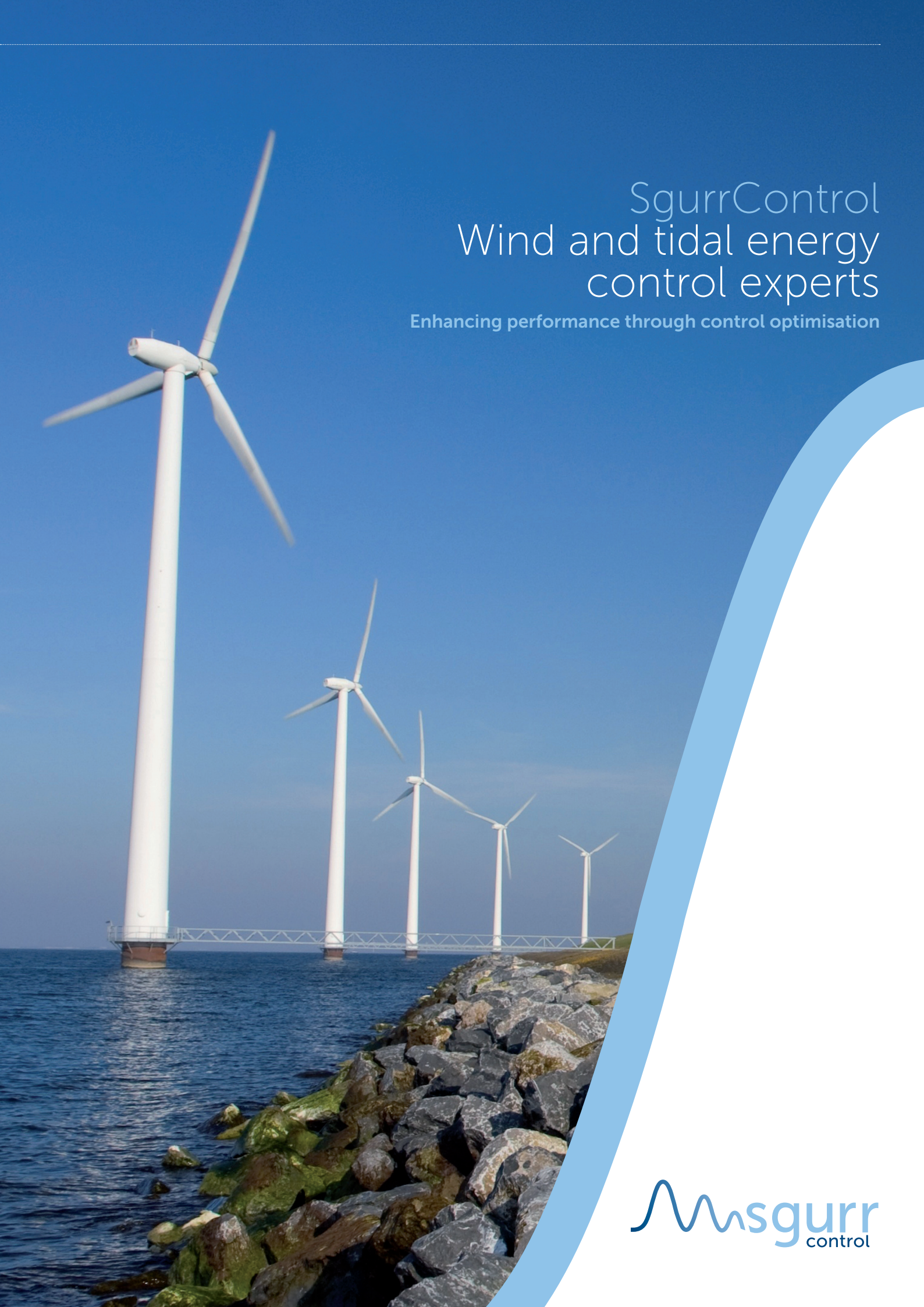


SgurrControl
Wind and tidal energy control experts

Enhancing performance through control optimisation

sgurr control

> Leaders in the use of control strategies to lower the cost of energy

SgurrControl

Wind and tidal energy control experts

We have the solutions

SgurrControl is an engineering organisation providing control solutions that alleviate structural loads, minimise O&M costs and optimise energy capture of wind and tidal turbines.

Our expert team has extensive experience of control system design. Our advanced control solutions are capable of effectively controlling wind and tidal devices, maximising their performance and providing unbeatable levels of flexibility and robustness.

