84.670587	1096.54	10.00	1106.54

Name: Cronk Rd  
 Route type Two-way  
 View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.977130	-84.728899	1078.75	10.00	1088.75
2	41.964798	-84.728791	1090.12	10.00	1100.13
3	41.955799	-84.728834	1044.93	10.00	1054.93
4	41.952416	-84.728856	1114.49	10.00	1124.49

**Name:** Deal Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.974602	-84.684784	1154.83	10.00	1164.83
2	41.972480	-84.684720	1160.33	10.00	1170.33
3	41.971292	-84.682960	1153.32	10.00	1163.32
4	41.970789	-84.682821	1151.99	10.00	1161.99
5	41.967590	-84.682756	1163.50	10.00	1173.50

**Name:** Driveway  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.995767	-84.685119	1075.68	10.00	1085.68
2	41.995536	-84.684958	1069.15	10.00	1079.15
3	41.995026	-84.684808	1072.43	10.00	1082.43
4	41.993710	-84.684217	1076.47	10.00	1086.47
5	41.993272	-84.683692	1076.71	10.00	1086.71
6	41.992977	-84.683069	1082.67	10.00	1092.67
7	41.992674	-84.682512	1083.81	10.00	1093.81
8	41.992602	-84.681932	1087.25	10.00	1097.25
9	41.992458	-84.681868	1083.80	10.00	1093.80
10	41.990449	-84.681879	1077.65	10.00	1087.65
11	41.988368	-84.681825	1086.81	10.00	1096.81
12	41.987785	-84.681739	1093.08	10.00	1103.08
13	41.986932	-84.681921	1095.86	10.00	1105.86
14	41.986485	-84.681836	1096.56	10.00	1106.56
15	41.985489	-84.681921	1101.26	10.00	1111.26

**Name:** Genesee Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000030	-84.728922	1067.79	10.00	1077.79
2	41.999982	-84.709482	1103.57	10.00	1113.57
3	42.000014	-84.694728	1118.53	10.00	1128.53
4	42.000022	-84.691563	1117.63	10.00	1127.63
5	41.999982	-84.690007	1087.54	10.00	1097.54
6	41.999926	-84.689600	1076.43	10.00	1086.43
7	41.999671	-84.688430	1058.92	10.00	1068.92
8	41.999615	-84.687958	1054.68	10.00	1064.69
9	41.999599	-84.687336	1050.28	10.00	1060.28
10	41.999767	-84.685684	1044.03	10.00	1054.03
11	42.000006	-84.684278	1057.00	10.00	1067.00
12	41.999998	-84.684107	1059.16	10.00	1069.16
13	41.999464	-84.683034	1064.98	10.00	1074.98
14	41.995070	-84.669708	1092.21	10.00	1102.21

**Name:** Glasgow Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985527	-84.719331	1087.94	10.00	1097.94
2	41.977733	-84.719052	1103.71	10.00	1113.71
3	41.973266	-84.719030	1111.41	10.00	1121.41
4	41.966661	-84.719073	1113.17	10.00	1123.17

**Name:** Industrial Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968404	-84.682780	1160.58	10.00	1170.58
2	41.968492	-84.670957	1089.74	10.00	1099.74

**Name:** Jonesville Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985481	-84.728891	1100.67	10.00	1110.67
2	41.985513	-84.709429	1093.35	10.00	1103.35
3	41.985513	-84.699494	1123.99	10.00	1133.99
4	41.985481	-84.689924	1122.16	10.00	1132.16
5	41.985481	-84.681878	1101.02	10.00	1111.02
6	41.985497	-84.673295	1093.95	10.00	1103.95

**Name:** Murphy St  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985519	-84.686428	1115.99	10.00	1125.99
2	41.985288	-84.686342	1116.02	10.00	1126.02
3	41.985160	-84.686139	1117.25	10.00	1127.25
4	41.985176	-84.685731	1116.85	10.00	1126.85
5	41.985145	-84.683542	1114.66	10.00	1124.66
6	41.984841	-84.680860	1109.42	10.00	1119.42
7	41.984578	-84.679894	1100.91	10.00	1110.91
8	41.982760	-84.675614	1114.10	10.00	1124.10
9	41.981875	-84.673629	1101.83	10.00	1111.83
10	41.981588	-84.673200	1100.47	10.00	1110.47
11	41.979833	-84.671011	1093.58	10.00	1103.58

**Name:** N Bunn Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000012	-84.690061	1088.52	10.00	1098.52
2	41.985404	-84.689932	1121.82	10.00	1131.82
3	41.973156	-84.689868	1161.37	10.00	1171.37
4	41.956132	-84.689889	1139.26	10.00	1149.26
5	41.948026	-84.689954	1140.62	10.00	1150.62

**Name:** Olde Street  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981436	-84.667386	1069.48	10.00	1079.48
2	41.979649	-84.665884	1068.73	10.00	1078.73
3	41.978325	-84.665841	1074.84	10.00	1084.84
4	41.977591	-84.666399	1077.45	10.00	1087.45
5	41.974800	-84.669574	1075.40	10.00	1085.40
6	41.973699	-84.670583	1073.92	10.00	1083.92
7	41.971976	-84.671505	1084.63	10.00	1094.63
8	41.969854	-84.671248	1091.59	10.00	1101.59
9	41.967126	-84.670604	1089.11	10.00	1099.11
10	41.963265	-84.669553	1112.18	10.00	1122.18
11	41.961111	-84.668630	1121.69	10.00	1131.69
12	41.957090	-84.665690	1119.18	10.00	1129.18

**Name:** Pine Dr  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.979915	-84.678553	1141.57	10.00	1151.57
2	41.979493	-84.679240	1138.15	10.00	1148.15
3	41.977076	-84.679251	1144.11	10.00	1154.11
4	41.976541	-84.678811	1142.07	10.00	1152.07

**Name:** Rainey Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.014437	-84.709545	1058.14	10.00	1068.14
2	41.999912	-84.709480	1103.34	10.00	1113.34
3	41.985479	-84.709416	1093.47	10.00	1103.47

**Name:** Sand Lake Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968772	-84.709415	1116.45	10.00	1126.45
2	41.956072	-84.709330	1136.41	10.00	1146.41

**Name:** Seneca  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981662	-84.673302	1100.66	10.00	1110.66
2	41.981183	-84.675072	1117.83	10.00	1127.83
3	41.980449	-84.675673	1128.01	10.00	1138.01

**Name:** W Chicago Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982786	-84.664363	1050.18	10.00	1060.18
2	41.977299	-84.677173	1141.86	10.00	1151.86
3	41.976071	-84.680134	1144.50	10.00	1154.50
4	41.974491	-84.685498	1156.34	10.00	1166.34
5	41.973183	-84.690047	1161.12	10.00	1171.12
6	41.970423	-84.700068	1123.07	10.00	1133.07
7	41.968190	-84.711827	1114.52	10.00	1124.52
8	41.966164	-84.721955	1115.01	10.00	1125.01
9	41.963020	-84.738027	1042.73	10.00	1052.73
10	41.962111	-84.742790	1092.27	10.00	1102.27

**Name:** Wise Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985561	-84.699581	1122.65	10.00	1132.65
2	41.970566	-84.699560	1122.83	10.00	1132.83
3	41.956255	-84.699560	1139.97	10.00	1149.97

## Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	41.978175	-84.679807	1141.09	20.00	1161.09
OP 2	41.975798	-84.679313	1144.60	20.00	1164.60
OP 3	41.975208	-84.681759	1153.05	20.00	1173.05
OP 4	41.976261	-84.681266	1145.06	20.00	1165.06
OP 5	41.974921	-84.682918	1152.21	20.00	1172.22
OP 6	41.974203	-84.687746	1163.33	20.00	1183.33
OP 7	41.974554	-84.690235	1162.54	20.00	1182.54
OP 8	41.976085	-84.690321	1143.82	20.00	1163.82
OP 9	41.977680	-84.690257	1137.12	20.00	1157.12
OP 10	41.973309	-84.690815	1157.87	20.00	1177.88
OP 11	41.980679	-84.690321	1139.57	20.00	1159.58
OP 12	41.984220	-84.685987	1124.66	20.00	1144.66
OP 13	41.985066	-84.699870	1121.90	20.00	1141.90
OP 14	41.970087	-84.699999	1124.74	20.00	1144.74
OP 15	41.963354	-84.700063	1132.45	20.00	1152.45
OP 16	41.958232	-84.700299	1138.00	20.00	1158.00
OP 17	41.954897	-84.697359	1135.26	20.00	1155.26
OP 18	41.962461	-84.689141	1165.78	20.00	1185.78
OP 19	41.968077	-84.685300	1156.35	20.00	1176.35
OP 20	41.967758	-84.677532	1136.06	20.00	1156.06
OP 21	41.965987	-84.670880	1095.40	20.00	1115.40
OP 22	41.990654	-84.690499	1134.11	20.00	1154.12
OP 23	41.994266	-84.690488	1125.73	20.00	1145.74
OP 24	41.999569	-84.693739	1125.58	20.00	1145.58
OP 25	42.000326	-84.697473	1103.37	20.00	1123.37
OP 26	42.000789	-84.695348	1115.64	20.00	1135.64
OP 27	41.999577	-84.706420	1121.12	20.00	1141.12
OP 28	41.997926	-84.709028	1092.76	20.00	1112.76
OP 29	41.985758	-84.708373	1093.45	20.00	1113.45
OP 30	41.984554	-84.704897	1101.04	20.00	1121.04
OP 31	41.985798	-84.705337	1102.99	20.00	1122.99
OP 32	41.981842	-84.699930	1117.21	20.00	1137.21
OP 33	41.979800	-84.700337	1138.94	20.00	1158.94
OP 34	41.965833	-84.720100	1115.44	20.00	1135.44
OP 35	41.964661	-84.725464	1118.03	20.00	1138.03
OP 36	41.962355	-84.729133	1079.68	20.00	1099.68
OP 37	41.970883	-84.728157	1118.47	20.00	1138.47
OP 38	41.986406	-84.688731	1131.28	20.00	1151.28
OP 39	41.998524	-84.698792	1093.02	20.00	1113.02
OP 40	41.984459	-84.680423	1107.73	20.00	1127.73

## Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV1	SA tracking	SA tracking	0	0	1,470,000.0	
PV10	SA tracking	SA tracking	0	0	1,533,000.0	
PV11	SA tracking	SA tracking	0	0	1,438,000.0	
PV12	SA tracking	SA tracking	0	0	1,511,000.0	
PV13	SA tracking	SA tracking	0	0	1,507,000.0	
PV14	SA tracking	SA tracking	0	0	1,573,000.0	
PV2	SA tracking	SA tracking	0	0	1,501,000.0	
PV3	SA tracking	SA tracking	0	0	1,474,000.0	
PV4	SA tracking	SA tracking	319,734	0	1,608,000.0	-
PV5	SA tracking	SA tracking	0	0	1,443,000.0	
PV6	SA tracking	SA tracking	0	0	1,448,000.0	
PV7	SA tracking	SA tracking	0	0	1,466,000.0	
PV8	SA tracking	SA tracking	0	0	1,547,000.0	
PV9	SA tracking	SA tracking	0	0	1,524,000.0	

### Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pv4 (green)	17330	17389	21772	23667	26737	26987	27343	25363	22022	20069	17240	16722
pv4 (yellow)	0	0	0	0	0	0	0	0	0	0	0	0

## PV & Receptor Analysis Results

Results for each PV array and receptor

**PV1** no glare found

Predicted energy output: 1,470,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV10** no glare found

Predicted energy output: 1,533,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV11** no glare found

Predicted energy output: 1,438,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV12** no glare found

Predicted energy output: 1,511,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV13** no glare found

Predicted energy output: 1,507,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV14** no glare found

Predicted energy output: 1,573,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV2** no glare found

Predicted energy output: 1,501,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV3** no glare found

Predicted energy output: 1,474,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV4** low potential for temporary after-image

Predicted energy output: 1,608,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0

OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	115792	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	203942	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

**PV4 - OP Receptor (OP 1)**

*No glare found*

**PV4 - OP Receptor (OP 2)**

*No glare found*

**PV4 - OP Receptor (OP 3)**

*No glare found*

**PV4 - OP Receptor (OP 4)**

*No glare found*

**PV4 - OP Receptor (OP 5)**

*No glare found*

**PV4 - OP Receptor (OP 6)**

*No glare found*

**PV4 - OP Receptor (OP 7)**

*No glare found*

**PV4 - OP Receptor (OP 8)**

*No glare found*

**PV4 - OP Receptor (OP 9)**

*No glare found*

**PV4 - OP Receptor (OP 10)**

*No glare found*

**PV4 - OP Receptor (OP 11)**

*No glare found*

**PV4 - OP Receptor (OP 12)**

*No glare found*

**PV4 - OP Receptor (OP 13)**

*No glare found*

**PV4 - OP Receptor (OP 14)**

*No glare found*

**PV4 - OP Receptor (OP 15)**

*No glare found*

**PV4 - OP Receptor (OP 16)**

*No glare found*

**PV4 - OP Receptor (OP 17)**

*No glare found*

**PV4 - OP Receptor (OP 18)**

*No glare found*

**PV4 - OP Receptor (OP 19)**

*No glare found*

**PV4 - OP Receptor (OP 20)**

*No glare found*

**PV4 - OP Receptor (OP 21)**

*No glare found*

**PV4 - OP Receptor (OP 22)**

*No glare found*

**PV4 - OP Receptor (OP 23)**

*No glare found*

**PV4 - OP Receptor (OP 24)**

*No glare found*

**PV4 - OP Receptor (OP 25)**

*No glare found*

**PV4 - OP Receptor (OP 26)**

*No glare found*

**PV4 - OP Receptor (OP 27)**

*No glare found*

**PV4 - OP Receptor (OP 28)**

*No glare found*

**PV4 - OP Receptor (OP 29)**

*No glare found*

**PV4 - OP Receptor (OP 30)**

*No glare found*

**PV4 - OP Receptor (OP 31)**

*No glare found*

**PV4 - OP Receptor (OP 32)**

*No glare found*

**PV4 - OP Receptor (OP 33)**

*No glare found*

**PV4 - OP Receptor (OP 34)**

*No glare found*

**PV4 - OP Receptor (OP 35)**

*No glare found*

**PV4 - OP Receptor (OP 36)**

*No glare found*

**PV4 - OP Receptor (OP 37)**

*No glare found*

**PV4 - OP Receptor (OP 38)**

*No glare found*

**PV4 - OP Receptor (OP 39)**

*No glare found*

**PV4 - OP Receptor (OP 40)**

*No glare found*

**PV4 - Route Receptor (Baker St)**

*No glare found*

**PV4 - Route Receptor (Baxter and Highland)**

*No glare found*

**PV4 - Route Receptor (Bean Rd)**

*No glare found*

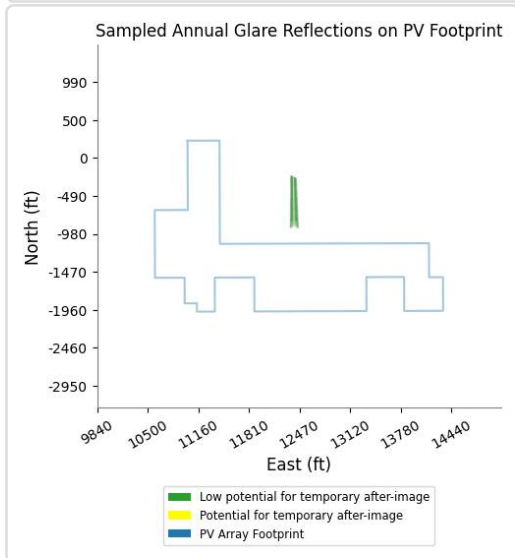
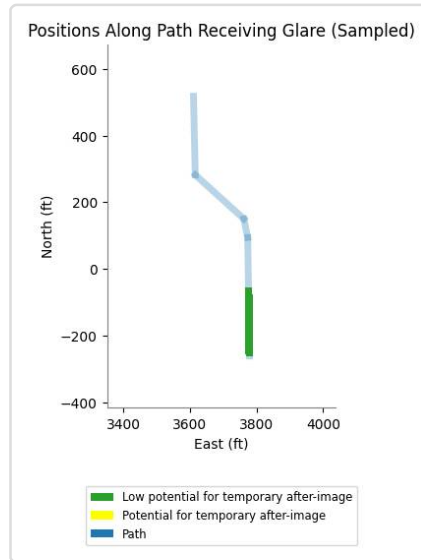
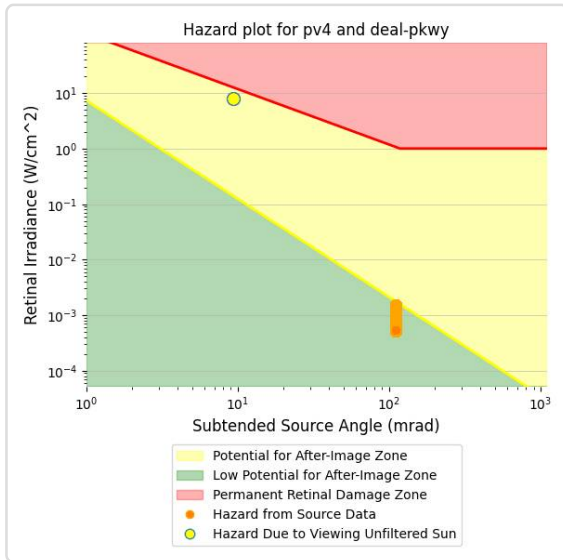
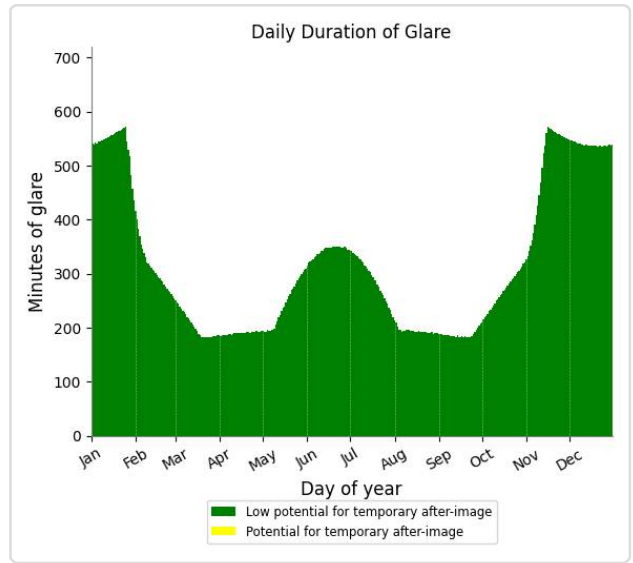
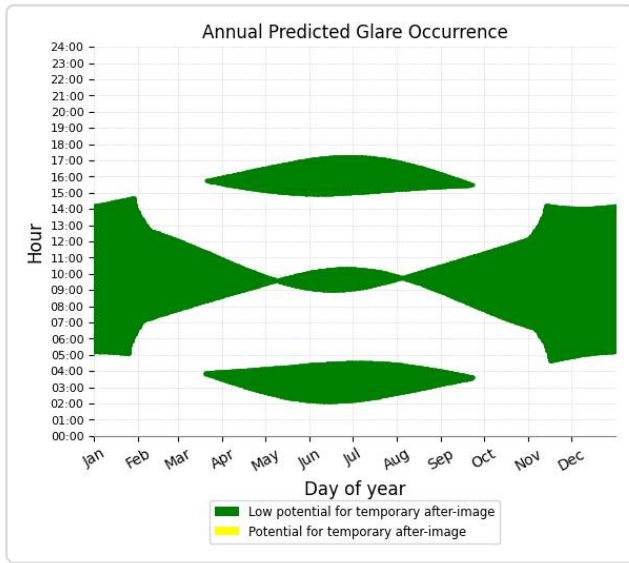
**PV4 - Route Receptor (Cronk Rd)**

*No glare found*

### PV4 - Route Receptor (Deal Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 115,792 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Driveway)

No glare found

### PV4 - Route Receptor (Genesse Rd)

No glare found

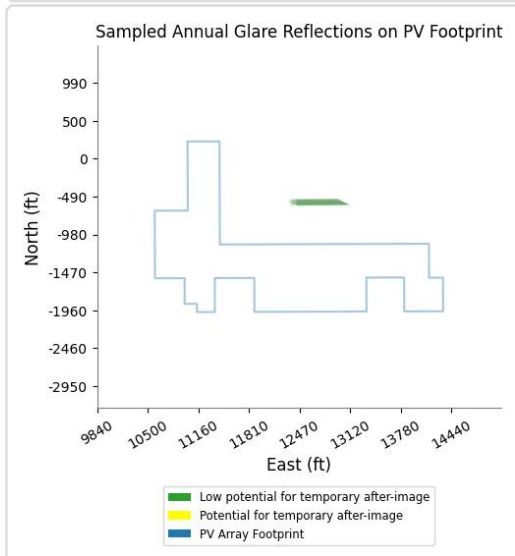
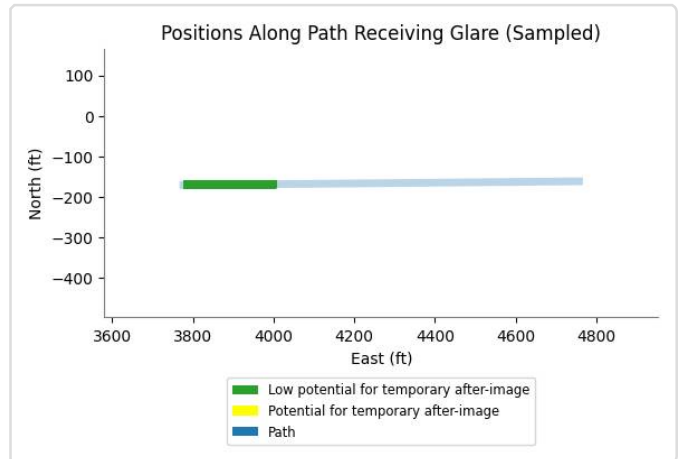
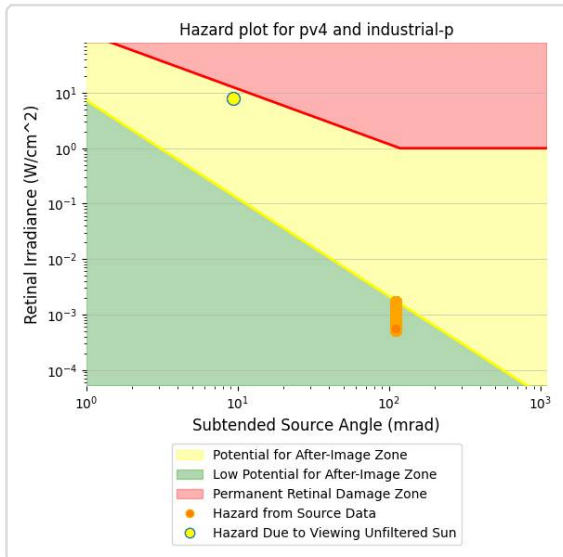
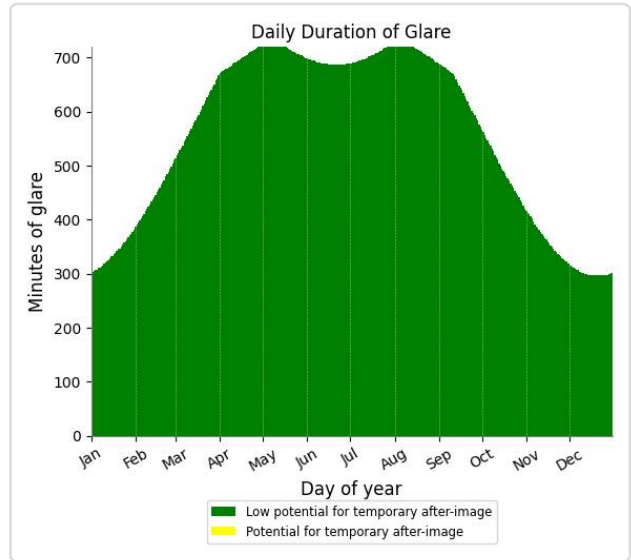
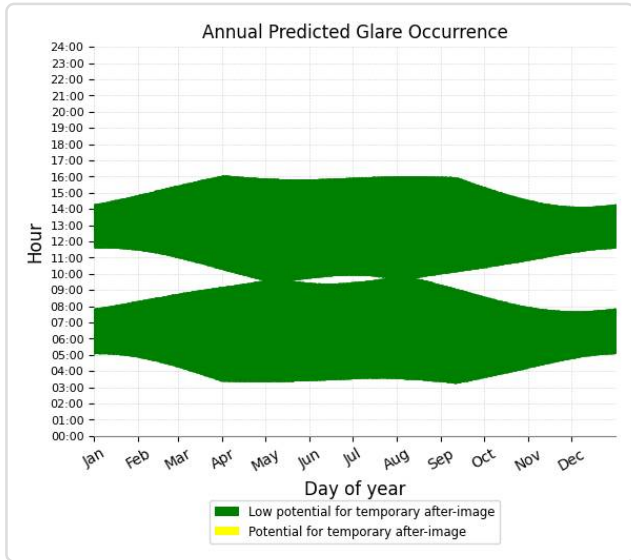
### PV4 - Route Receptor (Glasgow Rd)

No glare found

### PV4 - Route Receptor (Industrial Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 203,942 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Jonesville Rd)

No glare found

**PV4 - Route Receptor (Murphy St)**

*No glare found*

**PV4 - Route Receptor (N Bunn Rd)**

*No glare found*

**PV4 - Route Receptor (Olde Street)**

*No glare found*

**PV4 - Route Receptor (Pine Dr)**

*No glare found*

**PV4 - Route Receptor (Rainey Rd)**

*No glare found*

**PV4 - Route Receptor (Sand Lake Rd)**

*No glare found*

**PV4 - Route Receptor (Seneca)**

*No glare found*

**PV4 - Route Receptor (W Chicago Rd)**

*No glare found*

**PV4 - Route Receptor (Wise Rd)**

*No glare found*

**PV5** no glare found

Predicted energy output: 1,443,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV6** no glare found

Predicted energy output: 1,448,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV7** no glare found

Predicted energy output: 1,466,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV8** no glare found

Predicted energy output: 1,547,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

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**PV9** no glare found

Predicted energy output: 1,524,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

## Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- 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.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.



# Ranger Power

## Ranger - Heartwood - 20ft at OPs - Without ARC

**Created** April 29, 2022  
**Updated** April 29, 2022  
**Time-step** 1 minute  
**Timezone offset** UTC-8  
**Site ID** 68426.12083

**Project type** Advanced  
**Project status:** active  
**Category** 10 MW to 100 MW

### Misc. Analysis Settings

**DNI: varies (1,000.0 W/m<sup>2</sup> peak)**  
**Ocular transmission coefficient: 0.5**  
**Pupil diameter: 0.002 m**  
**Eye focal length: 0.017 m**  
**Sun subtended angle: 9.3 mrad**

#### Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

## Summary of Results Glare with potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV1	SA tracking	SA tracking	0	0	1,470,000.0
PV10	SA tracking	SA tracking	0	0	1,533,000.0
PV11	SA tracking	SA tracking	0	0	1,438,000.0
PV12	SA tracking	SA tracking	0	0	1,511,000.0
PV13	SA tracking	SA tracking	0	0	1,507,000.0
PV14	SA tracking	SA tracking	0	0	1,573,000.0
PV2	SA tracking	SA tracking	0	0	1,501,000.0
PV3	SA tracking	SA tracking	0	0	1,474,000.0
PV4	SA tracking	SA tracking	241,440	74,721	1,608,000.0
PV5	SA tracking	SA tracking	0	0	1,443,000.0
PV6	SA tracking	SA tracking	0	0	1,448,000.0
PV7	SA tracking	SA tracking	0	0	1,466,000.0
PV8	SA tracking	SA tracking	0	0	1,547,000.0
PV9	SA tracking	SA tracking	0	0	1,524,000.0

## Component Data

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### PV Array(s)

Total PV footprint area: 1,015.2 acres

**Name:** PV1  
**Footprint area:** 35.2 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.969931	-84.728342	1119.05	5.15	1124.20
2	41.969933	-84.727760	1115.05	5.15	1120.20
3	41.970229	-84.727762	1118.05	5.15	1123.20
4	41.970237	-84.725157	1114.05	5.15	1119.20
5	41.967597	-84.725150	1119.05	5.15	1124.20
6	41.967604	-84.722767	1115.05	5.15	1120.20
7	41.968156	-84.722770	1111.05	5.15	1116.20
8	41.968166	-84.719584	1112.05	5.15	1117.20
9	41.966968	-84.719577	1115.05	5.15	1120.20
10	41.966958	-84.722819	1117.05	5.15	1122.20
11	41.966406	-84.722816	1116.05	5.15	1121.20
12	41.966396	-84.726002	1124.05	5.15	1129.21
13	41.967770	-84.726010	1126.05	5.15	1131.21
14	41.967763	-84.728329	1112.05	5.15	1117.20

**Name:** PV10  
**Footprint area:** 84.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.992533	-84.707345	1088.05	5.15	1093.20
2	41.992545	-84.703326	1111.05	5.15	1116.20
3	41.992249	-84.703325	1114.05	5.15	1119.20
4	41.992252	-84.702576	1110.05	5.15	1115.20
5	41.991281	-84.702571	1120.05	5.15	1125.20
6	41.991288	-84.700326	1105.05	5.15	1110.20
7	41.990992	-84.700324	1109.05	5.15	1114.20
8	41.990993	-84.699992	1108.05	5.15	1113.20
9	41.988882	-84.699981	1128.06	5.15	1133.21
10	41.988880	-84.700729	1121.05	5.15	1126.20
11	41.985788	-84.700713	1111.05	5.15	1116.20
12	41.985778	-84.704232	1103.05	5.15	1108.20
13	41.986975	-84.704238	1097.05	5.15	1102.20
14	41.986977	-84.703656	1095.05	5.15	1100.20
15	41.987662	-84.703660	1103.05	5.15	1108.20
16	41.987654	-84.706570	1091.05	5.15	1096.20
17	41.988863	-84.706577	1097.05	5.15	1102.20
18	41.988859	-84.707741	1088.05	5.15	1093.20
19	41.991266	-84.707754	1088.05	5.15	1093.20
20	41.991267	-84.707338	1096.05	5.15	1101.20

**Name:** PV11  
**Footprint area:** 68.6 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.993804	-84.689611	1114.05	5.15	1119.20
2	41.993813	-84.686590	1086.05	5.15	1091.20
3	41.992546	-84.686584	1104.05	5.15	1109.20
4	41.992553	-84.684089	1071.05	5.15	1076.20
5	41.991345	-84.684083	1086.05	5.15	1091.20
6	41.991347	-84.683335	1074.05	5.15	1079.20
7	41.990080	-84.683328	1095.05	5.15	1100.20
8	41.990083	-84.682497	1079.05	5.15	1084.20
9	41.988885	-84.682491	1090.05	5.15	1095.20
10	41.988877	-84.685318	1114.05	5.15	1119.20
11	41.987668	-84.685312	1115.05	5.15	1120.20
12	41.987659	-84.688332	1116.05	5.15	1121.20
13	41.988868	-84.688339	1111.05	5.15	1116.20
14	41.988865	-84.689586	1129.06	5.15	1134.21

