



CITY OF TUCSON WATER DEPARTMENT

November 1, 2011

Doug Goodman
Ridgetop Group, Inc.
3580 W Ina Rd.
Tucson, AZ 85741

Dear Mr Goodman:

Ridgetop Group developed a solar monitoring solution that provided support to identify faulty inverters at the Thornydale Reclaimed Water Reservoir, a City of Tucson solar PV site managed by Tucson Water. Tucson Water has been pleased with Ridgetop Group's design services and subject matter expertise in PV-Inverter prognostics.

Beginning in 2005, Tucson Water invested in this 70 kW PV solar project using three Xantrex PV-Inverters. Recently, decreases in output and in PV inverter uptime triggered the need for a prognostic health monitoring system, as these devices appeared to be failing. The aging inverters were near or had surpassed the end of the warranty period.

The relationship between Ridgetop and Tucson Water began as a result of Ridgetop being awarded the US Department of Energy's SBIR Grant Number DE-SC0004208, "Uptime Improvements for Photovoltaic Power Inverters". Ridgetop's experience in power supply prognostics and Tucson Water's out of warranty PV-Inverters made this a beneficial opportunity for both parties. The scope of work completed by Ridgetop included the initial repair of a Xantrex Inverter and installation of a prognostic health monitoring system.

Tucson Water is looking forward to continued collaborating with Ridgetop Group in future research and development efforts.

Sincerely,

Bruce Plenk
Solar Energy Coordinator
Architecture & Engineering
Division
General Service Department
City of Tucson

Frank Yourison, P.E.
Electrical Engineer
Planning & Engineering Division
Tucson Water Department