

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:

Davis-Weber Canal Company, Sunset, Utah

- 400 watt grid-tie hydroelectric system
- Velocity driven turbines
- 600 cfs flow

Gardner Energy designed and installed a floating hydroelectric water wheel that uses the surface velocity of the canal to spin a water wheel attached to a permanent magnet generator generating “wild” AC power. The 260 volt AC power is rectified to DC power and sent through a grid tie solar inverter to the grid. The system is only operational during the irrigation season.

