

Renewables data

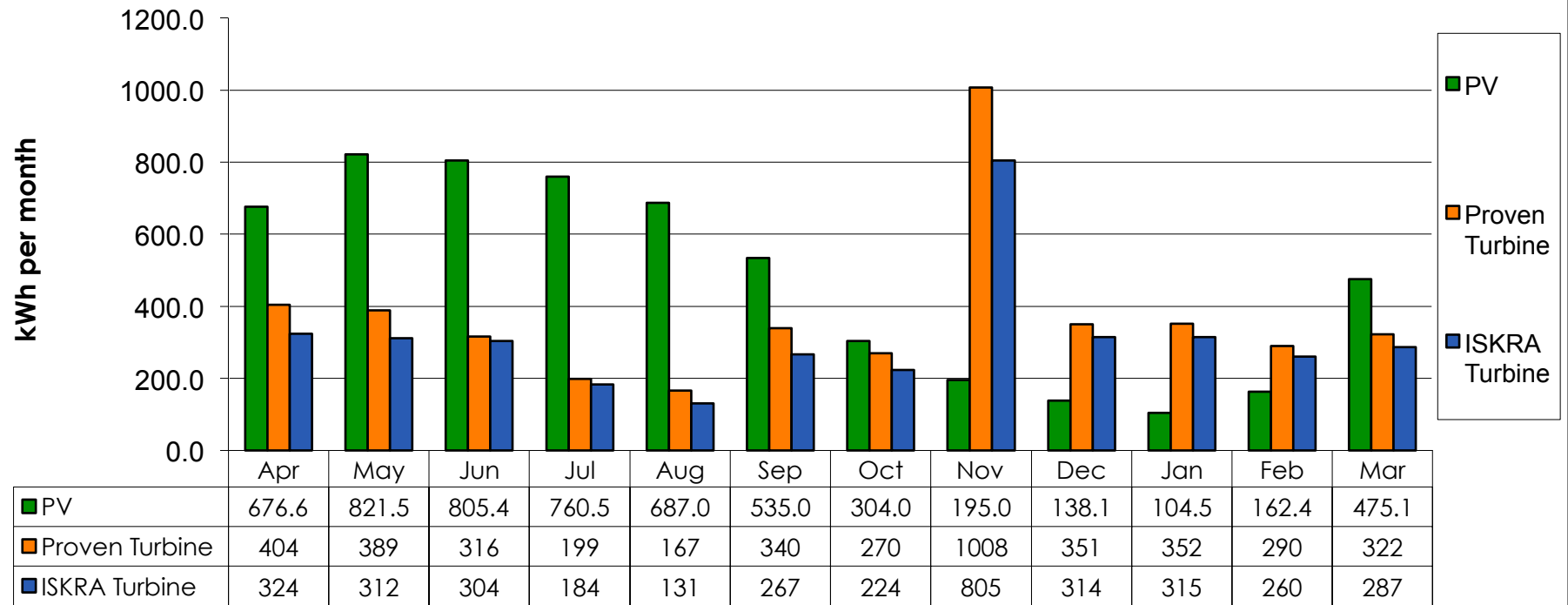
This data from 2009-10 will help potential investors and students understand how output from renewable energy systems varies through the year. They show the annual patterns of generation, the relationship to windspeed and solar radiation, and the impact of interference on output.

Visit www.hockertonhousingproject.org.uk to find out more.

