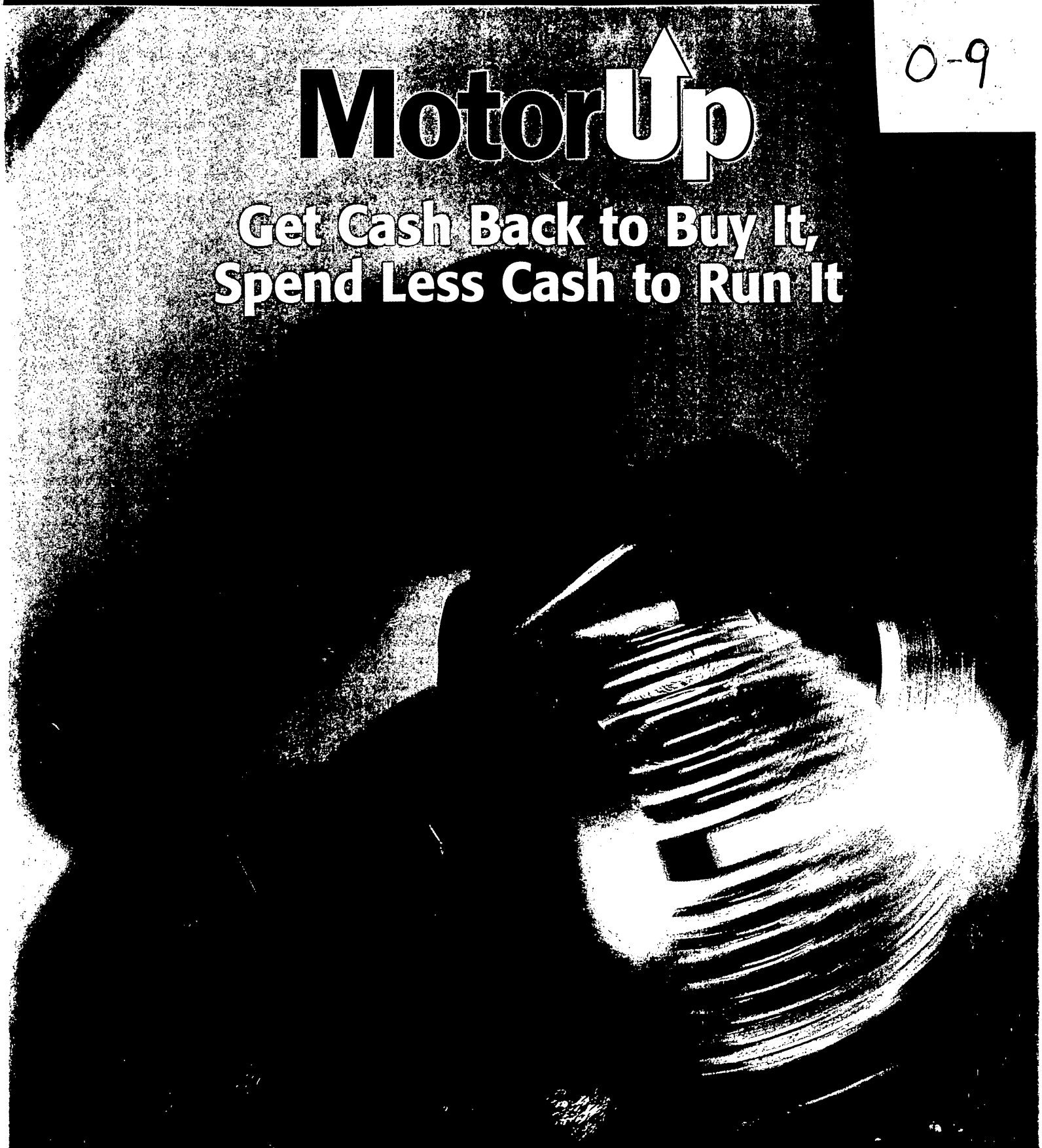
PREMIUM EFFICIENCY MOTOR INITIATIVE

0-9

MotorUp

Get Cash Back to Buy It, Spend Less Cash to Run It



Cash Rebates + Lifetime Energy Savings =

The Lowest Total-Cost Motor

MotorUp

Premium Efficiency Motor Initiative

Cash rebates up to $700

MotorUp offers cash rebates of $45 to $700 each for 3-phase motors that meet NEMA Premium™ guidelines, which are higher than the minimum efficiency standards of the federal Energy Policy Act (EPAct).