**Name:** PV12  
**Footprint area:** 135.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999738	-84.698112	1095.05	5.15	1100.20
2	41.999748	-84.694508	1121.05	5.15	1126.20
3	41.998482	-84.694502	1118.05	5.15	1123.20
4	41.998484	-84.693670	1125.05	5.15	1130.21
5	41.998188	-84.693669	1126.05	5.15	1131.21
6	41.998189	-84.693280	1130.06	5.15	1135.21
7	41.998485	-84.693282	1130.06	5.15	1135.21
8	41.998488	-84.692284	1136.06	5.15	1141.21
9	41.999755	-84.692290	1130.06	5.15	1135.21
10	41.999760	-84.690267	1102.05	5.15	1107.20
11	41.995175	-84.690243	1104.05	5.15	1109.20
12	41.995171	-84.691491	1125.05	5.15	1130.21
13	41.993905	-84.691484	1137.06	5.15	1142.21
14	41.993898	-84.693646	1133.06	5.15	1138.21
15	41.993602	-84.693645	1129.06	5.15	1134.21
16	41.993602	-84.693811	1129.06	5.15	1134.21
17	41.989918	-84.693792	1109.05	5.15	1114.20
18	41.989916	-84.694318	1110.05	5.15	1115.20
19	41.990212	-84.694320	1109.05	5.15	1114.20
20	41.990210	-84.695068	1108.05	5.15	1113.20
21	41.991180	-84.695073	1102.05	5.15	1107.20
22	41.991179	-84.695738	1103.05	5.15	1108.20
23	41.991475	-84.695740	1100.05	5.15	1105.20
24	41.991473	-84.696128	1101.05	5.15	1106.20
25	41.991177	-84.696127	1105.05	5.15	1110.20
26	41.991173	-84.697651	1104.05	5.15	1109.20
27	41.991469	-84.697652	1103.05	5.15	1108.20
28	41.991467	-84.698401	1104.05	5.15	1109.20
29	41.992380	-84.698406	1105.05	5.15	1110.20
30	41.992377	-84.699403	1101.05	5.15	1106.20
31	41.997258	-84.699429	1093.05	5.15	1098.20
32	41.997265	-84.697267	1098.05	5.15	1103.20
33	41.998542	-84.697274	1093.05	5.15	1098.20
34	41.998540	-84.698105	1090.05	5.15	1095.20

**Name:** PV13  
**Footprint area:** 27.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



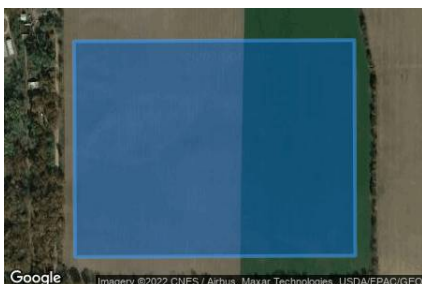
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.004972	-84.699577	1110.05	5.15	1115.20
2	42.004978	-84.697636	1108.05	5.15	1113.20
3	42.003712	-84.697630	1115.05	5.15	1120.20
4	42.003712	-84.697547	1115.05	5.15	1120.20
5	42.003477	-84.697545	1114.05	5.15	1119.20
6	42.003483	-84.695632	1106.05	5.15	1111.20
7	42.002285	-84.695626	1118.05	5.15	1123.20
8	42.002284	-84.695959	1115.05	5.15	1120.20
9	42.001075	-84.695952	1113.05	5.15	1118.20
10	42.001073	-84.696645	1108.05	5.15	1113.20
11	42.001369	-84.696647	1108.05	5.15	1113.20
12	42.001365	-84.698033	1103.05	5.15	1108.20
13	42.001304	-84.698033	1103.05	5.15	1108.20
14	42.001302	-84.698532	1099.05	5.15	1104.20
15	42.000389	-84.698527	1097.05	5.15	1102.20
16	42.000386	-84.699552	1095.05	5.15	1100.20

**Name:** PV14  
**Footprint area:** 36.5 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999430	-84.708031	1108.05	5.15	1113.20
2	41.999433	-84.707172	1114.05	5.15	1119.20
3	41.998224	-84.707166	1096.05	5.15	1101.20
4	41.998228	-84.705696	1108.05	5.15	1113.20
5	41.999547	-84.705703	1116.05	5.15	1121.20
6	41.999561	-84.700769	1095.05	5.15	1100.20
7	41.997045	-84.700756	1096.05	5.15	1101.20
8	41.997023	-84.708018	1096.05	5.15	1101.20

**Name:** PV2  
**Footprint area:** 53.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.963734	-84.728441	1091.05	5.15	1096.20
2	41.963754	-84.722013	1128.06	5.15	1133.21
3	41.960081	-84.721993	1124.05	5.15	1129.21
4	41.960061	-84.728420	1082.05	5.15	1087.20

**Name:** PV3  
**Footprint area:** 104.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



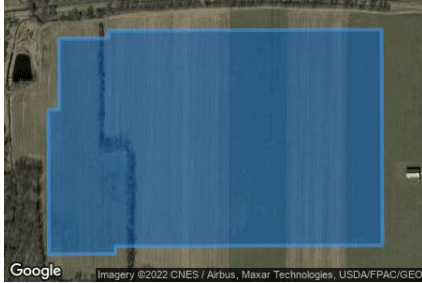
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970361	-84.699025	1124.05	5.15	1129.21
2	41.970373	-84.695008	1131.06	5.15	1136.21
3	41.959416	-84.694951	1138.06	5.15	1143.21
4	41.959409	-84.697361	1145.06	5.15	1150.21
5	41.956838	-84.697348	1130.06	5.15	1135.21
6	41.956833	-84.699037	1143.06	5.15	1148.21
7	41.961405	-84.699061	1142.06	5.15	1147.21
8	41.961409	-84.697897	1143.06	5.15	1148.21
9	41.963374	-84.697908	1138.06	5.15	1143.21
10	41.963371	-84.699155	1135.06	5.15	1140.21
11	41.964272	-84.699159	1128.06	5.15	1133.21
12	41.964274	-84.698744	1134.06	5.15	1139.21
13	41.965493	-84.698750	1127.05	5.15	1132.21
14	41.965492	-84.699166	1124.05	5.15	1129.21
15	41.969151	-84.699185	1125.05	5.15	1130.21
16	41.969152	-84.699019	1125.05	5.15	1130.21

**Name:** PV4  
**Footprint area:** 72.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970548	-84.687842	1150.06	5.15	1155.21
2	41.970553	-84.686319	1158.06	5.15	1163.21
3	41.966882	-84.686300	1167.06	5.15	1172.21
4	41.966910	-84.676325	1104.05	5.15	1109.20
5	41.965701	-84.676319	1107.05	5.15	1112.20
6	41.965703	-84.675654	1104.05	5.15	1109.20
7	41.964505	-84.675648	1105.05	5.15	1110.20
8	41.964500	-84.677504	1110.05	5.15	1115.20
9	41.965709	-84.677510	1109.05	5.15	1114.20
10	41.965704	-84.679312	1127.05	5.15	1132.21
11	41.964495	-84.679306	1110.05	5.15	1115.20
12	41.964480	-84.684652	1160.06	5.15	1165.21
13	41.965689	-84.684659	1165.06	5.15	1170.21
14	41.965684	-84.686543	1173.06	5.15	1178.21
15	41.964475	-84.686537	1160.06	5.15	1165.21
16	41.964473	-84.687395	1169.06	5.15	1174.21
17	41.964769	-84.687397	1171.06	5.15	1176.21
18	41.964767	-84.687979	1162.06	5.15	1167.21
19	41.965680	-84.687983	1171.06	5.15	1176.21
20	41.965676	-84.689396	1166.06	5.15	1171.21
21	41.968082	-84.689409	1148.06	5.15	1153.21
22	41.968087	-84.687829	1154.06	5.15	1159.21

**Name:** PV5  
**Footprint area:** 62.8 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982233	-84.708939	1094.05	5.15	1099.20
2	41.982236	-84.707804	1097.05	5.15	1102.20
3	41.982365	-84.707805	1097.05	5.15	1102.20
4	41.982384	-84.701542	1117.05	5.15	1122.20
5	41.978724	-84.701522	1135.06	5.15	1140.21
6	41.978706	-84.707646	1101.05	5.15	1106.20
7	41.978578	-84.707645	1102.05	5.15	1107.20
8	41.978573	-84.709169	1101.05	5.15	1106.20
9	41.981023	-84.709182	1097.05	5.15	1102.20
10	41.981024	-84.708933	1096.05	5.15	1101.20

**Name:** PV6  
**Footprint area:** 138.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982288	-84.699191	1116.05	5.15	1121.20
2	41.982309	-84.691930	1120.05	5.15	1125.20
3	41.979552	-84.691916	1124.05	5.15	1129.21
4	41.979557	-84.690170	1131.06	5.15	1136.21
5	41.978359	-84.690164	1132.06	5.15	1137.21
6	41.978352	-84.692741	1136.06	5.15	1141.21
7	41.974906	-84.692723	1143.06	5.15	1148.21
8	41.974898	-84.695384	1136.06	5.15	1141.21
9	41.973632	-84.695377	1134.06	5.15	1139.21
10	41.973628	-84.696541	1134.06	5.15	1139.21
11	41.972362	-84.696534	1134.06	5.15	1139.21
12	41.972354	-84.699138	1133.06	5.15	1138.21

**Name:** PV7  
**Footprint area:** 149.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984492	-84.689081	1125.05	5.15	1130.21
2	41.984498	-84.687141	1122.05	5.15	1127.21
3	41.983289	-84.687135	1128.06	5.15	1133.21
4	41.983308	-84.680317	1104.05	5.15	1109.20
5	41.980844	-84.680305	1122.05	5.15	1127.21
6	41.980841	-84.681220	1121.05	5.15	1126.20
7	41.978424	-84.681207	1141.06	5.15	1146.21
8	41.978420	-84.682400	1133.06	5.15	1138.21
9	41.976232	-84.682389	1143.06	5.15	1148.21
10	41.976229	-84.683470	1150.06	5.15	1155.21
11	41.975316	-84.683465	1153.06	5.15	1158.21
12	41.975313	-84.684546	1157.06	5.15	1162.21
13	41.975017	-84.684545	1157.06	5.15	1162.21
14	41.975004	-84.689310	1159.06	5.15	1164.21
15	41.982065	-84.689347	1151.06	5.15	1156.21
16	41.982066	-84.689068	1148.06	5.15	1153.21

**Name:** PV8  
**Footprint area:** 36.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984894	-84.708921	1093.05	5.15	1098.20
2	41.984896	-84.708238	1094.05	5.15	1099.20
3	41.985192	-84.708240	1094.05	5.15	1099.20
4	41.985198	-84.706217	1100.05	5.15	1105.20
5	41.983989	-84.706211	1100.05	5.15	1105.20
6	41.983994	-84.704641	1100.05	5.15	1105.20
7	41.985203	-84.704647	1102.05	5.15	1107.20
8	41.985215	-84.700611	1115.05	5.15	1120.20
9	41.984611	-84.700608	1114.05	5.15	1119.20
10	41.984611	-84.699842	1119.05	5.15	1124.20
11	41.983416	-84.699836	1110.05	5.15	1115.20
12	41.983413	-84.700602	1108.05	5.15	1113.20
13	41.983104	-84.700600	1105.05	5.15	1110.20
14	41.983079	-84.708911	1094.05	5.15	1099.20

**Name:** PV9  
**Footprint area:** 8.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985206	-84.699067	1128.06	5.15	1133.21
2	41.985210	-84.697460	1143.06	5.15	1148.21
3	41.984002	-84.697453	1129.06	5.15	1134.21
4	41.984003	-84.696871	1132.06	5.15	1137.21
5	41.983101	-84.696867	1115.05	5.15	1120.20
6	41.983095	-84.699056	1109.05	5.15	1114.20

### Route Receptor(s)

**Name:** Baker St  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982595	-84.675276	1110.87	10.00	1120.87
2	41.981678	-84.676059	1136.25	10.00	1146.25

**Name:** Baxter and Highland  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.983885	-84.678320	1116.05	10.00	1126.05
2	41.982952	-84.678910	1121.87	10.00	1131.87
3	41.982816	-84.678857	1122.26	10.00	1132.26
4	41.981636	-84.676024	1136.25	10.00	1146.25
5	41.981452	-84.676014	1137.22	10.00	1147.22
6	41.981117	-84.676604	1141.59	10.00	1151.59
7	41.980862	-84.676561	1138.96	10.00	1148.96
8	41.980160	-84.674683	1136.11	10.00	1146.11
9	41.979642	-84.673782	1123.98	10.00	1133.98
10	41.977913	-84.672905	1109.82	10.00	1119.82

**Name:** Bean Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.955879	-84.729038	1044.16	10.00	1054.17
2	41.956246	-84.709336	1134.38	10.00	1144.38
3	41.956262	-84.689831	1140.20	10.00	1150.20
4	41.956390	-84.670587	1096.54	10.00	1106.54

**Name:** Cronk Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.977130	-84.728899	1078.75	10.00	1088.75
2	41.964798	-84.728791	1090.12	10.00	1100.13
3	41.955799	-84.728834	1044.93	10.00	1054.93
4	41.952416	-84.728856	1114.49	10.00	1124.49

**Name:** Deal Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.974602	-84.684784	1154.83	10.00	1164.83
2	41.972480	-84.684720	1160.33	10.00	1170.33
3	41.971292	-84.682960	1153.32	10.00	1163.32
4	41.970789	-84.682821	1151.99	10.00	1161.99
5	41.967590	-84.682756	1163.50	10.00	1173.50

**Name:** Driveway  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.995767	-84.685119	1075.68	10.00	1085.68
2	41.995536	-84.684958	1069.15	10.00	1079.15
3	41.995026	-84.684808	1072.43	10.00	1082.43
4	41.993710	-84.684217	1076.47	10.00	1086.47
5	41.993272	-84.683692	1076.71	10.00	1086.71
6	41.992977	-84.683069	1082.67	10.00	1092.67
7	41.992674	-84.682512	1083.81	10.00	1093.81
8	41.992602	-84.681932	1087.25	10.00	1097.25
9	41.992458	-84.681868	1083.80	10.00	1093.80
10	41.990449	-84.681879	1077.65	10.00	1087.65
11	41.988368	-84.681825	1086.81	10.00	1096.81
12	41.987785	-84.681739	1093.08	10.00	1103.08
13	41.986932	-84.681921	1095.86	10.00	1105.86
14	41.986485	-84.681836	1096.56	10.00	1106.56
15	41.985489	-84.681921	1101.26	10.00	1111.26

**Name:** Genesee Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000030	-84.728922	1067.79	10.00	1077.79
2	41.999982	-84.709482	1103.57	10.00	1113.57
3	42.000014	-84.694728	1118.53	10.00	1128.53
4	42.000022	-84.691563	1117.63	10.00	1127.63
5	41.999982	-84.690007	1087.54	10.00	1097.54
6	41.999926	-84.689600	1076.43	10.00	1086.43
7	41.999671	-84.688430	1058.92	10.00	1068.92
8	41.999615	-84.687958	1054.68	10.00	1064.69
9	41.999599	-84.687336	1050.28	10.00	1060.28
10	41.999767	-84.685684	1044.03	10.00	1054.03
11	42.000006	-84.684278	1057.00	10.00	1067.00
12	41.999998	-84.684107	1059.16	10.00	1069.16
13	41.999464	-84.683034	1064.98	10.00	1074.98
14	41.995070	-84.669708	1092.21	10.00	1102.21

**Name:** Glasgow Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985527	-84.719331	1087.94	10.00	1097.94
2	41.977733	-84.719052	1103.71	10.00	1113.71
3	41.973266	-84.719030	1111.41	10.00	1121.41
4	41.966661	-84.719073	1113.17	10.00	1123.17

**Name:** Industrial Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968404	-84.682780	1160.58	10.00	1170.58
2	41.968492	-84.670957	1089.74	10.00	1099.74

**Name:** Jonesville Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985481	-84.728891	1100.67	10.00	1110.67
2	41.985513	-84.709429	1093.35	10.00	1103.35
3	41.985513	-84.699494	1123.99	10.00	1133.99
4	41.985481	-84.689924	1122.16	10.00	1132.16
5	41.985481	-84.681878	1101.02	10.00	1111.02
6	41.985497	-84.673295	1093.95	10.00	1103.95

**Name:** Murphy St  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985519	-84.686428	1115.99	10.00	1125.99
2	41.985288	-84.686342	1116.02	10.00	1126.02
3	41.985160	-84.686139	1117.25	10.00	1127.25
4	41.985176	-84.685731	1116.85	10.00	1126.85
5	41.985145	-84.683542	1114.66	10.00	1124.66
6	41.984841	-84.680860	1109.42	10.00	1119.42
7	41.984578	-84.679894	1100.91	10.00	1110.91
8	41.982760	-84.675614	1114.10	10.00	1124.10
9	41.981875	-84.673629	1101.83	10.00	1111.83
10	41.981588	-84.673200	1100.47	10.00	1110.47
11	41.979833	-84.671011	1093.58	10.00	1103.58

**Name:** N Bunn Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000012	-84.690061	1088.52	10.00	1098.52
2	41.985404	-84.689932	1121.82	10.00	1131.82
3	41.973156	-84.689868	1161.37	10.00	1171.37
4	41.956132	-84.689889	1139.26	10.00	1149.26
5	41.948026	-84.689954	1140.62	10.00	1150.62

**Name:** Olde Street  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981436	-84.667386	1069.48	10.00	1079.48
2	41.979649	-84.665884	1068.73	10.00	1078.73
3	41.978325	-84.665841	1074.84	10.00	1084.84
4	41.977591	-84.666399	1077.45	10.00	1087.45
5	41.974800	-84.669574	1075.40	10.00	1085.40
6	41.973699	-84.670583	1073.92	10.00	1083.92
7	41.971976	-84.671505	1084.63	10.00	1094.63
8	41.969854	-84.671248	1091.59	10.00	1101.59
9	41.967126	-84.670604	1089.11	10.00	1099.11
10	41.963265	-84.669553	1112.18	10.00	1122.18
11	41.961111	-84.668630	1121.69	10.00	1131.69
12	41.957090	-84.665690	1119.18	10.00	1129.18

**Name:** Pine Dr  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.979915	-84.678553	1141.57	10.00	1151.57
2	41.979493	-84.679240	1138.15	10.00	1148.15
3	41.977076	-84.679251	1144.11	10.00	1154.11
4	41.976541	-84.678811	1142.07	10.00	1152.07

**Name:** Rainey Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.014437	-84.709545	1058.14	10.00	1068.14
2	41.999912	-84.709480	1103.34	10.00	1113.34
3	41.985479	-84.709416	1093.47	10.00	1103.47

**Name:** Sand Lake Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968772	-84.709415	1116.45	10.00	1126.45
2	41.956072	-84.709330	1136.41	10.00	1146.41

**Name:** Seneca  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981662	-84.673302	1100.66	10.00	1110.66
2	41.981183	-84.675072	1117.83	10.00	1127.83
3	41.980449	-84.675673	1128.01	10.00	1138.01

**Name:** W Chicago Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982786	-84.664363	1050.18	10.00	1060.18
2	41.977299	-84.677173	1141.86	10.00	1151.86
3	41.976071	-84.680134	1144.50	10.00	1154.50
4	41.974491	-84.685498	1156.34	10.00	1166.34
5	41.973183	-84.690047	1161.12	10.00	1171.12
6	41.970423	-84.700068	1123.07	10.00	1133.07
7	41.968190	-84.711827	1114.52	10.00	1124.52
8	41.966164	-84.721955	1115.01	10.00	1125.01
9	41.963020	-84.738027	1042.73	10.00	1052.73
10	41.962111	-84.742790	1092.27	10.00	1102.27

**Name:** Wise Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985561	-84.699581	1122.65	10.00	1132.65
2	41.970566	-84.699560	1122.83	10.00	1132.83
3	41.956255	-84.699560	1139.97	10.00	1149.97

## Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	41.978175	-84.679807	1141.09	20.00	1161.09
OP 2	41.975798	-84.679313	1144.60	20.00	1164.60
OP 3	41.975208	-84.681759	1153.05	20.00	1173.05
OP 4	41.976261	-84.681266	1145.06	20.00	1165.06
OP 5	41.974921	-84.682918	1152.21	20.00	1172.22
OP 6	41.974203	-84.687746	1163.33	20.00	1183.33
OP 7	41.974554	-84.690235	1162.54	20.00	1182.54
OP 8	41.976085	-84.690321	1143.82	20.00	1163.82
OP 9	41.977680	-84.690257	1137.12	20.00	1157.12
OP 10	41.973309	-84.690815	1157.87	20.00	1177.88
OP 11	41.980679	-84.690321	1139.57	20.00	1159.58
OP 12	41.984220	-84.685987	1124.66	20.00	1144.66
OP 13	41.985066	-84.699870	1121.90	20.00	1141.90
OP 14	41.970087	-84.699999	1124.74	20.00	1144.74
OP 15	41.963354	-84.700063	1132.45	20.00	1152.45
OP 16	41.958232	-84.700299	1138.00	20.00	1158.00
OP 17	41.954897	-84.697359	1135.26	20.00	1155.26
OP 18	41.962461	-84.689141	1165.78	20.00	1185.78
OP 19	41.968077	-84.685300	1156.35	20.00	1176.35
OP 20	41.967758	-84.677532	1136.06	20.00	1156.06
OP 21	41.965987	-84.670880	1095.40	20.00	1115.40
OP 22	41.990654	-84.690499	1134.11	20.00	1154.12
OP 23	41.994266	-84.690488	1125.73	20.00	1145.74
OP 24	41.999569	-84.693739	1125.58	20.00	1145.58
OP 25	42.000326	-84.697473	1103.37	20.00	1123.37
OP 26	42.000789	-84.695348	1115.64	20.00	1135.64
OP 27	41.999577	-84.706420	1121.12	20.00	1141.12
OP 28	41.997926	-84.709028	1092.76	20.00	1112.76
OP 29	41.985758	-84.708373	1093.45	20.00	1113.45
OP 30	41.984554	-84.704897	1101.04	20.00	1121.04
OP 31	41.985798	-84.705337	1102.99	20.00	1122.99
OP 32	41.981842	-84.699930	1117.21	20.00	1137.21
OP 33	41.979800	-84.700337	1138.94	20.00	1158.94
OP 34	41.965833	-84.720100	1115.44	20.00	1135.44
OP 35	41.964661	-84.725464	1118.03	20.00	1138.03
OP 36	41.962355	-84.729133	1079.68	20.00	1099.68
OP 37	41.970883	-84.728157	1118.47	20.00	1138.47
OP 38	41.986406	-84.688731	1131.28	20.00	1151.28
OP 39	41.998524	-84.698792	1093.02	20.00	1113.02
OP 40	41.984459	-84.680423	1107.73	20.00	1127.73

# Summary of PV Glare Analysis

*PV configuration and total predicted glare*

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV1	SA tracking	SA tracking	0	0	1,470,000.0	
PV10	SA tracking	SA tracking	0	0	1,533,000.0	
PV11	SA tracking	SA tracking	0	0	1,438,000.0	
PV12	SA tracking	SA tracking	0	0	1,511,000.0	
PV13	SA tracking	SA tracking	0	0	1,507,000.0	
PV14	SA tracking	SA tracking	0	0	1,573,000.0	
PV2	SA tracking	SA tracking	0	0	1,501,000.0	
PV3	SA tracking	SA tracking	0	0	1,474,000.0	
PV4	SA tracking	SA tracking	241,440	74,721	1,608,000.0	-
PV5	SA tracking	SA tracking	0	0	1,443,000.0	
PV6	SA tracking	SA tracking	0	0	1,448,000.0	
PV7	SA tracking	SA tracking	0	0	1,466,000.0	
PV8	SA tracking	SA tracking	0	0	1,547,000.0	
PV9	SA tracking	SA tracking	0	0	1,524,000.0	

## Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pv4 (green)	17330	17389	21772	14541	10568	11406	11159	10503	21770	20069	17240	16722
pv4 (yellow)	0	0	0	9126	16169	15581	16184	14860	252	0	0	0

# PV & Receptor Analysis Results

*Results for each PV array and receptor*

**PV1** no glare found

Predicted energy output: 1,470,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

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**PV10** no glare found

Predicted energy output: 1,533,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV11** no glare found

Predicted energy output: 1,438,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

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**PV12** no glare found

Predicted energy output: 1,511,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

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**PV13** no glare found

Predicted energy output: 1,507,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

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**PV14** no glare found

Predicted energy output: 1,573,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

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**PV2** no glare found

Predicted energy output: 1,501,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV3** no glare found

Predicted energy output: 1,474,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV4** potential temporary after-image

Predicted energy output: 1,608,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0

OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	107694	5991
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	133746	68730
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

**PV4 - OP Receptor (OP 1)**

*No glare found*

**PV4 - OP Receptor (OP 2)**

*No glare found*

**PV4 - OP Receptor (OP 3)**

*No glare found*

**PV4 - OP Receptor (OP 4)**

*No glare found*

**PV4 - OP Receptor (OP 5)**

*No glare found*

**PV4 - OP Receptor (OP 6)**

*No glare found*

**PV4 - OP Receptor (OP 7)**

*No glare found*

**PV4 - OP Receptor (OP 8)**

*No glare found*

**PV4 - OP Receptor (OP 9)**

*No glare found*

**PV4 - OP Receptor (OP 10)**

*No glare found*

**PV4 - OP Receptor (OP 11)**

*No glare found*

**PV4 - OP Receptor (OP 12)**

*No glare found*

**PV4 - OP Receptor (OP 13)**

*No glare found*

**PV4 - OP Receptor (OP 14)**

*No glare found*

**PV4 - OP Receptor (OP 15)**

*No glare found*

**PV4 - OP Receptor (OP 16)**

*No glare found*

**PV4 - OP Receptor (OP 17)**

*No glare found*

**PV4 - OP Receptor (OP 18)**

*No glare found*

**PV4 - OP Receptor (OP 19)**

*No glare found*

**PV4 - OP Receptor (OP 20)**

*No glare found*

**PV4 - OP Receptor (OP 21)**

*No glare found*

**PV4 - OP Receptor (OP 22)**

*No glare found*

**PV4 - OP Receptor (OP 23)**

*No glare found*

**PV4 - OP Receptor (OP 24)**

*No glare found*

**PV4 - OP Receptor (OP 25)**

*No glare found*

**PV4 - OP Receptor (OP 26)**

*No glare found*

**PV4 - OP Receptor (OP 27)**

*No glare found*

**PV4 - OP Receptor (OP 28)**

*No glare found*

**PV4 - OP Receptor (OP 29)**

*No glare found*

**PV4 - OP Receptor (OP 30)**

*No glare found*

**PV4 - OP Receptor (OP 31)**

*No glare found*

**PV4 - OP Receptor (OP 32)**

*No glare found*

**PV4 - OP Receptor (OP 33)**

*No glare found*

**PV4 - OP Receptor (OP 34)**

*No glare found*

**PV4 - OP Receptor (OP 35)**

*No glare found*

**PV4 - OP Receptor (OP 36)**

*No glare found*

**PV4 - OP Receptor (OP 37)**

*No glare found*

**PV4 - OP Receptor (OP 38)**

*No glare found*

**PV4 - OP Receptor (OP 39)**

*No glare found*

**PV4 - OP Receptor (OP 40)**

*No glare found*

**PV4 - Route Receptor (Baker St)**

*No glare found*

**PV4 - Route Receptor (Baxter and Highland)**

*No glare found*

**PV4 - Route Receptor (Bean Rd)**

*No glare found*

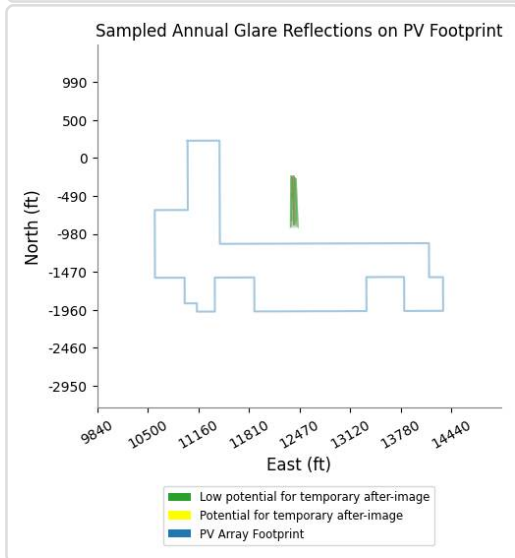
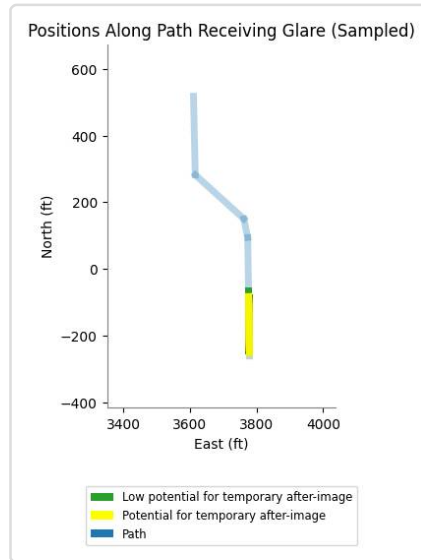
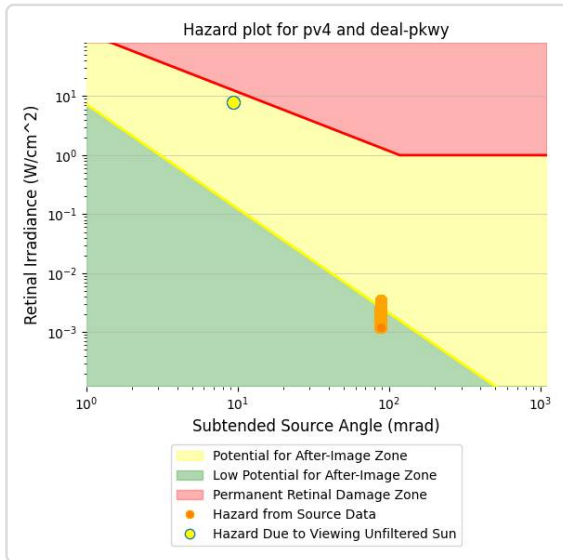
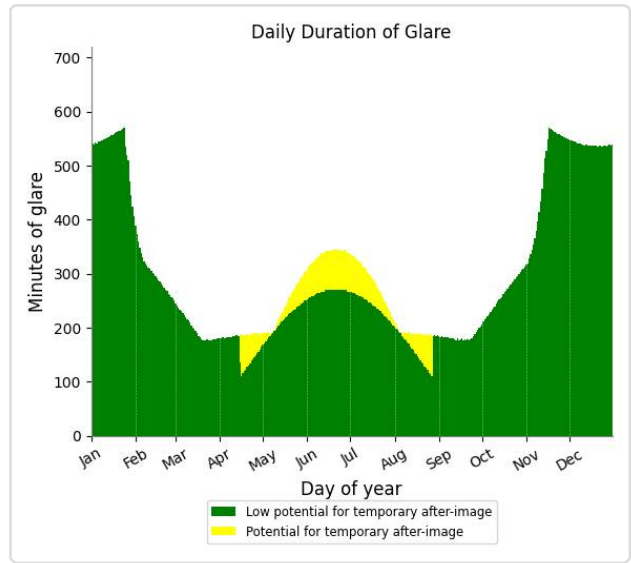
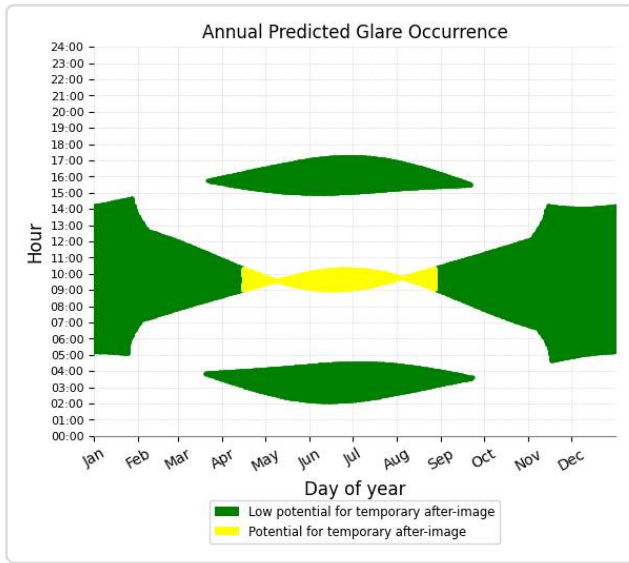
**PV4 - Route Receptor (Cronk Rd)**

