



Cooper Farms' Wind VW

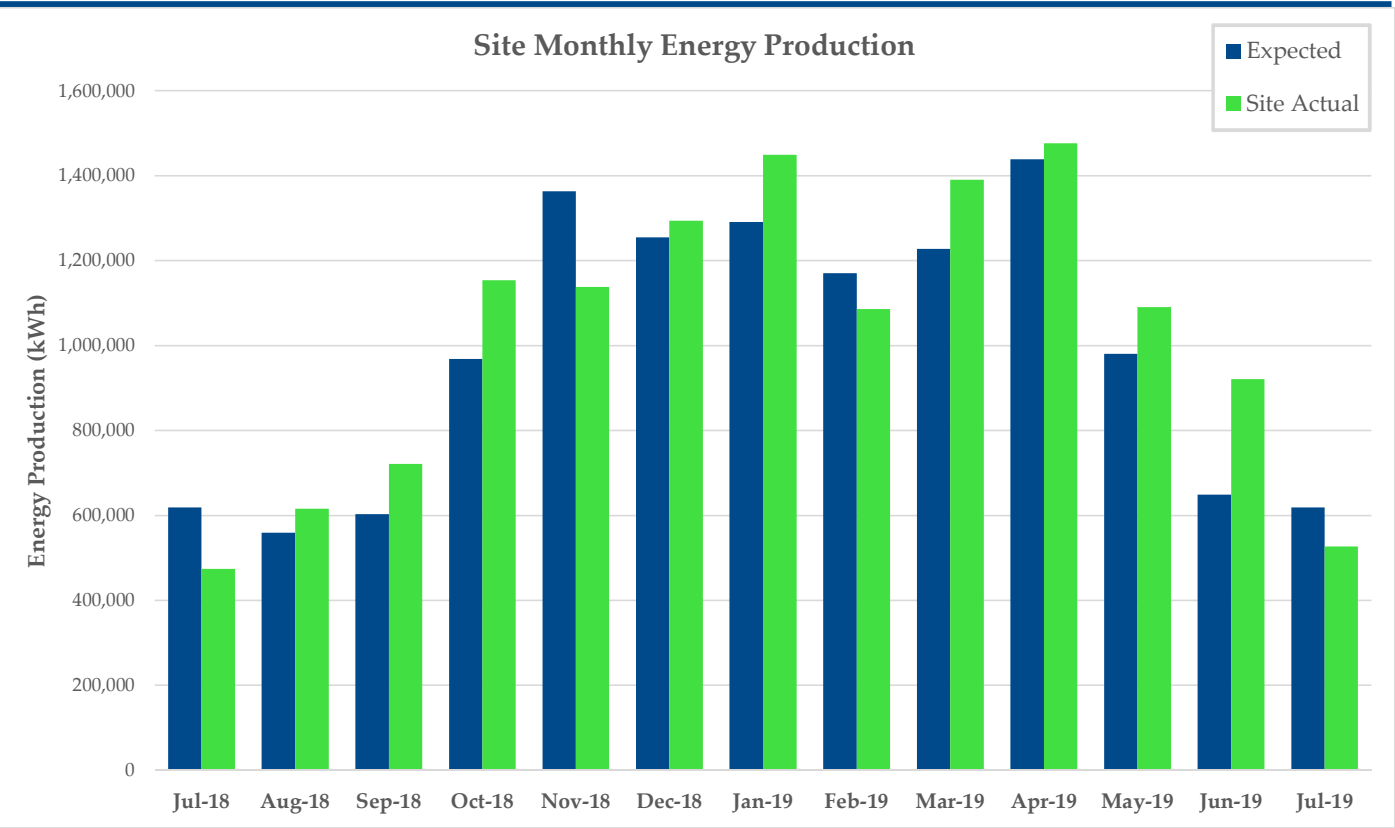
Van Wert, OH

A. Site Energy Production Summary

	Energy Production (kWh)				
	Site		By Turbine		
	Expected Production	Actual Production	WTG 1	WTG 2	WTG 3
Jul-18	618,687	474,100	152,310	157,510	164,280
Aug-18	559,508	615,620	204,140	199,030	212,450
Sep-18	603,085	720,940	241,440	243,200	236,300
Oct-18	967,926	1,153,610	388,960	373,700	390,950
Nov-18	1,362,692	1,138,070	381,630	373,480	382,960
Dec-18	1,254,397	1,293,550	427,830	426,560	439,160
Jan-19	1,290,968	1,449,160	491,430	475,470	482,260
Feb-19	1,170,349	1,085,536	358,334	356,884	370,318
Mar-19	1,227,217	1,390,286	471,222	450,690	468,374
Apr-19	1,438,497	1,476,210	495,410	493,970	486,830
May-19	980,450	1,090,450	368,640	351,610	370,200
Jun-19	649,158	921,230	304,100	301,760	315,370
Jul-19	618,687	526,810	179,780	167,330	179,700
Production 2019 (ytd) (kWh)	7,375,326	7,939,682	2,668,916	2,597,714	2,673,052
Total Production (kWh)*	12,122,935	12,861,472	4,312,916	4,213,684	4,334,872
Capacity Factor*	32.63%		*Value calculated over the last 12 months		

B. Site Energy Production Graph

July-2019



Monthly Report

July-2019



C. Safety Summary

	This Month	Project Cumulative
Recordable Incident(s)	0	0
Near Miss(es)	0	0

D. Planned Maintenance Events*

Date	Event	Duration (hr)	Turbine
September-2019	Goldwind 7 Year Maintenance	~15	WTG 1
September-2019	Goldwind 7 Year Maintenance	~15	WTG 2
September-2019	Goldwind 7 Year Maintenance	~15	WTG 3

E. Actual Maintenance Events

Date	Event	Planned/Unplanned	Duration (hr)	Turbine
7/17/2019	Convertor Not Ready Error	Unplanned	8.40	WTG 1
7/19-20/2019	Grid Fault	Unplanned	15.50	WTG 1,2,3
7/23-25/2019	Generator Replacement	Unplanned	51.93	WTG 2
7/30-31/2019	Generator Replacement	Unplanned	40.81	WTG 1

F. Turbine Availability & Downtime

Availability (%)	This Month	Year to Date
WTG 1	93.39%	98.59%
WTG 2	92.83%	98.21%
WTG 3	100.00%	100.00%
Avg	95.41%	98.93%

Downtime (hr)	This Month	Year to Date
WTG 1	68.68	269.55
WTG 2	71.80	319.33
WTG 3	18.15	203.20
Total	158.63	792.08

G. Wind Speed & Capacity Factor

Wind Speed (mph)	This Month	2019 Annual
WTG 1	10.85	13.93
WTG 2	9.08	12.89
WTG 3	9.83	13.37
Estimated	11.22	13.39

Capacity Factor (%)	This Month	2019 Annual
WTG 1	16.11%	34.97%
WTG 2	14.99%	34.04%
WTG 3	16.10%	35.02%
Low Estimate	18.03%	28.70%

H. Report Notes and Comments