



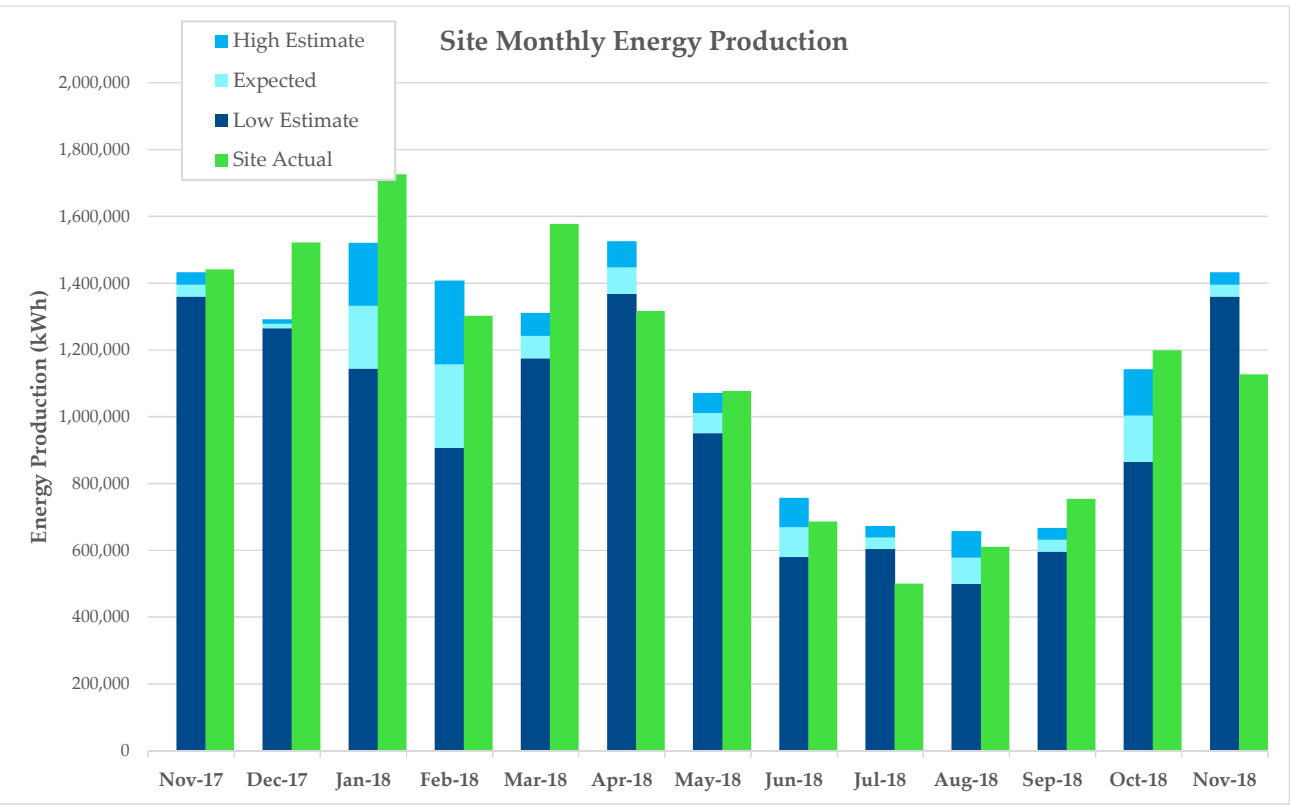
Haviland Plastic Products, Co.
Haviland, OH

A. Site Energy Production Summary

	Energy Production (kWh)				
	Site		By Turbine		
	Expected Production	Actual Production	WTG A	WTG B	WTG C
Nov-17	1,395,914	1,441,140	493,690	470,470	476,980
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
Production 2018 (ytd) (kWh)	11,106,141	11,877,440	4,033,900	3,828,340	4,015,200
Total Production (kWh)*	12,384,999	13,399,070	4,555,910	4,324,090	4,519,070
Capacity Factor*	33.99%		*Value calculated over the last 12 months		

B. Site Energy Production Graph

November-2018



Monthly Report
November-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 - November 2018

Date	Event	Planned/Unplanned	Duration (hr)	Turbine
11/3-5/2018	Hub Fault	Unplanned	53.06	WTG B
11/15-16/2018	Icing Event	Unplanned	28.39	WTG A, B, C
11/16/2018	Hydraulic Feedback Error	Unplanned	8.66	WTG C

F. Turbine Availability & Downtime

Availability (%)	This Month	Year to Date
WTG A	99.96%	98.54%
WTG B	96.54%	98.62%
WTG C	98.57%	99.45%
Avg	98.36%	98.87%

Downtime (hr)	This Month	Year to Date
WTG A	28.65	248.24
WTG B	84.28	270.42
WTG C	38.70	204.50
Total	151.63	723.16

G. Wind Speed & Capacity Factor

Wind Speed (mph)	This Month	2018 Annual
WTG A	11.97	11.99
WTG B	12.02	11.97
WTG C	12.70	12.67
Estimated	15.58	13.39

Capacity Factor (%)	This Month	2018 Annual
WTG A	35.77%	33.55%
WTG B	32.60%	31.84%
WTG C	35.94%	33.39%
Low Estimate	41.95%	32.93%

H. Report Notes and Comments