

Remote control

Director of marketing and senior project engineer at **Hibbard Inshore**, Dave Malak, speaks to *Modern Power Systems – BRICS Edition* about providing manned and unmanned solutions for inshore power industry companies, near and far.

Can you tell me a little bit about Hibbard's core business areas and the history of the company?

Dave Malak: Hibbard Inshore has been in business since 1984, getting its start by performing hydroelectric inspections with one of the first commercially available remotely operated vehicles (ROVs). Today, the company has grown significantly to provide a portfolio of services to power producers by using unmanned vehicles along with advanced sensors to deliver inspection, survey, and speciality construction solutions, with a focus on overall cost and risk reduction.

The company uses these tools to work with owners and engineers to assess critical structures such as dams and their component structures, including the most difficult long-intake and discharge tunnels, cooling water intakes and outfalls for coal and nuclear facilities, as well as subsea generation infrastructure including subsea transmission lines and generating assets for the offshore wind and tidal power industries. The company operates a fleet of swimming, floating and crawling vehicles to address fully flooded, partially flooded and dry areas. This equipment uses sensors including, but not limited to, multiple forms of sonar, lasers, survey equipment, thickness sensors and video.

What exactly can you offer the modern power sector?

For the inshore power industry including hydroelectric dams, nuclear facilities and coal facilities, Hibbard Inshore provides vehicles and sensors to help gather data on their structures, to identify maintenance issues and perform lifespan assessments. We do this while providing solutions to avoid de-watering and to avoid placing human inspectors in harm's way. The vehicles allow owners to inspect long pipes and tunnels while leaving present the water and thereby the hydrostatic pressure.

This reduces the potential for contraction, cracking or collapse that can increase with de-watering. It has the added benefit of not requiring the outage time that de-watering does.

Once problem areas are identified, vehicles can often be fitted with tooling such as drills, cutting implements, pumping equipment, wrenches and manipulators to perform repairs. These include plugging and grouting, cleaning and remediation, deepwater dredging in front of units or inside conduits, leak repairs, and temporary bulkheading to allow valve replacement.

In addition to these ROV services, Hibbard Inshore offers a full suite of marine survey services for the inshore and offshore power industries, including marine geophysical



A Hibbard Inshore Saab hybrid AUV-ROV in the water.



The Hibbard Inshore Mohican fitted for dredging.

surveys, using techniques such as sub-bottom profiling, marine magnetometer surveys, and marine electromagnetic surveys. Our survey offerings also include single and multibeam bathymetry surveys, side-scan sonar surveys, and mechanically scanned and multibeam imaging sonar surveys.

For the offshore industry, we can offer a variety of survey and ongoing maintenance services to determine cable or

pipe-laying routes, to survey these assets as they are placed, to inspect them after they are in operation, and to use sensors and tooling to aid in the installation and ongoing maintenance of the generating units. Hibbard Inshore has experience in managing currents in difficult areas, such as for tidal generation stations and for inter-island subsea transmission lines. For offshore services, the company operates ROVs with depth ratings to 2,000m and a Hybrid ROV/AUV with a depth rating of 1,200m.

What are the main benefits of your offshore and inshore services?

The robotic vehicles are ultimately a tool that, when used in the right situations, can reduce the costs of lost production, de-watering and confined entry work in areas of low visibility, and provide increased production and safety where currents, survey area or depth may present issues for commercial dive work. Some examples of our recent projects include:

- performing an internal, flooded tunnel inspection of a 16km line while maintaining minimum flow rates for generation
- working with a hydroelectric dam to identify leaks, develop a repair method, and to perform repairs to the holes in the bottom of their active surge shaft at 180m of water depth using only the nightly eight-hour outage periods so that they could maintain their generation schedule

- multiple insurance and acceptance inspections for large hydroelectric facilities, particularly with their large power tunnels
- performing unmanned dredging next to active intakes and inside power tunnels
- managing swift currents to perform cable route surveys for a new tidal generation installation
- providing geo-referenced surveys to determine volumes of sediments and debris required for removal.

Do have any future plans you'd like to discuss?

While Hibbard Inshore has had dealings in Asia, Central America, Europe, North America and South America over the past year, the company plans on continuing to expand its global reach. Currently, all of the company's vehicle and sensor systems can be shipped by airfreight to any location worldwide. Another focus for the company is the ability to offer affordable services to even the most remote power facilities. We also specialise in providing logistical cost reduction for inspection and survey of nearshore power installations because many of these may not be conveniently served by large offshore operators. ■

Further information

Hibbard Inshore
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