*No glare found*

### PV4 - Route Receptor (Deal Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 107,694 minutes of "green" glare with low potential to cause temporary after-image.
- 5,991 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Driveway)

No glare found

### PV4 - Route Receptor (Genesse Rd)

No glare found

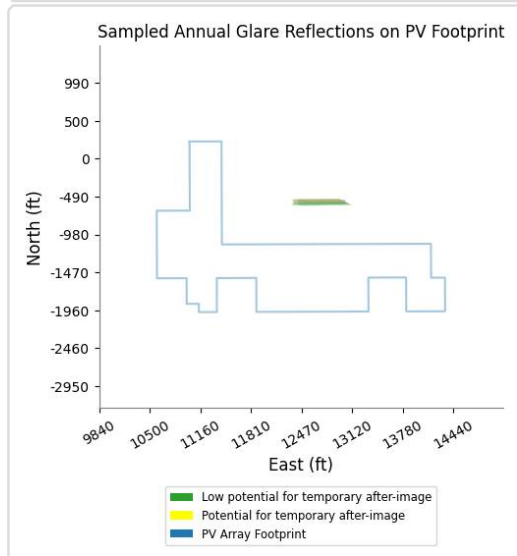
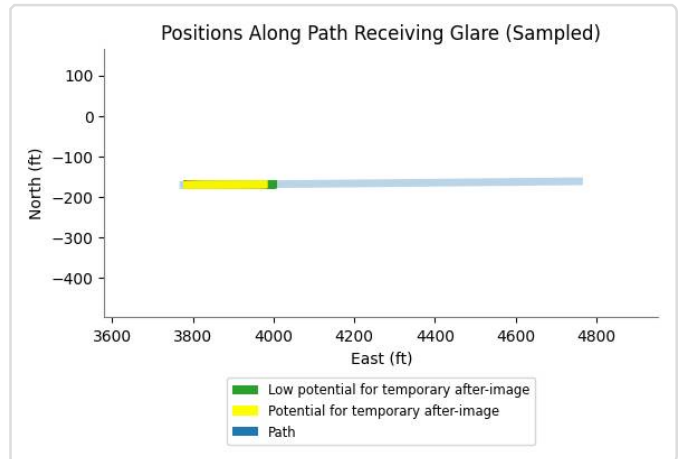
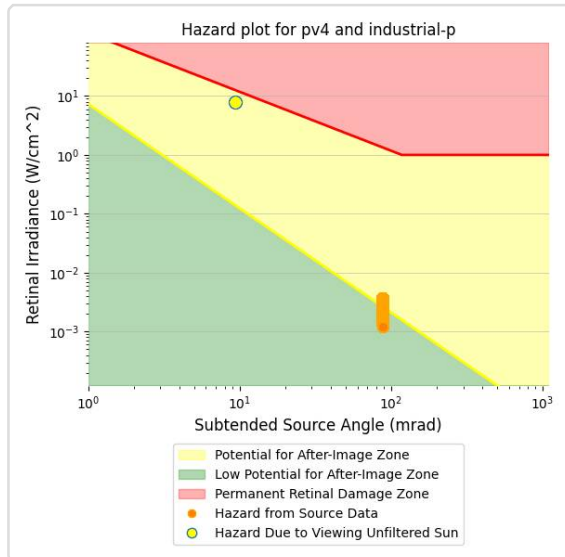
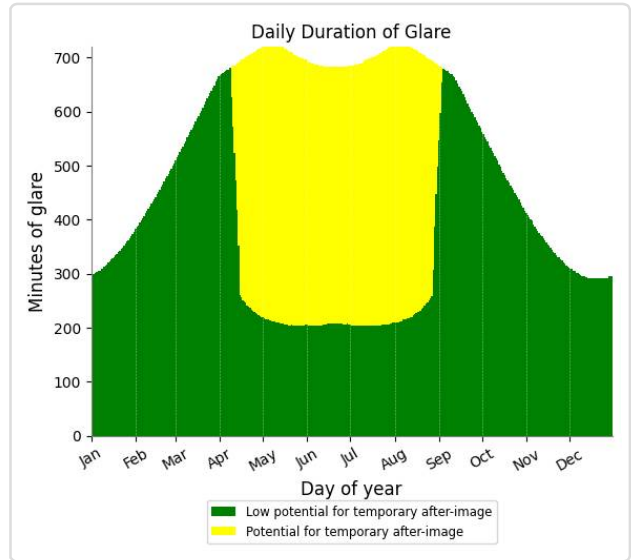
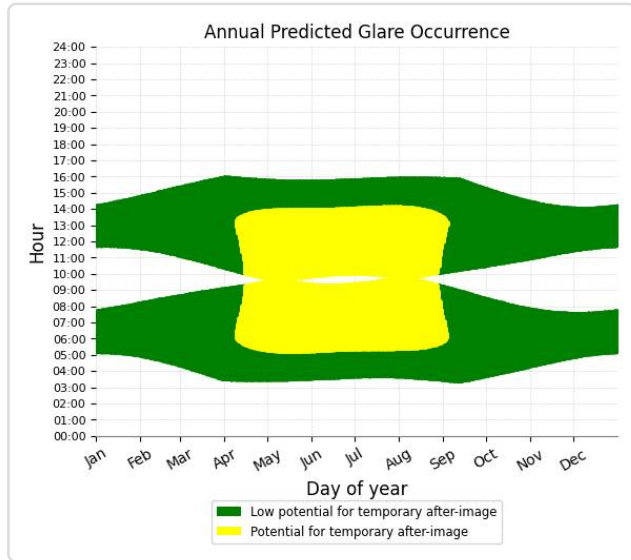
### PV4 - Route Receptor (Glasgow Rd)

No glare found

### PV4 - Route Receptor (Industrial Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 133,746 minutes of "green" glare with low potential to cause temporary after-image.
- 68,730 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Jonesville Rd)

No glare found

**PV4 - Route Receptor (Murphy St)**

*No glare found*

**PV4 - Route Receptor (N Bunn Rd)**

*No glare found*

**PV4 - Route Receptor (Olde Street)**

*No glare found*

**PV4 - Route Receptor (Pine Dr)**

*No glare found*

**PV4 - Route Receptor (Rainey Rd)**

*No glare found*

**PV4 - Route Receptor (Sand Lake Rd)**

*No glare found*

**PV4 - Route Receptor (Seneca)**

*No glare found*

**PV4 - Route Receptor (W Chicago Rd)**

*No glare found*

**PV4 - Route Receptor (Wise Rd)**

*No glare found*

**PV5** no glare found

Predicted energy output: 1,443,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV6** no glare found

Predicted energy output: 1,448,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV7** no glare found

Predicted energy output: 1,466,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV8** no glare found

Predicted energy output: 1,547,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

---

**PV9** no glare found

Predicted energy output: 1,524,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0

Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

## Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- 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.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.



# Ranger Power

## Ranger - Heartwood - 6ft at OPs - With Coating

Created May 5, 2022  
 Updated May 5, 2022  
 Time-step 1 minute  
 Timezone offset UTC-8  
 Site ID 68665.12083

Project type Advanced  
 Project status: active  
 Category 10 MW to 100 MW

### Misc. Analysis Settings

DNI: varies (1,000.0 W/m<sup>2</sup> peak)  
 Ocular transmission coefficient: 0.5  
 Pupil diameter: 0.002 m  
 Eye focal length: 0.017 m  
 Sun subtended angle: 9.3 mrad

#### Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

### Summary of Results Glare with low potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV1	SA tracking	SA tracking	0	0	1,470,000.0
PV10	SA tracking	SA tracking	0	0	1,533,000.0
PV11	SA tracking	SA tracking	0	0	1,438,000.0
PV12	SA tracking	SA tracking	0	0	1,511,000.0
PV13	SA tracking	SA tracking	0	0	1,507,000.0
PV14	SA tracking	SA tracking	0	0	1,573,000.0
PV2	SA tracking	SA tracking	0	0	1,501,000.0
PV3	SA tracking	SA tracking	0	0	1,474,000.0
PV4	SA tracking	SA tracking	319,734	0	1,608,000.0
PV5	SA tracking	SA tracking	0	0	1,443,000.0
PV6	SA tracking	SA tracking	0	0	1,448,000.0
PV7	SA tracking	SA tracking	0	0	1,466,000.0
PV8	SA tracking	SA tracking	0	0	1,547,000.0
PV9	SA tracking	SA tracking	0	0	1,524,000.0

## Component Data

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### PV Array(s)

Total PV footprint area: 1,015.2 acres

**Name:** PV1  
**Footprint area:** 35.2 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.969931	-84.728342	1119.05	5.15	1124.20
2	41.969933	-84.727760	1115.05	5.15	1120.20
3	41.970229	-84.727762	1118.05	5.15	1123.20
4	41.970237	-84.725157	1114.05	5.15	1119.20
5	41.967597	-84.725150	1119.05	5.15	1124.20
6	41.967604	-84.722767	1115.05	5.15	1120.20
7	41.968156	-84.722770	1111.05	5.15	1116.20
8	41.968166	-84.719584	1112.05	5.15	1117.20
9	41.966968	-84.719577	1115.05	5.15	1120.20
10	41.966958	-84.722819	1117.05	5.15	1122.20
11	41.966406	-84.722816	1116.05	5.15	1121.20
12	41.966396	-84.726002	1124.05	5.15	1129.21
13	41.967770	-84.726010	1126.05	5.15	1131.21
14	41.967763	-84.728329	1112.05	5.15	1117.20

**Name:** PV10  
**Footprint area:** 84.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.992533	-84.707345	1088.05	5.15	1093.20
2	41.992545	-84.703326	1111.05	5.15	1116.20
3	41.992249	-84.703325	1114.05	5.15	1119.20
4	41.992252	-84.702576	1110.05	5.15	1115.20
5	41.991281	-84.702571	1120.05	5.15	1125.20
6	41.991288	-84.700326	1105.05	5.15	1110.20
7	41.990992	-84.700324	1109.05	5.15	1114.20
8	41.990993	-84.699992	1108.05	5.15	1113.20
9	41.988882	-84.699981	1128.06	5.15	1133.21
10	41.988880	-84.700729	1121.05	5.15	1126.20
11	41.985788	-84.700713	1111.05	5.15	1116.20
12	41.985778	-84.704232	1103.05	5.15	1108.20
13	41.986975	-84.704238	1097.05	5.15	1102.20
14	41.986977	-84.703656	1095.05	5.15	1100.20
15	41.987662	-84.703660	1103.05	5.15	1108.20
16	41.987654	-84.706570	1091.05	5.15	1096.20
17	41.988863	-84.706577	1097.05	5.15	1102.20
18	41.988859	-84.707741	1088.05	5.15	1093.20
19	41.991266	-84.707754	1088.05	5.15	1093.20
20	41.991267	-84.707338	1096.05	5.15	1101.20

**Name:** PV11  
**Footprint area:** 68.6 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.993804	-84.689611	1114.05	5.15	1119.20
2	41.993813	-84.686590	1086.05	5.15	1091.20
3	41.992546	-84.686584	1104.05	5.15	1109.20
4	41.992553	-84.684089	1071.05	5.15	1076.20
5	41.991345	-84.684083	1086.05	5.15	1091.20
6	41.991347	-84.683335	1074.05	5.15	1079.20
7	41.990080	-84.683328	1095.05	5.15	1100.20
8	41.990083	-84.682497	1079.05	5.15	1084.20
9	41.988885	-84.682491	1090.05	5.15	1095.20
10	41.988877	-84.685318	1114.05	5.15	1119.20
11	41.987668	-84.685312	1115.05	5.15	1120.20
12	41.987659	-84.688332	1116.05	5.15	1121.20
13	41.988868	-84.688339	1111.05	5.15	1116.20
14	41.988865	-84.689586	1129.06	5.15	1134.21

**Name:** PV12  
**Footprint area:** 135.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999738	-84.698112	1095.05	5.15	1100.20
2	41.999748	-84.694508	1121.05	5.15	1126.20
3	41.998482	-84.694502	1118.05	5.15	1123.20
4	41.998484	-84.693670	1125.05	5.15	1130.21
5	41.998188	-84.693669	1126.05	5.15	1131.21
6	41.998189	-84.693280	1130.06	5.15	1135.21
7	41.998485	-84.693282	1130.06	5.15	1135.21
8	41.998488	-84.692284	1136.06	5.15	1141.21
9	41.999755	-84.692290	1130.06	5.15	1135.21
10	41.999760	-84.690267	1102.05	5.15	1107.20
11	41.995175	-84.690243	1104.05	5.15	1109.20
12	41.995171	-84.691491	1125.05	5.15	1130.21
13	41.993905	-84.691484	1137.06	5.15	1142.21
14	41.993898	-84.693646	1133.06	5.15	1138.21
15	41.993602	-84.693645	1129.06	5.15	1134.21
16	41.993602	-84.693811	1129.06	5.15	1134.21
17	41.989918	-84.693792	1109.05	5.15	1114.20
18	41.989916	-84.694318	1110.05	5.15	1115.20
19	41.990212	-84.694320	1109.05	5.15	1114.20
20	41.990210	-84.695068	1108.05	5.15	1113.20
21	41.991180	-84.695073	1102.05	5.15	1107.20
22	41.991179	-84.695738	1103.05	5.15	1108.20
23	41.991475	-84.695740	1100.05	5.15	1105.20
24	41.991473	-84.696128	1101.05	5.15	1106.20
25	41.991177	-84.696127	1105.05	5.15	1110.20
26	41.991173	-84.697651	1104.05	5.15	1109.20
27	41.991469	-84.697652	1103.05	5.15	1108.20
28	41.991467	-84.698401	1104.05	5.15	1109.20
29	41.992380	-84.698406	1105.05	5.15	1110.20
30	41.992377	-84.699403	1101.05	5.15	1106.20
31	41.997258	-84.699429	1093.05	5.15	1098.20
32	41.997265	-84.697267	1098.05	5.15	1103.20
33	41.998542	-84.697274	1093.05	5.15	1098.20
34	41.998540	-84.698105	1090.05	5.15	1095.20

**Name:** PV13  
**Footprint area:** 27.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.004972	-84.699577	1110.05	5.15	1115.20
2	42.004978	-84.697636	1108.05	5.15	1113.20
3	42.003712	-84.697630	1115.05	5.15	1120.20
4	42.003712	-84.697547	1115.05	5.15	1120.20
5	42.003477	-84.697545	1114.05	5.15	1119.20
6	42.003483	-84.695632	1106.05	5.15	1111.20
7	42.002285	-84.695626	1118.05	5.15	1123.20
8	42.002284	-84.695959	1115.05	5.15	1120.20
9	42.001075	-84.695952	1113.05	5.15	1118.20
10	42.001073	-84.696645	1108.05	5.15	1113.20
11	42.001369	-84.696647	1108.05	5.15	1113.20
12	42.001365	-84.698033	1103.05	5.15	1108.20
13	42.001304	-84.698033	1103.05	5.15	1108.20
14	42.001302	-84.698532	1099.05	5.15	1104.20
15	42.000389	-84.698527	1097.05	5.15	1102.20
16	42.000386	-84.699552	1095.05	5.15	1100.20

**Name:** PV14  
**Footprint area:** 36.5 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999430	-84.708031	1108.05	5.15	1113.20
2	41.999433	-84.707172	1114.05	5.15	1119.20
3	41.998224	-84.707166	1096.05	5.15	1101.20
4	41.998228	-84.705696	1108.05	5.15	1113.20
5	41.999547	-84.705703	1116.05	5.15	1121.20
6	41.999561	-84.700769	1095.05	5.15	1100.20
7	41.997045	-84.700756	1096.05	5.15	1101.20
8	41.997023	-84.708018	1096.05	5.15	1101.20

**Name:** PV2  
**Footprint area:** 53.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.963734	-84.728441	1091.05	5.15	1096.20
2	41.963754	-84.722013	1128.06	5.15	1133.21
3	41.960081	-84.721993	1124.05	5.15	1129.21
4	41.960061	-84.728420	1082.05	5.15	1087.20

**Name:** PV3  
**Footprint area:** 104.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



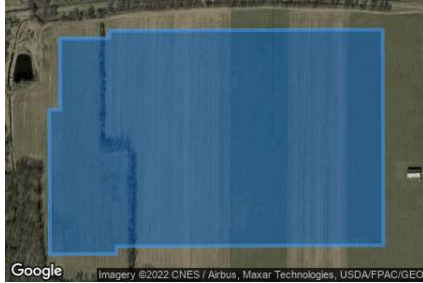
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970361	-84.699025	1124.05	5.15	1129.21
2	41.970373	-84.695008	1131.06	5.15	1136.21
3	41.959416	-84.694951	1138.06	5.15	1143.21
4	41.959409	-84.697361	1145.06	5.15	1150.21
5	41.956838	-84.697348	1130.06	5.15	1135.21
6	41.956833	-84.699037	1143.06	5.15	1148.21
7	41.961405	-84.699061	1142.06	5.15	1147.21
8	41.961409	-84.697897	1143.06	5.15	1148.21
9	41.963374	-84.697908	1138.06	5.15	1143.21
10	41.963371	-84.699155	1135.06	5.15	1140.21
11	41.964272	-84.699159	1128.06	5.15	1133.21
12	41.964274	-84.698744	1134.06	5.15	1139.21
13	41.965493	-84.698750	1127.05	5.15	1132.21
14	41.965492	-84.699166	1124.05	5.15	1129.21
15	41.969151	-84.699185	1125.05	5.15	1130.21
16	41.969152	-84.699019	1125.05	5.15	1130.21

**Name:** PV4  
**Footprint area:** 72.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970548	-84.687842	1150.06	5.15	1155.21
2	41.970553	-84.686319	1158.06	5.15	1163.21
3	41.966882	-84.686300	1167.06	5.15	1172.21
4	41.966910	-84.676325	1104.05	5.15	1109.20
5	41.965701	-84.676319	1107.05	5.15	1112.20
6	41.965703	-84.675654	1104.05	5.15	1109.20
7	41.964505	-84.675648	1105.05	5.15	1110.20
8	41.964500	-84.677504	1110.05	5.15	1115.20
9	41.965709	-84.677510	1109.05	5.15	1114.20
10	41.965704	-84.679312	1127.05	5.15	1132.21
11	41.964495	-84.679306	1110.05	5.15	1115.20
12	41.964480	-84.684652	1160.06	5.15	1165.21
13	41.965689	-84.684659	1165.06	5.15	1170.21
14	41.965684	-84.686543	1173.06	5.15	1178.21
15	41.964475	-84.686537	1160.06	5.15	1165.21
16	41.964473	-84.687395	1169.06	5.15	1174.21
17	41.964769	-84.687397	1171.06	5.15	1176.21
18	41.964767	-84.687979	1162.06	5.15	1167.21
19	41.965680	-84.687983	1171.06	5.15	1176.21
20	41.965676	-84.689396	1166.06	5.15	1171.21
21	41.968082	-84.689409	1148.06	5.15	1153.21
22	41.968087	-84.687829	1154.06	5.15	1159.21

**Name:** PV5  
**Footprint area:** 62.8 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982233	-84.708939	1094.05	5.15	1099.20
2	41.982236	-84.707804	1097.05	5.15	1102.20
3	41.982365	-84.707805	1097.05	5.15	1102.20
4	41.982384	-84.701542	1117.05	5.15	1122.20
5	41.978724	-84.701522	1135.06	5.15	1140.21
6	41.978706	-84.707646	1101.05	5.15	1106.20
7	41.978578	-84.707645	1102.05	5.15	1107.20
8	41.978573	-84.709169	1101.05	5.15	1106.20
9	41.981023	-84.709182	1097.05	5.15	1102.20
10	41.981024	-84.708933	1096.05	5.15	1101.20

**Name:** PV6  
**Footprint area:** 138.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982288	-84.699191	1116.05	5.15	1121.20
2	41.982309	-84.691930	1120.05	5.15	1125.20
3	41.979552	-84.691916	1124.05	5.15	1129.21
4	41.979557	-84.690170	1131.06	5.15	1136.21
5	41.978359	-84.690164	1132.06	5.15	1137.21
6	41.978352	-84.692741	1136.06	5.15	1141.21
7	41.974906	-84.692723	1143.06	5.15	1148.21
8	41.974898	-84.695384	1136.06	5.15	1141.21
9	41.973632	-84.695377	1134.06	5.15	1139.21
10	41.973628	-84.696541	1134.06	5.15	1139.21
11	41.972362	-84.696534	1134.06	5.15	1139.21
12	41.972354	-84.699138	1133.06	5.15	1138.21

**Name:** PV7  
**Footprint area:** 149.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984492	-84.689081	1125.05	5.15	1130.21
2	41.984498	-84.687141	1122.05	5.15	1127.21
3	41.983289	-84.687135	1128.06	5.15	1133.21
4	41.983308	-84.680317	1104.05	5.15	1109.20
5	41.980844	-84.680305	1122.05	5.15	1127.21
6	41.980841	-84.681220	1121.05	5.15	1126.20
7	41.978424	-84.681207	1141.06	5.15	1146.21
8	41.978420	-84.682400	1133.06	5.15	1138.21
9	41.976232	-84.682389	1143.06	5.15	1148.21
10	41.976229	-84.683470	1150.06	5.15	1155.21
11	41.975316	-84.683465	1153.06	5.15	1158.21
12	41.975313	-84.684546	1157.06	5.15	1162.21
13	41.975017	-84.684545	1157.06	5.15	1162.21
14	41.975004	-84.689310	1159.06	5.15	1164.21
15	41.982065	-84.689347	1151.06	5.15	1156.21
16	41.982066	-84.689068	1148.06	5.15	1153.21

**Name:** PV8  
**Footprint area:** 36.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984894	-84.708921	1093.05	5.15	1098.20
2	41.984896	-84.708238	1094.05	5.15	1099.20
3	41.985192	-84.708240	1094.05	5.15	1099.20
4	41.985198	-84.706217	1100.05	5.15	1105.20
5	41.983989	-84.706211	1100.05	5.15	1105.20
6	41.983994	-84.704641	1100.05	5.15	1105.20
7	41.985203	-84.704647	1102.05	5.15	1107.20
8	41.985215	-84.700611	1115.05	5.15	1120.20
9	41.984611	-84.700608	1114.05	5.15	1119.20
10	41.984611	-84.699842	1119.05	5.15	1124.20
11	41.983416	-84.699836	1110.05	5.15	1115.20
12	41.983413	-84.700602	1108.05	5.15	1113.20
13	41.983104	-84.700600	1105.05	5.15	1110.20
14	41.983079	-84.708911	1094.05	5.15	1099.20

**Name:** PV9  
**Footprint area:** 8.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985206	-84.699067	1128.06	5.15	1133.21
2	41.985210	-84.697460	1143.06	5.15	1148.21
3	41.984002	-84.697453	1129.06	5.15	1134.21
4	41.984003	-84.696871	1132.06	5.15	1137.21
5	41.983101	-84.696867	1115.05	5.15	1120.20
6	41.983095	-84.699056	1109.05	5.15	1114.20

### Route Receptor(s)

**Name:** Baker St  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982595	-84.675276	1110.87	6.00	1116.87
2	41.981678	-84.676059	1136.25	6.00	1142.25

**Name:** Baxter and Highland  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.983885	-84.678320	1116.05	6.00	1122.05
2	41.982952	-84.678910	1121.87	6.00	1127.87
3	41.982816	-84.678857	1122.26	6.00	1128.26
4	41.981636	-84.676024	1136.25	6.00	1142.25
5	41.981452	-84.676014	1137.22	6.00	1143.22
6	41.981117	-84.676604	1141.59	6.00	1147.59
7	41.980862	-84.676561	1138.96	6.00	1144.96
8	41.980160	-84.674683	1136.11	6.00	1142.11
9	41.979642	-84.673782	1123.98	6.00	1129.98
10	41.977913	-84.672905	1109.82	6.00	1115.82

**Name:** Bean Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.955879	-84.729038	1044.16	6.00	1050.17
2	41.956246	-84.709336	1134.38	6.00	1140.38
3	41.956262	-84.689831	1140.20	6.00	1146.20
4	41.956390	-84.670587	1096.54	6.00	1102.54

**Name:** Cronk Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.977130	-84.728899	1078.75	6.00	1084.75
2	41.964798	-84.728791	1090.12	6.00	1096.13
3	41.955799	-84.728834	1044.93	6.00	1050.93
4	41.952416	-84.728856	1114.49	6.00	1120.49

**Name:** Deal Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.974602	-84.684784	1154.83	6.00	1160.83
2	41.972480	-84.684720	1160.33	6.00	1166.33
3	41.971292	-84.682960	1153.32	6.00	1159.32
4	41.970789	-84.682821	1151.99	6.00	1157.99
5	41.967590	-84.682756	1163.50	6.00	1169.50

**Name:** Driveway  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.995767	-84.685119	1075.68	6.00	1081.68
2	41.995536	-84.684958	1069.15	6.00	1075.15
3	41.995026	-84.684808	1072.43	6.00	1078.43
4	41.993710	-84.684217	1076.47	6.00	1082.47
5	41.993272	-84.683692	1076.71	6.00	1082.71
6	41.992977	-84.683069	1082.67	6.00	1088.67
7	41.992674	-84.682512	1083.81	6.00	1089.81
8	41.992602	-84.681932	1087.25	6.00	1093.25
9	41.992458	-84.681868	1083.80	6.00	1089.80
10	41.990449	-84.681879	1077.65	6.00	1083.65
11	41.988368	-84.681825	1086.81	6.00	1092.81
12	41.987785	-84.681739	1093.08	6.00	1099.08
13	41.986932	-84.681921	1095.86	6.00	1101.86
14	41.986485	-84.681836	1096.56	6.00	1102.56
15	41.985489	-84.681921	1101.26	6.00	1107.26

**Name:** Genesee Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000030	-84.728922	1067.79	6.00	1073.79
2	41.999982	-84.709482	1103.57	6.00	1109.57
3	42.000014	-84.694728	1118.53	6.00	1124.53
4	42.000022	-84.691563	1117.63	6.00	1123.63
5	41.999982	-84.690007	1087.54	6.00	1093.54
6	41.999926	-84.689600	1076.43	6.00	1082.43
7	41.999671	-84.688430	1058.92	6.00	1064.92
8	41.999615	-84.687958	1054.68	6.00	1060.69
9	41.999599	-84.687336	1050.28	6.00	1056.28
10	41.999767	-84.685684	1044.03	6.00	1050.03
11	42.000006	-84.684278	1057.00	6.00	1063.00
12	41.999998	-84.684107	1059.16	6.00	1065.16
13	41.999464	-84.683034	1064.98	6.00	1070.98
14	41.995070	-84.669708	1092.21	6.00	1098.21

**Name:** Glasgow Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985527	-84.719331	1087.94	6.00	1093.94
2	41.977733	-84.719052	1103.71	6.00	1109.71
3	41.973266	-84.719030	1111.41	6.00	1117.41
4	41.966661	-84.719073	1113.17	6.00	1119.17

**Name:** Industrial Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968404	-84.682780	1160.58	6.00	1166.58
2	41.968492	-84.670957	1089.74	6.00	1095.74

**Name:** Jonesville Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985481	-84.728891	1100.67	6.00	1106.67
2	41.985513	-84.709429	1093.35	6.00	1099.35
3	41.985513	-84.699494	1123.99	6.00	1129.99
4	41.985481	-84.689924	1122.16	6.00	1128.16
5	41.985481	-84.681878	1101.02	6.00	1107.02
6	41.985497	-84.673295	1093.95	6.00	1099.95

**Name:** Murphy St  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985519	-84.686428	1115.99	6.00	1121.99
2	41.985288	-84.686342	1116.02	6.00	1122.02
3	41.985160	-84.686139	1117.25	6.00	1123.25
4	41.985176	-84.685731	1116.85	6.00	1122.85
5	41.985145	-84.683542	1114.66	6.00	1120.66
6	41.984841	-84.680860	1109.42	6.00	1115.42
7	41.984578	-84.679894	1100.91	6.00	1106.91
8	41.982760	-84.675614	1114.10	6.00	1120.10
9	41.981875	-84.673629	1101.83	6.00	1107.83
10	41.981588	-84.673200	1100.47	6.00	1106.47
11	41.979833	-84.671011	1093.58	6.00	1099.58

**Name:** N Bunn Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000012	-84.690061	1088.52	6.00	1094.52
2	41.985404	-84.689932	1121.82	6.00	1127.82
3	41.973156	-84.689868	1161.37	6.00	1167.37
4	41.956132	-84.689889	1139.26	6.00	1145.26
5	41.948026	-84.689954	1140.62	6.00	1146.62

**Name:** Olde Street  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981436	-84.667386	1069.48	6.00	1075.48
2	41.979649	-84.665884	1068.73	6.00	1074.73
3	41.978325	-84.665841	1074.84	6.00	1080.84
4	41.977591	-84.666399	1077.45	6.00	1083.45
5	41.974800	-84.669574	1075.40	6.00	1081.40
6	41.973699	-84.670583	1073.92	6.00	1079.92
7	41.971976	-84.671505	1084.63	6.00	1090.63
8	41.969854	-84.671248	1091.59	6.00	1097.59
9	41.967126	-84.670604	1089.11	6.00	1095.11
10	41.963265	-84.669553	1112.18	6.00	1118.18
11	41.961111	-84.668630	1121.69	6.00	1127.69
12	41.957090	-84.665690	1119.18	6.00	1125.18

