

Project Profile



Manufacturing Facility US Southwest

Fast Facts

Manufacturing plant in a major southwest US city

- Year Built: 1990s
- Size: 145,000 SF with 40,000 SF office space
- Use: Office, production, shipping and receiving

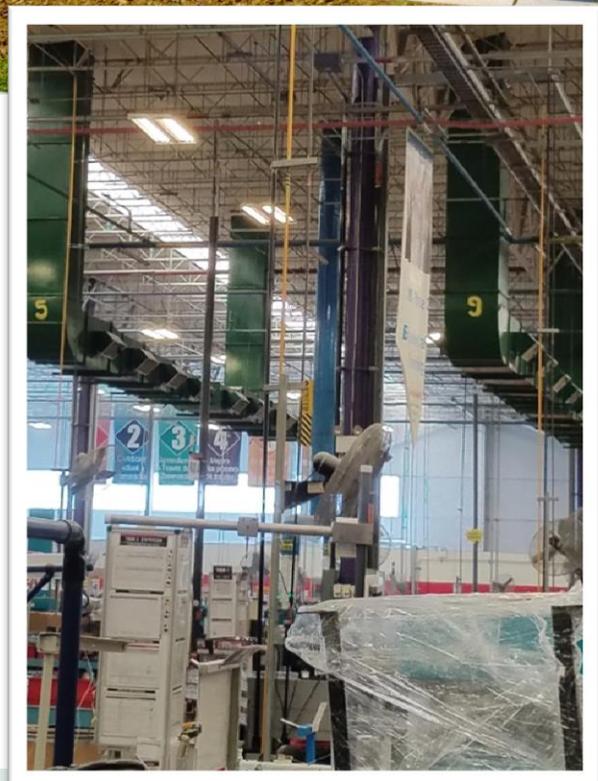
Energy Conservation Measures/Opportunities

- Production Compressed Air
 - Upgrade Nozzles
 - Repair Leaks
 - Install Energy Management Systems
- Lighting Retrofit
- Office HVAC Automation Controls

Investment: \$251,000

Estimated Savings (year 1): \$238,000

Payback: 1.05 years



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Manufacturing plant in a major Southwest US city

Project Background

The manager of this production and assembly facility wanted to save money and improve the bottom line without sacrificing the quality of their work, so they turned to energy savings. Newman Consulting Group conducted an ASHRAE Level 2 energy audit and found many opportunities for savings.

Strategies and Results

- **Production Compressed Air**

- 1. Change compressed air nozzles to engineered nozzles**

Change compressed air nozzles to engineered nozzles that reduce the amount of compressed air required by up to 70%. Now they only needed one 200 HP air compressor, rather than one 200 HP and one 350 HP.

- Cost \$6,000
- Savings \$148,000/year
- Payback 0.04 year

- 2. Repair compressed air leaks, tighten system and reduce air pressure**

Repairing air leaks, uncovered with an ultrasonic leak detection study, reduced noise levels and reduced the maintenance on existing machines. Changed manual valves to automatic and reduced air pressure from 120 psig to 100.

- Cost \$2,500
- Savings \$12,200/year
- Payback 0.2 year

- 3. Install production energy management systems**

Install permanent metering with real-time monitoring of energy use, trends and other data.

- Cost \$25,000
- Savings \$19,700/year
- Payback 1.3 years

- **Lighting Retrofit**

Upgrade interior lighting from T-8 fluorescents to LEDs with integrated motion sensors and daylight harvesting sensors. Change exterior metal halide lamps to LEDs. In addition to energy savings, assembly personnel can be more productive (and happier!).

- Cost \$142,500
- Savings \$43,800/year
- Payback 3.2 years

- **HVAC Automation Controls**

Replace existing VAV control system in office space with electronic DDC systems so personnel can adjust and monitor the system for optimal performance and equipment longevity, while reducing maintenance costs and employee complaints.

- Cost \$75,000
- Savings \$14,300/year
- Payback 5.2 years

About Newman Consulting Group

Newman Consulting Group, LLC (NCG), headquartered in Farmington Hills, Michigan, is a globally recognized authority in energy efficient buildings. The NCG reputation rests on a team of highly skilled engineers, analysts, program managers and professionals certified in efficiency implementation and verification to guarantee a positive ROI. The team helps commercial, industrial and multi-family property owners all over the U.S. implement energy efficiency projects (including renewable energy such as solar, wind, geothermal), eliminate waste, and save money through innovative financing solutions such as PACE (Property Assessed Clean Energy) and PPAs (Power Purchase Agreements).

Non-disclosure agreement (NDA) in place.