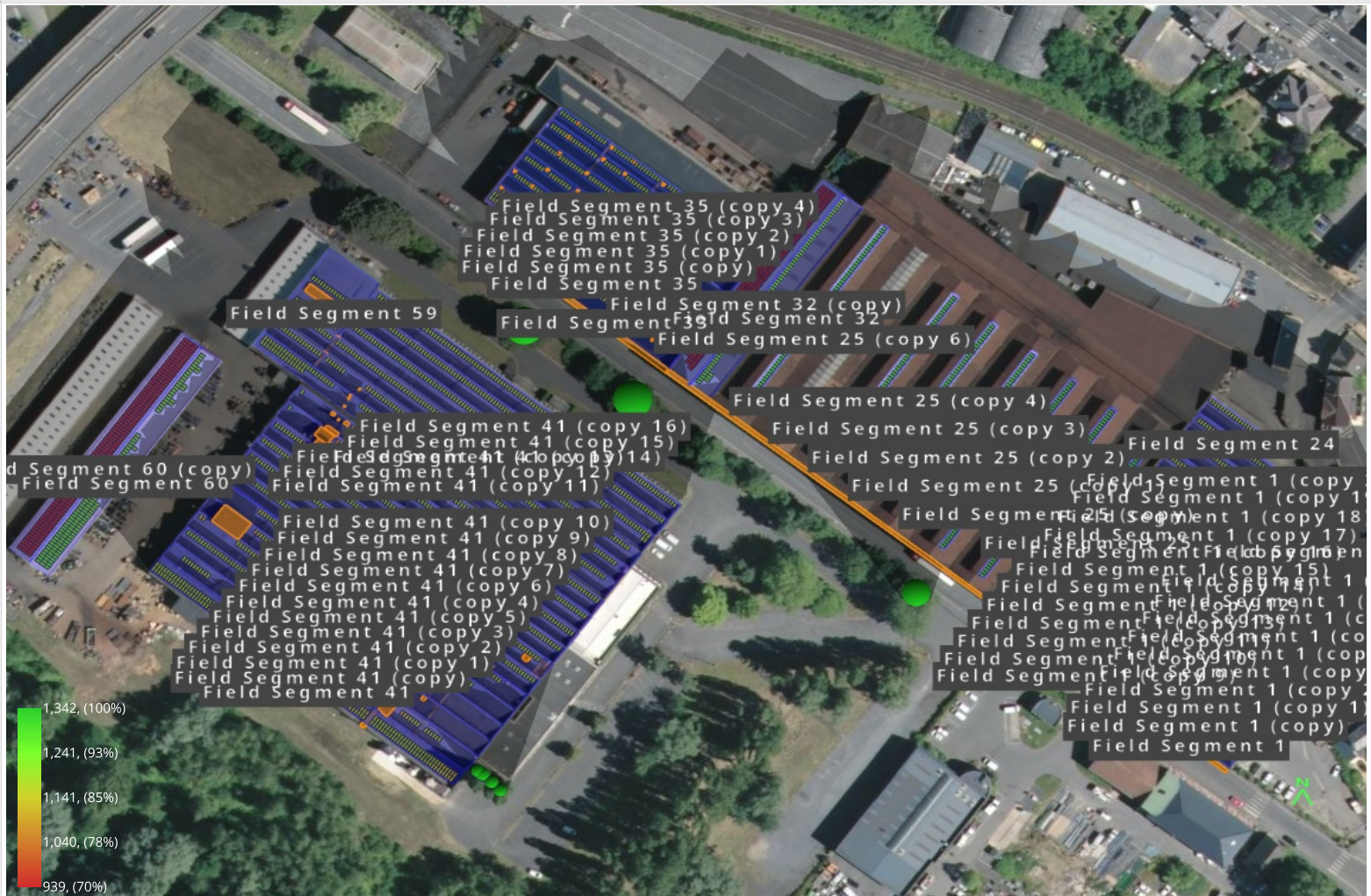


voltec 385 toiture inclinée CENTRE TECHNIQUE VOIRIE-Atelier, Rue de la Prairie, Charleville-Mézières


