



Case Study: Rivendell Distribution & Sod Farm

Garfield County, Colorado

By Cam Burns, CLEER



Rivendell Sod Farm Manager Works to Lower Business' Energy Load

Running a successful agriculture business on 160 acres can eat up a lot of energy. At Rivendell Distribution & Sod Farm southeast of Glenwood Springs, these costs include propane refills, diesel for farm vehicles, and \$600 worth of electricity every month.

Operating the business' office out of a converted 1930s grain shed with a remodeled construction trailer attached can leave "a lot of room for improvement" in energy efficiency, noted Jared Kerst, general manager of Rivendell.

In his 11 years as farm manager, Kerst has made the environment a priority, from investigating wind power to a recent purchase of goats for weed control. But when it came to improving the energy use of the "old and antiquated" farm build-

ings, he called on help from the countywide program Garfield Clean Energy Challenge for Business. The Challenge is a program of Garfield Clean Energy and managed by Clean Energy Economy for the Region (CLEER) and offers free energy coaching, online energy tracking services, and up to \$5,000 in rebate funding.

"We wanted to eliminate waste, help the business' bottom line, and improve employee comfort," Kerst explained.

The first step in the Challenge was a free commercial energy audit through Holy Cross Energy. Auditor Craig Tate provided a list of prioritized recommendations for the office, the steel-roofed storage barn, and a 1930s farmhouse used for employee housing.

"It's good to have a professional look to see where we can save energy," Kerst said. "He did understand where you get the most bang for your buck."

After the informative audit, the grainshed-turned-front-office received an insulation upgrade from old R-19 batting to blown-in fiber-



Employees in the Rivendell Distribution & Sod Farm's front office, built from a 1930s grain shed, are more comfortable since the roof insulation was upgraded.

Photos by Suzie Romig

glass insulation that insulates at the R-60 level. Old-style T-12 fluorescent lighting was replaced with efficient T-8 lighting with electronic ballasts.

Energy efficient honeycomb cellular blinds were installed on the

The Upgrades

- Additional insulation
- Improved efficiency lighting
- Motion-sensor lighting controls
- Honeycomb cellular blinds added to windows
- Foil-lined reflective insulation

Lessons Learned

- Highly restrictive historical regulations can be addressed during efficiency upgrades
- Insulation can help products' longevity
- 25 percent decrease in propane use during colder months
- an 8.5 percent drop in electricity use



Rivendell General Manager Jared Kerst looks over the foil-lined reflective insulation that helps control temperature extremes in the metal-roofed product storeroom.

windows. An aged refrigerator in the employee housing unit was replaced with an Energy Star-rated fridge.

The metal roof of the storage

"Using less energy, we were able to make it more comfortable."

— Jared Kerst,
Rivendell Distribution & Sod Farm

area—which is used to store temperature-sensitive products, such as plant bulbs and liquid fertilizer—was insulated with foil-lined reflective insulation. Kerst said the insulation helps keep products at optimum temperatures to protect longevity and effectiveness.

Rivendell spent \$5,198 on the upgrades and received \$4,159 in total rebates through Garfield Clean En-

ergy, Holy Cross, and CORE.

"Although the return on investments without rebates is longer term, with rebates it will be much quicker," Kerst noted.

The business has tracked a 25 percent decrease in propane use during colder months and an 8.5 percent drop in electricity use in the seven months since the upgrades were completed. That's despite the fact that the thermostat in the front office was turned up to accommodate new employees. "Using less energy, we were able to make it more comfortable," Kerst said.

The manager encourages other business owners to notice that small things that can add up when it comes to energy savings, such as his recent repair of a leaky air compressor, and to take advantage of an energy audit.

"There is no reason not to get an audit, no downside," Kerst said. Kerst is taking the Energy Chal-

lenge to heart. He hopes to wean the sod farm off fossil fuels as much as possible. When he is not learning about goat farming and beekeeping, he might be found researching micro-hydro power. He hopes to install a small hydro-electric generation system on a ditch that runs across the property from a spring-fed pond.

For more information on the Garfield Clean Energy Challenge for Business, go to www.garfield-cleanenergy.org and click on the "Commercial" tab or call CLEER at 704-9200.

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