



CASE STUDY

Ontario Power Relies on VideoRay Underwater Robots for Hydroelectric Inspections



Ontario Power Generation produces most of the province's electric power, operating 66 hydroelectric generating stations and 241 dams on 24 river systems.



Summary

Based on years of experience with Mission Specialist underwater robotic systems, Ontario Power Generation turned to VideoRay when it needed a new inspection-class underwater robotic system with enhanced capabilities to handle a growing variety of current and future hydroelectric inspection applications.



Challenge

Ontario Power Generation needed a heavy-duty inspection-class underwater robotic system to send into dangerous areas where diver safety is a concern and to gather accurate information about the integrity of the infrastructure. Personnel also needed a robot that could incorporate advanced technology yet was easy to use.



Solution

Ontario Power Generation selected the VideoRay Mission Specialist Defender system because of its ability to integrate large payloads and advanced accessories.

The Defender system is VideoRay's largest and most powerful configuration, optimized for precise control, heavier payloads and demanding missions. The Defender system has seven thrusters for exceptional maneuverability. It can move in any direction and maintain active pitch to move the vehicle in an upward or downward orientation.

All VideoRay Mission Specialist systems have a modular design, so that operators can add new sensors and tooling from a wide range of manufacturers to accommodate a broad selection of tactical, communications and power options.



Results

The Defender system especially impressed Ontario Power Generation with features like:

- Versatile modular design to quickly adapt the robot to specific tasks
- Station keeping that holds the vehicle in place for an extended time
- High-resolution 3D sonar imaging of structures

These performance advantages enable Ontario Power Generation to better execute inspections, assessments and data collection.

In addition, Ontario Power Generation developed a custom trailer inspired by VideoRay with a tether delivery system to increase inspection capability while traveling throughout Ontario to conduct dam assessments.



For years, Ontario Power Generation has been impressed with the performance of VideoRay's underwater robotic systems for successful hydroelectric inspections to identify and locate erosion or leaks before they become more serious problems. //