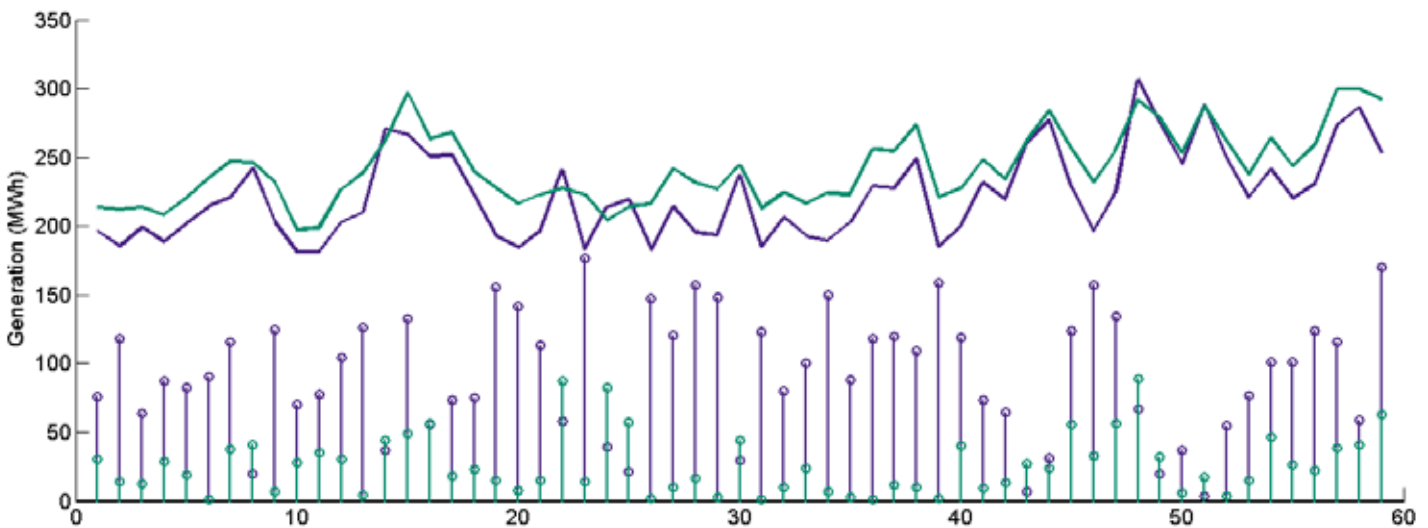
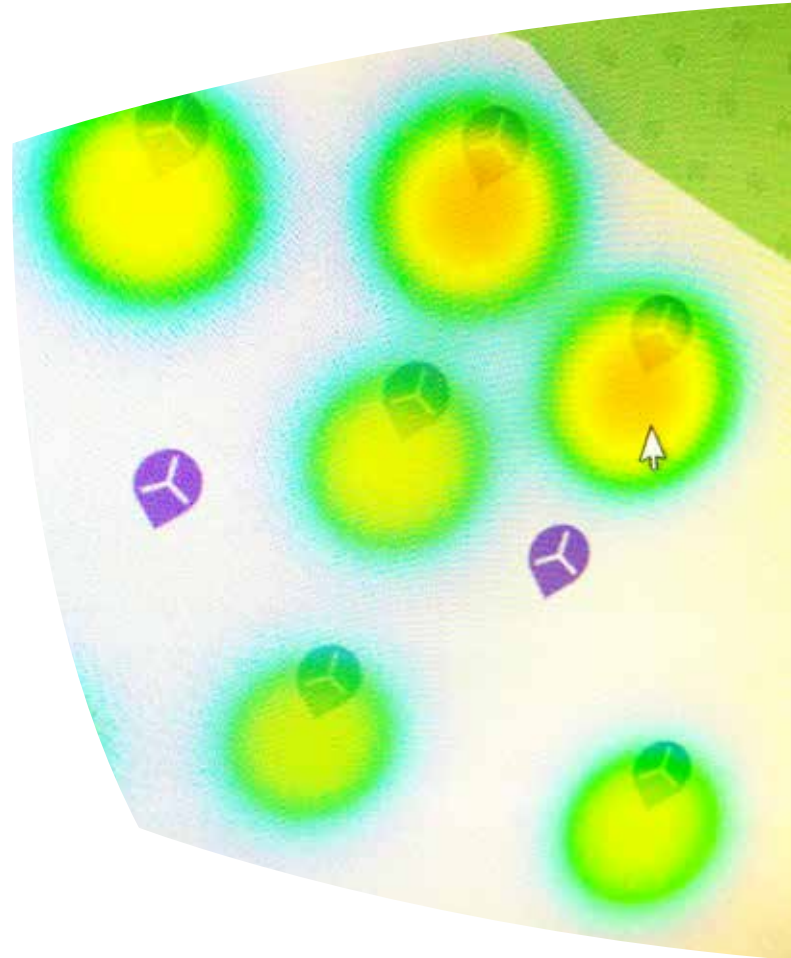




We take a holistic approach to performance analysis, combining performance indicators based on operational SCADA data and advanced flow modeling, enabling our analysts to identify areas of uncertainty which present the best opportunities for power performance improvement.