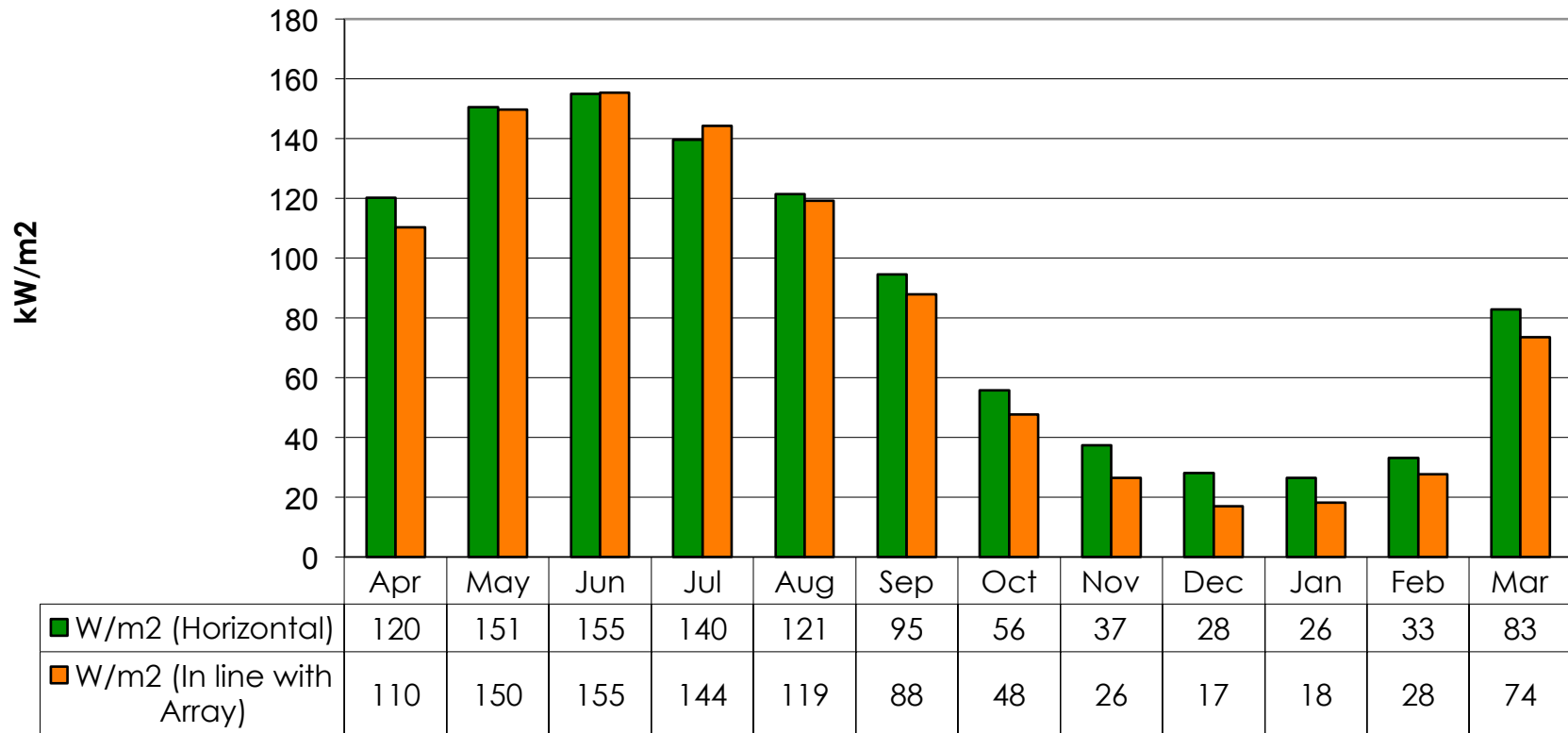
Renewable systems onsite at Hockerton Housing Project

Onsite renewable systems	Rating (kW)	Total Installed Cost (£)
Photovoltaic panels on homes	7.6	40,650
Proven wind turbine	6	26,105
Iskra wind turbine	5	23,000
Photovoltaic panels on visitor centre	6	11,650

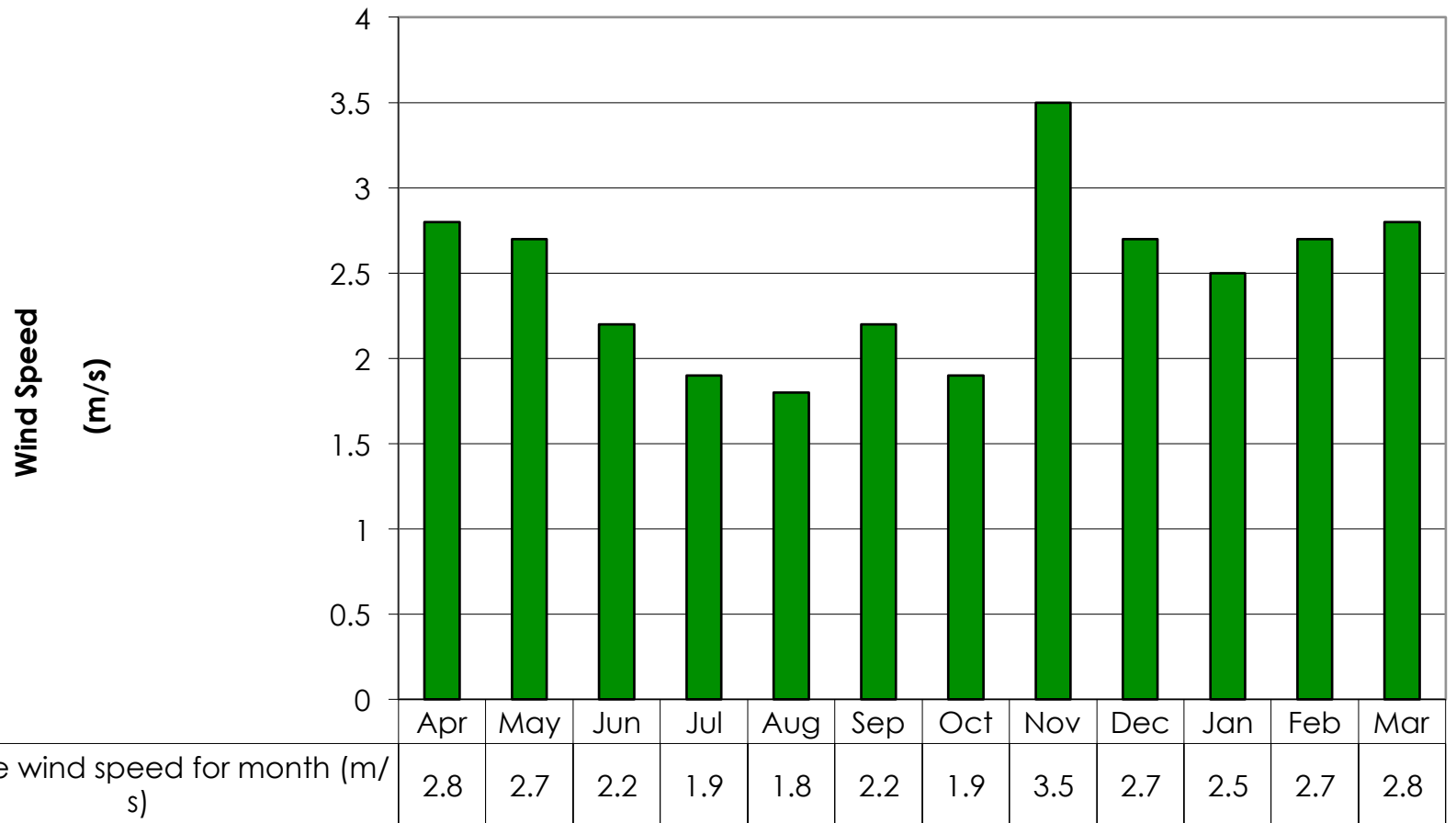
Electricity Production (kWh/month) at Hockerton Housing Project in 2009/10 from solar PV panels (7.65kWp), Proven WT6000 (6kW) and EVANCE ISKRA (5kW) wind turbines



