



For a power company, the logistics of having raw materials on hand to meet consumer demands are critical for efficient operations. For a utility operating a coal-fired electric generator, this issue of raw materials presented some challenges.

Challenges

Every 2 days, 120 rail cars filled with coal are delivered to the utility. However, the utility can handle only 60 cars at one time. The remaining 60 cars are warehoused at a local rail yard and switched out after the coal is emptied from the first 60 cars. Historically, the rail company has not been able to switch cars when the power company needs them, resulting in inefficiencies, operators waiting for trains to unload, and overtime.

Exploring Options

The utility leases the trains that make the round trip to and from the coal mines for approximately \$850,000 per year. At this time, another train is in the budget so that the plant can keep up with increasing demand for power. It was suggested that adding more track at the power company's site, so that all 120 cars could be accommodated, would alleviate the situation. However, this option had a price tag in the millions of dollars.

Before any major investments were made, Qualtec consultants were called in to review the processes. The railroad that stored the cars was also called in to consult on the best approach. Using LEAN tools and methodologies, it was determined that the physical unloading of the cars involved only a small percentage of the total time to turn a rail car.

Refined Schedules

Upon review, it was determined that the utility was calling on the rail yard to switch cars at the rail yard's busiest time of day. Optimal windows of opportunity were analyzed and the schedule for unloading cars was modified slightly to allow the client to call for a switch at the most opportune times. Based on knowing the time involved to unload a car, the operators were trained to call the rail yard an hour prior to needing the switch, so the rail yard would be better prepared and no time lost.

LEAN Results

An adjustment in the utility company's schedule provided significant benefits:

- **Speeding turnaround at the rail yard**
- **Minimizing overtime, inefficiencies and operators waiting for trains**
- **Improving scheduling for the utility and the rail yard**
- **Eliminating the need for a second train lease at \$850,000**
- **Avoiding significant investment in new track**
- **Retiring of an existing train, saving an additional \$850,000**