



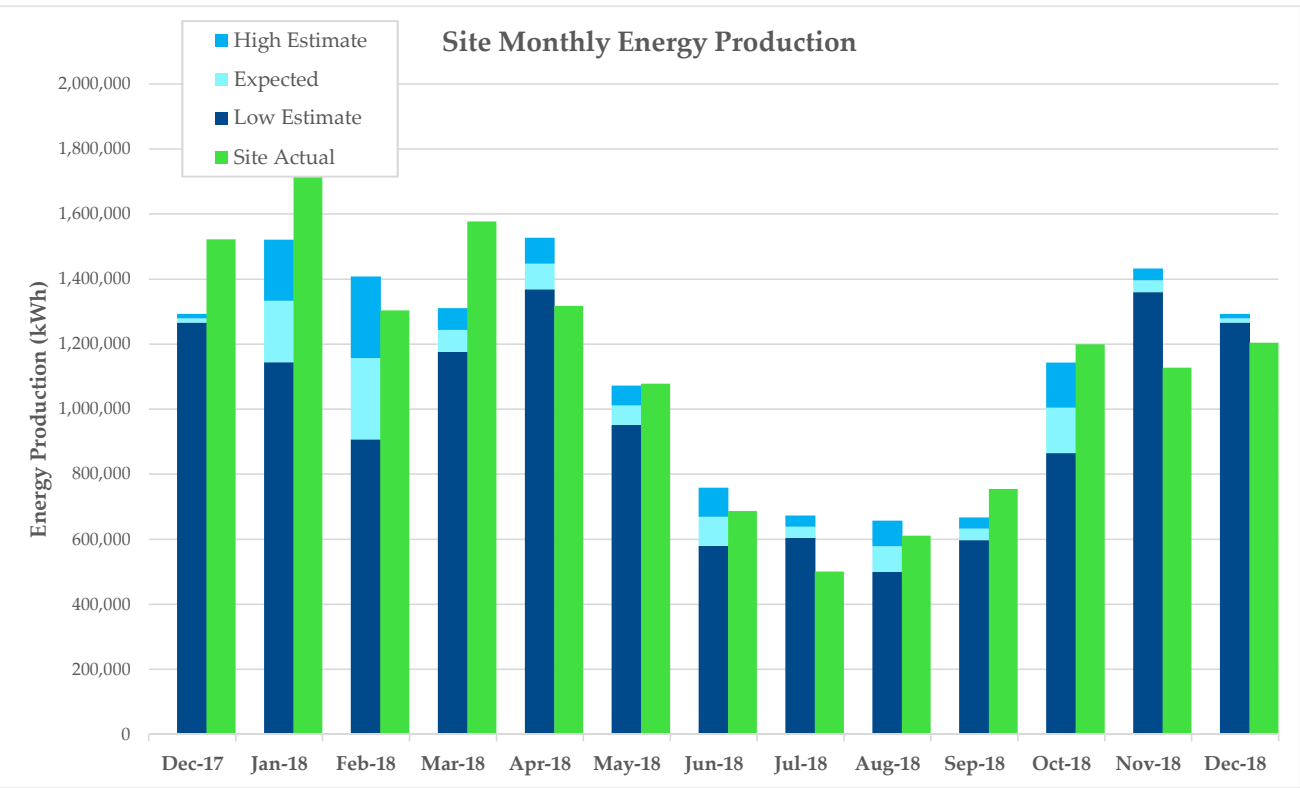
Haviland Plastic Products, Co.
Haviland, OH

A. Site Energy Production Summary

	Energy Production (kWh)				
	Site		By Turbine		
	Expected Production	Actual Production	WTG A	WTG B	WTG C
Dec-17	1,278,858	1,521,630	522,010	495,750	503,870
Jan-18	1,332,437	1,726,420	585,680	568,390	572,350
Feb-18	1,157,019	1,303,000	447,860	426,380	428,760
Mar-18	1,242,761	1,576,970	530,020	505,480	541,470
Apr-18	1,447,248	1,316,810	462,450	405,270	449,090
May-18	1,010,966	1,077,570	344,730	377,970	354,870
Jun-18	668,411	686,130	223,300	224,540	238,290
Jul-18	638,097	499,960	165,840	165,390	168,730
Aug-18	577,992	610,690	217,500	193,470	199,720
Sep-18	631,697	754,220	249,590	254,010	250,620
Oct-18	1,003,602	1,199,060	420,610	355,340	423,110
Nov-18	1,395,914	1,126,610	386,320	352,100	388,190
Dec-18	1,278,858	1,203,370	406,960	390,900	405,510
Production 2018 (ytd) (kWh)	12,384,999	13,080,810	4,440,860	4,219,240	4,420,710
Total Production (kWh)*	12,384,999	13,080,810	4,440,860	4,219,240	4,420,710
Capacity Factor*	33.18%		*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 A
January-2019	Goldwind 6.5 Year Maintenance	~8	WTG B
January-2019	Goldwind 6.5 Year Maintenance	~8	WTG C

E. Actual Maintenance Events - December 2018

Date	Event	Planned/Unplanned	Duration (hr)	Turbine
12/11/2018	Hydraulic Motor Feedback Error	Unplanned	9.51	WTG C

F. Turbine Availability & Downtime

Availability (%)	This Month	Year to Date
WTG A	100.00%	98.66%
WTG B	100.00%	98.74%
WTG C	98.57%	99.38%
Avg	99.52%	98.93%

Downtime (hr)	This Month	Year to Date
WTG A	3.12	251.36
WTG B	3.12	273.54
WTG C	13.76	218.26
Total	20.00	743.16

G. Wind Speed & Capacity Factor

Wind Speed (mph)	This Month	2018 Annual
WTG A	11.97	11.99
WTG B	11.93	11.97
WTG C	12.70	12.68
Estimated	14.23	13.39

Capacity Factor (%)	This Month	2018 Annual
WTG A	36.47%	33.80%
WTG B	35.03%	32.11%
WTG C	36.34%	33.64%
Low Estimate	37.80%	33.18%

H. Report Notes and Comments