Hydro news today

Scottish Water has finished the construction of the ?3m scheme at the Whiteadder Reservoir, which is expected to offset almost a third of the energy used by one of the area’s largest pumping stations named the Hungry Snout.

Water is drawn up through the intake and over the top of the damn through the use of siphon technology before running down through the siphon, through the hydro turbine, and back into the natural environment.

It will significantly reduce the carbon emissions from the pumping station, saving approximately 111 tonnes of carbon each year, the equivalent of a passenger jet flying from Edinburgh to Sydney, Australia 40 times.

“Scottish Water"s ?3m investment in this innovative technology, the first of its kind in Europe, is maximising the value of our water resources, reducing emissions and delivering benefits to customers by reducing costs which can be re-invested.

Senior project manager at Scottish Water Horizons Neil Beaumont said: "We are delighted to have completed construction of this exciting project which will produce enough green energy to meet 30% of the power needs of the Hungry Snout pumping station and reduce our reliance on drawing energy from the national grid.

"We also wanted to ensure our carbon footprint was as low as possible throughout the construction process, which is why we used divers and barges to sink the pipes under the water - this was a much less intrusive and carbon intensive way of installing the new infrastructure than more traditional methods."

He added: "The scheme will ensure that we are protecting the water levels of the reservoir via smart controls and sensors, so that we are never taking too much water in order to power the hydro turbine - the reservoir"s primary function is to provide water to customers."

Pumped-storage hydropower is a cornerstone of Scotland’s renewable energy strategy and unusually has its place set in literature with the tales of men like Seán Doyle, a fictional character from Patrick Campbell’s novel Tunnel Tigers.

Doyle is based on the stories of sacrifice by Irish migrant workers who tunnelled through Ben Cruachan to build the Cruachan Dam – Scotland’s first hydro-pumped facility opened in 1965 – and paints a wonderful description of the human endeavour involved. The Tunnel Tigers were given their moniker for unrivalled bravery, resilience and skill working with dynamite and heavy equipment to create what is still known today at the Hollow Mountain. It was essential but perilous work.

The story is not just about the human cost of the engineering marvel, but also of the workers’

contribution to Scotland’s energy future. While Doyle is fictional, he is a composite of the experiences of countless real-life men. His character offers a lens into the immense physical and emotional challenges faced by those who built the first wave of hydroelectric power stations.

My own great grandfather, James McDaid, was a Tunnel Tiger. Like his fictional counterpart Doyle, he was a dynamiter, his daughter, my grandmother, Maureen Stevenson recalls. It was “very hard, physically, and the air quality was poor” but “it was good money”, she says.

“My father got lung cancer not long after [finishing working as a dynamiter]. There was no health and safety to speak of then. He worked on a lot of big projects where he was blasting and drilling, lots down in England, but that one [tunnelling at Cruachan] forced him to retire, he was done with his chest.

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