We support our clients through each stage of the control engineering process. From guidance and consulting to the implementation, validation and support of the best control solution, we work with you to identify production improvements, reliability and ROI optimisation.

> Improving performance of wind and tidal turbines through effective control strategies

Products

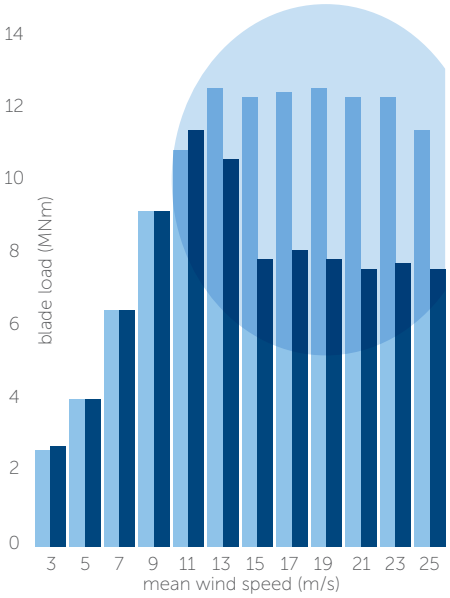
ATLAS

Reduce loads to lower capital and operational costs

ATLAS (Advanced Turbine Load Alleviation System) is our patented individual blade control (IBC) solution for load reduction and turbine performance enhancement. It works by adjusting each blade's pitch angle individually in response to measured loads. ATLAS is proven to significantly reduce fatigue loads and extreme loads on the blades, drive train shaft and structure of large, utility-scale wind and tidal turbines.

Target loads: ATLAS can be fine-tuned to target the most important loads on your turbine, including both lifetime fatigue and extreme loads.

Optimise your turbines: Load reduction allows the optimisation of turbine designs and reduces downtime and maintenance costs while extending turbine life expectancy.



Flexible: Local blade information is used and the system operates completely independently of the central controller.

ATLAS can form the basis for dynamic control design on new turbines or be designed to work on existing turbine models.

SgurrControlBox

Accelerate the pace of control engineering

SgurrControlBox is a software package used to model, design and test wind and tidal turbine control systems.

Using our software, engineers can model wind and tidal turbines more efficiently, design turbine control systems more quickly and evaluate controllers more easily while saving valuable time on post-processing tasks and load calculation work.

SgurrControlBox is embedded within MATLAB®. With commercial, academic and education licences available, there's a package designed for your needs. Contact us to request a demo version.

TurbineAdvance

Breathe new life into ageing and underperforming turbines

We provide effective control strategies to boost the performance of your turbines and help to extend their operating life. Using our expert knowledge, our TurbineAdvance solution includes design and implementation of new control algorithms on existing turbines, supporting your project to provide higher power capture, lower loads and fewer failures.

Use TurbineAdvance to target specific operational improvements of in-service turbines such as:

- Lost production due to poor power curves
- Load reduction to minimise gearbox failures
- Speed control
- Yaw misalignmentt

TurbineAdvance is a non-invasive solution for operating wind and tidal turbine assets which will maximise your turbine performance, your energy yield and dramatically improve turbine efficiency.

Advanced Wind Farm Control

Maximise the power output of your wind farm

Our Advanced Wind Farm Control solution is designed to maximise wind farm power output, reduce loads on wind turbines and facilitate grid management.

The Advanced Wind Farm Controller selectively controls individual turbines to enable key operational strategies including:

- Maximising power output of the farm
- Reducing loads on wind turbines
- Operating in a similar manner to conventional plant
- Allowing participation in grid network management
- Supporting principles of access rules

Advanced Wind Farm Control allows owners and operators to reduce overall cost of energy by improving reliability, boosting efficiency and extending asset longevity.

Services

Control engineering services

Count on our expertise

Our wide range of control engineering services includes wind and tidal turbine power and loading optimisation algorithms, turbine simulation and loads analysis services and supervisory and dynamic controllers.

Supervisory controllers oversee the total operation of turbines for "health monitoring" requirements including startup and shutdown, fault handling, safety of operation and data collection.

Dynamic controllers regulate the response of the turbine against changes in the wind to minimise loads and maximise power output.

Custom designed to client requirements, we deliver intelligent wind and tidal turbine control systems to maximise energy capture without damaging your turbine with excessive loads.

Contact us

We'd like to hear from you

To benefit from our control engineering services or to find out more about what we have to offer, contact us by telephone, email, or visit our website:
sgurrcontrol.com

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