



Cooper Farms' Wind VW

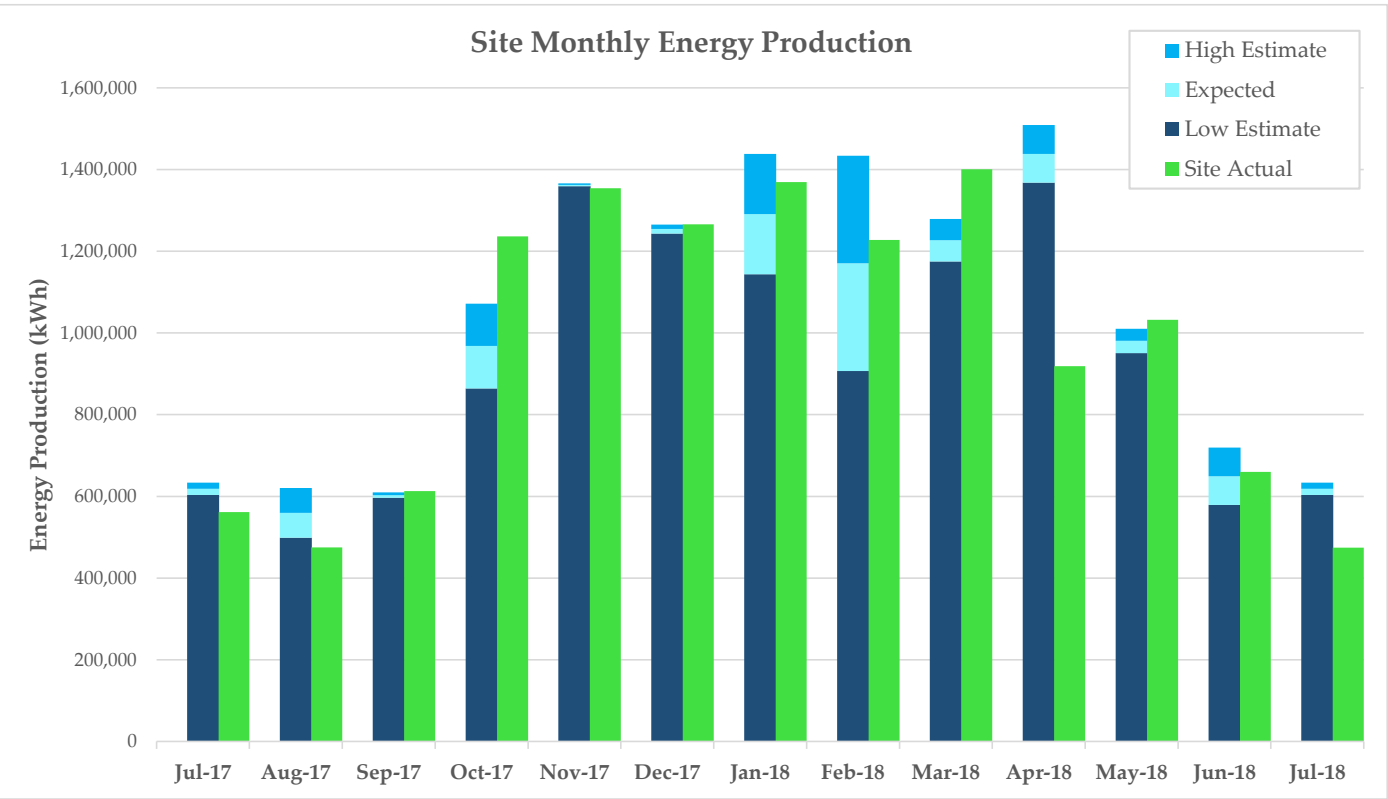
Van Wert, OH

A. Site Energy Production Summary

	Energy Production (kWh)				
	Site		By Turbine		
	Expected Production	Actual Production	WTG 1	WTG 2	WTG 3
Jul-17	618,687	561,560	191,610	186,470	183,480
Aug-17	559,508	475,092	176,146	172,986	125,960
Sep-17	603,085	612,820	204,550	207,830	200,440
Oct-17	967,926	1,236,610	415,110	393,660	427,840
Nov-17	1,362,692	1,354,336	447,934	467,136	439,266
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
Production 2018 (ytd) (kWh)	7,375,326	7,082,384	2,243,076	2,396,050	2,443,258
Total Production (kWh)*	12,122,935	12,026,842	3,799,246	4,106,102	4,121,494
Capacity Factor*	30.51%		*Value calculated over the last 12 months		

B. Site Energy Production Graph

July-2018



Monthly Report

July-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
November-2018	Goldwind 6.5 Year Maintenance	~8	WTG 1
November-2018	Goldwind 6.5 Year Maintenance	~8	WTG 2
November-2018	Goldwind 6.5 Year Maintenance	~8	WTG 3

E. Actual Maintenance Events

Date	Event	Planned/Unplanned	Duration (hr)	Turbine
7/13/2018	GW Punchlist, Gen. Speed Comparison	Unplanned	11.24	WTG 1
7/14/2018	Generator Speed Comparison Error	Unplanned	9.53	WTG 1
7/18/2018	Goldwind 6 Year Maintenance	Planned	4.35	WTG1
7/24-7/26/2018	Goldwind 6 Year Maintenance	Planned	9.60	WTG 1
7/24/2018	Goldwind 6 Year Maintenance	Planned	0.90	WTG 2
7/24/2018	Goldwind 6 Year Maintenance	Planned	0.92	WTG 3
7/25-7/26/2018	Goldwind Inspection	Unplanned	20.55	WTG 1
7/26-27/2018	Goldwind 6 Year Maintenance	Planned	5.86	WTG 2
7/26-7/27/2018	Grid Fault	Unplanned	10.61	WTG 2
7/27-7/28/2018	Low Hydraulic Oil Level	Unplanned	11.49	WTG 2
7/30-7/31/2018	Goldwind 6 Year Maintenance	Planned	11.98	WTG 2
7/31/2018	Goldwind 6 Year Maintenance	Planned	6.14	WTG 3

F. Turbine Availability & Downtime

Availability (%)	This Month	Year to Date
WTG 1	94.45%	98.45%
WTG 2	98.46%	99.31%
WTG 3	100.00%	99.42%
Avg	97.64%	99.06%

Downtime (hr)	This Month	Year to Date
WTG 1	57.50	384.83
WTG 2	43.60	359.89
WTG 3	9.29	362.61
Total	110.39	1107.33

G. Wind Speed & Capacity Factor

Wind Speed (mph)	This Month	2018 Annual
WTG 1	11.02	13.05
WTG 2	8.97	12.45
WTG 3	9.45	12.94
Estimated	11.22	13.39

Capacity Factor (%)	This Month	2018 Annual
WTG 1	13.65%	29.39%
WTG 2	14.11%	31.39%
WTG 3	14.72%	32.01%
Low Estimate	18.03%	28.70%

H. Report Notes and Comments