



WESCO
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Energy Management Programs to Improve Your Bottom Line



Program

Energy Management is a continual improvement process with a focus on three major components to reduce usage and costs:

- Audit of the integrated system
- Training
- Turnkey Project Management

Energy has become a variable cost of doing business. Many companies, however, require additional expertise and resources to develop an effective Energy Management program that identifies and fully capitalizes on every opportunity to conserve energy and save money.

Eaton's experts perform an end-to-end Energy Management needs assessment and submit comprehensive findings and recommendations.

EXAMPLE: MANUFACTURING	
Material cost	\$23,000
Labor Cost	\$10,000
Total Investment	\$33,000
Annual savings	\$48,000
Total losses	\$4,800,000
Net savings of \$384,000-\$480,000	
Simple payback period: 8.25	8.25 Months

Audit of the integrated system

- HVAC systems
- Lighting Systems and Controls
- Compressed Air Systems and Controls
- Motor Applications
- Utility Bills, Rates and Riders
 - *Power Factor*
 - *Demand Control and Peak Shaving*
- Building Automation Control Systems
- Plant and Office Operations
- Boiler Operation

Eaton can provide training of key personnel to enhance a company's Energy Management program to establish the order and consistency needed to realize long-term reductions in energy and greenhouse gas.

Turnkey Project Management

Highly trained Eaton engineers can implement improvements identified via the Energy Management Audit and can support all aspects of system design and development regardless of manufacturer including:

- Construction planning
- Equipment purchase
- Contract management
- On-site project management
- Commissioning / Start-up
- Personnel training

Examples of efficiency and cost reduction measures include, but are not limited to, the following:

- Power Factor Correction Capacitor Banks
- Energy Information Services
- The Instant Response Center
- Variable frequency Drives
- Reduced Voltage Soft Starters
- Lighting and Load Control Solutions
- Power Management systems
- Compressed Air Systems
- HVAC Control Systems

Payback Period

Facility Profile

- PF range = 0.87

Utility Charges

- PF penalty multiplier = 1.14 (PFM)
- 1,307 kW (billed) – 1,146 kW (actual) = 161 kW (penalty)



Sustainability



Operating cost efficiencies

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Results

Example 1

An Audit was conducted at a facility that manufactures heavy-duty, on- and off-road Class 8 trucks. The results indicated potential cost savings from compressed air usage, so the compressed air connectors, hoses and other associated parts were upgraded. The plant realized an eight (8) month payback. The following is a single measure of this program:

Material cost: \$23,000

Labor Cost: \$10,000

Total Investment: \$33,000

Annual savings: \$48,000

Total losses \$4,800,000

Results: 8-10 facilities would net a savings of \$384,000 - \$480,000

Simple payback period = 8.25 months

Example 2

A commercial building in Pittsburgh, PA, had a low Power Factor (.87) and was penalized over \$23,000 annually by the utility. A \$12,000 Power Factor Correction Bank, expertly installed by Eaton, corrected the PF to 0.95 and eliminated the penalty, resulting in a payback period of approximately six (6) months.

ROI Calculations

- Billing kW = 1,307 kW
- Penalty based on cost of 161 kW = \$1,932/month

Results: 8-10 facilities would produce annual penalties of \$185,000 - \$230,000

ROI

Eaton engineers applied their knowledge to various industrial facilities to identify cost-saving measures via effective Energy Management practices. Listed below are just some of the savings identified.

- **Transmission Plant** – Process change. Annual savings \$75,000.
- **Fluid Power Plant** – Water, lighting, compressed air and process change. Annual savings: \$150,000.
- **Automotive Plant** – Lighting and compressed air improvements. Annual savings \$126,000.
- **Aerospace Plant** – Lighting, compressed air cooling tower operation and meter consolidation. Annual savings \$177,000.

Total Annual Savings = \$528,000

Opportunities identified in most plants are 10 times greater than the cost of the study.

The Value of PowerChain Management

PowerChain Management helps enterprises achieve a competitive advantage through proactive management of the power system as a strategic, integrated asset throughout its lifecycle. PowerChain Management ensures that organizations will experience whole system reliability from end to end.



Enhanced Safety



Greater Reliability



Operating Cost Efficiencies



Effective Use of Capital



Risk Mitigation



Sustainability

To learn more about WESCO's Energy Management Programs visit www.wesco.com/aes or Email: aftermarketsolutions@wesco.com



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