Co-op’s Power Plant Uses Waste Tires for Fuel, Disposing of About 2.4 Million Tires A Year

MAYSVILLE, Ky.—Each year, East Kentucky Power Cooperative’s (EKPC) Spurlock Station uses the equivalent of about 2.4 million tires as fuel to make energy for more than 1 million Kentucky residents.

That’s the equivalent of about half of all the waste tires generated by Kentucky in a typical year.

“Every year, millions of tires in the U.S. end up in landfills, stockpiles or just thrown out along a road or creek,” said Joe VonDerHaar, Plant Manager at Spurlock Station, located in Maysville. “EKPC is helping to permanently dispose of those tires in an environmentally sound manner.”

Tire-derived fuel, or TDF, is a supplemental fuel source for Spurlock Station. Two of the power plant’s generating units incorporate state-of-the art technology that allows them to burn TDF along with coal in the units’ boilers.

That technology vastly reduces emissions, whether the fuel is coal or TDF, making the units among the cleanest in the nation fueled by coal. Recognizing an opportunity, EKPC conducted test burns of waste tires as early as 2005. Today, the plant’s air permit allows TDF for up to 10 percent of fuel by weight in both units.

As the infrastructure for collecting, processing and marketing waste tires has developed, Spurlock Station has become an integral part of the network of disposing of tires.

Last year, more of Kentucky’s waste tires ended up at Spurlock Station than to any other location, according to TAG Resource Recovery, a consultant on waste tires for Kentucky Division of Waste Management.

“EKPC really performs a significant environmental service to the region by using tires in an environmentally sound manner,” said Terry Gray of TAG Resource Recovery.

When TDF arrives at the power plant, it doesn’t look much like the tires on your car. The tires have been cut into small chunks and the metal bead wire has been removed.
The fuel arrives by truck and is stockpiled, said Jacob Bevins, Spurlock’s Materials Handling Operations Supervisor. When it’s ready to go to the boiler, TDF is mixed with coal and transported by conveyor.

Tire-derived fuel burns quite nicely in the power plant’s boiler. On a pound-for-pound basis, the amount of energy released during combustion is higher than the coal typically used in the units.

“Currently, EKPC is receiving about 2,000 tons of TDF a month, or 24,000 tons a year,” said Mark Horn, EKPC’s Manager of Fuel and Emissions.

Since 2013, about 13.2 million tires have gone to Spurlock Station, he said. That’s three tires for every man, woman and child in Kentucky.

Importantly, those are tires that don’t end up in a dump.

“TDF is a cost-effective fuel that helps EKPC generate energy as affordably and reliably as we can for our 16 owner-member electric cooperatives,” said Don Mosier, EKPC’s Chief Operating Officer and Executive Vice President. “At the same time, this helps to prevent waste tires from piling up in landfills or stockpiles year after year.”

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East Kentucky Power Cooperative is a not-for-profit, member-owned cooperative providing wholesale electricity to 16 owner-member distribution cooperatives that serve 1.1 million Kentucky residents at 535,000 homes, farms, businesses and industries across 87 counties. EKPC provides power through coal-fueled plants located in Mason and Pulaski counties; natural gas-fueled peaking units in Clark and Oldham counties; renewable energy plants in Clark, Barren, Boone, Laurel, Greenup, Hardin and Pendleton counties; and more than 2,800 miles of transmission lines. Together, EKPC and its 16 owner-member cooperatives are known as Kentucky’s Touchstone Energy Cooperatives. Visit EKPC at www.ekpc.coop.

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