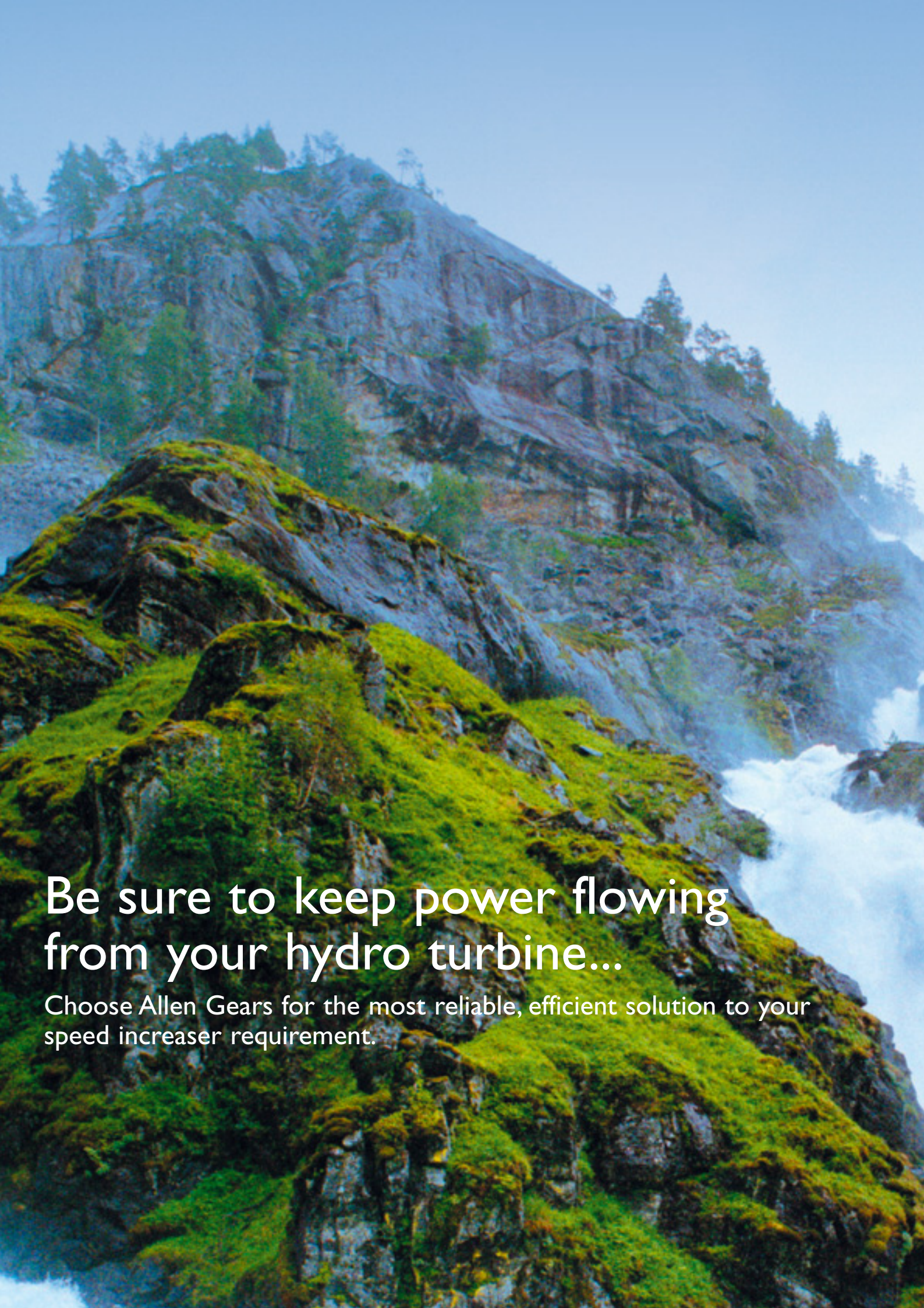



A large, high-contrast photograph of a waterfall, with white water cascading down dark blue rocks. The image is the background for the top half of the page.

Geared for
HYDRO POWER



Be sure to keep power flowing
from your hydro turbine...

Choose Allen Gears for the most reliable, efficient solution to your speed increaser requirement.



Allen Gears is a world-leading supplier of high performance gearboxes to the power generation industry. The company's particular skill rests in its ability to apply this sophisticated technology to hydro turbine projects.

The first Allen Gears hydro gearbox was installed in 1979 for Kvinner Boving at the Perak Hydro Power Plant in Malaysia. Since then, we have accumulated over 3 million hours of operation with this and other installations giving Allen Gears a wealth of knowledge that underpins its first class technology to ensure the success of every project.



Why use a gearbox?

A geared system offers the ability to drive a lower cost, high speed alternator with a low speed turbine. Low head turbines running at 40 - 200rpm with power output of 1 - 30MW can be geared to high speed alternators resulting in higher overall efficiency.

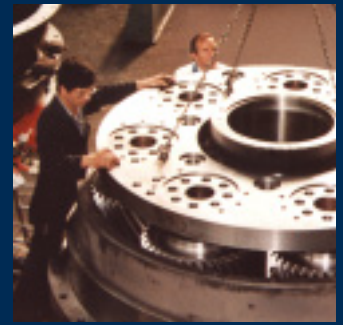
Power plant designers face unique river characteristics for each location. Bespoke geared systems enable the designer to achieve the best output for the lowest capital cost.

Epicyclic gears

Allen Gears epicyclic gear technology constantly out performs other gear systems for efficiency and reliability. This patented technology coupled with world leading quality of manufacture and design provides the very best compact high technology solution for small to medium size hydro turbine systems.

- High efficiency of typically 99% translates directly into additional revenue.
- Co-axial arrangement reduces overall size.
- Compact, smaller and lighter than alternatives reduces overall size of system.
- Lower pitch line velocity produces less noise.
- Horizontal and vertical arrangements.
- Multiple stage solutions for high ratio speed increasers.





Further benefits

In addition to offering the standard gearbox, Allen Gears has identified opportunities for reducing the overall machinery cost and optimising its performance by integrating sub-systems with the gearbox.

For example:

- Integral lubricating oil system
- Two bearing runner shaft system
- Auxiliary systems
- Safety systems
- Maintenance systems.

Parallel shaft gears

Parallel shaft gears offer versatile, simple arrangements for small hydro turbine systems. Combining well proven single or double helical gear technology with simple bearing arrangements to provide low cost solutions.

- Integral lubrication system.
- Simple access for turbine hydraulics.
- Hydro dynamic or rolling element bearing option.
- Vertical or horizontal offset arrangements.
- Horizontal or vertical axis.
- Low oil flow.





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POWER GENERATION ■

HYDRO POWER ■

MARINE PROPULSION ■

OIL & GAS ■

WIND POWER ■

SERVICES ■

Our dedicated Service facility provides gearbox inspections, overhauls, repairs, refurbishments and upgrades.