

Weholite goes HUGE

KWH Pipe raised the bar in the polyethylene pipe industry when it produced DN/ID 3.3 m Weholite pipe for the Aberfeldie Run-of-River Hydro redevelopment project.

The Aberfeldie generating station is located on the Bull River, 30 km east of Cranbrook, British Columbia, deep in the Canadian Rockies. The original facility was built in 1922, and then rebuilt in 1953. Now in the 21st century, as part of BC Hydro's Resource Smart Programme, construction of an upgraded facility was needed to increase the generating capacity from 5MW to 27MW, increasing the supply of clean energy to the region and creating jobs both during and after construction.

With case histories of previous hydro projects demonstrating the success of Weholite, representatives from KWH Pipe Canada's western office were able to respond to BC Hydro's requirements by providing engineering and costing proposals.

After four years of development, the project received the go-ahead in the spring of 2007.

Built on the side of a mountain, the Aberfeldie project posed many interesting challenges where Weholite provided the solution. For one, – the lighter the better – and Weholite was the ideal choice for ease of handling in such remote and mountainous terrain. When compared to other piping materials, Weholite presented an effective cost alternative. As stated by KWH's **Darrell Sallenbach**, "this large diameter Weholite facilitated BC Hydro in completing the upgrade to the Aberfeldie Hydro Generating Station by being an economical alternative to other piping materials."

KWH's plant in Saskatoon churned out DN/ID 3.3 m Weholite, in 12.8 m lengths. The pipes were loaded and trucked, with the assistance of pilot cars, to the site. All together over 70 truckloads of pipe snaked their way along 1,000 km trip via the TransCanada highway, across the Prairies, through the Rockies and south to the Cranbrook region.

Construction started in the summer of 2007, offering local sub-trades employment during the process, with a scheduled completion date in the autumn of 2008. Weholite, 3.3 m in diameter at 1.5 bar working pressure, was installed over a length of 855 m. Additionally, fourteen mitred elbows, two 1200 mm inspection chambers and a small quantity of solid wall pipe ranging from DN/OD 630 mm to 1400 mm, were required to complete the installation. Joining of the pipes was completed by KWH's field technician services using their semi-automatic internal welder.

The redevelopment of the Aberfeldie Hydro Facility will assist in filling the growing gap between total electrical supply and demand in British Columbia. Once completed, the Aberfeldie Dam and Generating facility will produce enough clean energy to supply 10,500 residential customers annually, reducing the need for importing energy.

This project demonstrates how Weholite PE-HD pipe is the ideal choice for hydroelectric applications.



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