**Name:** Pine Dr  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.979915	-84.678553	1141.57	6.00	1147.57
2	41.979493	-84.679240	1138.15	6.00	1144.15
3	41.977076	-84.679251	1144.11	6.00	1150.11
4	41.976541	-84.678811	1142.07	6.00	1148.07

**Name:** Rainey Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.014437	-84.709545	1058.14	6.00	1064.14
2	41.999912	-84.709480	1103.34	6.00	1109.34
3	41.985479	-84.709416	1093.47	6.00	1099.47

**Name:** Sand Lake Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968772	-84.709415	1116.45	6.00	1122.45
2	41.956072	-84.709330	1136.41	6.00	1142.41

**Name:** Seneca  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981662	-84.673302	1100.66	6.00	1106.66
2	41.981183	-84.675072	1117.83	6.00	1123.83
3	41.980449	-84.675673	1128.01	6.00	1134.01

**Name:** W Chicago Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982786	-84.664363	1050.18	6.00	1056.18
2	41.977299	-84.677173	1141.86	6.00	1147.86
3	41.976071	-84.680134	1144.50	6.00	1150.50
4	41.974491	-84.685498	1156.34	6.00	1162.34
5	41.973183	-84.690047	1161.12	6.00	1167.12
6	41.970423	-84.700068	1123.07	6.00	1129.07
7	41.968190	-84.711827	1114.52	6.00	1120.52
8	41.966164	-84.721955	1115.01	6.00	1121.01
9	41.963020	-84.738027	1042.73	6.00	1048.73
10	41.962111	-84.742790	1092.27	6.00	1098.27

**Name:** Wise Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985561	-84.699581	1122.65	6.00	1128.65
2	41.970566	-84.699560	1122.83	6.00	1128.83
3	41.956255	-84.699560	1139.97	6.00	1145.97

## Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	41.996381	-84.708839	1095.16	6.00	1101.16
OP 2	41.993083	-84.706000	1100.56	6.00	1106.56
OP 3	41.985769	-84.707503	1103.48	6.00	1109.48
OP 4	41.985786	-84.706686	1102.48	6.00	1108.48
OP 5	41.985781	-84.705800	1103.62	6.00	1109.62
OP 6	41.961411	-84.699961	1140.19	6.00	1146.19
OP 7	41.956622	-84.699919	1145.91	6.00	1151.91
OP 8	41.973125	-84.692267	1152.32	6.00	1158.32
OP 9	41.973217	-84.691575	1157.04	6.00	1163.04
OP 10	41.973628	-84.690294	1159.89	6.00	1165.89
OP 11	41.974828	-84.690369	1157.55	6.00	1163.55
OP 12	41.975081	-84.690142	1155.53	6.00	1161.53
OP 13	41.975650	-84.690122	1148.43	6.00	1154.43
OP 14	41.981833	-84.690272	1145.80	6.00	1151.80
OP 15	41.974111	-84.685268	1153.07	6.00	1159.07
OP 16	41.975692	-84.680325	1147.00	6.00	1153.00
OP 17	41.971564	-84.696972	1133.79	6.00	1139.79
OP 18	41.971939	-84.696078	1133.47	6.00	1139.47
OP 19	41.984947	-84.696178	1143.22	6.00	1149.22
OP 20	41.985186	-84.696983	1146.34	6.00	1152.34
OP 21	41.985231	-84.679869	1095.91	6.00	1101.91
OP 22	41.986028	-84.682439	1112.99	6.00	1118.99
OP 23	41.994503	-84.689772	1115.41	6.00	1121.41
OP 24	41.966300	-84.690264	1157.80	6.00	1163.80
OP 25	41.999553	-84.708722	1109.26	6.00	1115.26
OP 26	41.967781	-84.682785	1161.48	6.00	1167.48
OP 27	41.967829	-84.679630	1168.46	6.00	1174.46
OP 28	41.968403	-84.682870	1159.58	6.00	1165.58
OP 29	41.969328	-84.682806	1157.08	6.00	1163.08
OP 30	41.968451	-84.681583	1167.03	6.00	1173.03

## Summary of PV Glare Analysis

*PV configuration and total predicted glare*

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV1	SA tracking	SA tracking	0	0	1,470,000.0	
PV10	SA tracking	SA tracking	0	0	1,533,000.0	
PV11	SA tracking	SA tracking	0	0	1,438,000.0	
PV12	SA tracking	SA tracking	0	0	1,511,000.0	
PV13	SA tracking	SA tracking	0	0	1,507,000.0	
PV14	SA tracking	SA tracking	0	0	1,573,000.0	
PV2	SA tracking	SA tracking	0	0	1,501,000.0	
PV3	SA tracking	SA tracking	0	0	1,474,000.0	
PV4	SA tracking	SA tracking	319,734	0	1,608,000.0	-
PV5	SA tracking	SA tracking	0	0	1,443,000.0	
PV6	SA tracking	SA tracking	0	0	1,448,000.0	
PV7	SA tracking	SA tracking	0	0	1,466,000.0	
PV8	SA tracking	SA tracking	0	0	1,547,000.0	
PV9	SA tracking	SA tracking	0	0	1,524,000.0	

### Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pv4 (green)	17330	17389	21772	23667	26737	26987	27343	25363	22022	20069	17240	16722
pv4 (yellow)	0	0	0	0	0	0	0	0	0	0	0	0

## PV & Receptor Analysis Results

*Results for each PV array and receptor*

**PV1** no glare found

Predicted energy output: 1,470,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

**PV10** no glare found

Predicted energy output: 1,533,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV11** no glare found

Predicted energy output: 1,438,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV12** no glare found

Predicted energy output: 1,511,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV13** no glare found

Predicted energy output: 1,507,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

**PV14** no glare found

Predicted energy output: 1,573,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV2** no glare found

Predicted energy output: 1,501,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV3** no glare found

Predicted energy output: 1,474,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

**PV4** low potential for temporary after-image

Predicted energy output: 1,608,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	115792	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	203942	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

**PV4 - OP Receptor (OP 1)**

*No glare found*

**PV4 - OP Receptor (OP 2)**

*No glare found*

**PV4 - OP Receptor (OP 3)**

*No glare found*

**PV4 - OP Receptor (OP 4)**

*No glare found*

**PV4 - OP Receptor (OP 5)**

*No glare found*

**PV4 - OP Receptor (OP 6)**

*No glare found*

**PV4 - OP Receptor (OP 7)**

*No glare found*

**PV4 - OP Receptor (OP 8)**

*No glare found*

**PV4 - OP Receptor (OP 9)**

*No glare found*

**PV4 - OP Receptor (OP 10)**

*No glare found*

**PV4 - OP Receptor (OP 11)**

*No glare found*

**PV4 - OP Receptor (OP 12)**

*No glare found*

**PV4 - OP Receptor (OP 13)**

*No glare found*

**PV4 - OP Receptor (OP 14)**

*No glare found*

**PV4 - OP Receptor (OP 15)**

*No glare found*

**PV4 - OP Receptor (OP 16)**

*No glare found*

**PV4 - OP Receptor (OP 17)**

*No glare found*

**PV4 - OP Receptor (OP 18)**

*No glare found*

**PV4 - OP Receptor (OP 19)**

*No glare found*

**PV4 - OP Receptor (OP 20)**

*No glare found*

**PV4 - OP Receptor (OP 21)**

*No glare found*

**PV4 - OP Receptor (OP 22)**

*No glare found*

**PV4 - OP Receptor (OP 23)**

*No glare found*

**PV4 - OP Receptor (OP 24)**

*No glare found*

**PV4 - OP Receptor (OP 25)**

*No glare found*

**PV4 - OP Receptor (OP 26)**

*No glare found*

**PV4 - OP Receptor (OP 27)**

*No glare found*

**PV4 - OP Receptor (OP 28)**

*No glare found*

**PV4 - OP Receptor (OP 29)**

*No glare found*

**PV4 - OP Receptor (OP 30)**

*No glare found*

**PV4 - Route Receptor (Baker St)**

*No glare found*

**PV4 - Route Receptor (Baxter and Highland)**

*No glare found*

**PV4 - Route Receptor (Bean Rd)**

*No glare found*

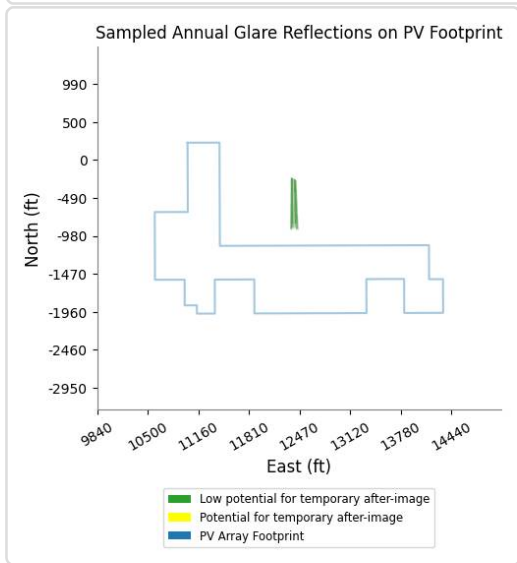
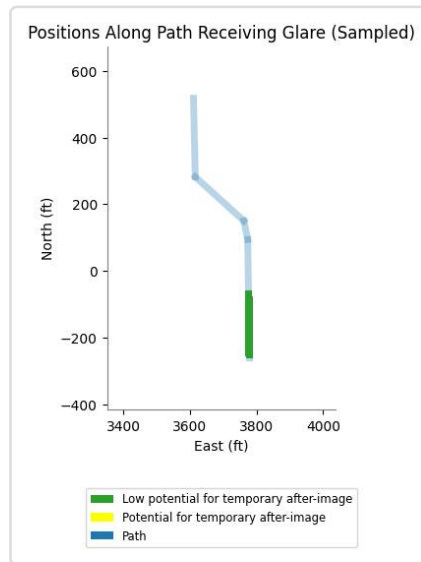
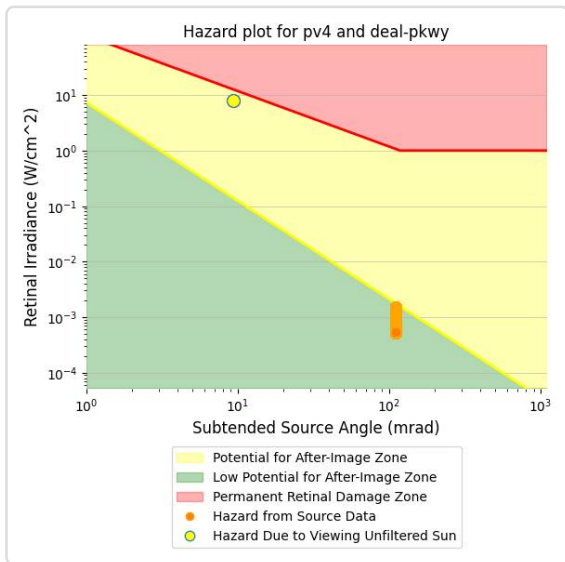
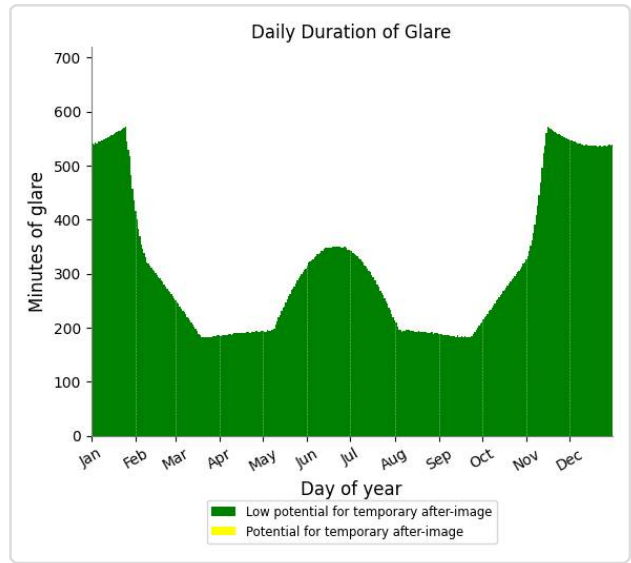
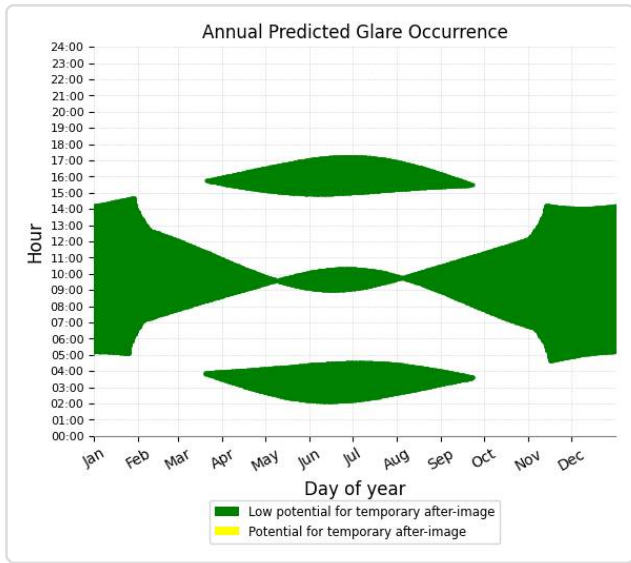
**PV4 - Route Receptor (Cronk Rd)**

*No glare found*

### PV4 - Route Receptor (Deal Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 115,792 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Driveway)

No glare found

### PV4 - Route Receptor (Genesse Rd)

No glare found

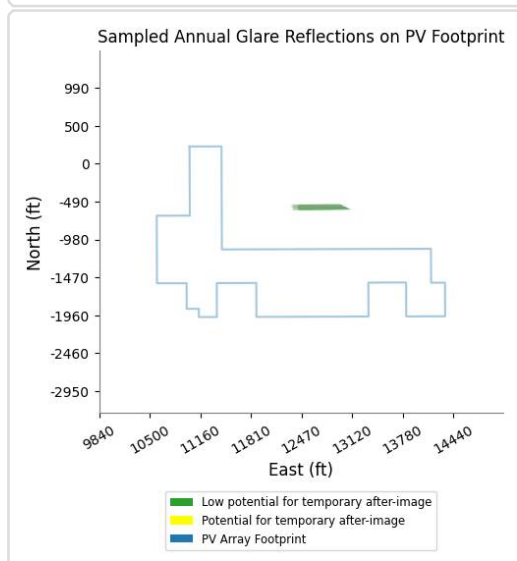
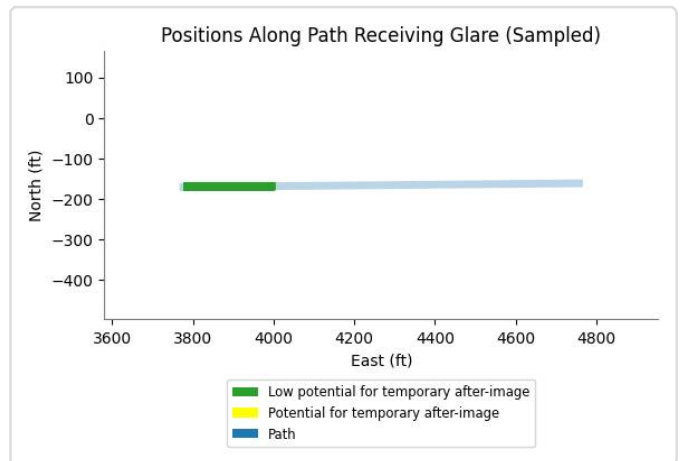
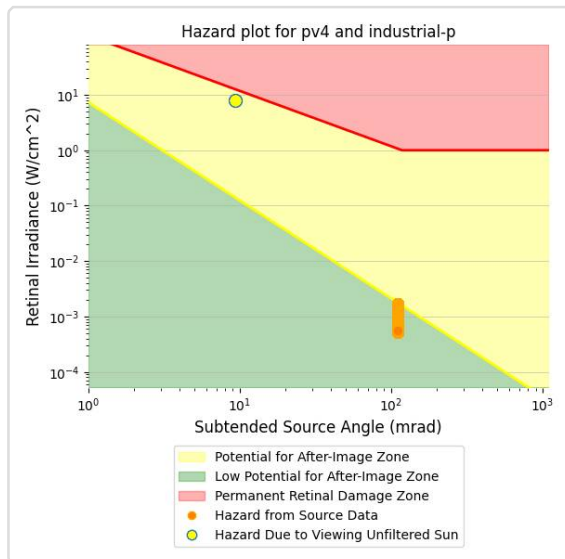
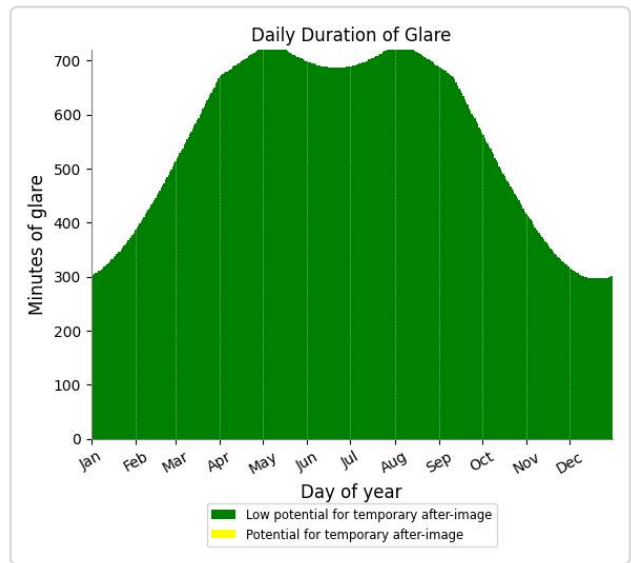
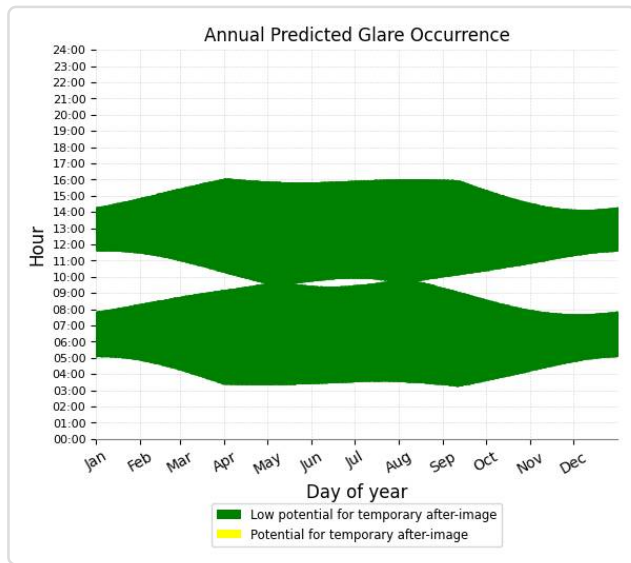
### PV4 - Route Receptor (Glasgow Rd)

No glare found

### PV4 - Route Receptor (Industrial Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 203,942 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Jonesville Rd)

No glare found

**PV4 - Route Receptor (Murphy St)**

*No glare found*

**PV4 - Route Receptor (N Bunn Rd)**

*No glare found*

**PV4 - Route Receptor (Olde Street)**

*No glare found*

**PV4 - Route Receptor (Pine Dr)**

*No glare found*

**PV4 - Route Receptor (Rainey Rd)**

*No glare found*

**PV4 - Route Receptor (Sand Lake Rd)**

*No glare found*

**PV4 - Route Receptor (Seneca)**

*No glare found*

**PV4 - Route Receptor (W Chicago Rd)**

*No glare found*

**PV4 - Route Receptor (Wise Rd)**

*No glare found*

**PV5** no glare found

Predicted energy output: 1,443,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV6** no glare found

Predicted energy output: 1,448,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

**PV7** no glare found

Predicted energy output: 1,466,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV8** no glare found

Predicted energy output: 1,547,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV9** no glare found

Predicted energy output: 1,524,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

## Assumptions

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- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- 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.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.



# Ranger Power

## Ranger - Heartwood - 6ft at OPs - Without Coating

Created May 5, 2022  
 Updated May 5, 2022  
 Time-step 1 minute  
 Timezone offset UTC-8  
 Site ID 68667.12083

Project type Advanced  
 Project status: active  
 Category 10 MW to 100 MW

### Misc. Analysis Settings

DNI: varies (1,000.0 W/m<sup>2</sup> peak)  
 Ocular transmission coefficient: 0.5  
 Pupil diameter: 0.002 m  
 Eye focal length: 0.017 m  
 Sun subtended angle: 9.3 mrad

#### Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

### Summary of Results Glare with potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV1	SA tracking	SA tracking	0	0	1,470,000.0
PV10	SA tracking	SA tracking	0	0	1,533,000.0
PV11	SA tracking	SA tracking	0	0	1,438,000.0
PV12	SA tracking	SA tracking	0	0	1,511,000.0
PV13	SA tracking	SA tracking	0	0	1,507,000.0
PV14	SA tracking	SA tracking	0	0	1,573,000.0
PV2	SA tracking	SA tracking	0	0	1,501,000.0
PV3	SA tracking	SA tracking	0	0	1,474,000.0
PV4	SA tracking	SA tracking	241,367	74,794	1,608,000.0
PV5	SA tracking	SA tracking	0	0	1,443,000.0
PV6	SA tracking	SA tracking	0	0	1,448,000.0
PV7	SA tracking	SA tracking	0	0	1,466,000.0
PV8	SA tracking	SA tracking	0	0	1,547,000.0
PV9	SA tracking	SA tracking	0	0	1,524,000.0

## Component Data

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### PV Array(s)

Total PV footprint area: 1,015.2 acres

**Name:** PV1  
**Footprint area:** 35.2 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.969931	-84.728342	1119.05	5.15	1124.20
2	41.969933	-84.727760	1115.05	5.15	1120.20
3	41.970229	-84.727762	1118.05	5.15	1123.20
4	41.970237	-84.725157	1114.05	5.15	1119.20
5	41.967597	-84.725150	1119.05	5.15	1124.20
6	41.967604	-84.722767	1115.05	5.15	1120.20
7	41.968156	-84.722770	1111.05	5.15	1116.20
8	41.968166	-84.719584	1112.05	5.15	1117.20
9	41.966968	-84.719577	1115.05	5.15	1120.20
10	41.966958	-84.722819	1117.05	5.15	1122.20
11	41.966406	-84.722816	1116.05	5.15	1121.20
12	41.966396	-84.726002	1124.05	5.15	1129.21
13	41.967770	-84.726010	1126.05	5.15	1131.21
14	41.967763	-84.728329	1112.05	5.15	1117.20

**Name:** PV10  
**Footprint area:** 84.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.992533	-84.707345	1088.05	5.15	1093.20
2	41.992545	-84.703326	1111.05	5.15	1116.20
3	41.992249	-84.703325	1114.05	5.15	1119.20
4	41.992252	-84.702576	1110.05	5.15	1115.20
5	41.991281	-84.702571	1120.05	5.15	1125.20
6	41.991288	-84.700326	1105.05	5.15	1110.20
7	41.990992	-84.700324	1109.05	5.15	1114.20
8	41.990993	-84.699992	1108.05	5.15	1113.20
9	41.988882	-84.699981	1128.06	5.15	1133.21
10	41.988880	-84.700729	1121.05	5.15	1126.20
11	41.985788	-84.700713	1111.05	5.15	1116.20
12	41.985778	-84.704232	1103.05	5.15	1108.20
13	41.986975	-84.704238	1097.05	5.15	1102.20
14	41.986977	-84.703656	1095.05	5.15	1100.20
15	41.987662	-84.703660	1103.05	5.15	1108.20
16	41.987654	-84.706570	1091.05	5.15	1096.20
17	41.988863	-84.706577	1097.05	5.15	1102.20
18	41.988859	-84.707741	1088.05	5.15	1093.20
19	41.991266	-84.707754	1088.05	5.15	1093.20
20	41.991267	-84.707338	1096.05	5.15	1101.20

**Name:** PV11  
**Footprint area:** 68.6 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.993804	-84.689611	1114.05	5.15	1119.20
2	41.993813	-84.686590	1086.05	5.15	1091.20
3	41.992546	-84.686584	1104.05	5.15	1109.20
4	41.992553	-84.684089	1071.05	5.15	1076.20
5	41.991345	-84.684083	1086.05	5.15	1091.20
6	41.991347	-84.683335	1074.05	5.15	1079.20
7	41.990080	-84.683328	1095.05	5.15	1100.20
8	41.990083	-84.682497	1079.05	5.15	1084.20
9	41.988885	-84.682491	1090.05	5.15	1095.20
10	41.988877	-84.685318	1114.05	5.15	1119.20
11	41.987668	-84.685312	1115.05	5.15	1120.20
12	41.987659	-84.688332	1116.05	5.15	1121.20
13	41.988868	-84.688339	1111.05	5.15	1116.20
14	41.988865	-84.689586	1129.06	5.15	1134.21

**Name:** PV12  
**Footprint area:** 135.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999738	-84.698112	1095.05	5.15	1100.20
2	41.999748	-84.694508	1121.05	5.15	1126.20
3	41.998482	-84.694502	1118.05	5.15	1123.20
4	41.998484	-84.693670	1125.05	5.15	1130.21
5	41.998188	-84.693669	1126.05	5.15	1131.21
6	41.998189	-84.693280	1130.06	5.15	1135.21
7	41.998485	-84.693282	1130.06	5.15	1135.21
8	41.998488	-84.692284	1136.06	5.15	1141.21
9	41.999755	-84.692290	1130.06	5.15	1135.21
10	41.999760	-84.690267	1102.05	5.15	1107.20
11	41.995175	-84.690243	1104.05	5.15	1109.20
12	41.995171	-84.691491	1125.05	5.15	1130.21
13	41.993905	-84.691484	1137.06	5.15	1142.21
14	41.993898	-84.693646	1133.06	5.15	1138.21
15	41.993602	-84.693645	1129.06	5.15	1134.21
16	41.993602	-84.693811	1129.06	5.15	1134.21
17	41.989918	-84.693792	1109.05	5.15	1114.20
18	41.989916	-84.694318	1110.05	5.15	1115.20
19	41.990212	-84.694320	1109.05	5.15	1114.20
20	41.990210	-84.695068	1108.05	5.15	1113.20
21	41.991180	-84.695073	1102.05	5.15	1107.20
22	41.991179	-84.695738	1103.05	5.15	1108.20
23	41.991475	-84.695740	1100.05	5.15	1105.20
24	41.991473	-84.696128	1101.05	5.15	1106.20
25	41.991177	-84.696127	1105.05	5.15	1110.20
26	41.991173	-84.697651	1104.05	5.15	1109.20
27	41.991469	-84.697652	1103.05	5.15	1108.20
28	41.991467	-84.698401	1104.05	5.15	1109.20
29	41.992380	-84.698406	1105.05	5.15	1110.20
30	41.992377	-84.699403	1101.05	5.15	1106.20
31	41.997258	-84.699429	1093.05	5.15	1098.20
32	41.997265	-84.697267	1098.05	5.15	1103.20
33	41.998542	-84.697274	1093.05	5.15	1098.20
34	41.998540	-84.698105	1090.05	5.15	1095.20

**Name:** PV13  
**Footprint area:** 27.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



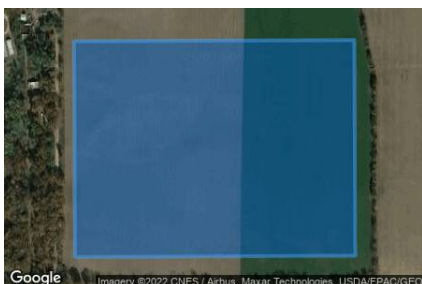
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.004972	-84.699577	1110.05	5.15	1115.20
2	42.004978	-84.697636	1108.05	5.15	1113.20
3	42.003712	-84.697630	1115.05	5.15	1120.20
4	42.003712	-84.697547	1115.05	5.15	1120.20
5	42.003477	-84.697545	1114.05	5.15	1119.20
6	42.003483	-84.695632	1106.05	5.15	1111.20
7	42.002285	-84.695626	1118.05	5.15	1123.20
8	42.002284	-84.695959	1115.05	5.15	1120.20
9	42.001075	-84.695952	1113.05	5.15	1118.20
10	42.001073	-84.696645	1108.05	5.15	1113.20
11	42.001369	-84.696647	1108.05	5.15	1113.20
12	42.001365	-84.698033	1103.05	5.15	1108.20
13	42.001304	-84.698033	1103.05	5.15	1108.20
14	42.001302	-84.698532	1099.05	5.15	1104.20
15	42.000389	-84.698527	1097.05	5.15	1102.20
16	42.000386	-84.699552	1095.05	5.15	1100.20

**Name:** PV14  
**Footprint area:** 36.5 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999430	-84.708031	1108.05	5.15	1113.20
2	41.999433	-84.707172	1114.05	5.15	1119.20
3	41.998224	-84.707166	1096.05	5.15	1101.20
4	41.998228	-84.705696	1108.05	5.15	1113.20
5	41.999547	-84.705703	1116.05	5.15	1121.20
6	41.999561	-84.700769	1095.05	5.15	1100.20
7	41.997045	-84.700756	1096.05	5.15	1101.20
8	41.997023	-84.708018	1096.05	5.15	1101.20

**Name:** PV2  
**Footprint area:** 53.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.963734	-84.728441	1091.05	5.15	1096.20
2	41.963754	-84.722013	1128.06	5.15	1133.21
3	41.960081	-84.721993	1124.05	5.15	1129.21
4	41.960061	-84.728420	1082.05	5.15	1087.20

**Name:** PV3  
**Footprint area:** 104.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



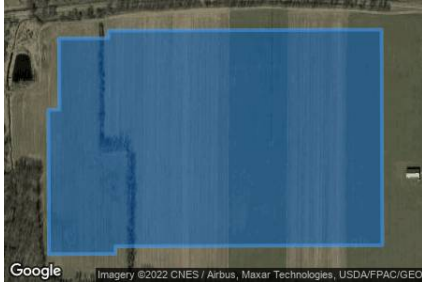
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970361	-84.699025	1124.05	5.15	1129.21
2	41.970373	-84.695008	1131.06	5.15	1136.21
3	41.959416	-84.694951	1138.06	5.15	1143.21
4	41.959409	-84.697361	1145.06	5.15	1150.21
5	41.956838	-84.697348	1130.06	5.15	1135.21
6	41.956833	-84.699037	1143.06	5.15	1148.21
7	41.961405	-84.699061	1142.06	5.15	1147.21
8	41.961409	-84.697897	1143.06	5.15	1148.21
9	41.963374	-84.697908	1138.06	5.15	1143.21
10	41.963371	-84.699155	1135.06	5.15	1140.21
11	41.964272	-84.699159	1128.06	5.15	1133.21
12	41.964274	-84.698744	1134.06	5.15	1139.21
13	41.965493	-84.698750	1127.05	5.15	1132.21
14	41.965492	-84.699166	1124.05	5.15	1129.21
15	41.969151	-84.699185	1125.05	5.15	1130.21
16	41.969152	-84.699019	1125.05	5.15	1130.21

