

Michigan South Central Power Agency *Litchfield, MI*

Construction Completion: 2013
Tri-Tech Services: PMES Engineering
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Project Description

Michigan South Central Power Agency (MSCPA) partnered with Symbiotic Energy in pursuit of an alternative energy source. The process, developed by Symbiotic Energy, utilizes whole scrap tires as an alternative fuel that replaces up to 25% of the coal usage of the plant. This is achieved through a process called "fractionation", which utilizes boiler flue gases to extract the volatile compounds associated with the non-metallic components of the tire. These combustible components are entrained in the air stream and fed directly into the modified burners on the boiler. The steel beads and belts fall through the system and are salvaged as scrap, which is then sold to a recycling company. As such, 100% of the scrap tires are utilized in an environmentally friendly process.

Tri-Tech was responsible for several facets of this project, which included structural design of the tower and platforms, mechanical design of the ducted fuel train, electrical design of the process, and design and full implementation and integration of the system controls.

The controls system required significant processing power to accommodate the many sub-systems, including a graphical operator interface and real-time data collection. We chose the Wonderware suite of products for this purpose, which provided the flexibility necessary to quickly review any given data point in order to continuously maintain control of the process. Controls hardware included a central Allen Bradley ControlLogix PLC and remote control panels with I/O on IP Ethernet network. SCADA software included Wonderware System Platform, Intouch, and Historian, with local and remote control capability.