

ENERGY *wise*

FOR YOUR BUSINESS



Compressed Air Efficiency Evaluation

Don't let a small leak in your compressed air system turn into a big leak in your bottom line!

Leaks and other inefficiencies in a commercial or industrial compressed air system can waste as much as 20–30% of compressor output—costing your business energy and money.

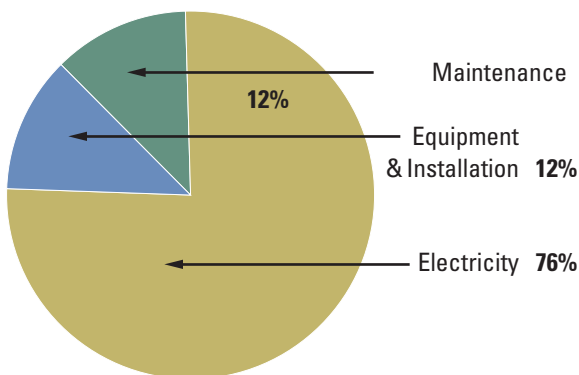
Most industrial facilities need some form of compressed air, whether running a simple air tool or for more complicated tasks such as operation of pneumatic controls or processes. A recent survey by the U.S. Department of Energy showed that for a typical industrial facility, approximately 10% of the electricity consumed is for generating compressed air.

Value for Your Business

For some facilities, compressed air generation may account for 30% or more of the electricity consumed. Compressed air is an on-site generated utility.

Compressed air is one of the most expensive sources of energy in a plant. The overall efficiency of a typical compressed air system can be as low as 10-15%. For example, to operate a 1 horsepower (hp) air motor at 100 psi, approximately 7-8 hp of electrical power is supplied to the air compressor.

Typical Lifetime Compressed Air Costs in Perspective*



* Assumptions in this example include a 75 hp compressor operated two shifts a day, five days a week at an aggregate electric rate of \$0.05/kWh over 10 years of equipment life.

How does it work?

Rebates and incentives are available for the evaluation of compressed air systems and for equipment updates or system improvements that result in lower energy use. The compressed air evaluation funding reimbursement is based on the hp size of the compressor. Repairs must be made to 50% of the air leaks identified as a result of the evaluation to receive funding. Evaluation funding also requires pre-approval from the member cooperative. Additional rebate incentives may be available through the Custom Energy Rebate program if additional energy savings occur as a result of the evaluation.

Who can participate?

Any commercial, agricultural, or industrial cooperative customer. Qualifying compressed air systems must meet the following requirements:

- Electrically driven
- 50 hp plus total installed air compressor capacity (excluding backup equipment)
- Operate at least 40 hours per week or 2,000 hours per year

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What you'll receive

Cost Share Funding of Compressed Air Evaluation costs

Compressor hp	Cost Share Funding
50 – 74	50% up to \$2,000
75 – 99	50% up to \$2,500
100 and above	50% up to \$15,000

Source: U.S. Department of Energy

What you need to do

- Determine the cost of the compressed air system for your plant by periodically monitoring the compressor operating hours and load duty cycle
- Use a systems approach while operating and maintaining a compressed air system
- Adopt a plant-wide compressed air management policy to cut costs and reduce waste by eliminating inappropriate uses, fixing leaks, and matching system supply with demand



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Success Story:

In 2001, Ohio Aluminum Industries implemented the first phase of a compressed air system improvement project at its Cleveland, Ohio, plant. The plant implemented the project after a system-level evaluation, which identified the causes of the system's air pressure problems and determined how to best solve them.

Once the project was implemented, the system's pressure was stabilized and its performance improved. Because of its improved performance and efficiency, the plant was able to reduce the system's compressor use without any decline in production. The project yielded annual energy savings of 716,000 kWh and \$73,200.

With a total cost for the first phase of the project of \$83,500, the simple payback is slightly more than one year.

Contact us

For any questions or assistance in making these savings a reality for your business, please contact your local energy expert at Agralite Electric Cooperative.