

Micro-hydro Capabilities

Gardner Energy has been designing and installing micro-hydro systems for the past 18 years and has installed 20 micro hydro systems in the intermountain west. Micro hydro power, just like solar power, can be designed for grid-tie with net metering, off-grid and grid-tie with battery backup. Micro hydro systems are typically designed to meet the customer's needs even though at times the potential exists to generate far more power than is needed. Because hydropower operates 24 hours a day a small system can provide enough energy for residential or small commercial customers.

Case Study:

Roger Rolfe, Cimarron, Colorado

- 2 kW grid-tie hydroelectric system (no batteries)
- 145 feet of head
- 143 gpm

The hydroelectric system supplements an existing solar electric net metered system. An existing pressure irrigation line is used to generate power when not irrigating. Four manual nozzles are operated by the owner based upon variable flow during all months of the year. The owner monitors a pressure gage at the turbine house next to his home and opens and closes valves to maintain maximum pressure.

