



Leading the Way to a Brighter Future

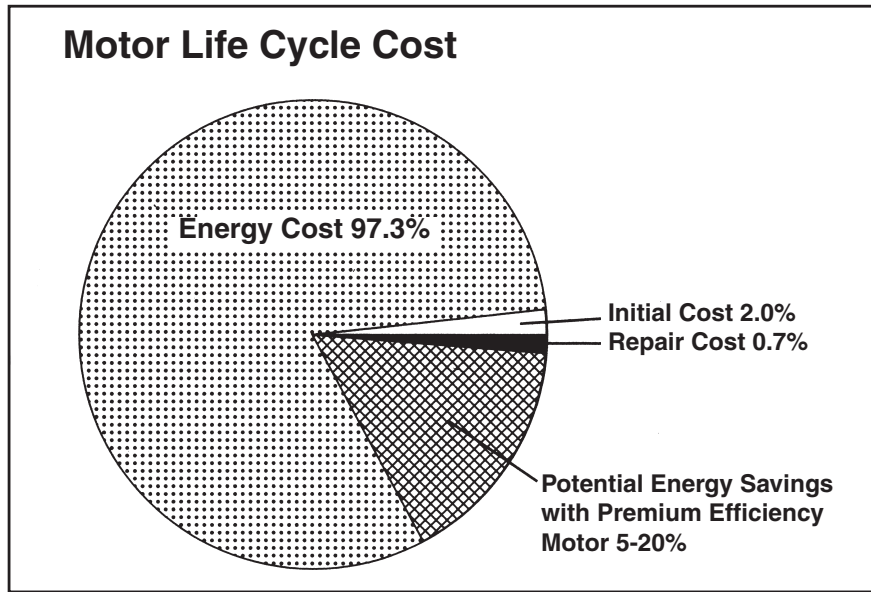
A program of the Maine Public Utilities Commission

Plan ahead and be ready – before motors fail

The initial cost of a motor is a small fraction, 2% – 7% of the total cost of running the motor over its life.

If you replace a failed motor with a NEMA* Premium Efficiency® motor, you reduce long-term operating costs and increase efficiency. Premium efficiency motors may cost more initially, but they use significantly less energy over their lifetimes.

The chart below illustrates the cost of a motor over its life.



Emergencies Demand Quick Action

When a critical motor in your plant fails, you must make a quick decision: repair or replace. And if replace, the first thought is generally, “What can I get off the shelf right now?”

Whether you know it or not, you are not just making a motor decision. You are also making an energy decision, which includes a 10 to 20 year commitment to buy electricity. However, in an emergency, most facility operators focus on the motor only; their main goal is getting back on-line. Advanced planning—before motor failure—ensures that you consider both the right motor and its lifetime electricity costs.

Motor failure offers a huge opportunity to improve your operational energy efficiency, and reduce energy cost, so facility operators should plan ahead for these inevitable situations. You should start with a simple survey of your motor systems, then create an emergency replacement and/or repair plan. The following steps can help guide your planning.

Key Planning Steps

- Inventory all motors and document the size (horsepower), annual operating hours, age, specific applications, repair history, and other significant factors. Verify that existing motors are loaded to run at peak efficiency. If they aren't, consider a smaller horsepower when replacement is required. Identify “high-risk” motors that are vital to your operations, and where down-time may justify the advance purchase of spare motors.
- Compare costs for standard efficiency versus premium efficiency motors, and establish the economic benefits of higher efficiency motors based on your specific applications. You can work with motor supply and service vendors to quantify this information, or you can use several of the analysis tools available at no cost from the non-profit “Motor Decisions Matter” website (www.motorsmatter.org). In almost every case, the cost savings over the life of a premium motor will repay the initial up front cost many times over.

Efficiency Maine is a statewide effort to promote the more efficient use of electricity, help Maine residents and businesses reduce energy costs, and improve Maine's environment.

Efficiency Maine is funded by electricity consumers and administered by the Maine Public Utilities Commission.

- Develop a repair/replace policy for each motor. Include consideration of the repair or replacement costs, operating efficiencies for each option, availability of parts or replacement motors, and process downtime. This policy should specify how often a motor can be rewound before it should be replaced. Each time you rewind a motor, you lose operating efficiency and increase operating costs. Again, you can obtain input from motor suppliers and service vendors to assess equipment and parts availability for various repair/replace options. Your motor supplier may arrange to have critical motors available for immediate delivery from local stock or from the manufacturing plant.
- Download a list from efficiencymaine.com of the cash incentives offered by the Efficiency Maine Business Program for the purchase of NEMA Premium Efficiency® motors.
- Call Efficiency Maine's technical staff for help in navigating your options. The service is free and unbiased.
- Call Efficiency Maine at 866-376-2463 with any other questions you have about electric energy-efficiency in your facility.
- Ask if your dealer or motor repair shop can provide a "Green Rewind." (For more information visit the non-profit Green Motor Practices Group at: www.greenmotors.org.) A Green Rewind can reduce the efficiency losses encountered in a normal repair/rewind.