Solar Radiation at Hockerton Housing Project 2009/10

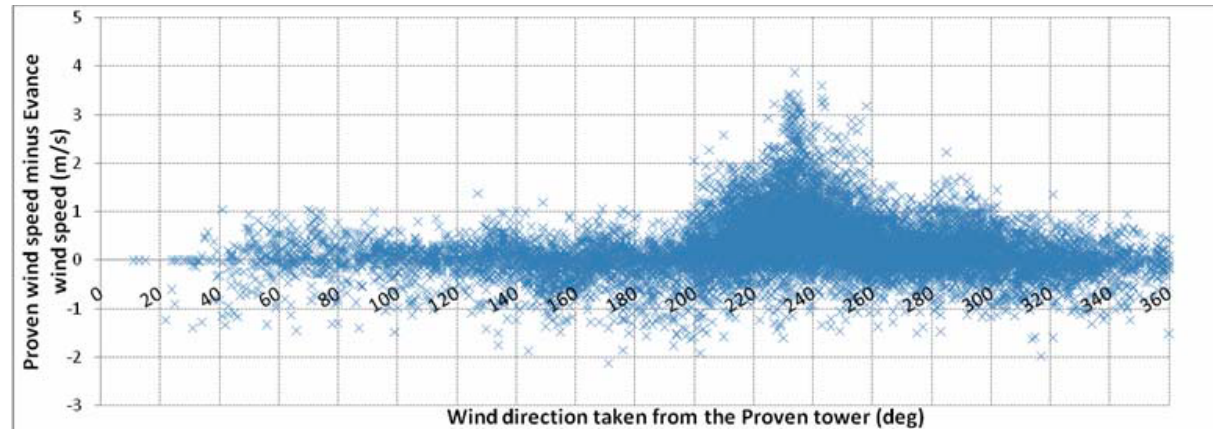


Average Wind Speed at 18m at Hockerton Housing Project



Comparison of wind speed at the two wind turbine sites at Hockerton Housing Project

Comparing wind turbines? In August 2009 for 5 months Iskra monitored the wind speed at each turbine tower with identical anemometers at identical heights. These indicated that the Proven turbine is experiencing a much better wind resource from the South West quadrant than the Evance. The graph below shows a definite trend around 220-260 degrees. This proves that the large trees to the south west are affecting the performance of the Iskra machine.



	Iskra AT5-1 wind speed (m/s)	Proven WT6000 wind speed (m/s)	Wind speed difference
August 09	1.37	1.57	14.6%
September 09	2.3	2.5	8.7%
October 09	2.07	2.12	2.4%
November 09 (up to 27 th)	3.44	3.73	8.4%
Last 4 weeks	3.64	3.94	8.2%

Using the Power predictor web site to predict output, there would be around 40% more energy at the Proven tower than at the Iskra tower (which is sited closer to the treeline). This should influence your comparison of the output figures from the different wind turbines.