**Name:** PV4  
**Footprint area:** 72.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970548	-84.687842	1150.06	5.15	1155.21
2	41.970553	-84.686319	1158.06	5.15	1163.21
3	41.966882	-84.686300	1167.06	5.15	1172.21
4	41.966910	-84.676325	1104.05	5.15	1109.20
5	41.965701	-84.676319	1107.05	5.15	1112.20
6	41.965703	-84.675654	1104.05	5.15	1109.20
7	41.964505	-84.675648	1105.05	5.15	1110.20
8	41.964500	-84.677504	1110.05	5.15	1115.20
9	41.965709	-84.677510	1109.05	5.15	1114.20
10	41.965704	-84.679312	1127.05	5.15	1132.21
11	41.964495	-84.679306	1110.05	5.15	1115.20
12	41.964480	-84.684652	1160.06	5.15	1165.21
13	41.965689	-84.684659	1165.06	5.15	1170.21
14	41.965684	-84.686543	1173.06	5.15	1178.21
15	41.964475	-84.686537	1160.06	5.15	1165.21
16	41.964473	-84.687395	1169.06	5.15	1174.21
17	41.964769	-84.687397	1171.06	5.15	1176.21
18	41.964767	-84.687979	1162.06	5.15	1167.21
19	41.965680	-84.687983	1171.06	5.15	1176.21
20	41.965676	-84.689396	1166.06	5.15	1171.21
21	41.968082	-84.689409	1148.06	5.15	1153.21
22	41.968087	-84.687829	1154.06	5.15	1159.21

**Name:** PV5  
**Footprint area:** 62.8 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982233	-84.708939	1094.05	5.15	1099.20
2	41.982236	-84.707804	1097.05	5.15	1102.20
3	41.982365	-84.707805	1097.05	5.15	1102.20
4	41.982384	-84.701542	1117.05	5.15	1122.20
5	41.978724	-84.701522	1135.06	5.15	1140.21
6	41.978706	-84.707646	1101.05	5.15	1106.20
7	41.978578	-84.707645	1102.05	5.15	1107.20
8	41.978573	-84.709169	1101.05	5.15	1106.20
9	41.981023	-84.709182	1097.05	5.15	1102.20
10	41.981024	-84.708933	1096.05	5.15	1101.20

**Name:** PV6  
**Footprint area:** 138.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982288	-84.699191	1116.05	5.15	1121.20
2	41.982309	-84.691930	1120.05	5.15	1125.20
3	41.979552	-84.691916	1124.05	5.15	1129.21
4	41.979557	-84.690170	1131.06	5.15	1136.21
5	41.978359	-84.690164	1132.06	5.15	1137.21
6	41.978352	-84.692741	1136.06	5.15	1141.21
7	41.974906	-84.692723	1143.06	5.15	1148.21
8	41.974898	-84.695384	1136.06	5.15	1141.21
9	41.973632	-84.695377	1134.06	5.15	1139.21
10	41.973628	-84.696541	1134.06	5.15	1139.21
11	41.972362	-84.696534	1134.06	5.15	1139.21
12	41.972354	-84.699138	1133.06	5.15	1138.21

**Name:** PV7  
**Footprint area:** 149.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984492	-84.689081	1125.05	5.15	1130.21
2	41.984498	-84.687141	1122.05	5.15	1127.21
3	41.983289	-84.687135	1128.06	5.15	1133.21
4	41.983308	-84.680317	1104.05	5.15	1109.20
5	41.980844	-84.680305	1122.05	5.15	1127.21
6	41.980841	-84.681220	1121.05	5.15	1126.20
7	41.978424	-84.681207	1141.06	5.15	1146.21
8	41.978420	-84.682400	1133.06	5.15	1138.21
9	41.976232	-84.682389	1143.06	5.15	1148.21
10	41.976229	-84.683470	1150.06	5.15	1155.21
11	41.975316	-84.683465	1153.06	5.15	1158.21
12	41.975313	-84.684546	1157.06	5.15	1162.21
13	41.975017	-84.684545	1157.06	5.15	1162.21
14	41.975004	-84.689310	1159.06	5.15	1164.21
15	41.982065	-84.689347	1151.06	5.15	1156.21
16	41.982066	-84.689068	1148.06	5.15	1153.21

**Name:** PV8  
**Footprint area:** 36.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984894	-84.708921	1093.05	5.15	1098.20
2	41.984896	-84.708238	1094.05	5.15	1099.20
3	41.985192	-84.708240	1094.05	5.15	1099.20
4	41.985198	-84.706217	1100.05	5.15	1105.20
5	41.983989	-84.706211	1100.05	5.15	1105.20
6	41.983994	-84.704641	1100.05	5.15	1105.20
7	41.985203	-84.704647	1102.05	5.15	1107.20
8	41.985215	-84.700611	1115.05	5.15	1120.20
9	41.984611	-84.700608	1114.05	5.15	1119.20
10	41.984611	-84.699842	1119.05	5.15	1124.20
11	41.983416	-84.699836	1110.05	5.15	1115.20
12	41.983413	-84.700602	1108.05	5.15	1113.20
13	41.983104	-84.700600	1105.05	5.15	1110.20
14	41.983079	-84.708911	1094.05	5.15	1099.20

**Name:** PV9  
**Footprint area:** 8.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985206	-84.699067	1128.06	5.15	1133.21
2	41.985210	-84.697460	1143.06	5.15	1148.21
3	41.984002	-84.697453	1129.06	5.15	1134.21
4	41.984003	-84.696871	1132.06	5.15	1137.21
5	41.983101	-84.696867	1115.05	5.15	1120.20
6	41.983095	-84.699056	1109.05	5.15	1114.20

Route Receptor(s)

Name: Baker St  
Route type Two-way  
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982595	-84.675276	1110.87	6.00	1116.87
2	41.981678	-84.676059	1136.25	6.00	1142.25

Name: Baxter and Highland  
Route type Two-way  
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.983885	-84.678320	1116.05	6.00	1122.05
2	41.982952	-84.678910	1121.87	6.00	1127.87
3	41.982816	-84.678857	1122.26	6.00	1128.26
4	41.981636	-84.676024	1136.25	6.00	1142.25
5	41.981452	-84.676014	1137.22	6.00	1143.22
6	41.981117	-84.676604	1141.59	6.00	1147.59
7	41.980862	-84.676561	1138.96	6.00	1144.96
8	41.980160	-84.674683	1136.11	6.00	1142.11
9	41.979642	-84.673782	1123.98	6.00	1129.98
10	41.977913	-84.672905	1109.82	6.00	1115.82

Name: Bean Rd  
Route type Two-way  
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.955879	-84.729038	1044.16	6.00	1050.17
2	41.956246	-84.709336	1134.38	6.00	1140.38
3	41.956262	-84.689831	1140.20	6.00	1146.20
4	41.956390	-84.670587	1096.54	6.00	1102.54

Name: Cronk Rd  
Route type Two-way  
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.977130	-84.728899	1078.75	6.00	1084.75
2	41.964798	-84.728791	1090.12	6.00	1096.13
3	41.955799	-84.728834	1044.93	6.00	1050.93
4	41.952416	-84.728856	1114.49	6.00	1120.49

**Name:** Deal Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.974602	-84.684784	1154.83	6.00	1160.83
2	41.972480	-84.684720	1160.33	6.00	1166.33
3	41.971292	-84.682960	1153.32	6.00	1159.32
4	41.970789	-84.682821	1151.99	6.00	1157.99
5	41.967590	-84.682756	1163.50	6.00	1169.50

**Name:** Driveway  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.995767	-84.685119	1075.68	6.00	1081.68
2	41.995536	-84.684958	1069.15	6.00	1075.15
3	41.995026	-84.684808	1072.43	6.00	1078.43
4	41.993710	-84.684217	1076.47	6.00	1082.47
5	41.993272	-84.683692	1076.71	6.00	1082.71
6	41.992977	-84.683069	1082.67	6.00	1088.67
7	41.992674	-84.682512	1083.81	6.00	1089.81
8	41.992602	-84.681932	1087.25	6.00	1093.25
9	41.992458	-84.681868	1083.80	6.00	1089.80
10	41.990449	-84.681879	1077.65	6.00	1083.65
11	41.988368	-84.681825	1086.81	6.00	1092.81
12	41.987785	-84.681739	1093.08	6.00	1099.08
13	41.986932	-84.681921	1095.86	6.00	1101.86
14	41.986485	-84.681836	1096.56	6.00	1102.56
15	41.985489	-84.681921	1101.26	6.00	1107.26

**Name:** Genesee Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000030	-84.728922	1067.79	6.00	1073.79
2	41.999982	-84.709482	1103.57	6.00	1109.57
3	42.000014	-84.694728	1118.53	6.00	1124.53
4	42.000022	-84.691563	1117.63	6.00	1123.63
5	41.999982	-84.690007	1087.54	6.00	1093.54
6	41.999926	-84.689600	1076.43	6.00	1082.43
7	41.999671	-84.688430	1058.92	6.00	1064.92
8	41.999615	-84.687958	1054.68	6.00	1060.69
9	41.999599	-84.687336	1050.28	6.00	1056.28
10	41.999767	-84.685684	1044.03	6.00	1050.03
11	42.000006	-84.684278	1057.00	6.00	1063.00
12	41.999998	-84.684107	1059.16	6.00	1065.16
13	41.999464	-84.683034	1064.98	6.00	1070.98
14	41.995070	-84.669708	1092.21	6.00	1098.21

**Name:** Glasgow Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985527	-84.719331	1087.94	6.00	1093.94
2	41.977733	-84.719052	1103.71	6.00	1109.71
3	41.973266	-84.719030	1111.41	6.00	1117.41
4	41.966661	-84.719073	1113.17	6.00	1119.17

**Name:** Industrial Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968404	-84.682780	1160.58	6.00	1166.58
2	41.968492	-84.670957	1089.74	6.00	1095.74

**Name:** Jonesville Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985481	-84.728891	1100.67	6.00	1106.67
2	41.985513	-84.709429	1093.35	6.00	1099.35
3	41.985513	-84.699494	1123.99	6.00	1129.99
4	41.985481	-84.689924	1122.16	6.00	1128.16
5	41.985481	-84.681878	1101.02	6.00	1107.02
6	41.985497	-84.673295	1093.95	6.00	1099.95

**Name:** Murphy St  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985519	-84.686428	1115.99	6.00	1121.99
2	41.985288	-84.686342	1116.02	6.00	1122.02
3	41.985160	-84.686139	1117.25	6.00	1123.25
4	41.985176	-84.685731	1116.85	6.00	1122.85
5	41.985145	-84.683542	1114.66	6.00	1120.66
6	41.984841	-84.680860	1109.42	6.00	1115.42
7	41.984578	-84.679894	1100.91	6.00	1106.91
8	41.982760	-84.675614	1114.10	6.00	1120.10
9	41.981875	-84.673629	1101.83	6.00	1107.83
10	41.981588	-84.673200	1100.47	6.00	1106.47
11	41.979833	-84.671011	1093.58	6.00	1099.58

**Name:** N Bunn Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000012	-84.690061	1088.52	6.00	1094.52
2	41.985404	-84.689932	1121.82	6.00	1127.82
3	41.973156	-84.689868	1161.37	6.00	1167.37
4	41.956132	-84.689889	1139.26	6.00	1145.26
5	41.948026	-84.689954	1140.62	6.00	1146.62

**Name:** Olde Street  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981436	-84.667386	1069.48	6.00	1075.48
2	41.979649	-84.665884	1068.73	6.00	1074.73
3	41.978325	-84.665841	1074.84	6.00	1080.84
4	41.977591	-84.666399	1077.45	6.00	1083.45
5	41.974800	-84.669574	1075.40	6.00	1081.40
6	41.973699	-84.670583	1073.92	6.00	1079.92
7	41.971976	-84.671505	1084.63	6.00	1090.63
8	41.969854	-84.671248	1091.59	6.00	1097.59
9	41.967126	-84.670604	1089.11	6.00	1095.11
10	41.963265	-84.669553	1112.18	6.00	1118.18
11	41.961111	-84.668630	1121.69	6.00	1127.69
12	41.957090	-84.665690	1119.18	6.00	1125.18

**Name:** Pine Dr  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.979915	-84.678553	1141.57	6.00	1147.57
2	41.979493	-84.679240	1138.15	6.00	1144.15
3	41.977076	-84.679251	1144.11	6.00	1150.11
4	41.976541	-84.678811	1142.07	6.00	1148.07

**Name:** Rainey Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.014437	-84.709545	1058.14	6.00	1064.14
2	41.999912	-84.709480	1103.34	6.00	1109.34
3	41.985479	-84.709416	1093.47	6.00	1099.47

**Name:** Sand Lake Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968772	-84.709415	1116.45	6.00	1122.45
2	41.956072	-84.709330	1136.41	6.00	1142.41

**Name:** Seneca  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981662	-84.673302	1100.66	6.00	1106.66
2	41.981183	-84.675072	1117.83	6.00	1123.83
3	41.980449	-84.675673	1128.01	6.00	1134.01

**Name:** W Chicago Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982786	-84.664363	1050.18	6.00	1056.18
2	41.977299	-84.677173	1141.86	6.00	1147.86
3	41.976071	-84.680134	1144.50	6.00	1150.50
4	41.974491	-84.685498	1156.34	6.00	1162.34
5	41.973183	-84.690047	1161.12	6.00	1167.12
6	41.970423	-84.700068	1123.07	6.00	1129.07
7	41.968190	-84.711827	1114.52	6.00	1120.52
8	41.966164	-84.721955	1115.01	6.00	1121.01
9	41.963020	-84.738027	1042.73	6.00	1048.73
10	41.962111	-84.742790	1092.27	6.00	1098.27

**Name:** Wise Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985561	-84.699581	1122.65	6.00	1128.65
2	41.970566	-84.699560	1122.83	6.00	1128.83
3	41.956255	-84.699560	1139.97	6.00	1145.97

## Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	41.996381	-84.708839	1095.16	6.00	1101.16
OP 2	41.993083	-84.706000	1100.56	6.00	1106.56
OP 3	41.985769	-84.707503	1103.48	6.00	1109.48
OP 4	41.985786	-84.706686	1102.48	6.00	1108.48
OP 5	41.985781	-84.705800	1103.62	6.00	1109.62
OP 6	41.961411	-84.699961	1140.19	6.00	1146.19
OP 7	41.956622	-84.699919	1145.91	6.00	1151.91
OP 8	41.973125	-84.692267	1152.32	6.00	1158.32
OP 9	41.973217	-84.691575	1157.04	6.00	1163.04
OP 10	41.973628	-84.690294	1159.89	6.00	1165.89
OP 11	41.974828	-84.690369	1157.55	6.00	1163.55
OP 12	41.975081	-84.690142	1155.53	6.00	1161.53
OP 13	41.975650	-84.690122	1148.43	6.00	1154.43
OP 14	41.981833	-84.690272	1145.80	6.00	1151.80
OP 15	41.974111	-84.685268	1153.07	6.00	1159.07
OP 16	41.975692	-84.680325	1147.00	6.00	1153.00
OP 17	41.971564	-84.696972	1133.79	6.00	1139.79
OP 18	41.971939	-84.696078	1133.47	6.00	1139.47
OP 19	41.984947	-84.696178	1143.22	6.00	1149.22
OP 20	41.985186	-84.696983	1146.34	6.00	1152.34
OP 21	41.985231	-84.679869	1095.91	6.00	1101.91
OP 22	41.986028	-84.682439	1112.99	6.00	1118.99
OP 23	41.994503	-84.689772	1115.41	6.00	1121.41
OP 24	41.966300	-84.690264	1157.80	6.00	1163.80
OP 25	41.999553	-84.708722	1109.26	6.00	1115.26
OP 26	41.967781	-84.682785	1161.48	6.00	1167.48
OP 27	41.967829	-84.679630	1168.46	6.00	1174.46
OP 28	41.968403	-84.682870	1159.58	6.00	1165.58
OP 29	41.969328	-84.682806	1157.08	6.00	1163.08
OP 30	41.968451	-84.681583	1167.03	6.00	1173.03

## Summary of PV Glare Analysis

*PV configuration and total predicted glare*

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV1	SA tracking	SA tracking	0	0	1,470,000.0	
PV10	SA tracking	SA tracking	0	0	1,533,000.0	
PV11	SA tracking	SA tracking	0	0	1,438,000.0	
PV12	SA tracking	SA tracking	0	0	1,511,000.0	
PV13	SA tracking	SA tracking	0	0	1,507,000.0	
PV14	SA tracking	SA tracking	0	0	1,573,000.0	
PV2	SA tracking	SA tracking	0	0	1,501,000.0	
PV3	SA tracking	SA tracking	0	0	1,474,000.0	
PV4	SA tracking	SA tracking	241,367	74,794	1,608,000.0	-
PV5	SA tracking	SA tracking	0	0	1,443,000.0	
PV6	SA tracking	SA tracking	0	0	1,448,000.0	
PV7	SA tracking	SA tracking	0	0	1,466,000.0	
PV8	SA tracking	SA tracking	0	0	1,547,000.0	
PV9	SA tracking	SA tracking	0	0	1,524,000.0	

### Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pv4 (green)	17330	17389	21772	14499	10563	11402	11157	10491	21762	20069	17240	16722
pv4 (yellow)	0	0	0	9168	16174	15585	16186	14872	260	0	0	0

## PV & Receptor Analysis Results

*Results for each PV array and receptor*

**PV1** no glare found

Predicted energy output: 1,470,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV10** no glare found

Predicted energy output: 1,533,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV11** no glare found

Predicted energy output: 1,438,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

**PV12** no glare found

Predicted energy output: 1,511,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV13** no glare found

Predicted energy output: 1,507,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV14** no glare found

Predicted energy output: 1,573,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV2** no glare found

Predicted energy output: 1,501,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV3** no glare found

Predicted energy output: 1,474,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV4** potential temporary after-image

Predicted energy output: 1,608,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	107666	6019
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	133701	68775
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

**PV4 - OP Receptor (OP 1)**

*No glare found*

**PV4 - OP Receptor (OP 2)**

*No glare found*

**PV4 - OP Receptor (OP 3)**

*No glare found*

**PV4 - OP Receptor (OP 4)**

*No glare found*

**PV4 - OP Receptor (OP 5)**

*No glare found*

**PV4 - OP Receptor (OP 6)**

*No glare found*

**PV4 - OP Receptor (OP 7)**

*No glare found*

**PV4 - OP Receptor (OP 8)**

*No glare found*

**PV4 - OP Receptor (OP 9)**

*No glare found*

**PV4 - OP Receptor (OP 10)**

*No glare found*

**PV4 - OP Receptor (OP 11)**

*No glare found*

**PV4 - OP Receptor (OP 12)**

*No glare found*

**PV4 - OP Receptor (OP 13)**

*No glare found*

**PV4 - OP Receptor (OP 14)**

*No glare found*

**PV4 - OP Receptor (OP 15)**

*No glare found*

**PV4 - OP Receptor (OP 16)**

*No glare found*

**PV4 - OP Receptor (OP 17)**

*No glare found*

**PV4 - OP Receptor (OP 18)**

*No glare found*

**PV4 - OP Receptor (OP 19)**

*No glare found*

**PV4 - OP Receptor (OP 20)**

*No glare found*

**PV4 - OP Receptor (OP 21)**

*No glare found*

**PV4 - OP Receptor (OP 22)**

*No glare found*

**PV4 - OP Receptor (OP 23)**

*No glare found*

**PV4 - OP Receptor (OP 24)**

*No glare found*

**PV4 - OP Receptor (OP 25)**

*No glare found*

**PV4 - OP Receptor (OP 26)**

*No glare found*

**PV4 - OP Receptor (OP 27)**

*No glare found*

**PV4 - OP Receptor (OP 28)**

*No glare found*

**PV4 - OP Receptor (OP 29)**

*No glare found*

**PV4 - OP Receptor (OP 30)**

*No glare found*

**PV4 - Route Receptor (Baker St)**

*No glare found*

**PV4 - Route Receptor (Baxter and Highland)**

*No glare found*

**PV4 - Route Receptor (Bean Rd)**

*No glare found*

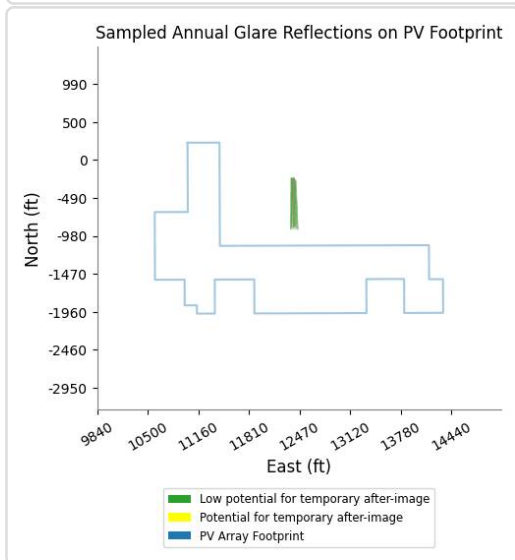
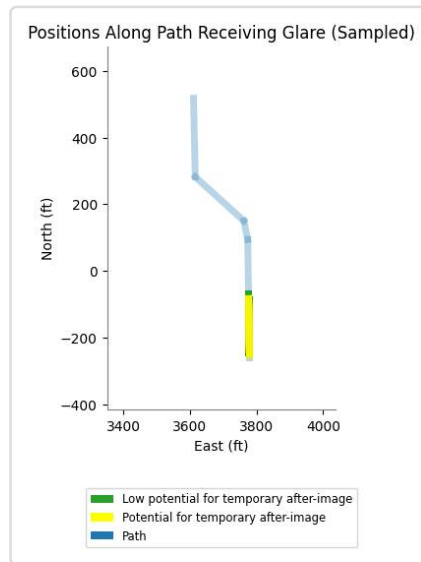
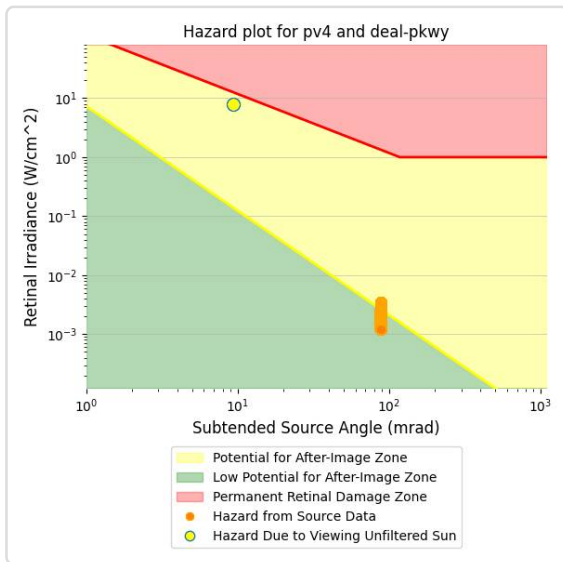
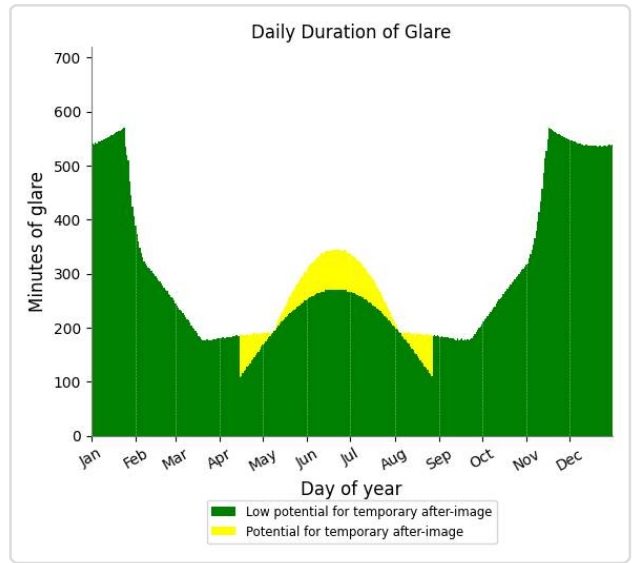
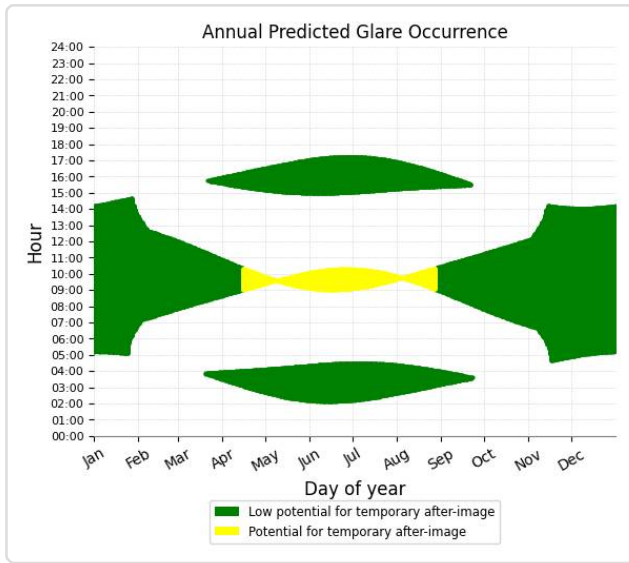
**PV4 - Route Receptor (Cronk Rd)**

*No glare found*

### PV4 - Route Receptor (Deal Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 107,666 minutes of "green" glare with low potential to cause temporary after-image.
- 6,019 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Driveway)

No glare found

### PV4 - Route Receptor (Genesse Rd)

No glare found

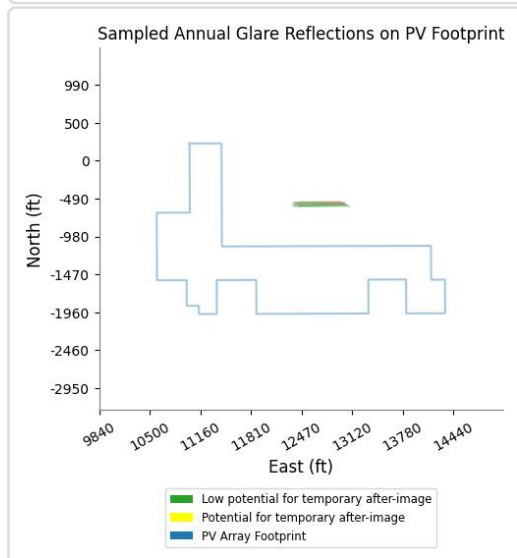
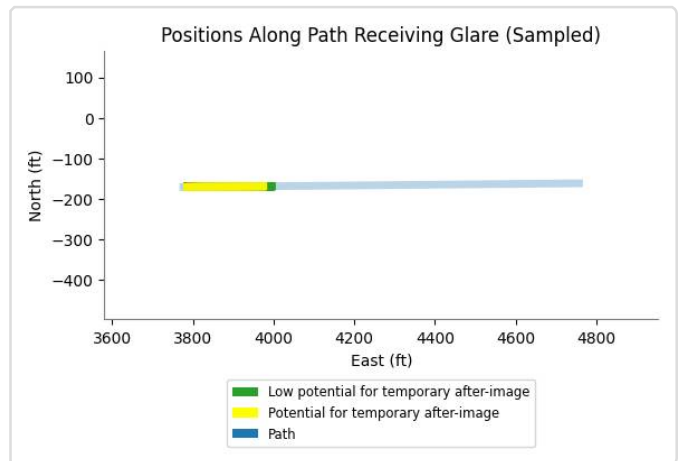
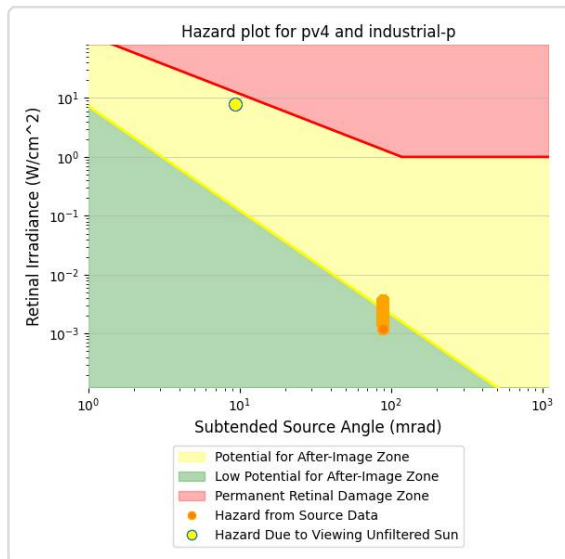
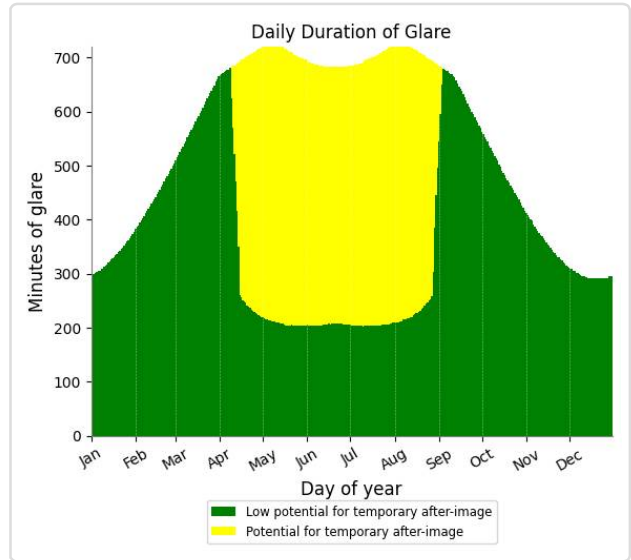
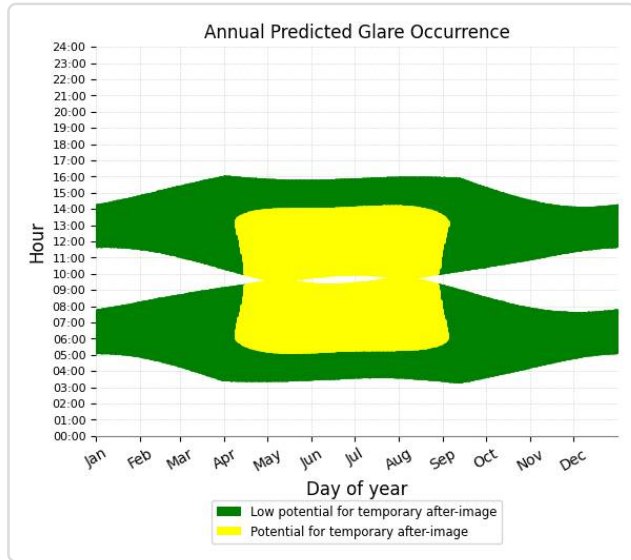
### PV4 - Route Receptor (Glasgow Rd)

No glare found

### PV4 - Route Receptor (Industrial Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 133,701 minutes of "green" glare with low potential to cause temporary after-image.
- 68,775 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Jonesville Rd)

No glare found

**PV4 - Route Receptor (Murphy St)**

*No glare found*

**PV4 - Route Receptor (N Bunn Rd)**

*No glare found*

**PV4 - Route Receptor (Olde Street)**

*No glare found*

**PV4 - Route Receptor (Pine Dr)**

*No glare found*

**PV4 - Route Receptor (Rainey Rd)**

*No glare found*

**PV4 - Route Receptor (Sand Lake Rd)**

*No glare found*

**PV4 - Route Receptor (Seneca)**

*No glare found*

**PV4 - Route Receptor (W Chicago Rd)**

*No glare found*

**PV4 - Route Receptor (Wise Rd)**

*No glare found*

**PV5** no glare found

Predicted energy output: 1,443,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV6** no glare found

Predicted energy output: 1,448,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV7** no glare found

Predicted energy output: 1,466,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV8** no glare found

Predicted energy output: 1,547,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV9** no glare found

Predicted energy output: 1,524,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

## Assumptions

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- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- 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.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.



