



‘Knock on wood, it’s been going great’

•By Lee Bloomquist

Hibbing Public Utilities re-fires wood boiler

Hibbing Public Utilities is all fired up about burning wood. Every day, Shermer Logging of Gheen, Minn., delivers about 16 semi-trailers of wood chips to the municipally owned utility. The wood chips are fed into a wood-burning boiler system that had been idle at the utility for several years. Energy from the boiler produces steam and electricity to the utility’s 4,500 customers. “Knock on wood, it’s been going great,” said Greg Hooper, Hibbing Public Utilities chief operating engineer. “Considering it (the boiler) hasn’t run for three years, I’m impressed.”

The 126-year-old steam and electrical generating facility on the north edge of downtown re-started the biomass boiler in December. Re-firing the wood-fired boiler is a major change in how the utility is doing business. The boiler system had been idle since the Laurentian Energy Authority (LEA), including a similar wood-burning facility in Virginia, was shuttered under a deal with Xcel Energy.

The two Iron Range utilities had been burning wood chips since 2007 under a legislative agreement that allowed Xcel Energy to store more nuclear waste at its two nuclear facilities in Minnesota in exchange for buying more renewable power. However, when Xcel later said it was cheaper to burn natural gas than wood, the Laurentian Energy Authority facilities were shuttered under a buyout agreement with Xcel.

Natural gas prices have since increased.

Hibbing Public Utilities in recent years has been buying electricity from Minnesota Power.

But in an effort to provide more affordable energy to its customers, the utility spent just under \$1 million to refurbish the boiler and resume wood-fired operations, according to utility officials.

“Everybody is kind of happy that we’re using it,” said Pat Garrity, Hibbing Public Utilities commission chair. “We didn’t have to raise rates this year. When you build a \$40 million wood burner you don’t just shut it down and go home.”

In its first month of operation, the boiler is already paying off, said Luke Peterson, Hibbing Public Utilities general manager.

“Our power bill would have been \$1 million, and we cut it in half,” Peterson said. “Even in the cold, it’s been showing to work well.”

Limbs, branches, treetops and other by-products of timber harvesting operations are chipped and loaded into trailers to be transported to the utility, where it’s fed into a storage facility and then into the boiler system.

A typical trailer load of wood is about 30 tons, said Cliff Shermer, owner of Shermer Logging.

The boiler consumes about 150,000 pounds of wood chips per hour.

Wood chips that fire the boiler are a renewable resource produced in Northeastern Minnesota.

Burning wood chips helps support the region’s logging industry and creates jobs, said Peterson.

“It’s a heritage that can diversify our economy so we can have good jobs,” said Peterson. “It’s a very symbiotic relationship between the energy production and good forest management.”

For Shermer, providing wood to the utility is a big lift for his business.

“It’s going really good, said Shermer. “They’ve really stepped up to the plate there with the new management. It’s a whole different attitude there. We’ve been pleasantly surprised.”

Shermer says the partnership with the utility has helped his business retain its infrastructure.

“We had supplied 25% of the wood to LEA and we were heavy into biomass,” said Shermer. “We had just bought a new chipper in 2017 when we found out LEA was going to shut down. We were getting appraisals and we were going to sell our chipper.”

Returning to biomass energy production is a plus for loggers, for utility customers, the economy, and for the utility, said Peterson.

“We can supply all the electricity needed in Hibbing,” said Peterson.

Combined with other energy production, the utility can either import electricity from Minnesota Power as needed or export into the Minnesota Power grid, he said.

“One thing that’s important to us is that unlike solar and wind, wood is a baseload resource we can depend on 24/7,” said Peterson. “Wood is the only baseload resource besides hydro that can run 24/7, and hydro is seasonal.”

As February unfolds, Peterson says the utility will continue to assess the performance of the wood boiler.

“December was our first month, and we have been cautious to see how it works,” said Peterson. “Right now, after this first month, it works well. We want to get a couple months operating it this winter season, but this doesn’t look like something at all that we should turn our back on.”

Utilizing northeastern Minnesota’s renewable timber resource continues to make sense, he said.

“Why wouldn’t we use it?” said Peterson. “We’re not in a spot where we can follow the political trends like in St. Paul. We’re in Northern Minnesota and how many tons of wood are standing in the forests because of lower demand for wood, which increases the chance of wildfires? It’s not only common sense like your grandparents would understand, but it’s more efficient.”

Operating the boiler utilizes the region’s natural resources and sustains jobs, said Garrity.

“We bought \$251,000 in wood chips in the first month and that \$251,000 is recirculating on the Iron Range,” said Garrity. “I think it’s incredible that we can keep the wood industry going. They’re happy, they’re making money and it’s good for everybody. It’s successful.”0