Motors have a huge impact on electrical demand

More than 72,000 motors are sold annually in the Northeast.

3-phase electric motors consume half of the area's commercial electricity and up to 70% of its industrial electricity!

HVAC motors use up to 50% of the total energy in commercial buildings.

In 10 years, a motor can consume 50 to 60 times its purchase price in electricity.*

Motor upgrades can have a huge impact, too

Manufacturers can reduce their electric motor energy bill 5% by switching to premium efficiency motors.**

A NEMA Premium efficiency 20-HP motor can save up to $375 a year over a standard motor.*

NEMA Premium efficiency motors run cooler... so they can last longer and be more reliable (less maintenance).

Manufacturers of qualifying premium efficiency motors

- AO Smith
- Baldor
- Dayton
- GE
- Leeson
- Leland Faraday
- Lincoln
- Magnatek
- Marathon
- Reliance
- Siemens
- Sterling
- Teco
- Toshiba
- US Motors
- WEG
- *Others*

Utilities of seven Northeast states support this effort to cut carbon emissions, reduce greenhouse gases and protect the environment. The power industry can also delay or avoid building new power plants as energy consumption drops.

Connecticut:

Connecticut Light & Power, United Illuminating

Massachusetts:

NSTAR Electric, Massachusetts Electric, Nantucket Electric, Unitil/Fitchburg Gas & Electric, Western Mass Electric, Cape Light Compact Energy Save

New Hampshire:

Granite State Electric, PSNH

New Jersey:

Conectiv Power Delivery, GPU Energy, PSE&G

New York:

Long Island Power Authority (LIPA)

Rhode Island:

Narragansett Electric

Vermont:

Efficiency Vermont, Burlington Electric

The MotorUp program covers new motors only. They can be used in new installations, to replace failed motors, as retrofits to upgrade equipment or placed in stock. Other parameters:

- Three-phase induction AC motors, 1-200 horsepower.
- NEMA design A and B, with standard frames and T-frames.
- 1200, 1800 and 3600 RPM (6-, 4- and 2-pole motors).
- Motors must meet NEMA Premium efficiency guidelines.
- Open Drip Proof (ODP) and Totally Enclosed Fan Cooled (TEFC) types.
- At least 2,000 hours per year operation.

Contact MotorUp today at 1-888-456-6867

www.MotorUpOnline.com

**Savings based on 1800 rpm, TEFC motors at 75% load. Energy cost $0.10/kWh. Compares motors that meet or exceed NEMA Premium standards vs. EPAct standard. Individual motor savings will vary.*

***DOE BestPractices.*

A Program that Benefits Everyone, Starting with Your Business.

Save dramatically on operating costs

The MotorUp initiative is a program to save energy in the Northeast through the use of more premium efficiency electric motors. Long-term benefits of motor upgrades include greater reliability, along with dramatic reductions in operating costs, electrical consumption and carbon emissions. Short payback periods make premium efficiency motors a smart business decision—and MotorUp incentives make them even more attractive.

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Savings... it's as simple as that

Given the cost of electricity in the Northeast, you should use the most efficient motors available if they run 2,000 hours a year or more. That's because the power savings over a 10- or 15-year life will offset the higher cost of a premium efficiency motor, usually by thousands of dollars.

