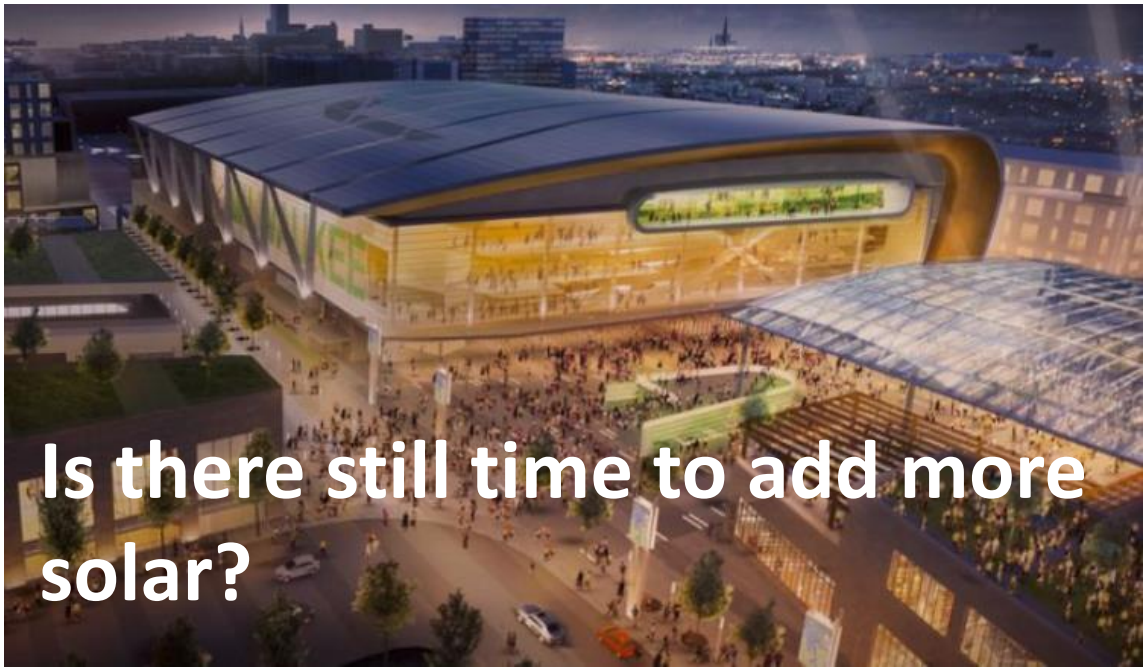


Daniel Folkman, 350 Milwaukee
2737 N. Weil St. Milwaukee

There is ample space in the Bucks planning area to accommodate a significant increase in a solar installation. A projected payback for adding solar panels is 11.6 years. This estimate is based on an installation cost of $2.50 per watt hour and a price for electricity at $.11 kWh. Accordingly, we ask that solar panels be added to the proposed plan in blocks 7 and 8 making full use of available roof and wall space. We also ask that thin film flexible solar panels be considered for a roof top application on the arena. The Johnson Controls facility incorporates thin film solar panels as part of its solar installation.

Large facilities have large solar collector arrays.

CenturyLink Field Seattle Seahawks, 2.5 acre site

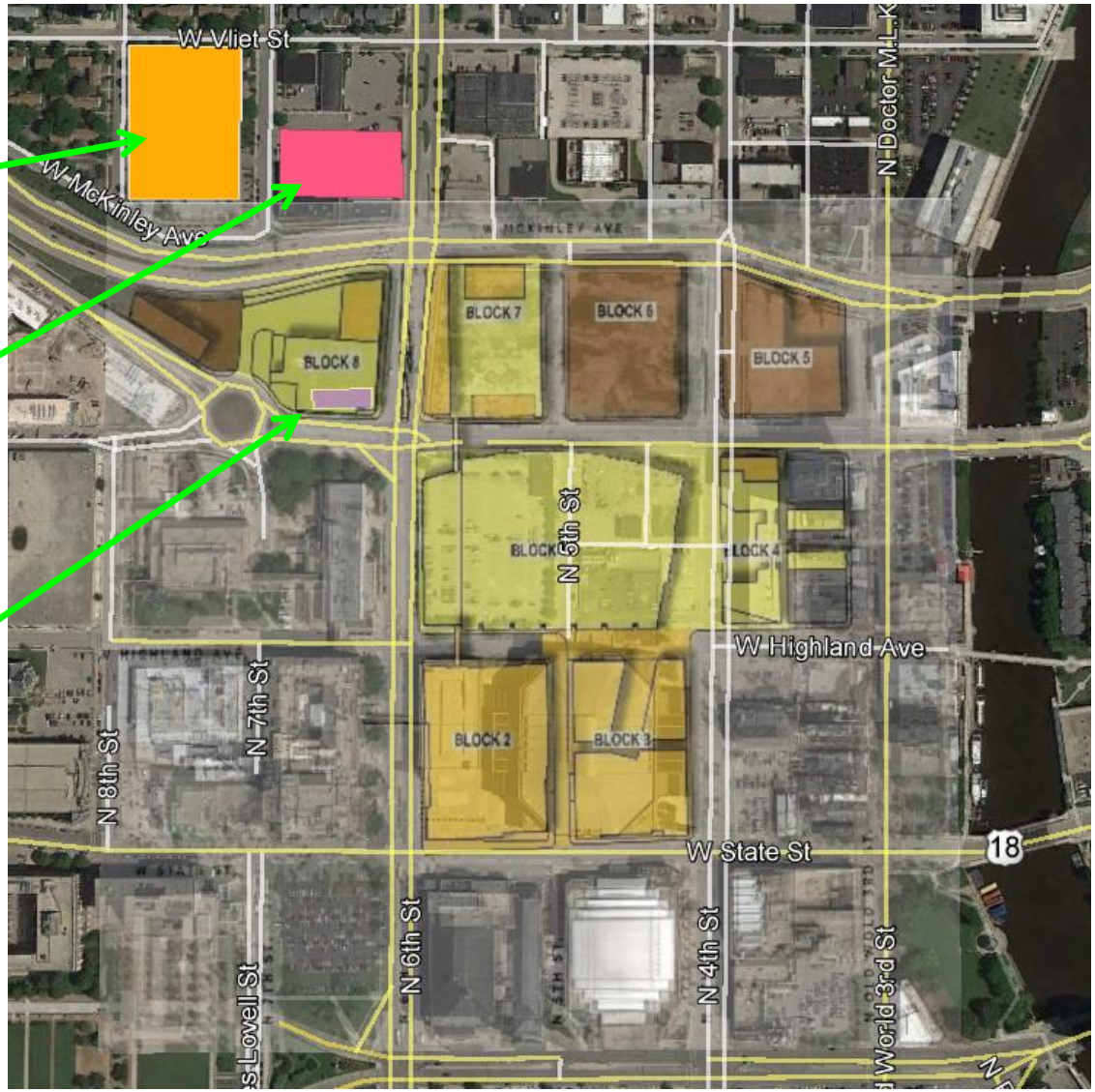
Johnson Controls Glendale Wi 1.2 acre site

