



Cooper Farms' Wind VW

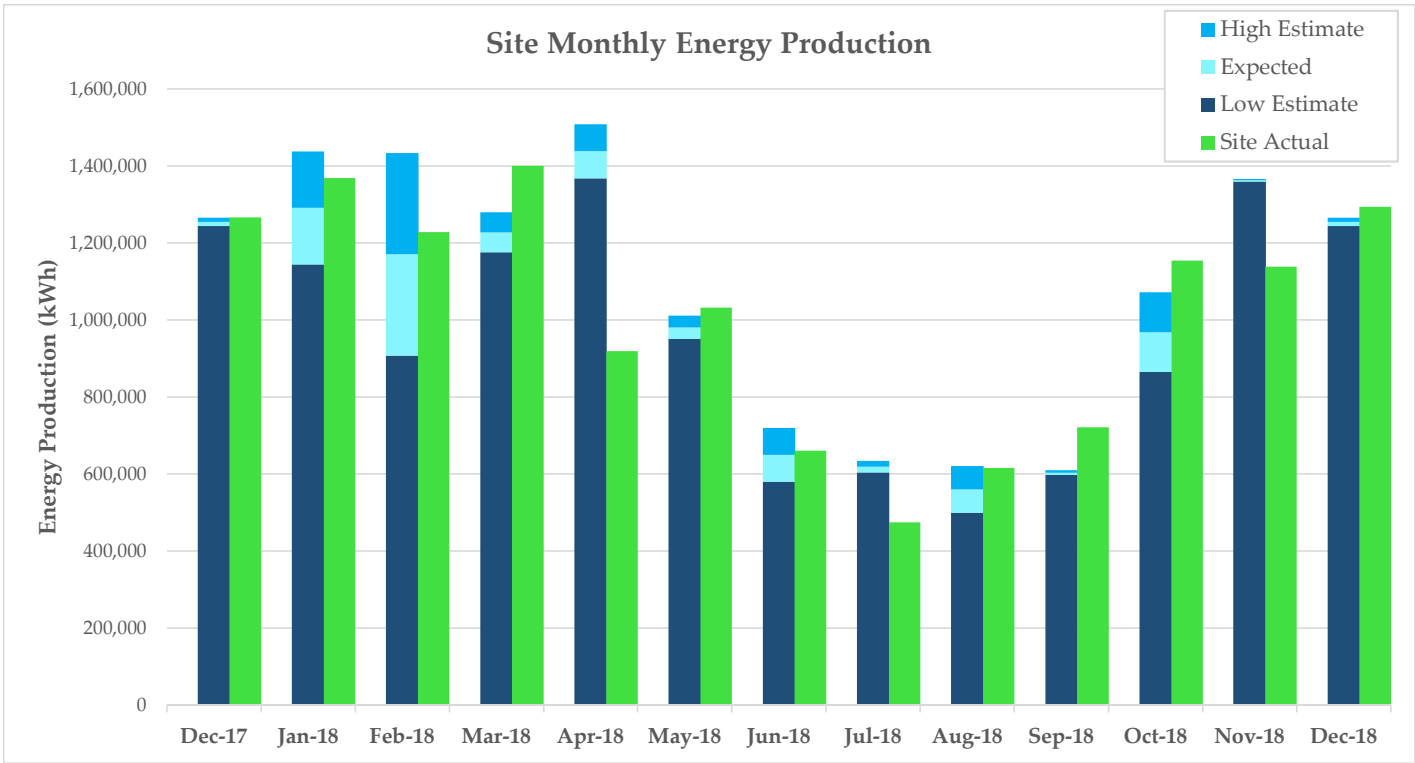
Van Wert, OH

A. Site Energy Production Summary

	Energy Production (kWh)				
	Site		By Turbine		
	Expected Production	Actual Production	WTG 1	WTG 2	WTG 3
Dec-17	1,254,397	1,265,600	312,430	468,440	484,730
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
Production 2018 (ytd) (kWh)	12,122,935	12,004,174	3,887,076	4,012,020	4,105,078
Total Production (kWh)*	12,122,935	12,004,174	3,887,076	4,012,020	4,105,078
Capacity Factor*	30.45%		*Value calculated over the last 12 months		

B. Site Energy Production Graph

December-2018



Monthly Report

December-2018



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

E. Actual Maintenance Events

Date	Event	Planned/Unplanned	Duration (hr)	Turbine
12/7/2018	Hydraulic Motor Error	Unplanned	4.14	WTG 1
12/9/2018	Plant Shutdown	Unplanned	7.62	WTG 1, WTG 3
12/9/2018	Plant Shutdown	Unplanned	9.39	WTG 2

F. Turbine Availability & Downtime

Availability (%)	This Month	Year to Date
WTG 1	99.30%	98.96%
WTG 2	99.93%	99.57%
WTG 3	99.97%	99.62%
Avg	99.74%	99.38%

Downtime (hr)	This Month	Year to Date
WTG 1	15.92	523.72
WTG 2	13.01	495.79
WTG 3	10.91	501.30
Total	39.84	1520.81

G. Wind Speed & Capacity Factor

Wind Speed (mph)	This Month	2018 Annual
WTG 1	12.51	13.00
WTG 2	12.81	12.19
WTG 3	13.39	12.69
Estimated	14.23	13.39

Capacity Factor (%)	This Month	2018 Annual
WTG 1	38.34%	29.58%
WTG 2	38.22%	30.53%
WTG 3	39.35%	31.24%
Low Estimate	37.80%	28.70%

H. Report Notes and Comments