Check it out yourself. Here are three examples, all based on a 40-HP motor with a 10-year life, running 8,000 hrs/year at $0.10/kWh.*

* Calculations based on the Department of Energy's Motor Master+3 (MM+3) Software

New Motor Purchase

Standard Efficiency EPAct motor

Purchase price	$1,157
Lifetime operating cost	$153,350

vs. NEMA Premium efficiency motor

Purchase price	$1,210 - $162 rebate	= $1,048
Lifetime operating cost		$150,950
Lifetime savings for PE motor		$2,400

Retrofit old application with new NEMA Premium efficiency motor

(Old, pre-EPAct motor of very low efficiency)

Lifetime operating cost	$158,590

vs. NEMA Premium efficiency motor

Purchase price	$1,210 - $162 rebate	= $1,048
Lifetime operating cost		$150,950
Lifetime savings for PE motor		$7,640

Rewind Old Motor vs. New PE Motor

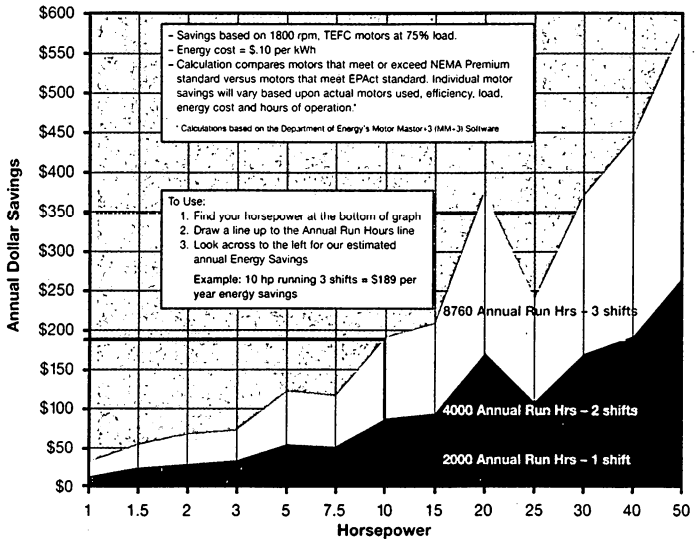
(Old, pre-EPAct motor of very low efficiency)

Rewind/repair old motor (approximate)	$800
Lifetime operating cost	$160,370

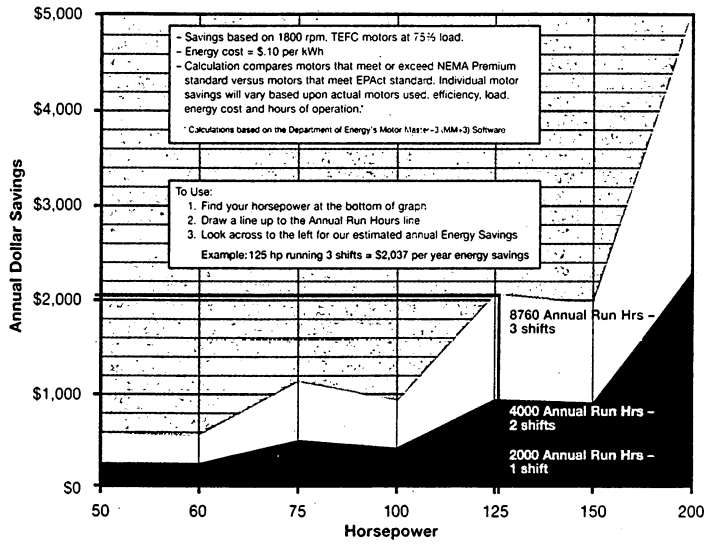
vs. NEMA Premium efficiency motor

Purchase price	$1,210 - $162 rebate	= $1,048
Lifetime operating cost		$150,950
Lifetime savings for PE motor		$9,420