# Ranger Power

## Ranger - Heartwood - 10ft at OPs - With Coating

Created May 5, 2022  
 Updated May 5, 2022  
 Time-step 1 minute  
 Timezone offset UTC-8  
 Site ID 68671.12083

Project type Advanced  
 Project status: active  
 Category 10 MW to 100 MW

### Misc. Analysis Settings

DNI: varies (1,000.0 W/m<sup>2</sup> peak)  
 Ocular transmission coefficient: 0.5  
 Pupil diameter: 0.002 m  
 Eye focal length: 0.017 m  
 Sun subtended angle: 9.3 mrad

#### Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

### Summary of Results Glare with low potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV1	SA tracking	SA tracking	0	0	1,470,000.0
PV10	SA tracking	SA tracking	0	0	1,533,000.0
PV11	SA tracking	SA tracking	0	0	1,438,000.0
PV12	SA tracking	SA tracking	0	0	1,511,000.0
PV13	SA tracking	SA tracking	0	0	1,507,000.0
PV14	SA tracking	SA tracking	0	0	1,573,000.0
PV2	SA tracking	SA tracking	0	0	1,501,000.0
PV3	SA tracking	SA tracking	0	0	1,474,000.0
PV4	SA tracking	SA tracking	319,734	0	1,608,000.0
PV5	SA tracking	SA tracking	0	0	1,443,000.0
PV6	SA tracking	SA tracking	0	0	1,448,000.0
PV7	SA tracking	SA tracking	0	0	1,466,000.0
PV8	SA tracking	SA tracking	0	0	1,547,000.0
PV9	SA tracking	SA tracking	0	0	1,524,000.0

## Component Data

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### PV Array(s)

Total PV footprint area: 1,015.2 acres

**Name:** PV1  
**Footprint area:** 35.2 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.969931	-84.728342	1119.05	5.15	1124.20
2	41.969933	-84.727760	1115.05	5.15	1120.20
3	41.970229	-84.727762	1118.05	5.15	1123.20
4	41.970237	-84.725157	1114.05	5.15	1119.20
5	41.967597	-84.725150	1119.05	5.15	1124.20
6	41.967604	-84.722767	1115.05	5.15	1120.20
7	41.968156	-84.722770	1111.05	5.15	1116.20
8	41.968166	-84.719584	1112.05	5.15	1117.20
9	41.966968	-84.719577	1115.05	5.15	1120.20
10	41.966958	-84.722819	1117.05	5.15	1122.20
11	41.966406	-84.722816	1116.05	5.15	1121.20
12	41.966396	-84.726002	1124.05	5.15	1129.21
13	41.967770	-84.726010	1126.05	5.15	1131.21
14	41.967763	-84.728329	1112.05	5.15	1117.20

**Name:** PV10  
**Footprint area:** 84.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.992533	-84.707345	1088.05	5.15	1093.20
2	41.992545	-84.703326	1111.05	5.15	1116.20
3	41.992249	-84.703325	1114.05	5.15	1119.20
4	41.992252	-84.702576	1110.05	5.15	1115.20
5	41.991281	-84.702571	1120.05	5.15	1125.20
6	41.991288	-84.700326	1105.05	5.15	1110.20
7	41.990992	-84.700324	1109.05	5.15	1114.20
8	41.990993	-84.699992	1108.05	5.15	1113.20
9	41.988882	-84.699981	1128.06	5.15	1133.21
10	41.988880	-84.700729	1121.05	5.15	1126.20
11	41.985788	-84.700713	1111.05	5.15	1116.20
12	41.985778	-84.704232	1103.05	5.15	1108.20
13	41.986975	-84.704238	1097.05	5.15	1102.20
14	41.986977	-84.703656	1095.05	5.15	1100.20
15	41.987662	-84.703660	1103.05	5.15	1108.20
16	41.987654	-84.706570	1091.05	5.15	1096.20
17	41.988863	-84.706577	1097.05	5.15	1102.20
18	41.988859	-84.707741	1088.05	5.15	1093.20
19	41.991266	-84.707754	1088.05	5.15	1093.20
20	41.991267	-84.707338	1096.05	5.15	1101.20

**Name:** PV11  
**Footprint area:** 68.6 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.993804	-84.689611	1114.05	5.15	1119.20
2	41.993813	-84.686590	1086.05	5.15	1091.20
3	41.992546	-84.686584	1104.05	5.15	1109.20
4	41.992553	-84.684089	1071.05	5.15	1076.20
5	41.991345	-84.684083	1086.05	5.15	1091.20
6	41.991347	-84.683335	1074.05	5.15	1079.20
7	41.990080	-84.683328	1095.05	5.15	1100.20
8	41.990083	-84.682497	1079.05	5.15	1084.20
9	41.988885	-84.682491	1090.05	5.15	1095.20
10	41.988877	-84.685318	1114.05	5.15	1119.20
11	41.987668	-84.685312	1115.05	5.15	1120.20
12	41.987659	-84.688332	1116.05	5.15	1121.20
13	41.988868	-84.688339	1111.05	5.15	1116.20
14	41.988865	-84.689586	1129.06	5.15	1134.21

**Name:** PV12  
**Footprint area:** 135.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999738	-84.698112	1095.05	5.15	1100.20
2	41.999748	-84.694508	1121.05	5.15	1126.20
3	41.998482	-84.694502	1118.05	5.15	1123.20
4	41.998484	-84.693670	1125.05	5.15	1130.21
5	41.998188	-84.693669	1126.05	5.15	1131.21
6	41.998189	-84.693280	1130.06	5.15	1135.21
7	41.998485	-84.693282	1130.06	5.15	1135.21
8	41.998488	-84.692284	1136.06	5.15	1141.21
9	41.999755	-84.692290	1130.06	5.15	1135.21
10	41.999760	-84.690267	1102.05	5.15	1107.20
11	41.995175	-84.690243	1104.05	5.15	1109.20
12	41.995171	-84.691491	1125.05	5.15	1130.21
13	41.993905	-84.691484	1137.06	5.15	1142.21
14	41.993898	-84.693646	1133.06	5.15	1138.21
15	41.993602	-84.693645	1129.06	5.15	1134.21
16	41.993602	-84.693811	1129.06	5.15	1134.21
17	41.989918	-84.693792	1109.05	5.15	1114.20
18	41.989916	-84.694318	1110.05	5.15	1115.20
19	41.990212	-84.694320	1109.05	5.15	1114.20
20	41.990210	-84.695068	1108.05	5.15	1113.20
21	41.991180	-84.695073	1102.05	5.15	1107.20
22	41.991179	-84.695738	1103.05	5.15	1108.20
23	41.991475	-84.695740	1100.05	5.15	1105.20
24	41.991473	-84.696128	1101.05	5.15	1106.20
25	41.991177	-84.696127	1105.05	5.15	1110.20
26	41.991173	-84.697651	1104.05	5.15	1109.20
27	41.991469	-84.697652	1103.05	5.15	1108.20
28	41.991467	-84.698401	1104.05	5.15	1109.20
29	41.992380	-84.698406	1105.05	5.15	1110.20
30	41.992377	-84.699403	1101.05	5.15	1106.20
31	41.997258	-84.699429	1093.05	5.15	1098.20
32	41.997265	-84.697267	1098.05	5.15	1103.20
33	41.998542	-84.697274	1093.05	5.15	1098.20
34	41.998540	-84.698105	1090.05	5.15	1095.20

**Name:** PV13  
**Footprint area:** 27.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



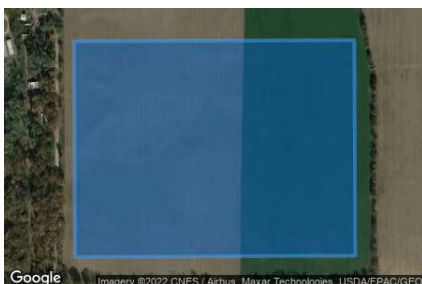
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.004972	-84.699577	1110.05	5.15	1115.20
2	42.004978	-84.697636	1108.05	5.15	1113.20
3	42.003712	-84.697630	1115.05	5.15	1120.20
4	42.003712	-84.697547	1115.05	5.15	1120.20
5	42.003477	-84.697545	1114.05	5.15	1119.20
6	42.003483	-84.695632	1106.05	5.15	1111.20
7	42.002285	-84.695626	1118.05	5.15	1123.20
8	42.002284	-84.695959	1115.05	5.15	1120.20
9	42.001075	-84.695952	1113.05	5.15	1118.20
10	42.001073	-84.696645	1108.05	5.15	1113.20
11	42.001369	-84.696647	1108.05	5.15	1113.20
12	42.001365	-84.698033	1103.05	5.15	1108.20
13	42.001304	-84.698033	1103.05	5.15	1108.20
14	42.001302	-84.698532	1099.05	5.15	1104.20
15	42.000389	-84.698527	1097.05	5.15	1102.20
16	42.000386	-84.699552	1095.05	5.15	1100.20

**Name:** PV14  
**Footprint area:** 36.5 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999430	-84.708031	1108.05	5.15	1113.20
2	41.999433	-84.707172	1114.05	5.15	1119.20
3	41.998224	-84.707166	1096.05	5.15	1101.20
4	41.998228	-84.705696	1108.05	5.15	1113.20
5	41.999547	-84.705703	1116.05	5.15	1121.20
6	41.999561	-84.700769	1095.05	5.15	1100.20
7	41.997045	-84.700756	1096.05	5.15	1101.20
8	41.997023	-84.708018	1096.05	5.15	1101.20

**Name:** PV2  
**Footprint area:** 53.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with position?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.963734	-84.728441	1091.05	5.15	1096.20
2	41.963754	-84.722013	1128.06	5.15	1133.21
3	41.960081	-84.721993	1124.05	5.15	1129.21
4	41.960061	-84.728420	1082.05	5.15	1087.20

**Name:** PV3  
**Footprint area:** 104.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



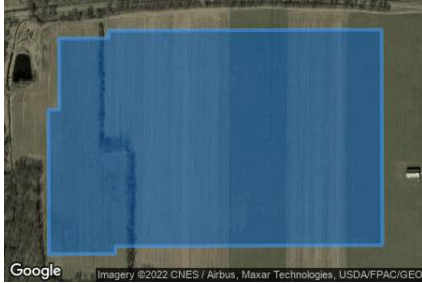
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970361	-84.699025	1124.05	5.15	1129.21
2	41.970373	-84.695008	1131.06	5.15	1136.21
3	41.959416	-84.694951	1138.06	5.15	1143.21
4	41.959409	-84.697361	1145.06	5.15	1150.21
5	41.956838	-84.697348	1130.06	5.15	1135.21
6	41.956833	-84.699037	1143.06	5.15	1148.21
7	41.961405	-84.699061	1142.06	5.15	1147.21
8	41.961409	-84.697897	1143.06	5.15	1148.21
9	41.963374	-84.697908	1138.06	5.15	1143.21
10	41.963371	-84.699155	1135.06	5.15	1140.21
11	41.964272	-84.699159	1128.06	5.15	1133.21
12	41.964274	-84.698744	1134.06	5.15	1139.21
13	41.965493	-84.698750	1127.05	5.15	1132.21
14	41.965492	-84.699166	1124.05	5.15	1129.21
15	41.969151	-84.699185	1125.05	5.15	1130.21
16	41.969152	-84.699019	1125.05	5.15	1130.21

**Name:** PV4  
**Footprint area:** 72.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970548	-84.687842	1150.06	5.15	1155.21
2	41.970553	-84.686319	1158.06	5.15	1163.21
3	41.966882	-84.686300	1167.06	5.15	1172.21
4	41.966910	-84.676325	1104.05	5.15	1109.20
5	41.965701	-84.676319	1107.05	5.15	1112.20
6	41.965703	-84.675654	1104.05	5.15	1109.20
7	41.964505	-84.675648	1105.05	5.15	1110.20
8	41.964500	-84.677504	1110.05	5.15	1115.20
9	41.965709	-84.677510	1109.05	5.15	1114.20
10	41.965704	-84.679312	1127.05	5.15	1132.21
11	41.964495	-84.679306	1110.05	5.15	1115.20
12	41.964480	-84.684652	1160.06	5.15	1165.21
13	41.965689	-84.684659	1165.06	5.15	1170.21
14	41.965684	-84.686543	1173.06	5.15	1178.21
15	41.964475	-84.686537	1160.06	5.15	1165.21
16	41.964473	-84.687395	1169.06	5.15	1174.21
17	41.964769	-84.687397	1171.06	5.15	1176.21
18	41.964767	-84.687979	1162.06	5.15	1167.21
19	41.965680	-84.687983	1171.06	5.15	1176.21
20	41.965676	-84.689396	1166.06	5.15	1171.21
21	41.968082	-84.689409	1148.06	5.15	1153.21
22	41.968087	-84.687829	1154.06	5.15	1159.21

**Name:** PV5  
**Footprint area:** 62.8 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982233	-84.708939	1094.05	5.15	1099.20
2	41.982236	-84.707804	1097.05	5.15	1102.20
3	41.982365	-84.707805	1097.05	5.15	1102.20
4	41.982384	-84.701542	1117.05	5.15	1122.20
5	41.978724	-84.701522	1135.06	5.15	1140.21
6	41.978706	-84.707646	1101.05	5.15	1106.20
7	41.978578	-84.707645	1102.05	5.15	1107.20
8	41.978573	-84.709169	1101.05	5.15	1106.20
9	41.981023	-84.709182	1097.05	5.15	1102.20
10	41.981024	-84.708933	1096.05	5.15	1101.20

**Name:** PV6  
**Footprint area:** 138.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982288	-84.699191	1116.05	5.15	1121.20
2	41.982309	-84.691930	1120.05	5.15	1125.20
3	41.979552	-84.691916	1124.05	5.15	1129.21
4	41.979557	-84.690170	1131.06	5.15	1136.21
5	41.978359	-84.690164	1132.06	5.15	1137.21
6	41.978352	-84.692741	1136.06	5.15	1141.21
7	41.974906	-84.692723	1143.06	5.15	1148.21
8	41.974898	-84.695384	1136.06	5.15	1141.21
9	41.973632	-84.695377	1134.06	5.15	1139.21
10	41.973628	-84.696541	1134.06	5.15	1139.21
11	41.972362	-84.696534	1134.06	5.15	1139.21
12	41.972354	-84.699138	1133.06	5.15	1138.21

**Name:** PV7  
**Footprint area:** 149.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984492	-84.689081	1125.05	5.15	1130.21
2	41.984498	-84.687141	1122.05	5.15	1127.21
3	41.983289	-84.687135	1128.06	5.15	1133.21
4	41.983308	-84.680317	1104.05	5.15	1109.20
5	41.980844	-84.680305	1122.05	5.15	1127.21
6	41.980841	-84.681220	1121.05	5.15	1126.20
7	41.978424	-84.681207	1141.06	5.15	1146.21
8	41.978420	-84.682400	1133.06	5.15	1138.21
9	41.976232	-84.682389	1143.06	5.15	1148.21
10	41.976229	-84.683470	1150.06	5.15	1155.21
11	41.975316	-84.683465	1153.06	5.15	1158.21
12	41.975313	-84.684546	1157.06	5.15	1162.21
13	41.975017	-84.684545	1157.06	5.15	1162.21
14	41.975004	-84.689310	1159.06	5.15	1164.21
15	41.982065	-84.689347	1151.06	5.15	1156.21
16	41.982066	-84.689068	1148.06	5.15	1153.21

**Name:** PV8  
**Footprint area:** 36.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984894	-84.708921	1093.05	5.15	1098.20
2	41.984896	-84.708238	1094.05	5.15	1099.20
3	41.985192	-84.708240	1094.05	5.15	1099.20
4	41.985198	-84.706217	1100.05	5.15	1105.20
5	41.983989	-84.706211	1100.05	5.15	1105.20
6	41.983994	-84.704641	1100.05	5.15	1105.20
7	41.985203	-84.704647	1102.05	5.15	1107.20
8	41.985215	-84.700611	1115.05	5.15	1120.20
9	41.984611	-84.700608	1114.05	5.15	1119.20
10	41.984611	-84.699842	1119.05	5.15	1124.20
11	41.983416	-84.699836	1110.05	5.15	1115.20
12	41.983413	-84.700602	1108.05	5.15	1113.20
13	41.983104	-84.700600	1105.05	5.15	1110.20
14	41.983079	-84.708911	1094.05	5.15	1099.20

**Name:** PV9  
**Footprint area:** 8.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985206	-84.699067	1128.06	5.15	1133.21
2	41.985210	-84.697460	1143.06	5.15	1148.21
3	41.984002	-84.697453	1129.06	5.15	1134.21
4	41.984003	-84.696871	1132.06	5.15	1137.21
5	41.983101	-84.696867	1115.05	5.15	1120.20
6	41.983095	-84.699056	1109.05	5.15	1114.20

### Route Receptor(s)

**Name:** Baker St  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982595	-84.675276	1110.87	10.00	1120.87
2	41.981678	-84.676059	1136.25	10.00	1146.25

**Name:** Baxter and Highland  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.983885	-84.678320	1116.05	10.00	1126.05
2	41.982952	-84.678910	1121.87	10.00	1131.87
3	41.982816	-84.678857	1122.26	10.00	1132.26
4	41.981636	-84.676024	1136.25	10.00	1146.25
5	41.981452	-84.676014	1137.22	10.00	1147.22
6	41.981117	-84.676604	1141.59	10.00	1151.59
7	41.980862	-84.676561	1138.96	10.00	1148.96
8	41.980160	-84.674683	1136.11	10.00	1146.11
9	41.979642	-84.673782	1123.98	10.00	1133.98
10	41.977913	-84.672905	1109.82	10.00	1119.82

**Name:** Bean Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.955879	-84.729038	1044.16	10.00	1054.17
2	41.956246	-84.709336	1134.38	10.00	1144.38
3	41.956262	-84.689831	1140.20	10.00	1150.20
4	41.956390	-84.670587	1096.54	10.00	1106.54

**Name:** Cronk Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.977130	-84.728899	1078.75	10.00	1088.75
2	41.964798	-84.728791	1090.12	10.00	1100.13
3	41.955799	-84.728834	1044.93	10.00	1054.93
4	41.952416	-84.728856	1114.49	10.00	1124.49

**Name:** Deal Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.974602	-84.684784	1154.83	10.00	1164.83
2	41.972480	-84.684720	1160.33	10.00	1170.33
3	41.971292	-84.682960	1153.32	10.00	1163.32
4	41.970789	-84.682821	1151.99	10.00	1161.99
5	41.967590	-84.682756	1163.50	10.00	1173.50

**Name:** Driveway  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.995767	-84.685119	1075.68	10.00	1085.68
2	41.995536	-84.684958	1069.15	10.00	1079.15
3	41.995026	-84.684808	1072.43	10.00	1082.43
4	41.993710	-84.684217	1076.47	10.00	1086.47
5	41.993272	-84.683692	1076.71	10.00	1086.71
6	41.992977	-84.683069	1082.67	10.00	1092.67
7	41.992674	-84.682512	1083.81	10.00	1093.81
8	41.992602	-84.681932	1087.25	10.00	1097.25
9	41.992458	-84.681868	1083.80	10.00	1093.80
10	41.990449	-84.681879	1077.65	10.00	1087.65
11	41.988368	-84.681825	1086.81	10.00	1096.81
12	41.987785	-84.681739	1093.08	10.00	1103.08
13	41.986932	-84.681921	1095.86	10.00	1105.86
14	41.986485	-84.681836	1096.56	10.00	1106.56
15	41.985489	-84.681921	1101.26	10.00	1111.26

**Name:** Genesee Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000030	-84.728922	1067.79	10.00	1077.79
2	41.999982	-84.709482	1103.57	10.00	1113.57
3	42.000014	-84.694728	1118.53	10.00	1128.53
4	42.000022	-84.691563	1117.63	10.00	1127.63
5	41.999982	-84.690007	1087.54	10.00	1097.54
6	41.999926	-84.689600	1076.43	10.00	1086.43
7	41.999671	-84.688430	1058.92	10.00	1068.92
8	41.999615	-84.687958	1054.68	10.00	1064.69
9	41.999599	-84.687336	1050.28	10.00	1060.28
10	41.999767	-84.685684	1044.03	10.00	1054.03
11	42.000006	-84.684278	1057.00	10.00	1067.00
12	41.999998	-84.684107	1059.16	10.00	1069.16
13	41.999464	-84.683034	1064.98	10.00	1074.98
14	41.995070	-84.669708	1092.21	10.00	1102.21

**Name:** Glasgow Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985527	-84.719331	1087.94	10.00	1097.94
2	41.977733	-84.719052	1103.71	10.00	1113.71
3	41.973266	-84.719030	1111.41	10.00	1121.41
4	41.966661	-84.719073	1113.17	10.00	1123.17

**Name:** Industrial Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968404	-84.682780	1160.58	10.00	1170.58
2	41.968492	-84.670957	1089.74	10.00	1099.74

**Name:** Jonesville Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985481	-84.728891	1100.67	10.00	1110.67
2	41.985513	-84.709429	1093.35	10.00	1103.35
3	41.985513	-84.699494	1123.99	10.00	1133.99
4	41.985481	-84.689924	1122.16	10.00	1132.16
5	41.985481	-84.681878	1101.02	10.00	1111.02
6	41.985497	-84.673295	1093.95	10.00	1103.95

**Name:** Murphy St  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985519	-84.686428	1115.99	10.00	1125.99
2	41.985288	-84.686342	1116.02	10.00	1126.02
3	41.985160	-84.686139	1117.25	10.00	1127.25
4	41.985176	-84.685731	1116.85	10.00	1126.85
5	41.985145	-84.683542	1114.66	10.00	1124.66
6	41.984841	-84.680860	1109.42	10.00	1119.42
7	41.984578	-84.679894	1100.91	10.00	1110.91
8	41.982760	-84.675614	1114.10	10.00	1124.10
9	41.981875	-84.673629	1101.83	10.00	1111.83
10	41.981588	-84.673200	1100.47	10.00	1110.47
11	41.979833	-84.671011	1093.58	10.00	1103.58

**Name:** N Bunn Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000012	-84.690061	1088.52	10.00	1098.52
2	41.985404	-84.689932	1121.82	10.00	1131.82
3	41.973156	-84.689868	1161.37	10.00	1171.37
4	41.956132	-84.689889	1139.26	10.00	1149.26
5	41.948026	-84.689954	1140.62	10.00	1150.62

**Name:** Olde Street  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981436	-84.667386	1069.48	10.00	1079.48
2	41.979649	-84.665884	1068.73	10.00	1078.73
3	41.978325	-84.665841	1074.84	10.00	1084.84
4	41.977591	-84.666399	1077.45	10.00	1087.45
5	41.974800	-84.669574	1075.40	10.00	1085.40
6	41.973699	-84.670583	1073.92	10.00	1083.92
7	41.971976	-84.671505	1084.63	10.00	1094.63
8	41.969854	-84.671248	1091.59	10.00	1101.59
9	41.967126	-84.670604	1089.11	10.00	1099.11
10	41.963265	-84.669553	1112.18	10.00	1122.18
11	41.961111	-84.668630	1121.69	10.00	1131.69
12	41.957090	-84.665690	1119.18	10.00	1129.18

**Name:** Pine Dr  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.979915	-84.678553	1141.57	10.00	1151.57
2	41.979493	-84.679240	1138.15	10.00	1148.15
3	41.977076	-84.679251	1144.11	10.00	1154.11
4	41.976541	-84.678811	1142.07	10.00	1152.07

**Name:** Rainey Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.014437	-84.709545	1058.14	10.00	1068.14
2	41.999912	-84.709480	1103.34	10.00	1113.34
3	41.985479	-84.709416	1093.47	10.00	1103.47

**Name:** Sand Lake Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968772	-84.709415	1116.45	10.00	1126.45
2	41.956072	-84.709330	1136.41	10.00	1146.41

**Name:** Seneca  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981662	-84.673302	1100.66	10.00	1110.66
2	41.981183	-84.675072	1117.83	10.00	1127.83
3	41.980449	-84.675673	1128.01	10.00	1138.01

**Name:** W Chicago Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982786	-84.664363	1050.18	10.00	1060.18
2	41.977299	-84.677173	1141.86	10.00	1151.86
3	41.976071	-84.680134	1144.50	10.00	1154.50
4	41.974491	-84.685498	1156.34	10.00	1166.34
5	41.973183	-84.690047	1161.12	10.00	1171.12
6	41.970423	-84.700068	1123.07	10.00	1133.07
7	41.968190	-84.711827	1114.52	10.00	1124.52
8	41.966164	-84.721955	1115.01	10.00	1125.01
9	41.963020	-84.738027	1042.73	10.00	1052.73
10	41.962111	-84.742790	1092.27	10.00	1102.27

**Name:** Wise Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985561	-84.699581	1122.65	10.00	1132.65
2	41.970566	-84.699560	1122.83	10.00	1132.83
3	41.956255	-84.699560	1139.97	10.00	1149.97

## Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	41.996381	-84.708839	1095.16	10.00	1105.16
OP 2	41.993083	-84.706000	1100.56	10.00	1110.56
OP 3	41.985769	-84.707503	1103.48	10.00	1113.48
OP 4	41.985786	-84.706686	1102.48	10.00	1112.48
OP 5	41.985781	-84.705800	1103.62	10.00	1113.62
OP 6	41.961411	-84.699961	1140.19	10.00	1150.19
OP 7	41.956622	-84.699919	1145.91	10.00	1155.91
OP 8	41.973125	-84.692267	1152.32	10.00	1162.32
OP 9	41.973217	-84.691575	1157.04	10.00	1167.04
OP 10	41.973628	-84.690294	1159.89	10.00	1169.89
OP 11	41.974828	-84.690369	1157.55	10.00	1167.55
OP 12	41.975081	-84.690142	1155.53	10.00	1165.53
OP 13	41.975650	-84.690122	1148.43	10.00	1158.43
OP 14	41.981833	-84.690272	1145.80	10.00	1155.80
OP 15	41.974111	-84.685268	1153.07	10.00	1163.07
OP 16	41.975692	-84.680325	1147.00	10.00	1157.00
OP 17	41.971564	-84.696972	1133.79	10.00	1143.79
OP 18	41.971939	-84.696078	1133.47	10.00	1143.47
OP 19	41.984947	-84.696178	1143.22	10.00	1153.22
OP 20	41.985186	-84.696983	1146.34	10.00	1156.34
OP 21	41.985231	-84.679869	1095.91	10.00	1105.91
OP 22	41.986028	-84.682439	1112.99	10.00	1122.99
OP 23	41.994503	-84.689772	1115.41	10.00	1125.41
OP 24	41.966300	-84.690264	1157.80	10.00	1167.80
OP 25	41.999553	-84.708722	1109.26	10.00	1119.26
OP 26	41.967781	-84.682785	1161.48	10.00	1171.48
OP 27	41.967829	-84.679630	1168.46	10.00	1178.46
OP 28	41.968403	-84.682870	1159.58	10.00	1169.58
OP 29	41.969328	-84.682806	1157.08	10.00	1167.08
OP 30	41.968451	-84.681583	1167.03	10.00	1177.03

## Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV1	SA tracking	SA tracking	0	0	1,470,000.0	
PV10	SA tracking	SA tracking	0	0	1,533,000.0	
PV11	SA tracking	SA tracking	0	0	1,438,000.0	
PV12	SA tracking	SA tracking	0	0	1,511,000.0	
PV13	SA tracking	SA tracking	0	0	1,507,000.0	
PV14	SA tracking	SA tracking	0	0	1,573,000.0	
PV2	SA tracking	SA tracking	0	0	1,501,000.0	
PV3	SA tracking	SA tracking	0	0	1,474,000.0	
PV4	SA tracking	SA tracking	319,734	0	1,608,000.0	-
PV5	SA tracking	SA tracking	0	0	1,443,000.0	
PV6	SA tracking	SA tracking	0	0	1,448,000.0	
PV7	SA tracking	SA tracking	0	0	1,466,000.0	
PV8	SA tracking	SA tracking	0	0	1,547,000.0	
PV9	SA tracking	SA tracking	0	0	1,524,000.0	

### Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pv4 (green)	17330	17389	21772	23667	26737	26987	27343	25363	22022	20069	17240	16722
pv4 (yellow)	0	0	0	0	0	0	0	0	0	0	0	0

## PV & Receptor Analysis Results

Results for each PV array and receptor

**PV1** no glare found

Predicted energy output: 1,470,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV10** no glare found

Predicted energy output: 1,533,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV11** no glare found

Predicted energy output: 1,438,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV12** no glare found

Predicted energy output: 1,511,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

*No glare found*

**PV13** no glare found

Predicted energy output: 1,507,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV14** no glare found

Predicted energy output: 1,573,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV2** no glare found

Predicted energy output: 1,501,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV3** no glare found

Predicted energy output: 1,474,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV4** low potential for temporary after-image

Predicted energy output: 1,608,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	115792	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	203942	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