Shading Heatmap



■ ■ ■ Shading by Field Segment

Description	Tilt	Azimuth	Modules	Nameplate	Shaded Irradiance	AC Energy	TOF ²	Solar Access	Avg TSRF ²
Field Segment 1	15.0°	216.9°	70	27.0 kWp	1,173.3kWh/m ²	24.6 MWh ¹	88.0%	99.3%	87.4%
Field Segment 1 (copy)	15.0°	216.9°	71	27.3 kWp	1,172.0kWh/m ²	24.9 MWh ¹	88.0%	99.2%	87.3%
Field Segment 1 (copy 1)	15.0°	216.9°	70	27.0 kWp	1,171.7kWh/m ²	24.6 MWh ¹	88.0%	99.2%	87.3%
Field Segment 1 (copy 2)	15.0°	216.9°	70	27.0 kWp	1,170.3kWh/m ²	24.5 MWh ¹	88.0%	99.1%	87.2%
Field Segment 1 (copy 3)	15.0°	216.9°	70	27.0 kWp	1,171.9kWh/m ²	24.6 MWh ¹	88.0%	99.2%	87.3%
Field Segment 1 (copy 4)	15.0°	216.9°	71	27.3 kWp	1,171.2kWh/m ²	24.9 MWh ¹	88.0%	99.2%	87.3%
Field Segment 1 (copy 5)	15.0°	216.9°	70	27.0 kWp	1,169.7kWh/m ²	24.5 MWh ¹	88.0%	99.0%	87.2%
Field Segment 1 (copy 6)	15.0°	216.9°	71	27.3 kWp	1,170.8kWh/m ²	24.9 MWh ¹	88.0%	99.1%	87.2%
Field Segment 1 (copy 8)	15.0°	216.9°	23	8.86 kWp	1,163.0kWh/m ²	8.02 MWh ¹	88.0%	98.5%	86.7%
Field Segment 1 (copy 7)	15.0°	216.9°	43	16.6 kWp	1,168.7kWh/m ²	15.1 MWh ¹	88.0%	98.9%	87.1%
Field Segment 11	15.0°	216.9°	2	770.0 Wp	1,142.7kWh/m ²	686.7 kWh ¹	88.0%	96.7%	85.1%
Field Segment 1 (copy 9)	15.0°	216.9°	37	14.2 kWp	1,168.9kWh/m ²	13.0 MWh ¹	88.0%	99.0%	87.1%
Field Segment 1 (copy 10)	15.0°	216.9°	37	14.2 kWp	1,168.9kWh/m ²	13.0 MWh ¹	88.0%	99.0%	87.1%
Field Segment 1 (copy 11)	15.0°	216.9°	37	14.2 kWp	1,168.7kWh/m ²	13.0 MWh ¹	88.0%	98.9%	87.1%
Field Segment 1 (copy 12)	15.0°	216.9°	37	14.2 kWp	1,169.1kWh/m ²	13.0 MWh ¹	88.0%	99.0%	87.1%
Field Segment 1 (copy 13)	15.0°	216.9°	37	14.2 kWp	1,168.7kWh/m ²	13.0 MWh ¹	88.0%	98.9%	87.1%
Field Segment 1 (copy 14)	15.0°	216.9°	37	14.2 kWp	1,169.0kWh/m ²	13.0 MWh ¹	88.0%	99.0%	87.1%