Typical Energy Cost Savings From NEMA Premium Efficiency Motors

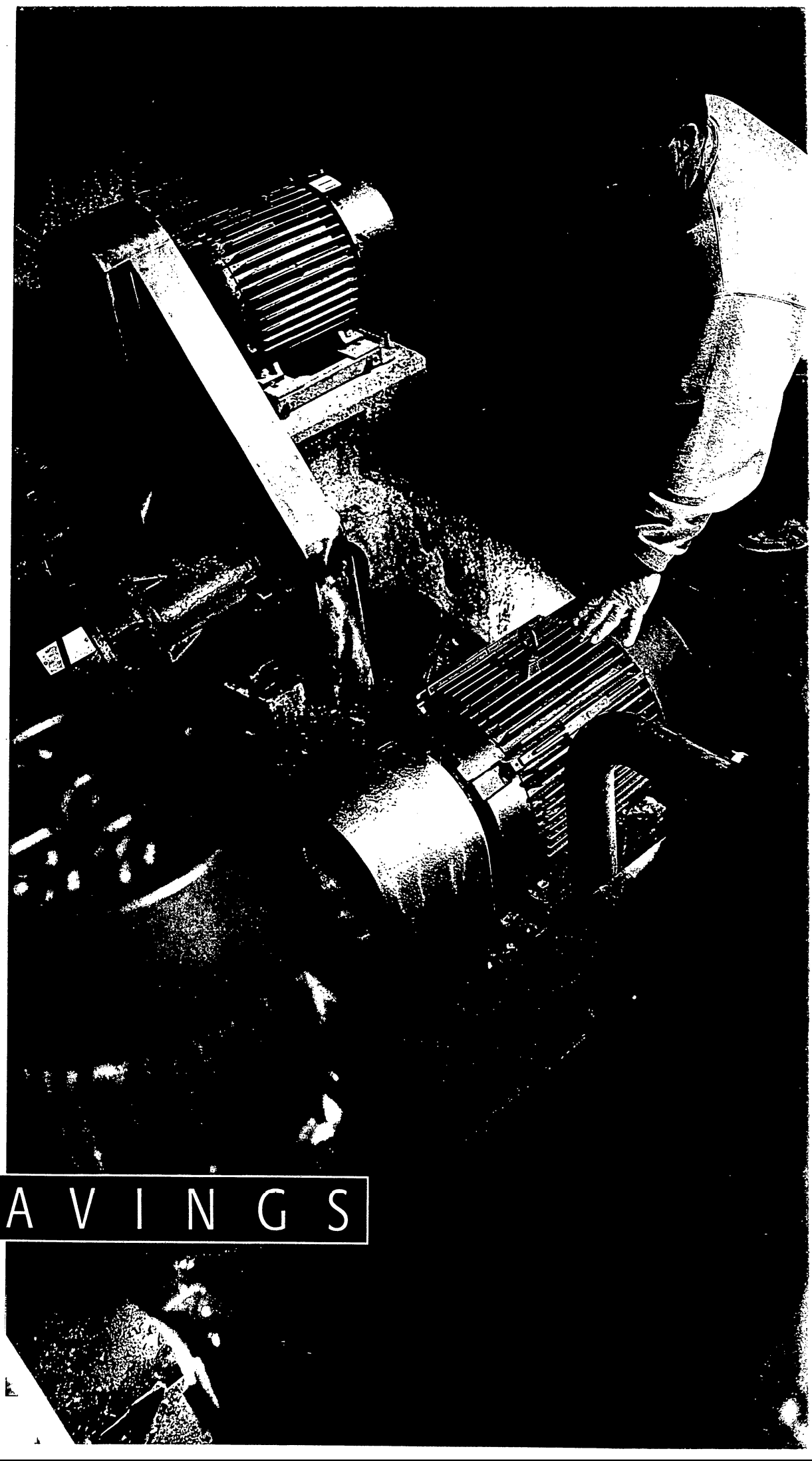


Typical Energy Cost Savings From NEMA Premium Efficiency Motors



Count on Immediate and Long-Term Savings

- Cash rebates to help offset the cost of higher quality, premium efficiency motors.
- Reduced operating costs from energy savings.
- Better built, cooler running motors.
- Extended warranties from many manufacturers.
- Increased reliability, less downtime, fewer repairs.
- Reduced air pollution, cleaner environment.
- Quick payback on your investment—immediate to three years.



MotorUp
Premium Efficiency Motor Initiative

Qualifying motors have these design, construction and material differences:

20-60% more copper in the windings, including more wire of larger diameter in the stator–reduces the stator winding resistance.

Larger conductive bars and end rings–reduce rotor resistance losses.

