

Motor Management Best Practices Part 1: Creating a Motor Inventory, Repair/Replace Guidelines

Installing an Energy-Efficient Motor Helps Reduce Losses While Increasing Profits

(New York, NY) – By upgrading to a higher, more energy-efficient motor, facility managers can improve their equipment reliability, increase productivity and reduce downtime and repair costs.

The Copper Development Association (CDA) recommends that individuals involved in the specification, design, selection and installation of [electrical motor systems](#) adopt a motor management program, which examines a facility's needs whether to replace an old worn-out motor or specify a new unit.

“The goal of a motor management plan is to take advantage of opportunities for energy savings and increased productivity using energy-efficient, reliable motors such as Premium Efficiency Motors,” said Richard deFay, Project Manager for CDA's Sustainable Energy Program. “This allows maintenance supervisors and facility managers to make easier replace-versus-repair decisions and see fewer motor failures in the field.”

Currently, there are three recognized efficiency classes for motors, with [Premium Efficiency Motors](#) representing the most energy-efficient option. These motors recognize the strength, conductivity and sustainability of copper, which is not only beneficial for lowering energy costs but also improving equipment performance.

Working with government and industry-based motor experts, CDA has created a comprehensive three-part [Motor Management Program](#). Part 1 involves creating a motor inventory and developing repair and replacement guidelines.

One of the least cared-for and maintained industrial tools in the workplace today is the electric motor. When not properly administered, motors can cost businesses billions of dollars in wasted energy and operating costs annually.

However, facilities could reduce their losses and increase profits by instituting a motor management plan that is flexible and tailored to the size and complexity of their organization and its motor population.

CDA, in conjunction with the [Washington State University \(WSU\) Energy Extension Office](#), offers hands-on training and assistance to companies, military and utilities to develop motor management plans.

“The object is to identify the energy-savings opportunities,” said Gilbert (Gil) McCoy, an Energy Systems Engineer with WSU. “The motor management plan not only indicates savings in dollars but also gives the user a path that describes how those savings can be obtained.”

Once a plant's motor inventory is collected, a company can use a free data management software application, such as MotorMaster+ which is available for free by the Department of Energy, to compare the cost of repairing the motor versus the cost of replacing it with a new unit.

The data can then be referenced for future needs, including identifying where motors can be sourced locally if replacement is required; scrapped or repaired and stored in inventory; or whether regular periodic maintenance is vital for reliability and efficiency.

"The key question from the start should be 'do you repair a motor when it fails or replace it with a new Premium Efficiency model?'" asked deFay. "While the repair costs are typically lower than buying a new motor, you'll pay for it later when a critical motor fails and the production line grinds to a halt."

For more information about the Motor Management Best Practices series, visit www.copper.org.