SUMMER 2023

PHILMONT IS CLIMATE SMART

PCSC, Philmont Climate Smart Task Force

PCSTF's Tour of MicroHydro in Valatie

On March 9th, 2023, members of the Philmont Climate Smart Task Force—Tom Paino (Chair), Michael Seserman, Susan Michie, Andrew Personette, Arthur King, Sarah King, and Chris Wetmore,—visited a small, independent hydropower facility in Valatie, NY. Like Philmont, the Village of Valatie experienced rapid industrial development buoyed by easily resourced waterpower.

The Valatie hydropower facility was purchased by John Doran in 2020, after being offline since 2017. The restoration and reactivation of the hydro station took three years and was completely financed by John with all of the work performed by John, his employees, and even his family. He said that repairing and running the facility is a “labor of love”. Micro Hydro power stations in the country are usually owned by individuals, as there has been little interest to date by municipalities and financial programs to support their construction.

The facility is located on a site with remnants of an original textile mill, the Valatie “Cotton Mill,” which stood from 1834 to 1945. The power house dam and sluice remaining on the Kinderhook Creek are key components of the hydroelectric project. John owns the dam and the land on his side of the creek with an easement for the property on the other side of the creek.

The mission of the Philmont Climate Smart Task Force is to take actions designated by New York State to help Philmont reduce its greenhouse gas emissions, to deflect climate change and help New York State meet its climate goals.

https://philmont.org/climate-smart

VALATIE TOUR CONT'D

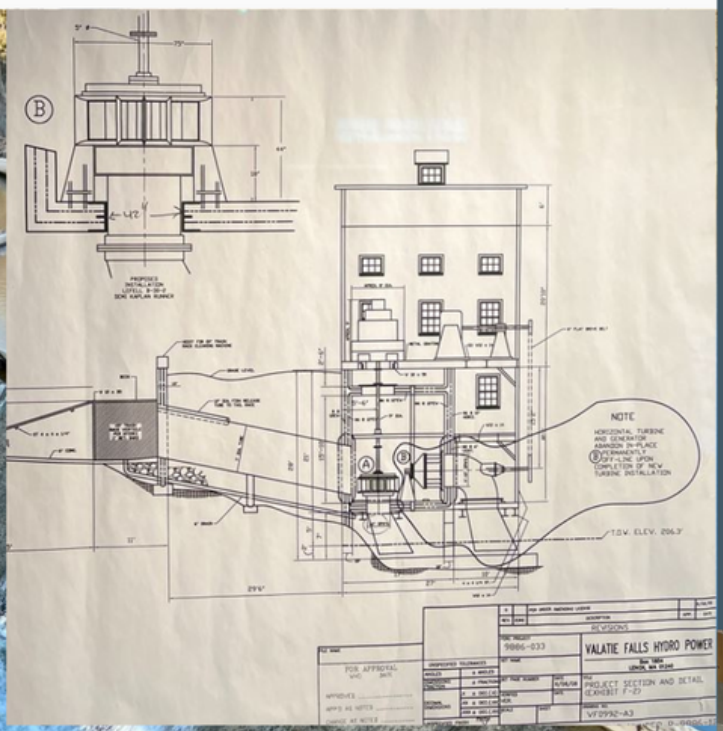
To get the facility going after purchasing the property, the existing 1951 generator and the 1920 turbine needed refurbishment. There is a second, older generator and turbine setup that is mainly used as a backup system. John currently operates on an existing Federal Energy Regulatory Commission (FERC) permit from 1987 and is already working on reapplying in 2027. The permit preparation and application process takes five years, according to John, and will cost $250,000. A rather large sum, but John claims it will pay for itself in only 4 years.

The Valatie facility has a 150 KW capacity, which is enough to power the equivalent of 40-50 homes in Valatie. Production declines if the water level declines and there is less water to spin the turbine, as happens in summers. John currently sells his power to National Grid at wholesale rates. and equally important, provides the utility with Renewable Energy Credits (REC's), to meet federally established requirements.

The environmental impacts and considerations of the facility were also discussed during the visit. Water flow over the dam and fish impacts were addressed, as was the importance of using trash racks with a 1" or less opening. Auto-cleaning trash racks were recommended to reduce maintenance requirements at the dam site. John also noted that there are extra permitting challenges if the waterway is a trout stream.

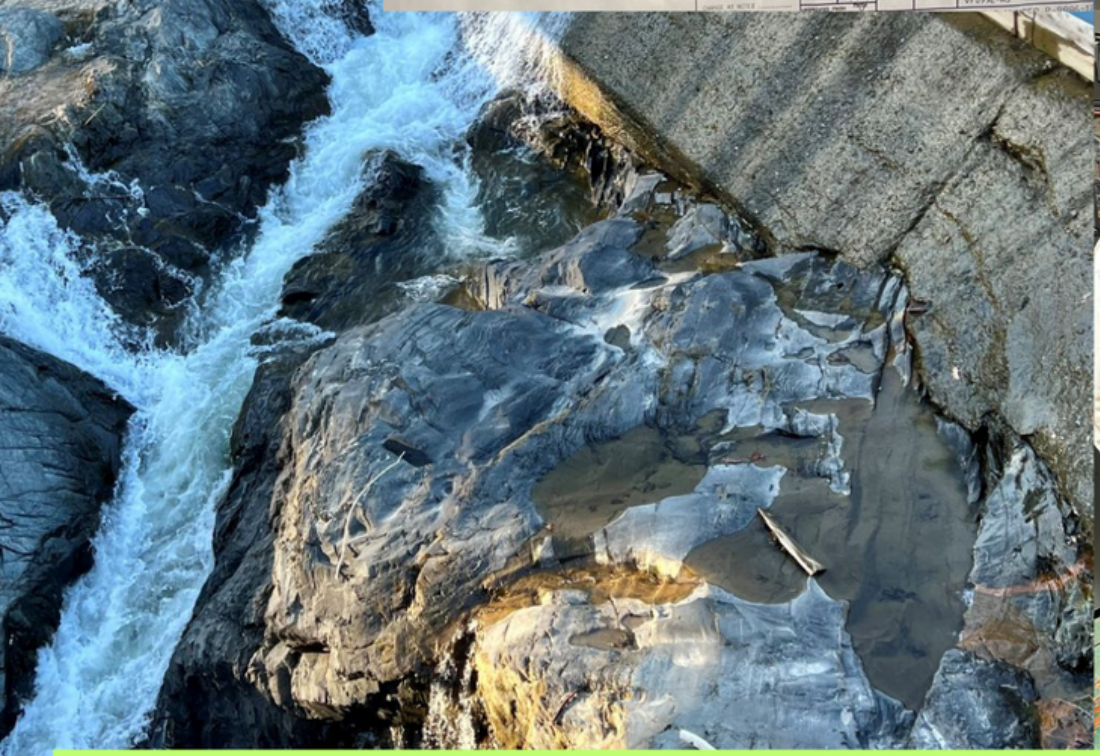
Currently the system generates 150 Kilowtts, enough to power 40-50 homes.

Overall, the visit was informative and demonstrated the possibilities and challenges of micro hydro facilities. It highlighted both the importance of investing in sustainable energy sources and taking into account the environmental impacts of energy production.For further application to Philmont, see “Summit Street Dam Hydropower Feasibility Study” by Alden Research Center, 2016 posted on Village of Philmont website.



"We re-built the old G.E. generator from 1951. It is a labor of love."

JOHN DURAN



New with old: New turbine blades were custom made. John displays his patented drawings of the rejuvenated machinary.