

ROV Survey UK Power Station

Subsea Vision Ltd has recently completed a comprehensive ROV survey at First Hydro Company, part of Edison Mission Energy at Dinorwig Power Station, North Wales.

The complex close to the foot of Snowdon Mountain includes an upper reservoir Marchlyn Mawr, and a lower reservoir Llyn Peris. Water falling from the upper reservoir at 600m head drives six turbine generators via 16km of underground tunnels, supplying the national grid with a combined output of up to 1728MW of electricity. The water is then discharged into the lower reservoir. Using off-peak electricity, the six units are reversed to pump water back to Marchlyn Mawr.

A Seaeye Falcon ROV was equipped with a number of additional features for the various survey tasks it had to perform, including:

- A specifically designed dye injection unit, enabling the monitoring of water flow through cracks, etc
- A gauge scale in the camera view for accurate measurements
- A position reference system, allowing GPS readings to be taken throughout the survey for ease of reference and mapping of specific areas

These surveys were carried out to assess structural integrity of the dam face, the scour inlet and the main Intake structure. The ROV was also lowered into the Surge Pond by a crane to assess the overall condition of the 30m-diameter shaft and the 10m-orifice shaft below. The ROV was then repositioned to survey the Tailworks structure located in the lower lake.

<https://www.hydro-international.com/content/article/rov-survey-uk-power-station>
