

Case Study

Basler DECS-250 Replaces an Aging System

In the summer of 2019, a small Midwestern utility decided to replace the aging excitation systems at all four of their hydro generation units.

They specified a Basler DECS-250 system and selected E² Power Systems to carry out the turnkey installation.

The site will be unmanned and was tied into their new Ovation™ control system using Modbus® to communicate with the DECS-250 controllers.

Scope

- To replace an aging excitation system with a DECS-250 excitation system and control via Ovation™ DCS
- The existing system had to be removed via turnkey installation and the new one installed in its place.

Schedule

The excitation system was placed into operation in December 2019 and all system reports and documentation were delivered to the utility in February 2020.

Design and Solution

Because of the new communications now possible, the excitation system was interfaced with the new Ovation™ controller to allow for four unmanned-capable generating stations. E² Power Systems coordinated delivery of the new DECS-250 systems which were shipped from Basler's factory in Highland, Illinois to the installation site.

Upon arrival, the pieces were numbered and moved into the powerhouse using the same cabinet that housed the existing exciter and controllers.

Testing

With equipment in place, the exciter and control cabinet was rebuilt and system testing began.

Wrap Up

After completing the installation, the client has the capability to fully control the four generators from offsite.

E²Power Systems LLC



Figure 1 - Basler DECS-250



Figure 2 - Hydro Generators