Modified stator slot design–helps reduce magnetic losses and allows larger diameter wire.

More and thinner laminations of higher quality steel–decrease eddy current losses.

Larger stator–lowers magnetic density and increases cooling capacity to reduce magnetic and load losses.

Efficient cooling fan design–improves airflow and reduces power required to run the fan.

Premium grade steel core–reduces hysteresis power losses.

Longer core–reduces resistance losses.

Optimized air gap between stator and rotor.

More efficient rotor bar designs.

Improved overall design–reduces windage, friction and stray load losses.

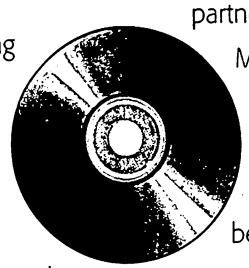
Better quality control during manufacturing.

Get up to 18% energy savings through smart motor management

Motor Decisions Matter

When an electric motor fails, repair or replace decisions are often rushed to get the process or equipment back into operation. You can avoid making hasty judgments by developing a motor management plan for your company. Planning ahead helps you:

- Avoid rushed decision-making
- Reduce costly downtime
- Save energy dollars
- Increase productivity



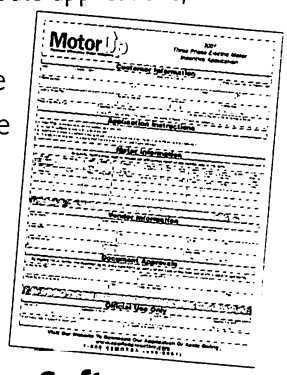
A motor management plan incorporates a motor inventory and a set of criteria for repair or replacement decisions. These steps are just what you need for long-range planning that saves energy.

We want to help you join in and save

MotorUp offers comprehensive support to help you get your share of savings and rebates.

- Program literature
- Dealer/distributor information
- Field representative network
- End-user training and presentations
- Simple application forms
- Training and assistance
- Motor management tools

For example, MotorUp reps will help you complete the rebate applications, eliminating red tape. And they can provide field training on these two valuable aids, both of which are available at no charge.



Motor Master+ Software

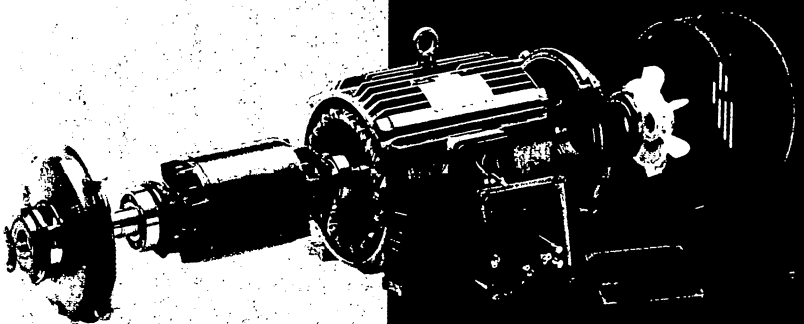
As a Department of Energy allied partner, MotorUp offers Motor Master+ software and training. Besides running motor efficiency comparisons, this sophisticated CD program can be used to manage an entire motor base in complex facilities. Companies can inventory all their motors, track their histories and do life-costing across the entire inventory.