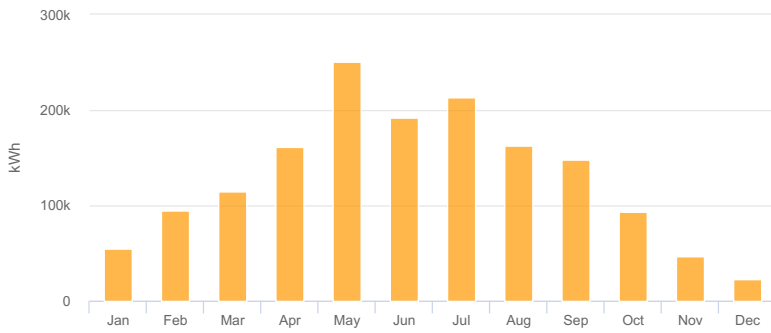
Field Segment 1 (copy 15)	15.0°	216.9°	37	14.2 kWp	1,168.7kWh/m²	13.0 MWh ¹	88.0%	98.9%	87.1%
Field Segment 1 (copy 16)	15.0°	216.9°	37	14.2 kWp	1,168.5kWh/m²	13.0 MWh ¹	88.0%	98.9%	87.1%
Field Segment 1 (copy 17)	15.0°	216.9°	37	14.2 kWp	1,168.7kWh/m²	13.0 MWh ¹	88.0%	98.9%	87.1%
Field Segment 1 (copy 18)	15.0°	216.9°	37	14.2 kWp	1,169.0kWh/m²	13.0 MWh ¹	88.0%	99.0%	87.1%
Field Segment 1 (copy 19)	15.0°	216.9°	37	14.2 kWp	1,169.9kWh/m²	13.0 MWh ¹	88.0%	99.0%	87.2%
Field Segment 1 (copy 20)	15.0°	216.9°	37	14.2 kWp	1,169.4kWh/m²	13.0 MWh ¹	88.0%	99.0%	87.1%
Field Segment 24	15.0°	216.9°	19	7.32 kWp	1,168.9kWh/m²	6.65 MWh ¹	88.0%	99.0%	87.1%
Field Segment 25	15.0°	126.7°	66	25.4 kWp	1,282.3kWh/m²	25.2 MWh ¹	95.6%	100.0%	95.6%
Field Segment 25 (copy)	15.0°	126.7°	66	25.4 kWp	1,281.8kWh/m²	25.2 MWh ¹	95.6%	100.0%	95.5%
Field Segment 25 (copy 1)	15.0°	126.7°	66	25.4 kWp	1,281.7kWh/m²	25.2 MWh ¹	95.6%	99.9%	95.5%
Field Segment 25 (copy 2)	15.0°	126.7°	66	25.4 kWp	1,281.7kWh/m²	25.2 MWh ¹	95.6%	100.0%	95.5%
Field Segment 25 (copy 3)	15.0°	126.7°	66	25.4 kWp	1,281.8kWh/m²	25.2 MWh ¹	95.6%	100.0%	95.5%
Field Segment 25 (copy 4)	15.0°	126.7°	66	25.4 kWp	1,281.8kWh/m²	25.2 MWh ¹	95.6%	100.0%	95.5%
Field Segment 25 (copy 6)	15.0°	126.7°	72	27.7 kWp	1,282.3kWh/m²	27.5 MWh ¹	95.6%	100.0%	95.6%
Field Segment 32	15.0°	126.7°	76	29.3 kWp	1,239.4kWh/m²	28.2 MWh ¹	95.6%	96.7%	92.4%
Field Segment 33	15.0°	218.0°	66	25.4 kWp	1,158.9kWh/m²	22.9 MWh ¹	87.8%	98.3%	86.4%
Field Segment 32 (copy)	15.0°	307.6°	209	80.5 kWp	957.7kWh/m²	60.5 MWh ¹	71.4%	100.0%	71.4%
Field Segment 35	15.0°	216.3°	63	24.3 kWp	1,168.6kWh/m²	22.1 MWh ¹	88.1%	98.8%	87.1%
Field Segment 35 (copy)	15.0°	216.3°	46	17.7 kWp	1,170.4kWh/m²	16.1 MWh ¹	88.1%	99.0%	87.2%
Field Segment 35 (copy 1)	15.0°	216.3°	45	17.3 kWp	1,170.8kWh/m²	15.8 MWh ¹	88.1%	99.0%	87.2%
Field Segment 35 (copy 2)	15.0°	216.3°	52	20.0 kWp	1,170.7kWh/m²	18.2 MWh ¹	88.1%	99.0%	87.2%
Field Segment 35 (copy 3)	15.0°	216.3°	46	17.7 kWp	1,170.5kWh/m²	16.1 MWh ¹	88.1%	99.0%	87.2%
Field Segment 35 (copy 4)	15.0°	216.3°	46	17.7 kWp	1,180.3kWh/m²	16.2 MWh ¹	88.1%	99.8%	87.9%