**PV4 - OP Receptor (OP 1)**

*No glare found*

**PV4 - OP Receptor (OP 2)**

*No glare found*

**PV4 - OP Receptor (OP 3)**

*No glare found*

**PV4 - OP Receptor (OP 4)**

*No glare found*

**PV4 - OP Receptor (OP 5)**

*No glare found*

**PV4 - OP Receptor (OP 6)**

*No glare found*

**PV4 - OP Receptor (OP 7)**

*No glare found*

**PV4 - OP Receptor (OP 8)**

*No glare found*

**PV4 - OP Receptor (OP 9)**

*No glare found*

**PV4 - OP Receptor (OP 10)**

*No glare found*

**PV4 - OP Receptor (OP 11)**

*No glare found*

**PV4 - OP Receptor (OP 12)**

*No glare found*

**PV4 - OP Receptor (OP 13)**

*No glare found*

**PV4 - OP Receptor (OP 14)**

*No glare found*

**PV4 - OP Receptor (OP 15)**

*No glare found*

**PV4 - OP Receptor (OP 16)**

*No glare found*

**PV4 - OP Receptor (OP 17)**

*No glare found*

**PV4 - OP Receptor (OP 18)**

*No glare found*

**PV4 - OP Receptor (OP 19)**

*No glare found*

**PV4 - OP Receptor (OP 20)**

*No glare found*

**PV4 - OP Receptor (OP 21)**

*No glare found*

**PV4 - OP Receptor (OP 22)**

*No glare found*

**PV4 - OP Receptor (OP 23)**

*No glare found*

**PV4 - OP Receptor (OP 24)**

*No glare found*

**PV4 - OP Receptor (OP 25)**

*No glare found*

**PV4 - OP Receptor (OP 26)**

*No glare found*

**PV4 - OP Receptor (OP 27)**

*No glare found*

**PV4 - OP Receptor (OP 28)**

*No glare found*

**PV4 - OP Receptor (OP 29)**

*No glare found*

**PV4 - OP Receptor (OP 30)**

*No glare found*

**PV4 - Route Receptor (Baker St)**

*No glare found*

**PV4 - Route Receptor (Baxter and Highland)**

*No glare found*

**PV4 - Route Receptor (Bean Rd)**

*No glare found*

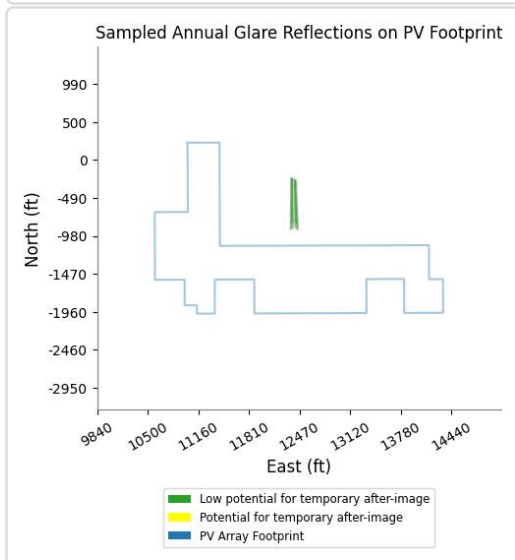
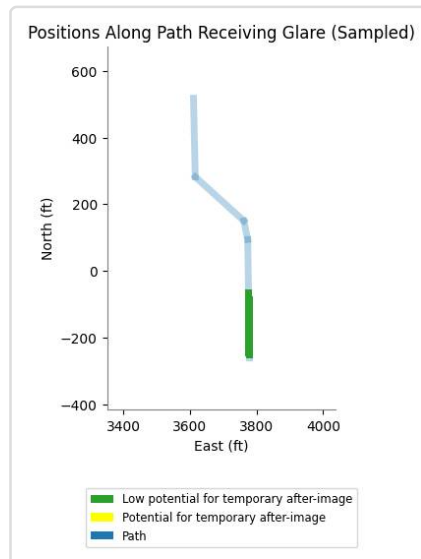
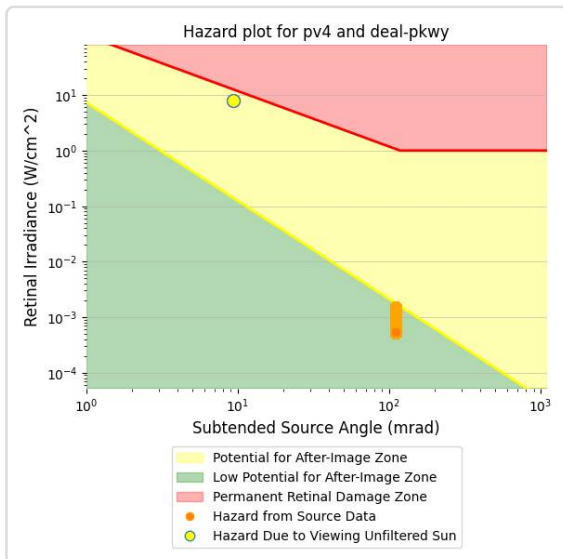
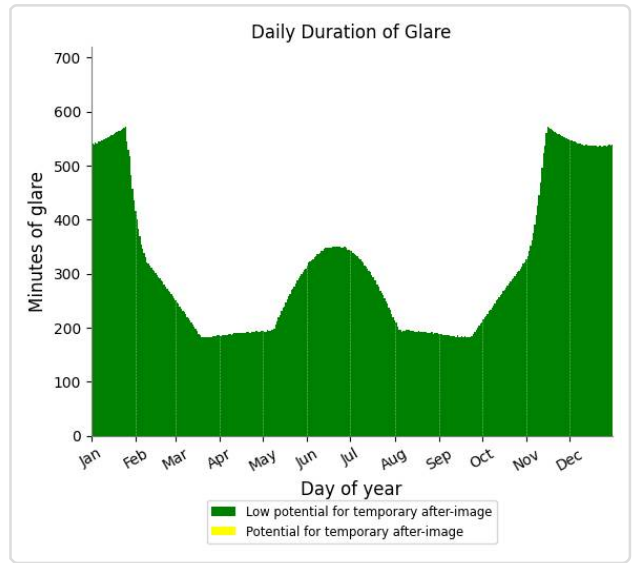
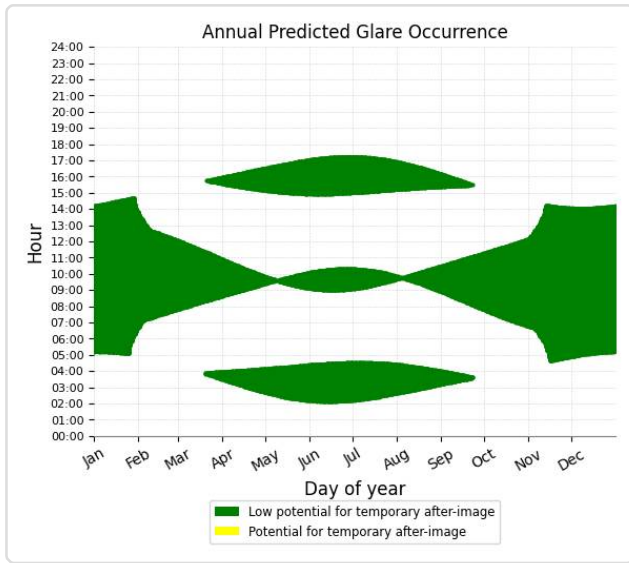
**PV4 - Route Receptor (Cronk Rd)**

*No glare found*

### PV4 - Route Receptor (Deal Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 115,792 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Driveway)

No glare found

### PV4 - Route Receptor (Genesse Rd)

No glare found

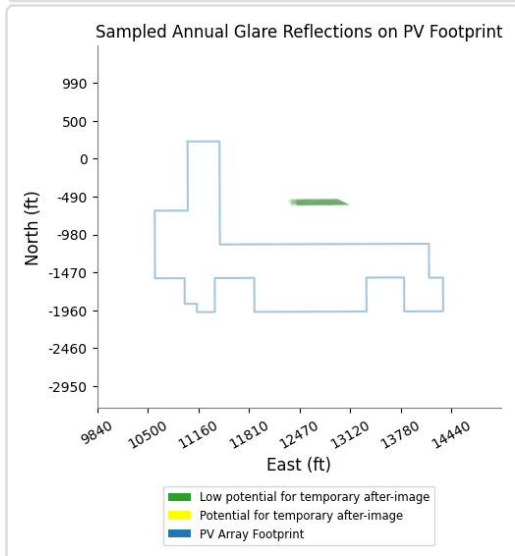
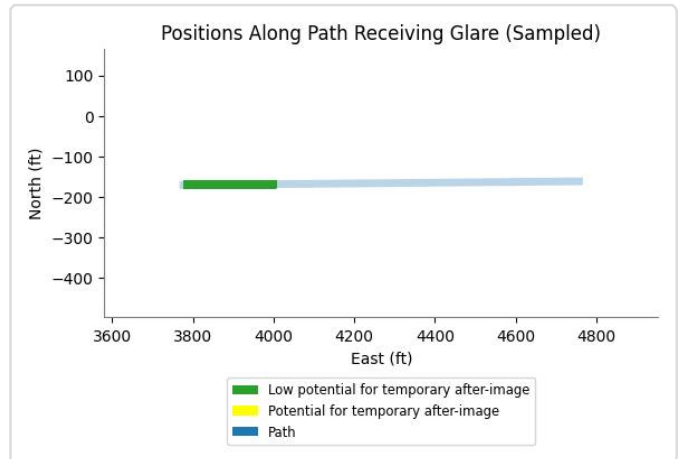
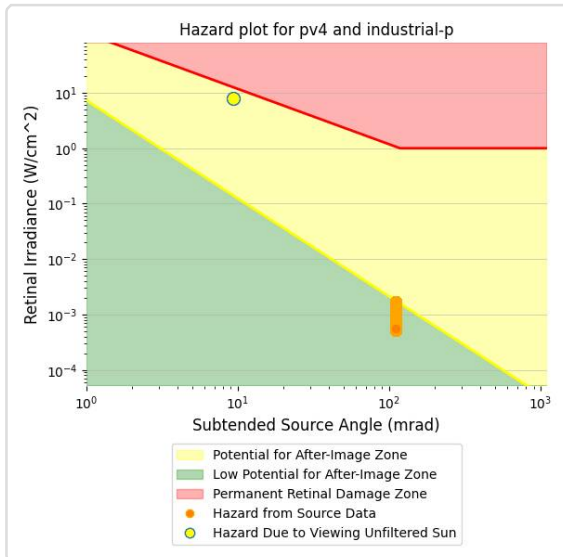
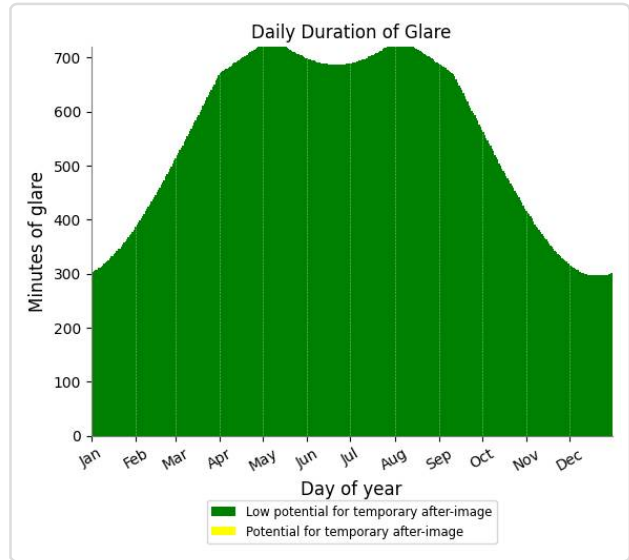
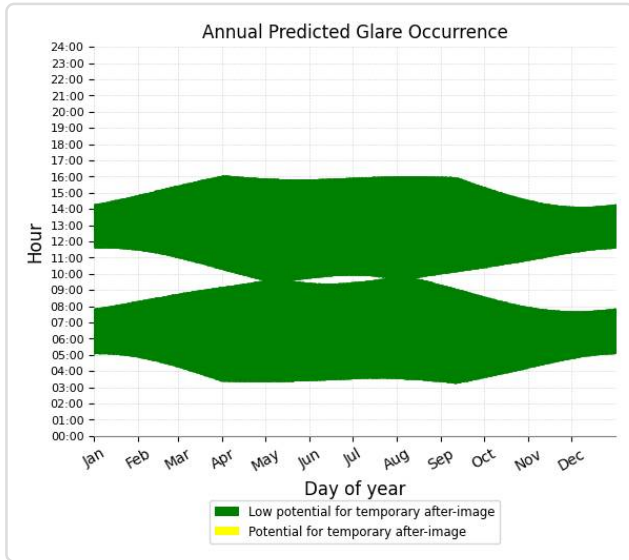
### PV4 - Route Receptor (Glasgow Rd)

No glare found

### PV4 - Route Receptor (Industrial Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 203,942 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Jonesville Rd)

No glare found

**PV4 - Route Receptor (Murphy St)**

*No glare found*

**PV4 - Route Receptor (N Bunn Rd)**

*No glare found*

**PV4 - Route Receptor (Olde Street)**

*No glare found*

**PV4 - Route Receptor (Pine Dr)**

*No glare found*

**PV4 - Route Receptor (Rainey Rd)**

*No glare found*

**PV4 - Route Receptor (Sand Lake Rd)**

*No glare found*

**PV4 - Route Receptor (Seneca)**

*No glare found*

**PV4 - Route Receptor (W Chicago Rd)**

*No glare found*

**PV4 - Route Receptor (Wise Rd)**

*No glare found*

**PV5** no glare found

Predicted energy output: 1,443,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV6** no glare found

Predicted energy output: 1,448,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV7** no glare found

Predicted energy output: 1,466,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV8** no glare found

Predicted energy output: 1,547,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV9** no glare found

Predicted energy output: 1,524,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

## Assumptions

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- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- 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.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.



# Ranger Power

## Ranger - Heartwood - 10ft at OPs - Without Coating

Created May 5, 2022  
 Updated May 5, 2022  
 Time-step 1 minute  
 Timezone offset UTC-8  
 Site ID 68669.12083

Project type Advanced  
 Project status: active  
 Category 10 MW to 100 MW

### Misc. Analysis Settings

DNI: varies (1,000.0 W/m<sup>2</sup> peak)  
 Ocular transmission coefficient: 0.5  
 Pupil diameter: 0.002 m  
 Eye focal length: 0.017 m  
 Sun subtended angle: 9.3 mrad

#### Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

### Summary of Results Glare with potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV1	SA tracking	SA tracking	0	0	1,470,000.0
PV10	SA tracking	SA tracking	0	0	1,533,000.0
PV11	SA tracking	SA tracking	0	0	1,438,000.0
PV12	SA tracking	SA tracking	0	0	1,511,000.0
PV13	SA tracking	SA tracking	0	0	1,507,000.0
PV14	SA tracking	SA tracking	0	0	1,573,000.0
PV2	SA tracking	SA tracking	0	0	1,501,000.0
PV3	SA tracking	SA tracking	0	0	1,474,000.0
PV4	SA tracking	SA tracking	241,440	74,721	1,608,000.0
PV5	SA tracking	SA tracking	0	0	1,443,000.0
PV6	SA tracking	SA tracking	0	0	1,448,000.0
PV7	SA tracking	SA tracking	0	0	1,466,000.0
PV8	SA tracking	SA tracking	0	0	1,547,000.0
PV9	SA tracking	SA tracking	0	0	1,524,000.0

## Component Data

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### PV Array(s)

Total PV footprint area: 1,015.2 acres

**Name:** PV1  
**Footprint area:** 35.2 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.969931	-84.728342	1119.05	5.15	1124.20
2	41.969933	-84.727760	1115.05	5.15	1120.20
3	41.970229	-84.727762	1118.05	5.15	1123.20
4	41.970237	-84.725157	1114.05	5.15	1119.20
5	41.967597	-84.725150	1119.05	5.15	1124.20
6	41.967604	-84.722767	1115.05	5.15	1120.20
7	41.968156	-84.722770	1111.05	5.15	1116.20
8	41.968166	-84.719584	1112.05	5.15	1117.20
9	41.966968	-84.719577	1115.05	5.15	1120.20
10	41.966958	-84.722819	1117.05	5.15	1122.20
11	41.966406	-84.722816	1116.05	5.15	1121.20
12	41.966396	-84.726002	1124.05	5.15	1129.21
13	41.967770	-84.726010	1126.05	5.15	1131.21
14	41.967763	-84.728329	1112.05	5.15	1117.20

**Name:** PV10  
**Footprint area:** 84.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.992533	-84.707345	1088.05	5.15	1093.20
2	41.992545	-84.703326	1111.05	5.15	1116.20
3	41.992249	-84.703325	1114.05	5.15	1119.20
4	41.992252	-84.702576	1110.05	5.15	1115.20
5	41.991281	-84.702571	1120.05	5.15	1125.20
6	41.991288	-84.700326	1105.05	5.15	1110.20
7	41.990992	-84.700324	1109.05	5.15	1114.20
8	41.990993	-84.699992	1108.05	5.15	1113.20
9	41.988882	-84.699981	1128.06	5.15	1133.21
10	41.988880	-84.700729	1121.05	5.15	1126.20
11	41.985788	-84.700713	1111.05	5.15	1116.20
12	41.985778	-84.704232	1103.05	5.15	1108.20
13	41.986975	-84.704238	1097.05	5.15	1102.20
14	41.986977	-84.703656	1095.05	5.15	1100.20
15	41.987662	-84.703660	1103.05	5.15	1108.20
16	41.987654	-84.706570	1091.05	5.15	1096.20
17	41.988863	-84.706577	1097.05	5.15	1102.20
18	41.988859	-84.707741	1088.05	5.15	1093.20
19	41.991266	-84.707754	1088.05	5.15	1093.20
20	41.991267	-84.707338	1096.05	5.15	1101.20

**Name:** PV11  
**Footprint area:** 68.6 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.993804	-84.689611	1114.05	5.15	1119.20
2	41.993813	-84.686590	1086.05	5.15	1091.20
3	41.992546	-84.686584	1104.05	5.15	1109.20
4	41.992553	-84.684089	1071.05	5.15	1076.20
5	41.991345	-84.684083	1086.05	5.15	1091.20
6	41.991347	-84.683335	1074.05	5.15	1079.20
7	41.990080	-84.683328	1095.05	5.15	1100.20
8	41.990083	-84.682497	1079.05	5.15	1084.20
9	41.988885	-84.682491	1090.05	5.15	1095.20
10	41.988877	-84.685318	1114.05	5.15	1119.20
11	41.987668	-84.685312	1115.05	5.15	1120.20
12	41.987659	-84.688332	1116.05	5.15	1121.20
13	41.988868	-84.688339	1111.05	5.15	1116.20
14	41.988865	-84.689586	1129.06	5.15	1134.21

**Name:** PV12  
**Footprint area:** 135.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999738	-84.698112	1095.05	5.15	1100.20
2	41.999748	-84.694508	1121.05	5.15	1126.20
3	41.998482	-84.694502	1118.05	5.15	1123.20
4	41.998484	-84.693670	1125.05	5.15	1130.21
5	41.998188	-84.693669	1126.05	5.15	1131.21
6	41.998189	-84.693280	1130.06	5.15	1135.21
7	41.998485	-84.693282	1130.06	5.15	1135.21
8	41.998488	-84.692284	1136.06	5.15	1141.21
9	41.999755	-84.692290	1130.06	5.15	1135.21
10	41.999760	-84.690267	1102.05	5.15	1107.20
11	41.995175	-84.690243	1104.05	5.15	1109.20
12	41.995171	-84.691491	1125.05	5.15	1130.21
13	41.993905	-84.691484	1137.06	5.15	1142.21
14	41.993898	-84.693646	1133.06	5.15	1138.21
15	41.993602	-84.693645	1129.06	5.15	1134.21
16	41.993602	-84.693811	1129.06	5.15	1134.21
17	41.989918	-84.693792	1109.05	5.15	1114.20
18	41.989916	-84.694318	1110.05	5.15	1115.20
19	41.990212	-84.694320	1109.05	5.15	1114.20
20	41.990210	-84.695068	1108.05	5.15	1113.20
21	41.991180	-84.695073	1102.05	5.15	1107.20
22	41.991179	-84.695738	1103.05	5.15	1108.20
23	41.991475	-84.695740	1100.05	5.15	1105.20
24	41.991473	-84.696128	1101.05	5.15	1106.20
25	41.991177	-84.696127	1105.05	5.15	1110.20
26	41.991173	-84.697651	1104.05	5.15	1109.20
27	41.991469	-84.697652	1103.05	5.15	1108.20
28	41.991467	-84.698401	1104.05	5.15	1109.20
29	41.992380	-84.698406	1105.05	5.15	1110.20
30	41.992377	-84.699403	1101.05	5.15	1106.20
31	41.997258	-84.699429	1093.05	5.15	1098.20
32	41.997265	-84.697267	1098.05	5.15	1103.20
33	41.998542	-84.697274	1093.05	5.15	1098.20
34	41.998540	-84.698105	1090.05	5.15	1095.20

**Name:** PV13  
**Footprint area:** 27.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



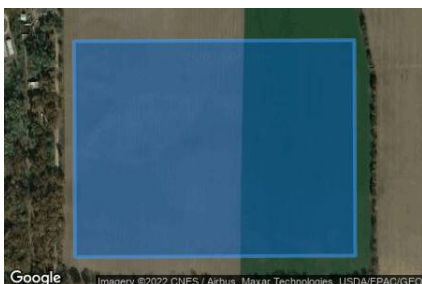
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.004972	-84.699577	1110.05	5.15	1115.20
2	42.004978	-84.697636	1108.05	5.15	1113.20
3	42.003712	-84.697630	1115.05	5.15	1120.20
4	42.003712	-84.697547	1115.05	5.15	1120.20
5	42.003477	-84.697545	1114.05	5.15	1119.20
6	42.003483	-84.695632	1106.05	5.15	1111.20
7	42.002285	-84.695626	1118.05	5.15	1123.20
8	42.002284	-84.695959	1115.05	5.15	1120.20
9	42.001075	-84.695952	1113.05	5.15	1118.20
10	42.001073	-84.696645	1108.05	5.15	1113.20
11	42.001369	-84.696647	1108.05	5.15	1113.20
12	42.001365	-84.698033	1103.05	5.15	1108.20
13	42.001304	-84.698033	1103.05	5.15	1108.20
14	42.001302	-84.698532	1099.05	5.15	1104.20
15	42.000389	-84.698527	1097.05	5.15	1102.20
16	42.000386	-84.699552	1095.05	5.15	1100.20

**Name:** PV14  
**Footprint area:** 36.5 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.999430	-84.708031	1108.05	5.15	1113.20
2	41.999433	-84.707172	1114.05	5.15	1119.20
3	41.998224	-84.707166	1096.05	5.15	1101.20
4	41.998228	-84.705696	1108.05	5.15	1113.20
5	41.999547	-84.705703	1116.05	5.15	1121.20
6	41.999561	-84.700769	1095.05	5.15	1100.20
7	41.997045	-84.700756	1096.05	5.15	1101.20
8	41.997023	-84.708018	1096.05	5.15	1101.20

**Name:** PV2  
**Footprint area:** 53.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.963734	-84.728441	1091.05	5.15	1096.20
2	41.963754	-84.722013	1128.06	5.15	1133.21
3	41.960081	-84.721993	1124.05	5.15	1129.21
4	41.960061	-84.728420	1082.05	5.15	1087.20

**Name:** PV3  
**Footprint area:** 104.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



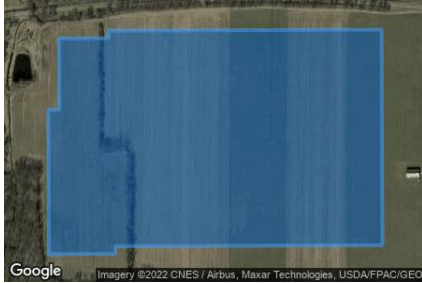
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970361	-84.699025	1124.05	5.15	1129.21
2	41.970373	-84.695008	1131.06	5.15	1136.21
3	41.959416	-84.694951	1138.06	5.15	1143.21
4	41.959409	-84.697361	1145.06	5.15	1150.21
5	41.956838	-84.697348	1130.06	5.15	1135.21
6	41.956833	-84.699037	1143.06	5.15	1148.21
7	41.961405	-84.699061	1142.06	5.15	1147.21
8	41.961409	-84.697897	1143.06	5.15	1148.21
9	41.963374	-84.697908	1138.06	5.15	1143.21
10	41.963371	-84.699155	1135.06	5.15	1140.21
11	41.964272	-84.699159	1128.06	5.15	1133.21
12	41.964274	-84.698744	1134.06	5.15	1139.21
13	41.965493	-84.698750	1127.05	5.15	1132.21
14	41.965492	-84.699166	1124.05	5.15	1129.21
15	41.969151	-84.699185	1125.05	5.15	1130.21
16	41.969152	-84.699019	1125.05	5.15	1130.21

**Name:** PV4  
**Footprint area:** 72.7 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.970548	-84.687842	1150.06	5.15	1155.21
2	41.970553	-84.686319	1158.06	5.15	1163.21
3	41.966882	-84.686300	1167.06	5.15	1172.21
4	41.966910	-84.676325	1104.05	5.15	1109.20
5	41.965701	-84.676319	1107.05	5.15	1112.20
6	41.965703	-84.675654	1104.05	5.15	1109.20
7	41.964505	-84.675648	1105.05	5.15	1110.20
8	41.964500	-84.677504	1110.05	5.15	1115.20
9	41.965709	-84.677510	1109.05	5.15	1114.20
10	41.965704	-84.679312	1127.05	5.15	1132.21
11	41.964495	-84.679306	1110.05	5.15	1115.20
12	41.964480	-84.684652	1160.06	5.15	1165.21
13	41.965689	-84.684659	1165.06	5.15	1170.21
14	41.965684	-84.686543	1173.06	5.15	1178.21
15	41.964475	-84.686537	1160.06	5.15	1165.21
16	41.964473	-84.687395	1169.06	5.15	1174.21
17	41.964769	-84.687397	1171.06	5.15	1176.21
18	41.964767	-84.687979	1162.06	5.15	1167.21
19	41.965680	-84.687983	1171.06	5.15	1176.21
20	41.965676	-84.689396	1166.06	5.15	1171.21
21	41.968082	-84.689409	1148.06	5.15	1153.21
22	41.968087	-84.687829	1154.06	5.15	1159.21

**Name:** PV5  
**Footprint area:** 62.8 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982233	-84.708939	1094.05	5.15	1099.20
2	41.982236	-84.707804	1097.05	5.15	1102.20
3	41.982365	-84.707805	1097.05	5.15	1102.20
4	41.982384	-84.701542	1117.05	5.15	1122.20
5	41.978724	-84.701522	1135.06	5.15	1140.21
6	41.978706	-84.707646	1101.05	5.15	1106.20
7	41.978578	-84.707645	1102.05	5.15	1107.20
8	41.978573	-84.709169	1101.05	5.15	1106.20
9	41.981023	-84.709182	1097.05	5.15	1102.20
10	41.981024	-84.708933	1096.05	5.15	1101.20

**Name:** PV6  
**Footprint area:** 138.3 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982288	-84.699191	1116.05	5.15	1121.20
2	41.982309	-84.691930	1120.05	5.15	1125.20
3	41.979552	-84.691916	1124.05	5.15	1129.21
4	41.979557	-84.690170	1131.06	5.15	1136.21
5	41.978359	-84.690164	1132.06	5.15	1137.21
6	41.978352	-84.692741	1136.06	5.15	1141.21
7	41.974906	-84.692723	1143.06	5.15	1148.21
8	41.974898	-84.695384	1136.06	5.15	1141.21
9	41.973632	-84.695377	1134.06	5.15	1139.21
10	41.973628	-84.696541	1134.06	5.15	1139.21
11	41.972362	-84.696534	1134.06	5.15	1139.21
12	41.972354	-84.699138	1133.06	5.15	1138.21

**Name:** PV7  
**Footprint area:** 149.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984492	-84.689081	1125.05	5.15	1130.21
2	41.984498	-84.687141	1122.05	5.15	1127.21
3	41.983289	-84.687135	1128.06	5.15	1133.21
4	41.983308	-84.680317	1104.05	5.15	1109.20
5	41.980844	-84.680305	1122.05	5.15	1127.21
6	41.980841	-84.681220	1121.05	5.15	1126.20
7	41.978424	-84.681207	1141.06	5.15	1146.21
8	41.978420	-84.682400	1133.06	5.15	1138.21
9	41.976232	-84.682389	1143.06	5.15	1148.21
10	41.976229	-84.683470	1150.06	5.15	1155.21
11	41.975316	-84.683465	1153.06	5.15	1158.21
12	41.975313	-84.684546	1157.06	5.15	1162.21
13	41.975017	-84.684545	1157.06	5.15	1162.21
14	41.975004	-84.689310	1159.06	5.15	1164.21
15	41.982065	-84.689347	1151.06	5.15	1156.21
16	41.982066	-84.689068	1148.06	5.15	1153.21

**Name:** PV8  
**Footprint area:** 36.4 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.984894	-84.708921	1093.05	5.15	1098.20
2	41.984896	-84.708238	1094.05	5.15	1099.20
3	41.985192	-84.708240	1094.05	5.15	1099.20
4	41.985198	-84.706217	1100.05	5.15	1105.20
5	41.983989	-84.706211	1100.05	5.15	1105.20
6	41.983994	-84.704641	1100.05	5.15	1105.20
7	41.985203	-84.704647	1102.05	5.15	1107.20
8	41.985215	-84.700611	1115.05	5.15	1120.20
9	41.984611	-84.700608	1114.05	5.15	1119.20
10	41.984611	-84.699842	1119.05	5.15	1124.20
11	41.983416	-84.699836	1110.05	5.15	1115.20
12	41.983413	-84.700602	1108.05	5.15	1113.20
13	41.983104	-84.700600	1105.05	5.15	1110.20
14	41.983079	-84.708911	1094.05	5.15	1099.20

**Name:** PV9  
**Footprint area:** 8.9 acres  
**Axis tracking:** Single-axis rotation  
**Backtracking:** Shade-slope  
**Tracking axis orientation:** 180.0 deg  
**Maximum tracking angle:** 52.0 deg  
**Resting angle:** 52.0 deg  
**Ground Coverage Ratio:** 0.327  
**Rated power:** 500.0 kW  
**Panel material:** Smooth glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 6.55 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985206	-84.699067	1128.06	5.15	1133.21
2	41.985210	-84.697460	1143.06	5.15	1148.21
3	41.984002	-84.697453	1129.06	5.15	1134.21
4	41.984003	-84.696871	1132.06	5.15	1137.21
5	41.983101	-84.696867	1115.05	5.15	1120.20
6	41.983095	-84.699056	1109.05	5.15	1114.20

### Route Receptor(s)

**Name:** Baker St  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982595	-84.675276	1110.87	10.00	1120.87
2	41.981678	-84.676059	1136.25	10.00	1146.25

**Name:** Baxter and Highland  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.983885	-84.678320	1116.05	10.00	1126.05
2	41.982952	-84.678910	1121.87	10.00	1131.87
3	41.982816	-84.678857	1122.26	10.00	1132.26
4	41.981636	-84.676024	1136.25	10.00	1146.25
5	41.981452	-84.676014	1137.22	10.00	1147.22
6	41.981117	-84.676604	1141.59	10.00	1151.59
7	41.980862	-84.676561	1138.96	10.00	1148.96
8	41.980160	-84.674683	1136.11	10.00	1146.11
9	41.979642	-84.673782	1123.98	10.00	1133.98
10	41.977913	-84.672905	1109.82	10.00	1119.82

