



Cooper Farms' Wind VW

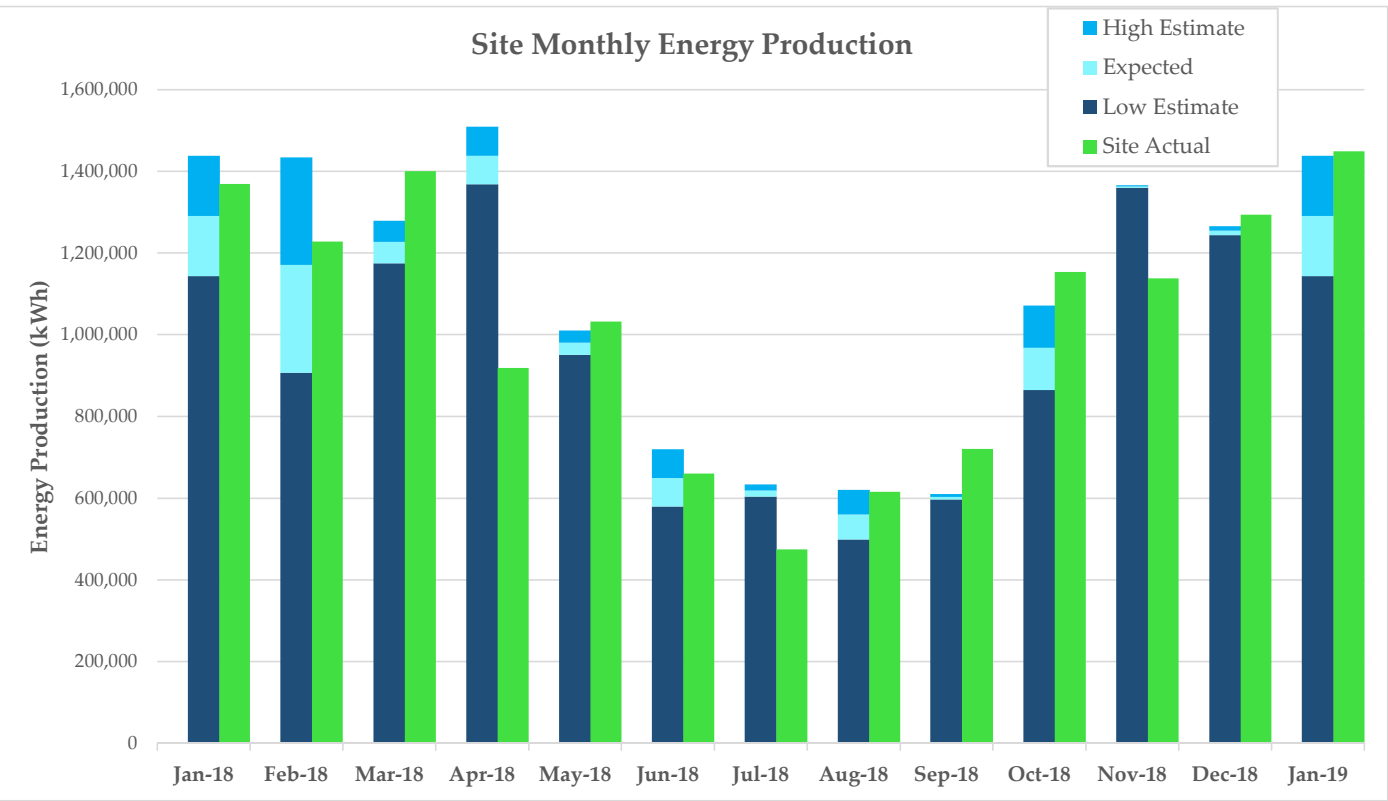
Van Wert, OH

A. Site Energy Production Summary

	Energy Production (kWh)				
	Site		By Turbine		
	Expected Production	Actual Production	WTG 1	WTG 2	WTG 3
Jan-18	1,290,968	1,369,330	300,220	544,990	524,120
Feb-18	1,170,349	1,227,684	415,536	413,210	398,938
Mar-18	1,227,217	1,400,340	500,650	409,470	490,220
Apr-18	1,438,497	918,970	311,290	302,960	304,720
May-18	980,450	1,031,960	343,900	352,850	335,210
Jun-18	649,158	660,000	219,170	215,060	225,770
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
Production 2019 (ytd) (kWh)	1,290,968	1,449,160	491,430	475,470	482,260
Total Production (kWh)*	12,122,935	12,084,004	4,078,286	3,942,500	4,063,218
Capacity Factor*	30.65%		*Value calculated over the last 12 months		

B. Site Energy Production Graph

January-2019



Monthly Report

January-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
February-2019	Goldwind 6.5 Year Maintenance	~8	WTG 1
February-2019	Goldwind 6.5 Year Maintenance	~8	WTG 2
February-2019	Goldwind 6.5 Year Maintenance	~8	WTG 3

E. Actual Maintenance Events

Date	Event	Planned/Unplanned	Duration (hr)	Turbine
1/2/2019	Grid Fault	Unplanned	5.97	WTG 1
1/2/2019	Grid Fault	Unplanned	6.20	WTG 2
1/2/2019	Grid Fault	Unplanned	6.43	WTG 3
1/3/2019	Grid Fault	Unplanned	6.48	WTG 1,2,3
1/10-11/2019	Blade Repairs	Unplanned	16.54	WTG 2
1/15-16/2019	Icing Event	Unplanned	15.53	WTG 1,2,3
1/16/2019	Profibus Error	Unplanned	6.51	WTG 1
1/28-29/2019	Grid Fault	Unplanned	15.07	WTG 1,2
1/28/2019	Grid Fault	Unplanned	15.18	WTG 3

F. Turbine Availability & Downtime

Availability (%)	This Month	Year to Date
WTG 1	99.13%	99.13%
WTG 2	100.00%	100.00%
WTG 3	100.00%	100.00%
Avg	99.71%	99.71%

Downtime (hr)	This Month	Year to Date
WTG 1	52.38	52.38
WTG 2	62.64	62.64
WTG 3	46.44	46.44
Total	161.46	161.46

G. Wind Speed & Capacity Factor

Wind Speed (mph)	This Month	2019 Annual
WTG 1	14.59	14.59
WTG 2	14.67	14.67
WTG 3	14.91	#REF!
Estimated	15.49	13.39

Capacity Factor (%)	This Month	2019 Annual
WTG 1	44.03%	44.03%
WTG 2	42.60%	42.60%
WTG 3	43.21%	43.21%
Low Estimate	34.17%	28.70%

H. Report Notes and Comments

*Goldwind 6.5 Year Maintenance pushed back to February.