FABRICATEIQ

CASE STUDY: B&S CUSTOM METALWORKS

How a 40-person job shop saved $72,000 in annual energy costs.

FABRICATEIQ | Industrial Energy Intelligence

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The Challenge: Rising Energy Costs

The owner of a 45,000 sq ft metal shop in a regional industrial park operates 12 machines, including high-precision lasers. With electricity bills hitting $264,000 last year, they knew costs were rising but couldn't pinpoint the primary culprits for shrinking margins. **After installing FabricateIQ sensors, the team discovered several key insights within 30 days:**
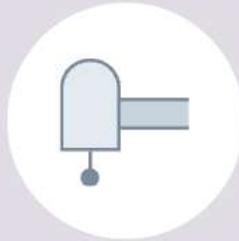
TRUMPF 3030: 38% more energy/cut-hour

Press brake idling 4.2 hours/shift

Peak demand spikes at 9:15 AM

Saved $72,000 in annual energy spend

Caught $12k chiller repair early

OEE increased to 62% tracked

The FabricateIQ dashboard provided the management team with something they'd never had before: a clear, honest picture of where money was going on the shop floor—without having to rely on manual tracking or gut feeling. Within 6 months, annual spend dropped by 27% and OEE is now a tracked metric.

FabricateIQ Implementation Results

Implementing FabricateIQ sensors across the shop floor allowed the team to move from guesswork to precision. Within just 6 months, the shop saw significant improvements in both operational efficiency and the bottom line through data-driven decision making.

01 Reduced Annual Spend by 27%

02 Staggered Start-up Scheduling

03 Preventative Chiller Maintenance

04 Energy Allocation Per Job

05 Real-time Demand Monitoring

06 Eliminated Idle Machine Power

07 Accurate Contract Renegotiation

08 OEE Tracking & Benchmarking

09 Data-Driven Shop Floor Culture

The results go beyond just utility savings. By understanding the energy cost per job, the shop was able to renegotiate contracts with high-volume customers that were previously unprofitable. The facility is now on track to hit 70% OEE by year-end.

Staggering machine start-ups reduced annual demand charges by **$14,400**.

Operational Insights & Savings

The FabricateIQ dashboard provided granular data that transformed shop floor management. By analyzing machine-level consumption and identifying specific inefficiencies, the facility achieved a 27% reduction in total energy spend within the first half-year.

Identify Machine Inefficiency

Dave discovered his older TRUMPF 3030 was consuming 38% more energy per cut-hour than the newer 5030. This data point led directly to the discovery of a degrading chiller that was wasting power and nearing a total failure.

Eliminate Idle Power Waste

Sensors revealed a press brake was idling in 'ready' mode for over 4 hours per shift, pulling 6 kW constantly. Simply training operators to power down during long gaps removed this unnecessary cost immediately.

Manage Peak Demand Charges

Peak demand spikes were hitting every Tuesday and Thursday at 9:15 AM. By staggering the start-up of the lasers, plasma table, and HVAC, Dave reduced annual demand charges by $14,400 without affecting production.

Track OEE and Job Margins

The shop now allocates energy costs per specific job. This revealed that two high-volume customers were actually unprofitable. Management used this data to renegotiate those contracts and preserve margins.