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Au naturel heat

When Jim Meeks, owner of Vogue Dry Cleaners and Laundry and a partner in the Elko Heat Company, meets with peer groups in the laundry industry, he proudly tells them Vogue Laundry doesn't heat hot water for washing.

Vogue Laundry is one of the original customers of Elko Heat Company, which provides heat to many Elko businesses via a geothermal well, and the laundry uses hot water directly after softening. Elko Heat Company was founded in 1978.

Meeks says the laundry uses about a million gallons of water a month. The well provides 180-degree water and also saves the laundry money in utilities by providing heat for administrative offices. Meeks estimates that the laundry's utility bills are less than half what they'd be if he had to heat 60- to 68-degree groundwater for washing.

"We are a laundry that doesn't need hot water," Meeks says. "In our industry it is just unheard of. It just is not done."

Elko Heat Company was originally a venture between Vogue Laundry, Stockman's Casino and Chilton Engineering. Meeks said the group started out by sinking holes all around Elko until they had a good idea where the heat sources lay. Basically the hot water follows the Carlin Trend, he says.

Once they'd found the water, they installed piping and began pumping geothermal-heated water to the three businesses, which convert the hot water to heat through heat exchangers. Today about 20 companies are customers of Elko Heat Company, including:

- Bank of America
- Wells Fargo
- Elko County Courthouse
- Commercial Casino
- NV Energy

"We are providing heat for the local electric utility," Meeks quips.

Elko has a wealth of geothermal resources, and many organizations and businesses are capitalizing on the renewable energy trend.



The Elko Unified School District uses a geothermal source for heat, as do business in the 20-acre Geothermal Industrial Park on the southwest end of town.

Pam Borda, executive director of Elko County Economic Development Authority, says the authority promotes the benefits of geothermal heat sources when it lures new business to the area. “It is going to become more and more of a focus,” Borda says. “We definitely intend to capitalize on that and focus on some business development in those areas. The city and several others have been on it for years and years, and we are starting to expand that capability and will see it continue to grow.”

A study commissioned in June 2004 found that the Elko Heat Company well can service many more customers without installing any pumping. The system currently operates under artesian, or natural, pressure. The well could produce about 1,000 gallons per minute with the addition of pumping, says R. Gordon Bloomquist of the Washington State University Energy Program, the study’s author.

Technicians working with the geothermal system read a monthly usage meter just like any other utility, Meeks says. Customers are charged on gallons used per month. Rates are regulated by the Public Utilities Commission of Nevada and have seen little historical increase, the study says.

“We can continue to hook up an infinite number of users,” Meeks says. “The biggest advantage is that it is about 50 percent the cost of natural gas. It provides a great revenue-saving tool for businesses in Elko.” The current Elko Heat Co. infrastructure extends from the wellhead about two east miles to Sixth Street and also runs across town to the north. Meeks says Elko Heat Company would like to enter into a cooperative agreement with the Elko Unified School District, which uses a different geothermal resource to heat Elko High School and Flag View Intermediate School. Meeks says the heated discharge from the school district’s system is still more than sufficient to heat buildings.

The Elko Heat Company has faced several minor challenges with its piping system since it was installed more than 30 years ago. The original cement pipe used to carry the 180-degree hot water became soft and soggy over time, and last year the delivery and return lines were replaced with a newer form of PVP pipe able to handle the high-temperature water. Cost for the infrastructure replacement was about \$220,000, Meeks says.

Through the years there have been a few instances of minor flooding associated with corrosion. However, Meeks says, the system is self-policing, because if there is a leak the heat shuts off. Valves are closed in the summer.

Elko Heat Company continues to pursue new customers, Meeks says. “There is some limitation on how far we can push pipe through the City of Elko. As we find businesses we can bring them online and try to get more people to join the system because we can save them money. It is a slam dunk.”

Tying into the system requires running underground delivery and return lines and installing heat exchangers. Elko Heat Company will run the lines, Meeks says, but customers are usually responsible for purchasing their own heat exchangers.

“As long as we can continue to tap into the aquifer without degrading the well we already have, we



Elko County Economic Diversification Authority
Representing Northeastern Nevada

can continue to drill wells and add people onto it,” Meeks says. “There definitely is a future for geothermal in Nevada.”