Residents in Chevak will soon be reaping the benefits of a five-year endeavor to build new power generation facilities that include renewable energy to take advantage of strong winds. The major projects that are nearly complete include a fully automated, modular-style diesel power plant, a bulk fuel tank farm, upgraded distribution lines and four wind turbines.

The power plant includes a control module and three fuel-efficient engine-generator modules built up by AVEC employees at AVEC’s headquarters in Anchorage and shipped out to Chevak by barge. After arrival in Chevak, final assembly work was completed and plant commissioning (start up) occurred.

The plant has a total diesel-engine generating capacity of 1,800 kW, powered by the following fuel-efficient engine-generator sets: an 824 kW Cummins QSK23; an 1800-RPM Caterpillar 3456 rated at 477 kW; and an 1800 RPM Cummins QSX15 rated at 499 kW.

Four Northwind 100-kW wind turbines will provide an additional 400 kW generating capacity after they become operational sometime in December.

The power plant also has support modules that sustain the operation and maintenance of the new plant, including providing living quarters for AVEC’s crews.

Planning, designing and building multi-million dollar projects like this require a lot of teamwork and several years to complete due to many factors, starting with obtaining funding. Five entities provided money to help finance this project: US Department of Agriculture High Energy Cost Reduction Program, Denali Commission, Alaska Energy Authority (wind turbine foundations), Clean Renewable Energy Bonds (CREBs) issued by the National Rural Cooperative Finance Corporation (CFC) and AVEC. Land for the project was provided by the City of Chevak.

Various contractors helped with the design and construction of various aspects of the projects, including geotechnical work to determine how to prepare the ground to support the wind turbines, power plant and tank farm; driving pilings for the elevated platforms that the power plant and tank farm sit on; preparing wind turbine foundations; providing technical support and maintenance of the wind turbines; and constructing power lines and fiber-optic communication lines.

Work continues on the community tank farm that will add 501,000 gallons of code-compliant fuel storage for Chevak’s heating oil and gasoline needs. The community tank farm could be finished as early as August 2010, nearly a year ahead of schedule.

Photos by Amy Murphy and Matt Metcalf.
Employees tour the control module, built up from bare walls at AVEC’s headquarters.

Francis Bell of Chevak and Amy Spark Dobmeier of AVEC, also from Chevak.

Old power plant.

One of the generator modules built up at AVEC.

L to R: Mark Hillemeier and Jiri Purdic.

Old tank farm.

L to R: Jim Hill & Karl Haddow.