

Understanding and Preparing for the Energy Independence and Security Act of 2007

fact sheet

The date when the motor provisions in the Energy Independence and Security Act of 2007 take effect—December 19, 2010—is quickly approaching. To educate, guide and support our customers during this transition, we offer the following information.

Background

The Energy Independence and Security Act (EISA) was signed into law on December 19, 2007. Section 313, “Electric Motor Efficiency Standards,” established updated standards for electric motors and expanded efficiency requirements to motor types not yet regulated. These standards will take effect December 19, 2010.

Features

What motors are affected by EISA?

EISA raises the minimum efficiency standards for general purpose two-, four- and six-pole motors in the 1-200 horsepower range from the originally legislated levels in the Energy Policy Act of 1992 (EPACT) to NEMA Premium® levels, as defined by NEMA MG-1, Table 12-12. This category includes general purpose motors that are:



- Foot mounted
- C-face mounted
- Brakeless brake motors
- Encoder-ready
- IEC (90 frame and up)
- Explosion proof
- Severe-duty
- Washdown

EISA also mandates efficiency requirements for other motor types and horsepower ranges that previously were not covered by EPACT. These newly regulated motors will need to meet EPACT nominal full load efficiency levels (see NEMA MG-1, Table 12-11) by December 19, 2010. This expanded list of motor types includes:

- U-frame
- Design C
- Close-coupled pump
- Footless (C-face or D-flange without base)
- Vertical solid shaft normal thrust (P-base)
- Round body
- Eight-pole
- Poly-phase <600 volts (not 230v and 460v)
- Fire-pump
- General purpose, Design B, 201HP – 500HP

Note that all listed motor types must meet the efficiency standards defined by EISA regardless if they are manufactured in or imported into the U.S., shipped loose or shipped as a component of another piece of equipment.

What motors are not affected by EISA?

The following motors are not affected by EISA:

- Two-digit NEMA frame (ex. 48 or 56 frame)
- Single-phase
- 50 Hertz
- Multi-speed
- Design D (high torque)
- Special shaft extension
- DC
- Vertical high thrust
- Special inverter duty
- Voltages greater than 600V
- Integral gear motor or brake motor designs



Are inverter duty motors covered by EISA?

If an inverter duty motor can be used for general purpose applications, it must meet EISA efficiency requirements. However, motors with special volts/Hertz designs are exempt.

NEMA Premium® motors will cost more than EPACT motors. Why?

NEMA Premium® efficiency motors use greater quantities of steel and copper than their EPACT equivalents. In addition, NEMA Premium® motor designs generally require higher quality commodities and engineered components to deliver improved efficiencies. Although the initial costs are higher for NEMA Premium® motors, the payback from energy savings will help offset this expense.

Are NEMA Premium® motors drop-in replacements for EPACT equivalents?

Generally, yes. The shaft and mounting dimensions should stay the same, but for the reasons stated above, the user always should confirm the weight and length of the NEMA Premium® equivalents before purchase.

Are IEC frame motors subject to EISA?

Yes, all IEC frame motors larger than 90 frame must meet NEMA Premium® efficiency levels.

Will GE manufacture and sell general purpose EPACT motors after December 19, 2010?

GE will continue to sell general purpose EPACT (KE) motors until our inventories are depleted. However, GE will phase out the manufacture of KE products well before the law's deadline arrives. GE will begin phasing out the manufacturing of all EPACT efficiency motors (type KE) on **August 1, 2010**. Review your motor needs against this date and place your orders as needed to ensure adequate supply.

What GE products are available to replace the discontinued EPACT (KE) product families?

GE manufactures a complete line of NEMA Premium® efficiency motors that are fully compliant with EISA and are available for purchase today. Our Energy Saver (type KS) motors, available in ODP and TEFC enclosures, and our X\$D Ultra® family of severe duty motors meet or exceed NEMA Premium® efficiency requirements. Product brochures can be downloaded at our web site: http://www.ge-energy.com/prod_serv/products/motors/en/nema_iec.htm

What is the value proposition for GE NEMA frame motors?

NEMA Premium® motors offer long-term energy savings to the end user. Return on investment is dependent upon several factors including the application's operating characteristics and the differences in efficiencies between the existing and replacement motors.

GE is committed to delivering the lowest total cost of ownership available in the industry with NEMA Premium® efficient motors incorporating high quality, safety and operating features.



For more information, contact your local GE Motors sales representative, call our customer care line at (800) 541-7191 or visit us on the web at www.gemotors.com.

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