The Bucks site in Milwaukee can accommodate a significant collector array

CenturyLink Field:
Seattle Seahawks, **2.5 acres**

Johnson Controls
Milwaukee, **1.2 acres**

Bucks Planned Solar
Installation, **.17 acres**



Total Bucks Planning Area
33.7 Acres

Solar Planned for Training Facility

Location Block 8: 666 sq m

Cost per wh	2.50
Total Wh	99,900
Total kWh/year	99.9
Total Cost	249,750
Fed Tax Cr 30%	74,925
Total Cost - 30%	174,825
Annual Savings @ .11 kWh	15,100

Projected Payback Period in Years **11.6**

PVWatt Calculator http://pvwatts.nrel.gov/

RESULTS

Print Results

131,761 kWh per Year

System output may range from 124,330 to 137,960kWh per year near this location

Click HERE for more information

Month	Solar Radiation (kWh / m² / day)	AC Energy (kWh)	Energy Value ($)
January	2.66	7,496	859
February	3.38	8,374	960
March	4.01	10,702	1,226
April	5.22	12,918	1,480
May	6.04	15,066	1,727
June	6.56	15,303	1,754
July	6.21	14,728	1,688
August	5.82	13,946	1,598
September	4.98	11,756	1,347
October	3.81	9,589	1,099
November	2.48	6,334	726
December	2.01	5,551	636
Annual	4.43	131,763	$ 15,100

Location and Station Identification

Requested Location	milwaukee	
Weather Data Source	(TMY2) MILWAUKEE, WI	6.2 mi
Latitude	42.95° N	
Longitude	87.9° W	

PV System Specifications *(Commercial)*

DC System Size	99.9 kW
Module Type	Standard
Array Type	Fixed (open rack)
Array Tilt	20°
Array Azimuth	180°
System Losses	14%
Inverter Efficiency	96%
DC to AC Size Ratio	1.1

Initial Economic Comparison

Average Cost of Electricity Purchased from Utility	0.11 $/kWh

Possible Expanded Solar for Training Facility

PVWatt Calculator http://pvwatts.nrel.gov/

Location Block 8: 4,470 sq m

Cost per wh	2.50
Total Wh	670,500
Total kWh/year	670.5
Total Cost	1,676,250
Fed Tax Cr 30%	502,875
Total Cost - 30%	1,173,375
Annual Savings @ .11 kWh	101,346

Projected Payback Period in Years **11.6**

RESULTS

Print Results

884,343 kWh per Year

System output may range from 834,466 to 926,084 kWh per year near this location.
Click HERE for more information.

Month	Solar Radiation (kWh / m² / day)	AC Energy (kWh)	Energy Value ($)
January	2.66	50,310	5,766
February	3.38	56,203	6,441
March	4.01	71,829	8,232
April	5.22	86,701	9,936
May	6.04	101,116	11,588
June	6.56	102,707	11,770
July	6.21	98,851	11,328
August	5.82	93,605	10,727
September	4.98	78,900	9,042
October	3.81	64,357	7,375
November	2.48	42,510	4,872
December	2.01	37,255	4,269
Annual	4.43	884,344	$ 101,346

Location and Station Identification

Requested Location	milwaukee	
Weather Data Source	(TMY2) MILWAUKEE, WI	6.2 mi
Latitude	42.95° N	
Longitude	87.9° W	

PV System Specifications (Commercial)

DC System Size	670.5 kW
Module Type	Standard
Array Type	Fixed (open rack)
Array Tilt	20°
Array Azimuth	180°
System Losses	14%
Inverter Efficiency	96%
DC to AC Size Ratio	1.1

Initial Economic Comparison

Average Cost of Electricity Purchased from Utility	0.11 $/kWh