Field Segment 41	15.0°	216.9°	197	75.8 kWp	1,165.5kWh/m²	68.8 MWh ¹	88.0%	98.7%	86.8%
Field Segment 41 (copy)	15.0°	216.9°	31	11.9 kWp	1,152.2kWh/m²	10.7 MWh ¹	88.0%	97.6%	85.9%
Field Segment 41 (copy 1)	15.0°	216.9°	46	17.7 kWp	1,177.1kWh/m²	16.2 MWh ¹	88.0%	99.7%	87.7%
Field Segment 41 (copy 2)	15.0°	216.9°	44	16.9 kWp	1,169.1kWh/m²	15.4 MWh ¹	88.0%	99.0%	87.1%
Field Segment 41 (copy 3)	15.0°	216.9°	80	30.8 kWp	1,169.7kWh/m²	28.0 MWh ¹	88.0%	99.0%	87.2%
Field Segment 41 (copy 4)	15.0°	216.9°	112	43.1 kWp	1,173.0kWh/m²	39.3 MWh ¹	88.0%	99.3%	87.4%
Field Segment 41 (copy 5)	15.0°	216.9°	85	32.7 kWp	1,171.1kWh/m²	29.8 MWh ¹	88.0%	99.2%	87.3%
Field Segment 41 (copy 6)	15.0°	216.9°	109	42.0 kWp	1,175.5kWh/m²	38.3 MWh ¹	88.0%	99.5%	87.6%
Field Segment 41 (copy 7)	15.0°	216.9°	112	43.1 kWp	1,174.1kWh/m²	39.4 MWh ¹	88.0%	99.4%	87.5%
Field Segment 41 (copy 8)	15.0°	216.9°	106	40.8 kWp	1,172.1kWh/m²	37.2 MWh ¹	88.0%	99.2%	87.3%
Field Segment 41 (copy 9)	15.0°	216.9°	95	36.6 kWp	1,174.9kWh/m²	33.4 MWh ¹	88.0%	99.5%	87.5%
Field Segment 41 (copy 10)	15.0°	216.9°	92	35.4 kWp	1,172.7kWh/m²	32.3 MWh ¹	88.0%	99.3%	87.4%
Field Segment 41 (copy 11)	15.0°	216.9°	134	51.6 kWp	1,177.2kWh/m²	47.2 MWh ¹	88.0%	99.7%	87.7%
Field Segment 41 (copy 12)	15.0°	216.9°	116	44.7 kWp	1,170.5kWh/m²	40.7 MWh ¹	88.0%	99.1%	87.2%
Field Segment 41 (copy 13)	15.0°	216.9°	126	48.5 kWp	1,173.9kWh/m²	44.3 MWh ¹	88.0%	99.4%	87.5%
Field Segment 41 (copy 14)	15.0°	216.9°	114	43.9 kWp	1,177.4kWh/m²	40.2 MWh ¹	88.0%	99.7%	87.7%
Field Segment 41 (copy 15)	15.0°	216.9°	112	43.1 kWp	1,174.1kWh/m²	39.4 MWh ¹	88.0%	99.4%	87.5%
Field Segment 41 (copy 16)	15.0°	216.9°	112	43.1 kWp	1,174.0kWh/m²	39.4 MWh ¹	88.0%	99.4%	87.5%
Field Segment 59	15.0°	216.9°	32	12.3 kWp	1,181.0kWh/m²	11.8 MWh ¹	88.0%	100.0%	88.0%
Field Segment 60	15.0°	127.0°	139	53.5 kWp	1,249.6kWh/m²	51.9 MWh ¹	95.6%	97.4%	93.1%
Field Segment 60 (copy)	15.0°	307.0°	252	97.0 kWp	959.0kWh/m²	73.0 MWh ¹	71.5%	100.0%	71.5%
Totals, weighted by kWp			4,457	1.72 MWp	1,164.6kWh/m²	1.56 GWh	87.5%	99.2%	86.8%
¹ approximate, varies based on inverter performance									
² based on location Optimal POA Irradiance of 1,342.1kWh/m² at 40.9° tilt and 175.0° azimuth									

