

# Take the long view

How do you inspect long tunnels without a time-consuming, costly and perhaps risky dewatering process? Do you wait to inspect and hope that they continue to function? Do you take the risk of causing movement of rock or lining materials by removing the water and hydrostatic pressure? Or do you look for a creative solution to these issues?

Hibbard Inshore is able to address these situations in flooded tunnels with a comprehensive fleet of underwater robotic vehicles and sensors. Each vehicle is handpicked to suit the circumstances, and all are capable of providing real-time video and inspection sensor data at ranges exceeding 20km. In many cases, the vehicles are even able to conduct inspections in-flow at these distances. This allows plants to continue generating during inspection or maintain necessary environmental flows while still collecting the data they need to make lifespan assessments and maintenance decisions. The inspections are often conducted to help the customer minimise outage times and related costs.

The tunnels can frequently be entered through intakes or existing shafts, as the Hibbard Inshore tunnel inspection robots are able to swim down the opening and out into the main tunnel. From that point, the vehicle can use its video,

sonar and inertial navigation systems to measure dimensions, detect open cracks, holes, loss of construction materials, build-up of debris or sediment, and compare differences with previous inspection data

or as-built drawings. Three-dimensional models can be built for comparison with data collected in future inspections.

Long tunnels are critical and can become very costly if they encounter failure or blockage; if your facility has one that is in need of condition assessment, Hibbard Inshore would be happy to help you reduce inspection risks and costs.



Long-tunnel vehicle entering shaft.