

PRESS RELEASE

City of Sheridan Generates Power from Drinking Water
Sheridan, Wyoming – March 28, 2018

The City of Sheridan recently installed a hydro turbine in their drinking water system which is expected to generate over 1,000,000 Kilowatt-Hours of electricity per year, enough power to supply 100 homes with clean renewable power.

Raw water is transmitted to the Sheridan Water Treatment Plant from a reservoir by means of a transmission line. As the raw water runs downhill the pressure is reduced by valves to avoid over-pressurization of the pipe. The City of Sheridan saw an opportunity to capture the energy being dissipated by these valves and installed a turbine which generates up to 256 kW of continuous power from the preexisting line.

Hydroelectric installations of this type are known as *Energy Recovery Hydropower*. Energy Recovery Hydropower is an emerging field in the renewable energy market that is defined as generating power from water already diverted for human use.

The turbine installed is of a unique design manufactured exclusively by Canyon Hydro of Deming, WA. It has a compact footprint and in-line layout allowing the City to install it into an existing structure without significant alterations to the building or piping. The fact that they didn't have to make a new structure was vital in proving the economics as it significantly reduced both the time and expense required to complete the project.

Canyon's In-Line Turbines control pipeline pressure and flow the same as traditional valves however rather than dissipating the energy the turbine spins a generator that converts mechanical energy into electricity. Canyon Hydro also supplied the utility-grade electrical panel which controls flow and pressure as needed while maximizing electricity production. The electrical system is connected to the grid, power generated is used on site with excess sold back to the local utility.

It is important to the City that any changes to their water network not disrupt normal system operation. The turbine is installed in parallel to the existing valves and water flow is transitioned seamlessly and automatically from one to the other in the event that the turbine needs to be taken offline ensuring water supply to the treatment plant is uninterrupted.

The turbine outputs continuous power running 24/7/365. Unlike solar or wind the generation does not depend on the weather. Water use is variable throughout the year but the turbine is equipped with adjustable wicket gates to maximize generation as flows fluctuate.

Without altering the operation of their system, the City of Sheridan now generates electricity from a drinking water infrastructure that they already had in place. Power output of this one site is not enough to meet the City's entire demand but there are countless sites with the potential for similar installations.

About Canyon Hydro

Canyon Hydro is based in Deming, Washington USA. Canyon designs, engineers, and manufactures their products in the United States with production facilities in both Deming and Sumas, WA. Learn more at www.canyonhydro.com.

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