<div>  Solar Access by Month </div>												
Description	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Field Segment 1	99%	100%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%

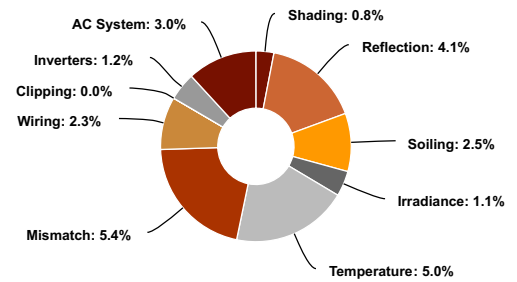
-												
Field Segment 1 (copy)	99%	100%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 1)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 2)	98%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%	97%
Field Segment 1 (copy 3)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 4)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%	98%
Field Segment 1 (copy 5)	98%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%	97%
Field Segment 1 (copy 6)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 8)	98%	99%	99%	98%	99%	98%	98%	98%	99%	98%	98%	97%
Field Segment 1 (copy 7)	98%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%	97%
Field Segment 11	91%	96%	97%	97%	98%	97%	97%	97%	98%	96%	95%	91%
Field Segment 1 (copy 9)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 10)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 11)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 12)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 13)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 14)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 15)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 16)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 17)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 18)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 19)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 1 (copy 20)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 24	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%	98%
Field Segment 25	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Field Segment 25 (copy)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Field Segment 25 (copy 1)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Field Segment 25 (copy 2)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Field Segment 25 (copy 3)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Field Segment 25 (copy 4)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Field Segment 25 (copy 6)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Field Segment 32	86%	93%	95%	98%	98%	98%	98%	98%	97%	95%	90%	91%
Field Segment 33	96%	98%	98%	98%	99%	98%	99%	98%	99%	98%	97%	96%
Field Segment 32 (copy)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Field Segment 35	98%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%	97%
Field Segment 35 (copy)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%	97%
Field Segment 35 (copy 1)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%	98%
Field Segment 35 (copy 2)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%	98%
Field Segment 35 (copy 3)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%	98%
Field Segment 35 (copy 4)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Field Segment 41	99%	100%	99%	99%	98%	99%	99%	98%	99%	99%	99%	99%
Field Segment 41 (copy)	94%	96%	98%	98%	98%	98%	98%	98%	98%	97%	96%	94%
Field Segment 41 (copy 1)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%	99%
Field Segment 41 (copy 2)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Field Segment 41 (copy 3)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 41 (copy 4)	99%	100%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Field Segment 41 (copy 5)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Field Segment 41 (copy 6)	100%	100%	100%	99%	100%	99%	100%	99%	100%	100%	99%	99%
Field Segment 41 (copy 7)	99%	100%	99%	99%	100%	99%	99%	99%	99%	99%	99%	99%
Field Segment 41 (copy 8)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Field Segment 41 (copy 9)	100%	100%	99%	99%	100%	99%	99%	99%	99%	99%	99%	99%
Field Segment 41 (copy 10)	99%	100%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Field Segment 41 (copy 11)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%	99%

Field Segment 41 (copy 11)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%	99%
Field Segment 41 (copy 12)	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	98%
Field Segment 41 (copy 13)	99%	100%	99%	99%	100%	99%	99%	99%	99%	99%	99%	99%
Field Segment 41 (copy 14)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%
Field Segment 41 (copy 15)	99%	100%	99%	99%	100%	99%	99%	99%	99%	99%	99%	99%
Field Segment 41 (copy 16)	99%	100%	99%	99%	100%	99%	99%	99%	99%	99%	99%	99%
Field Segment 59	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Field Segment 60	92%	94%	95%	97%	99%	99%	99%	99%	98%	95%	93%	95%
Field Segment 60 (copy)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Solar Access, weighted by kWp	98.7%	99.2%	99.1%	99.2%	99.5%	99.3%	99.3%	99.2%	99.3%	99.1%	98.7%	98.4%
AC Power (kWh)	54,069.9	94,100.1	114,494.7	160,759.1	250,593.2	192,521.3	213,997.2	162,972.0	148,512.9	93,804.5	46,230.3	23,064.1

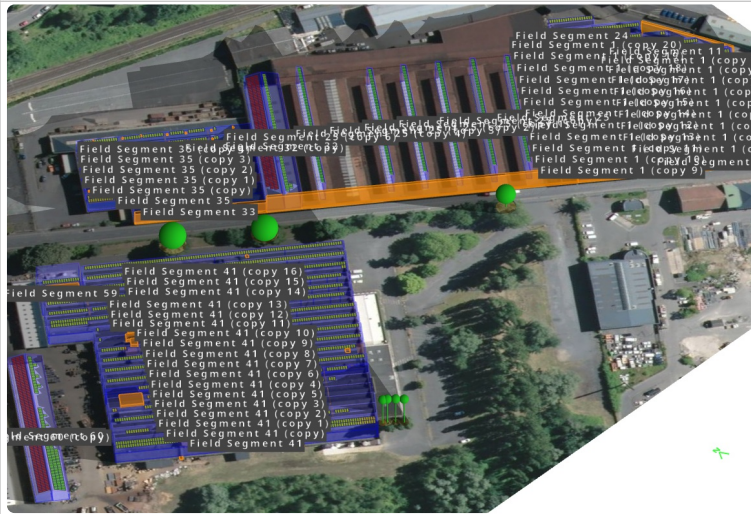
Month	Production
Jan	10
Feb	20
Mar	30
Apr	40
May	50
Jun	60
Jul	70
Aug	80
Sep	90
Oct	100
Nov	90
Dec	80



❶ Sources of System Loss



 Southwestern Angle



Southeastern Angle