MotoRater™ Calculator

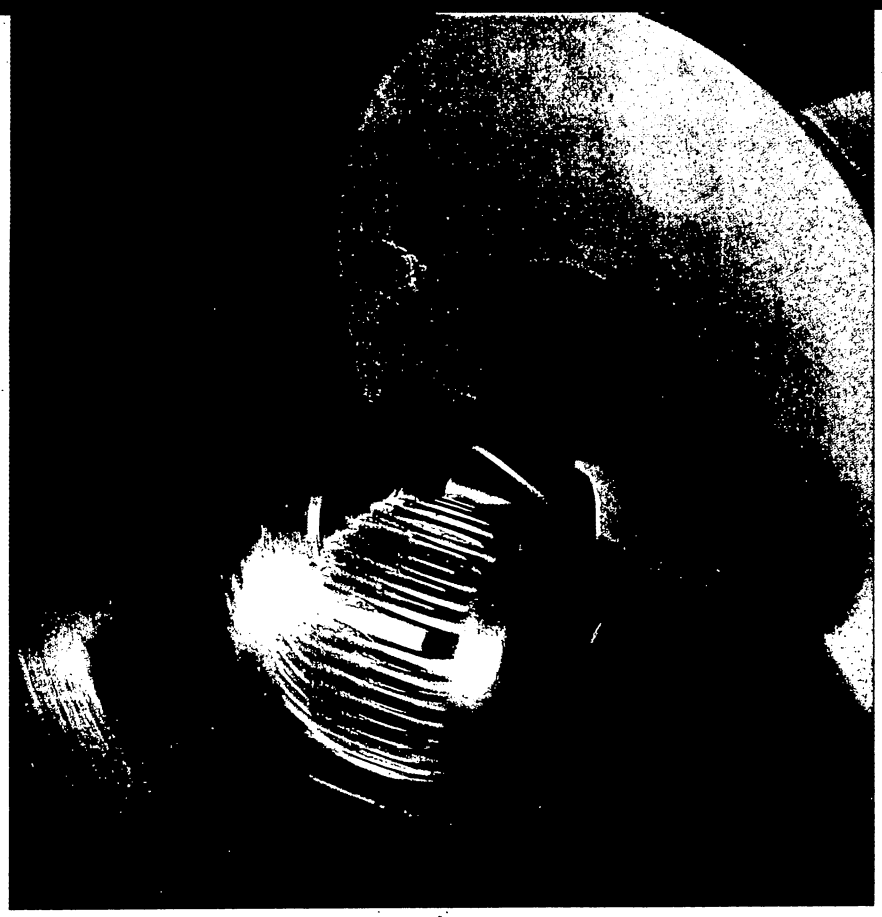
This is an excellent tool for determining the best options at motor replacement time. The MotoRater Energy Savings Calculator is a simple-to-use slide rule that calculates the annual energy cost for 1- to 200-HP motors. It also allows easy comparison of various motor efficiencies to determine the savings possible with premium efficiency motors.

What Makes A Motor "Premium Efficiency?"

There are many different industry definitions for energy efficiency. The Energy Policy Act (EPAct) of 1997 requires most motors to be 2–6% more efficient than conventional motors. NEMA Premium motors have even higher standards than EPAct. This is the level required for MotorUp, but not all "premium" or "energy-efficient" motors measure up.



PREMIUM EFFICIENCY MOTOR INITIATIVE



MotorUp

Formerly Northeast Premium Efficiency Motor Initiative

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1-888-456-6867 • 413-785-5716 • Fax 413-734-3475

CCM-101

City of Cambridge

O-9.

IN CITY COUNCIL

January 27, 2003

VICE MAYOR DAVIS
COUNCILLOR DECKER
COUNCILLOR GALLUCCIO
COUNCILLOR MAHER
COUNCILLOR MURPHY
COUNCILLOR REEVES
COUNCILLOR SIMMONS
MAYOR SULLIVAN
COUNCILLOR TOOMEY

WHEREAS: The Cambridge City Council recently passed a Climate Protection Plan for Cambridge; and

WHEREAS: The Plan includes goals for "green procurement"; now therefore be it

ORDERED: That the City Manager investigate the use of premium efficiency electric motors (see attached Energy Policy Act information) when replacing electric motors for any applicable City uses; and be it further

ORDERED: That the City Manager be and hereby is requested to report back to the City Council on this matter.

In City Council January 27, 2003.
Adopted by the affirmative vote of nine members.
Attest:- D. Margaret Drury, City Clerk.

A true copy; D. Margaret Drury

ATTEST:-

D. Margaret Drury
City Clerk

CM-26

ORDER #9

Requesting the City Manager to investigate the use of premium efficiency electronic motors (see attached Energy Policy Act information).
Vice Mayor Davis

In City Council January 27, 2003

ORDER ADOPTED.