**Name:** Bean Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.955879	-84.729038	1044.16	10.00	1054.17
2	41.956246	-84.709336	1134.38	10.00	1144.38
3	41.956262	-84.689831	1140.20	10.00	1150.20
4	41.956390	-84.670587	1096.54	10.00	1106.54

**Name:** Cronk Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.977130	-84.728899	1078.75	10.00	1088.75
2	41.964798	-84.728791	1090.12	10.00	1100.13
3	41.955799	-84.728834	1044.93	10.00	1054.93
4	41.952416	-84.728856	1114.49	10.00	1124.49

**Name:** Deal Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.974602	-84.684784	1154.83	10.00	1164.83
2	41.972480	-84.684720	1160.33	10.00	1170.33
3	41.971292	-84.682960	1153.32	10.00	1163.32
4	41.970789	-84.682821	1151.99	10.00	1161.99
5	41.967590	-84.682756	1163.50	10.00	1173.50

**Name:** Driveway  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.995767	-84.685119	1075.68	10.00	1085.68
2	41.995536	-84.684958	1069.15	10.00	1079.15
3	41.995026	-84.684808	1072.43	10.00	1082.43
4	41.993710	-84.684217	1076.47	10.00	1086.47
5	41.993272	-84.683692	1076.71	10.00	1086.71
6	41.992977	-84.683069	1082.67	10.00	1092.67
7	41.992674	-84.682512	1083.81	10.00	1093.81
8	41.992602	-84.681932	1087.25	10.00	1097.25
9	41.992458	-84.681868	1083.80	10.00	1093.80
10	41.990449	-84.681879	1077.65	10.00	1087.65
11	41.988368	-84.681825	1086.81	10.00	1096.81
12	41.987785	-84.681739	1093.08	10.00	1103.08
13	41.986932	-84.681921	1095.86	10.00	1105.86
14	41.986485	-84.681836	1096.56	10.00	1106.56
15	41.985489	-84.681921	1101.26	10.00	1111.26

**Name:** Genesee Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000030	-84.728922	1067.79	10.00	1077.79
2	41.999982	-84.709482	1103.57	10.00	1113.57
3	42.000014	-84.694728	1118.53	10.00	1128.53
4	42.000022	-84.691563	1117.63	10.00	1127.63
5	41.999982	-84.690007	1087.54	10.00	1097.54
6	41.999926	-84.689600	1076.43	10.00	1086.43
7	41.999671	-84.688430	1058.92	10.00	1068.92
8	41.999615	-84.687958	1054.68	10.00	1064.69
9	41.999599	-84.687336	1050.28	10.00	1060.28
10	41.999767	-84.685684	1044.03	10.00	1054.03
11	42.000006	-84.684278	1057.00	10.00	1067.00
12	41.999998	-84.684107	1059.16	10.00	1069.16
13	41.999464	-84.683034	1064.98	10.00	1074.98
14	41.995070	-84.669708	1092.21	10.00	1102.21

**Name:** Glasgow Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985527	-84.719331	1087.94	10.00	1097.94
2	41.977733	-84.719052	1103.71	10.00	1113.71
3	41.973266	-84.719030	1111.41	10.00	1121.41
4	41.966661	-84.719073	1113.17	10.00	1123.17

**Name:** Industrial Pkwy  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968404	-84.682780	1160.58	10.00	1170.58
2	41.968492	-84.670957	1089.74	10.00	1099.74

**Name:** Jonesville Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985481	-84.728891	1100.67	10.00	1110.67
2	41.985513	-84.709429	1093.35	10.00	1103.35
3	41.985513	-84.699494	1123.99	10.00	1133.99
4	41.985481	-84.689924	1122.16	10.00	1132.16
5	41.985481	-84.681878	1101.02	10.00	1111.02
6	41.985497	-84.673295	1093.95	10.00	1103.95

**Name:** Murphy St  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985519	-84.686428	1115.99	10.00	1125.99
2	41.985288	-84.686342	1116.02	10.00	1126.02
3	41.985160	-84.686139	1117.25	10.00	1127.25
4	41.985176	-84.685731	1116.85	10.00	1126.85
5	41.985145	-84.683542	1114.66	10.00	1124.66
6	41.984841	-84.680860	1109.42	10.00	1119.42
7	41.984578	-84.679894	1100.91	10.00	1110.91
8	41.982760	-84.675614	1114.10	10.00	1124.10
9	41.981875	-84.673629	1101.83	10.00	1111.83
10	41.981588	-84.673200	1100.47	10.00	1110.47
11	41.979833	-84.671011	1093.58	10.00	1103.58

**Name:** N Bunn Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.000012	-84.690061	1088.52	10.00	1098.52
2	41.985404	-84.689932	1121.82	10.00	1131.82
3	41.973156	-84.689868	1161.37	10.00	1171.37
4	41.956132	-84.689889	1139.26	10.00	1149.26
5	41.948026	-84.689954	1140.62	10.00	1150.62

**Name:** Olde Street  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981436	-84.667386	1069.48	10.00	1079.48
2	41.979649	-84.665884	1068.73	10.00	1078.73
3	41.978325	-84.665841	1074.84	10.00	1084.84
4	41.977591	-84.666399	1077.45	10.00	1087.45
5	41.974800	-84.669574	1075.40	10.00	1085.40
6	41.973699	-84.670583	1073.92	10.00	1083.92
7	41.971976	-84.671505	1084.63	10.00	1094.63
8	41.969854	-84.671248	1091.59	10.00	1101.59
9	41.967126	-84.670604	1089.11	10.00	1099.11
10	41.963265	-84.669553	1112.18	10.00	1122.18
11	41.961111	-84.668630	1121.69	10.00	1131.69
12	41.957090	-84.665690	1119.18	10.00	1129.18

**Name:** Pine Dr  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.979915	-84.678553	1141.57	10.00	1151.57
2	41.979493	-84.679240	1138.15	10.00	1148.15
3	41.977076	-84.679251	1144.11	10.00	1154.11
4	41.976541	-84.678811	1142.07	10.00	1152.07

**Name:** Rainey Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	42.014437	-84.709545	1058.14	10.00	1068.14
2	41.999912	-84.709480	1103.34	10.00	1113.34
3	41.985479	-84.709416	1093.47	10.00	1103.47

**Name:** Sand Lake Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.968772	-84.709415	1116.45	10.00	1126.45
2	41.956072	-84.709330	1136.41	10.00	1146.41

**Name:** Seneca  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.981662	-84.673302	1100.66	10.00	1110.66
2	41.981183	-84.675072	1117.83	10.00	1127.83
3	41.980449	-84.675673	1128.01	10.00	1138.01

**Name:** W Chicago Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.982786	-84.664363	1050.18	10.00	1060.18
2	41.977299	-84.677173	1141.86	10.00	1151.86
3	41.976071	-84.680134	1144.50	10.00	1154.50
4	41.974491	-84.685498	1156.34	10.00	1166.34
5	41.973183	-84.690047	1161.12	10.00	1171.12
6	41.970423	-84.700068	1123.07	10.00	1133.07
7	41.968190	-84.711827	1114.52	10.00	1124.52
8	41.966164	-84.721955	1115.01	10.00	1125.01
9	41.963020	-84.738027	1042.73	10.00	1052.73
10	41.962111	-84.742790	1092.27	10.00	1102.27

**Name:** Wise Rd  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	41.985561	-84.699581	1122.65	10.00	1132.65
2	41.970566	-84.699560	1122.83	10.00	1132.83
3	41.956255	-84.699560	1139.97	10.00	1149.97

## Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	41.996381	-84.708839	1095.16	10.00	1105.16
OP 2	41.993083	-84.706000	1100.56	10.00	1110.56
OP 3	41.985769	-84.707503	1103.48	10.00	1113.48
OP 4	41.985786	-84.706686	1102.48	10.00	1112.48
OP 5	41.985781	-84.705800	1103.62	10.00	1113.62
OP 6	41.961411	-84.699961	1140.19	10.00	1150.19
OP 7	41.956622	-84.699919	1145.91	10.00	1155.91
OP 8	41.973125	-84.692267	1152.32	10.00	1162.32
OP 9	41.973217	-84.691575	1157.04	10.00	1167.04
OP 10	41.973628	-84.690294	1159.89	10.00	1169.89
OP 11	41.974828	-84.690369	1157.55	10.00	1167.55
OP 12	41.975081	-84.690142	1155.53	10.00	1165.53
OP 13	41.975650	-84.690122	1148.43	10.00	1158.43
OP 14	41.981833	-84.690272	1145.80	10.00	1155.80
OP 15	41.974111	-84.685268	1153.07	10.00	1163.07
OP 16	41.975692	-84.680325	1147.00	10.00	1157.00
OP 17	41.971564	-84.696972	1133.79	10.00	1143.79
OP 18	41.971939	-84.696078	1133.47	10.00	1143.47
OP 19	41.984947	-84.696178	1143.22	10.00	1153.22
OP 20	41.985186	-84.696983	1146.34	10.00	1156.34
OP 21	41.985231	-84.679869	1095.91	10.00	1105.91
OP 22	41.986028	-84.682439	1112.99	10.00	1122.99
OP 23	41.994503	-84.689772	1115.41	10.00	1125.41
OP 24	41.966300	-84.690264	1157.80	10.00	1167.80
OP 25	41.999553	-84.708722	1109.26	10.00	1119.26
OP 26	41.967781	-84.682785	1161.48	10.00	1171.48
OP 27	41.967829	-84.679630	1168.46	10.00	1178.46
OP 28	41.968403	-84.682870	1159.58	10.00	1169.58
OP 29	41.969328	-84.682806	1157.08	10.00	1167.08
OP 30	41.968451	-84.681583	1167.03	10.00	1177.03

## Summary of PV Glare Analysis

*PV configuration and total predicted glare*

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV1	SA tracking	SA tracking	0	0	1,470,000.0	
PV10	SA tracking	SA tracking	0	0	1,533,000.0	
PV11	SA tracking	SA tracking	0	0	1,438,000.0	
PV12	SA tracking	SA tracking	0	0	1,511,000.0	
PV13	SA tracking	SA tracking	0	0	1,507,000.0	
PV14	SA tracking	SA tracking	0	0	1,573,000.0	
PV2	SA tracking	SA tracking	0	0	1,501,000.0	
PV3	SA tracking	SA tracking	0	0	1,474,000.0	
PV4	SA tracking	SA tracking	241,440	74,721	1,608,000.0	-
PV5	SA tracking	SA tracking	0	0	1,443,000.0	
PV6	SA tracking	SA tracking	0	0	1,448,000.0	
PV7	SA tracking	SA tracking	0	0	1,466,000.0	
PV8	SA tracking	SA tracking	0	0	1,547,000.0	
PV9	SA tracking	SA tracking	0	0	1,524,000.0	

### Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pv4 (green)	17330	17389	21772	14541	10568	11406	11159	10503	21770	20069	17240	16722
pv4 (yellow)	0	0	0	9126	16169	15581	16184	14860	252	0	0	0

## PV & Receptor Analysis Results

*Results for each PV array and receptor*

**PV1** no glare found

Predicted energy output: 1,470,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV10** no glare found

Predicted energy output: 1,533,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV11** no glare found

Predicted energy output: 1,438,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV12** no glare found

Predicted energy output: 1,511,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV13** no glare found

Predicted energy output: 1,507,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV14** no glare found

Predicted energy output: 1,573,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV2** no glare found

Predicted energy output: 1,501,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV3** no glare found

Predicted energy output: 1,474,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV4** potential temporary after-image

Predicted energy output: 1,608,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	107694	5991
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	133746	68730
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

**PV4 - OP Receptor (OP 1)**

*No glare found*

**PV4 - OP Receptor (OP 2)**

*No glare found*

**PV4 - OP Receptor (OP 3)**

*No glare found*

**PV4 - OP Receptor (OP 4)**

*No glare found*

**PV4 - OP Receptor (OP 5)**

*No glare found*

**PV4 - OP Receptor (OP 6)**

*No glare found*

**PV4 - OP Receptor (OP 7)**

*No glare found*

**PV4 - OP Receptor (OP 8)**

*No glare found*

**PV4 - OP Receptor (OP 9)**

*No glare found*

**PV4 - OP Receptor (OP 10)**

*No glare found*

**PV4 - OP Receptor (OP 11)**

*No glare found*

**PV4 - OP Receptor (OP 12)**

*No glare found*

**PV4 - OP Receptor (OP 13)**

*No glare found*

**PV4 - OP Receptor (OP 14)**

*No glare found*

**PV4 - OP Receptor (OP 15)**

*No glare found*

**PV4 - OP Receptor (OP 16)**

*No glare found*

**PV4 - OP Receptor (OP 17)**

*No glare found*

**PV4 - OP Receptor (OP 18)**

*No glare found*

**PV4 - OP Receptor (OP 19)**

*No glare found*

**PV4 - OP Receptor (OP 20)**

*No glare found*

**PV4 - OP Receptor (OP 21)**

*No glare found*

**PV4 - OP Receptor (OP 22)**

*No glare found*

**PV4 - OP Receptor (OP 23)**

*No glare found*

**PV4 - OP Receptor (OP 24)**

*No glare found*

**PV4 - OP Receptor (OP 25)**

*No glare found*

**PV4 - OP Receptor (OP 26)**

*No glare found*

**PV4 - OP Receptor (OP 27)**

*No glare found*

**PV4 - OP Receptor (OP 28)**

*No glare found*

**PV4 - OP Receptor (OP 29)**

*No glare found*

**PV4 - OP Receptor (OP 30)**

*No glare found*

**PV4 - Route Receptor (Baker St)**

*No glare found*

**PV4 - Route Receptor (Baxter and Highland)**

*No glare found*

**PV4 - Route Receptor (Bean Rd)**

*No glare found*

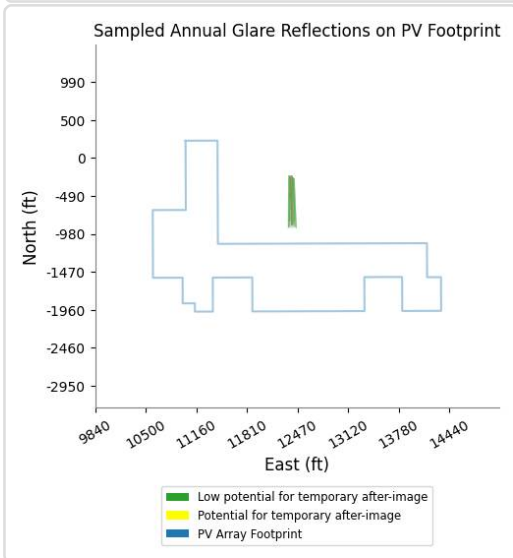
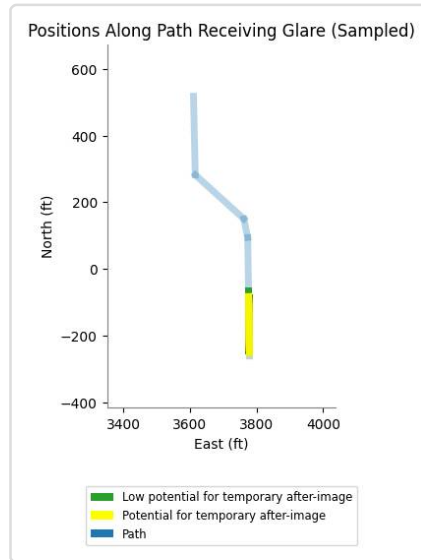
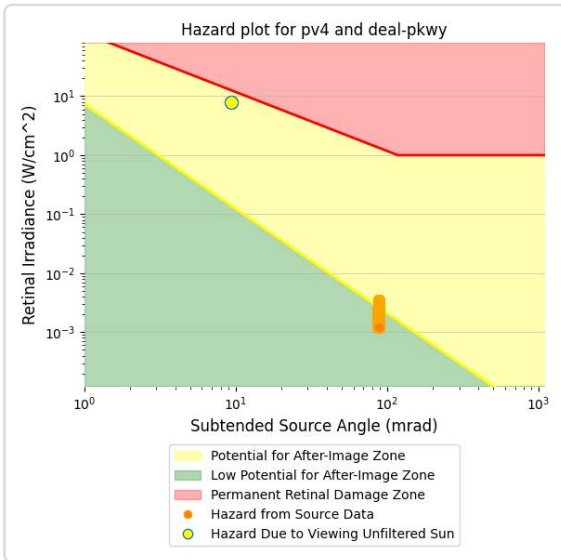
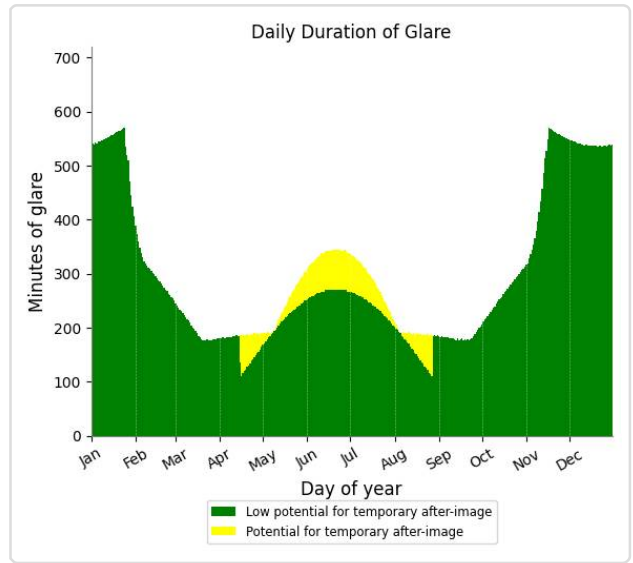
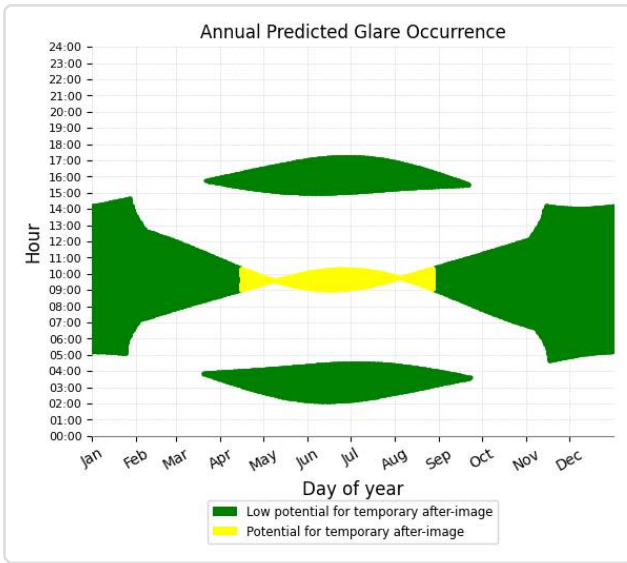
**PV4 - Route Receptor (Cronk Rd)**

*No glare found*

### PV4 - Route Receptor (Deal Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 107,694 minutes of "green" glare with low potential to cause temporary after-image.
- 5,991 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Driveway)

No glare found

### PV4 - Route Receptor (Genesse Rd)

No glare found

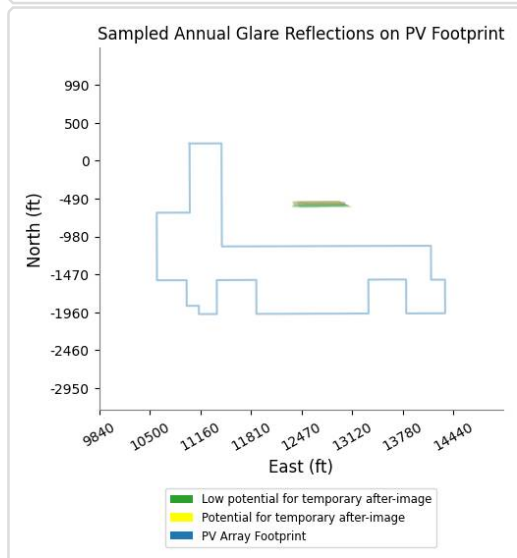
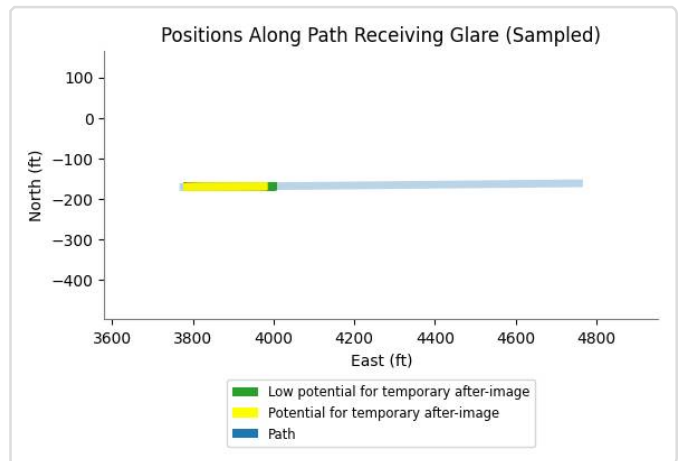
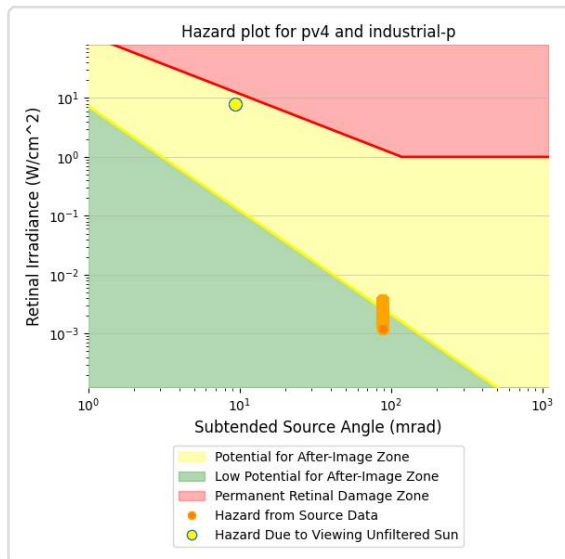
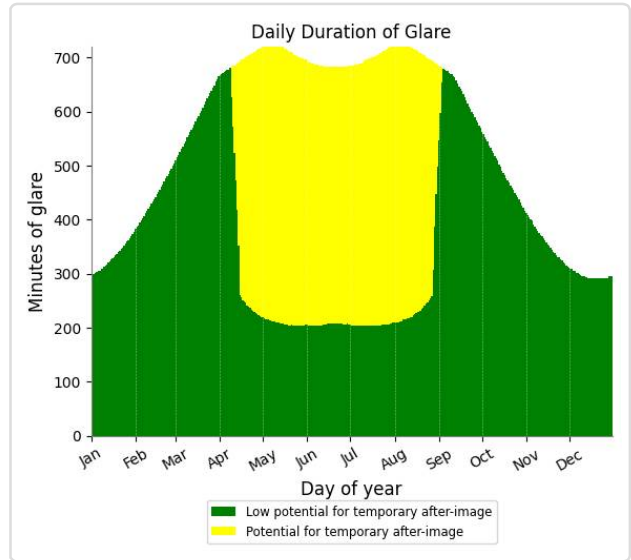
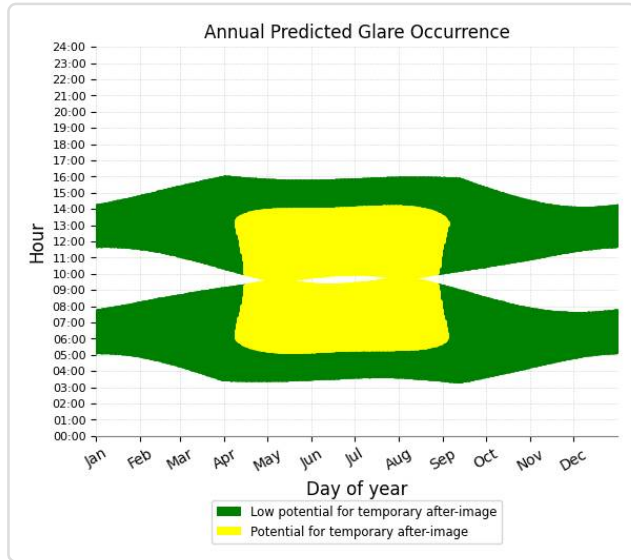
### PV4 - Route Receptor (Glasgow Rd)

No glare found

### PV4 - Route Receptor (Industrial Pkwy)

PV array is expected to produce the following glare for receptors at this location:

- 133,746 minutes of "green" glare with low potential to cause temporary after-image.
- 68,730 minutes of "yellow" glare with potential to cause temporary after-image.



### PV4 - Route Receptor (Jonesville Rd)

No glare found

**PV4 - Route Receptor (Murphy St)**

*No glare found*

**PV4 - Route Receptor (N Bunn Rd)**

*No glare found*

**PV4 - Route Receptor (Olde Street)**

*No glare found*

**PV4 - Route Receptor (Pine Dr)**

*No glare found*

**PV4 - Route Receptor (Rainey Rd)**

*No glare found*

**PV4 - Route Receptor (Sand Lake Rd)**

*No glare found*

**PV4 - Route Receptor (Seneca)**

*No glare found*

**PV4 - Route Receptor (W Chicago Rd)**

*No glare found*

**PV4 - Route Receptor (Wise Rd)**

*No glare found*

**PV5** no glare found

Predicted energy output: 1,443,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV6** no glare found

Predicted energy output: 1,448,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV7** no glare found

Predicted energy output: 1,466,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV8** no glare found

Predicted energy output: 1,547,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

**PV9** no glare found

Predicted energy output: 1,524,000.0 kWh (assuming sunny, clear skies)

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
Route: Baker St	0	0
Route: Baxter and Highland	0	0
Route: Bean Rd	0	0
Route: Cronk Rd	0	0
Route: Deal Pkwy	0	0
Route: Driveway	0	0
Route: Genesse Rd	0	0
Route: Glasgow Rd	0	0
Route: Industrial Pkwy	0	0
Route: Jonesville Rd	0	0
Route: Murphy St	0	0
Route: N Bunn Rd	0	0
Route: Olde Street	0	0
Route: Pine Dr	0	0
Route: Rainey Rd	0	0
Route: Sand Lake Rd	0	0
Route: Seneca	0	0
Route: W Chicago Rd	0	0
Route: Wise Rd	0	0

No glare found

## Assumptions

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- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- 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.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

# HEARTWOOD SOLAR PROJECT, FAYETTE TOWNSHIP, MICHIGAN

## SITE PHOTOS FROM INDUSTRIAL PARKWAY AND DEAL PARKWAY, JONESVILLE, MICHIGAN

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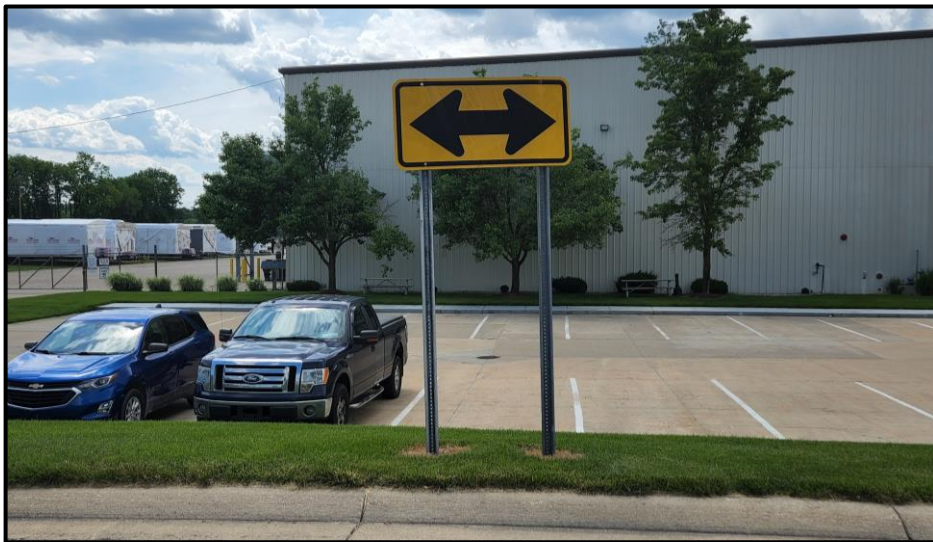
**Photo 1.** Intersection of Industrial Parkway and Deal Parkway, facing southeast. Existing vegetation, structures, and topography.



**Photo 2.** Intersection of Industrial Parkway and Deal Parkway, facing south. Existing vegetation and topography.



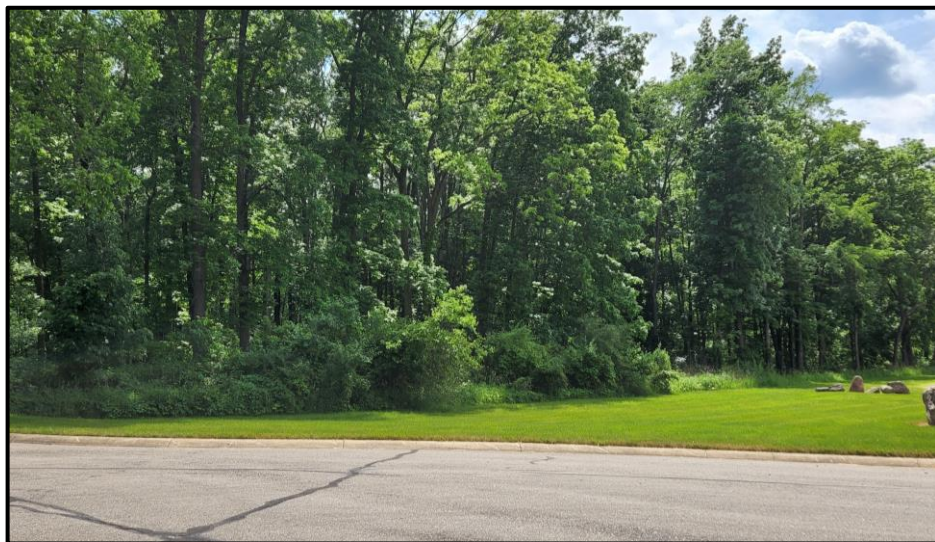
**Photo 3.** Intersection of Industrial Parkway and Deal Parkway, facing southwest. Existing vegetation and structures.



**Photo 4.** Intersection of Industrial Parkway and Deal Parkway, facing west. Existing structures.



**Photo 5.** Southern portion of Deal Parkway, facing southeast. Existing vegetation and topography.



**Photo 6.** Southern portion of Deal Parkway, facing southwest. Existing vegetation.



**Photo 7.** Industrial Parkway, approximately 300 feet east of intersection with Deal Parkway, facing southeast. Existing structures and vegetation.



**Photo 8.** Industrial Parkway, approximately 300 feet east of intersection with Deal Parkway, facing south. Existing structure and vegetation.



**Photo 10.** Industrial Parkway, approximately 300 feet east of intersection with Deal Parkway, facing southeast. Existing vegetation.



**Photo 11.** Industrial Parkway, approximately 325 feet of intersection, facing west. Existing structure and vegetation.