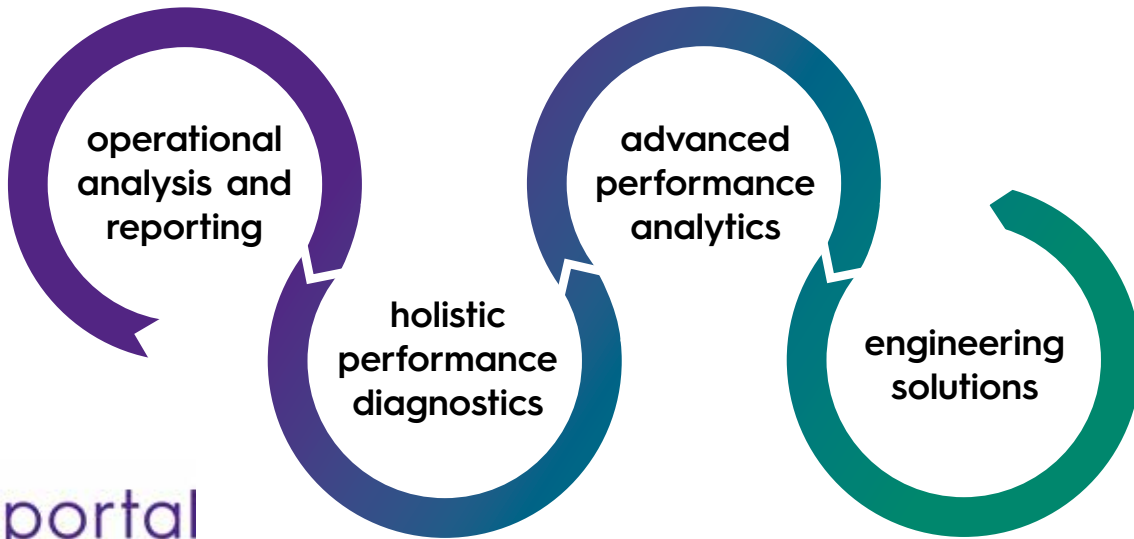
Initial desktop analyses quantify historical operational performance and highlight areas for potential improvement. A suite of follow-up tools including inspections and measurement campaigns are recommended to carry out an in depth investigation to confirm performance deficiency, rectify issues and ultimately validate performance improvement.



// through our consistent focus on technical innovation including pioneering tool development, and advanced flow modeling applications and deep operational experience we are well placed to offer expert advice and bespoke solutions to maximise energy generation from operational renewable energy projects

Leanne Ramage, Head of Technical Projects





Operational reporting and analysis

- Independent warranted availability calculations
- Loss categorisation
- Energy generation comparison against budget
- Wind speed indexing
- Operational power curve review
- Assessment of curtailment losses

Advanced performance analytics

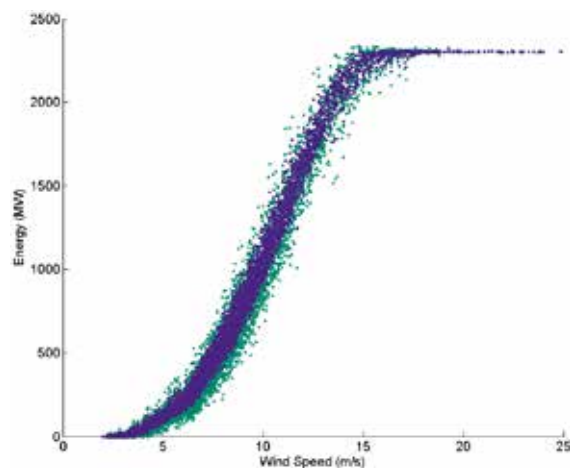
- CFD modeling
- Turbine health assessments
- Turbine inspections
- Targeted additional data collection (lidar, CMS, RTI)
- Performance data analysis
 - Benchmarking
 - Power curve investigations
 - PCYA
 - Energy reconciliation
 - KPI refinement
 - Operational optimisation
 - Refinement and re-powering analysis
 - Energy prediction for site expansions
- Remaining useful life calculations

Holistic performance diagnostics

- Determination of residual differences within turbine performance
- Targeted maintenance campaigns

Engineering solutions

- Yaw realignment
- Blade realignment
- Implementation of refined KPI's
- Smart servicing
- Predictive analysis
- Strategic component replacement



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