



Dear Motor Manufacturer,

For over 20 years, Advanced Energy has provided motor testing and motor efficiency compliance services to motor manufacturers in order to achieve compliance with the Energy Policy and Conservation Act (EPCA). We also offer an ongoing Alternative Efficiency Determination Method (AEDM) maintenance program as required by the law. With updated regulations and frequently changing product lines, we are reaching out to all of our previous customers to verify that they are following the AEDM maintenance rules as set forth by the U.S. Department of Energy (DOE).

On page 54153 in the federal register of the EPCA final rule, the DOE defines three options for “subsequent verification of an AEDM.” The law states that “Each manufacturer shall periodically select basic models representative of those to which it has applied an AEDM and for each basic model selected shall either:

- (A) Subject a sample of units to testing in accordance with 431.23 and 431.24 (2) by an accredited laboratory that meets the requirements of 431.25.
- (B) Have a certification body recognized under 431.27 certify its nominal full load efficiency, or
- (C) Have an independent state registered professional engineer, who is qualified to perform an evaluation of electric motor efficiency in a highly competent manner and who is not an employee of the manufacturer, review the manufacturer’s representations and certify that the results of the AEDM accurately represent the total power loss and nominal full load efficiency of the basic model.”

Most recently, in 2014, another final rule was issued that applies the existing standards to a wider scope of electric motors that were not previously regulated. The formerly unregulated electric motor types that are now covered by the amended rule include NEMA Design A from 201 to 500 horsepower, electric motors with moisture resistant windings, electric motors with sealed windings, partial electric motors, totally enclosed



non-ventilated (TENV) electric motors, immersible electric motors, brake electric motors, electric motors with separately powered blowers, electric motors with non-standard end shields or flanges, electric motors with non-standard bases, electric motors with special shafts, vertical hollow-shaft electric motors, electric motors with sleeve bearings, electric motors with thrust bearings, and electric motors with encapsulated windings.

The law states that each motor manufacturer that has used an AEDM shall have, available for inspection by the DOE, records showing the method or methods used. This is important to note because at any time the DOE can ask a manufacturer to produce records that prove its AEDM is current and valid under the law. Failure to have the records could result in a violation.

The DOE recognizes that AEDMs are fluid models that are continually adjusted to improve motor efficiency prediction. Because AEDMs are fluid and because motor manufacturers strive to improve the efficiency of their products, the DOE requires continual maintenance. In addition, anytime a motor manufacturer makes significant design or production changes, the AEDM needs to reflect those changes. If you are manufacturing any of the motors listed above, we encourage you to verify that they are being included in your AEDM subsequent verifications.

To provide complete compliance services and to make sure all of our clients are prepared for a potential DOE inspection, we offer two programs to help you maintain sufficient records. The first program is for clients who have achieved or are working toward National Voluntary Laboratory Accreditation Program (NVLAP) compliance. This program involves testing a few basic models per year per AEDM in the NVLAP lab of your choice with reports sent to Advanced Energy for verification to the AEDM. Under this program, Advanced Energy defines the motor test plan, reviews all test reports and creates the documentation necessary to maintain the “subsequent verification of an AEDM.” Advanced Energy is an independent company with state-registered professional engineers who are highly qualified to perform an evaluation of electric motor efficiency.



Our second AEDM maintenance program is for customers who do not have a NVLAP lab or are not planning to obtain this accreditation. (Advanced Energy has provided and offers programs to motor manufacturers who are interested in obtaining NVLAP accreditation for their own labs.) Under this program, we perform all of the items listed above along with testing from our own NVLAP lab. We help each customer select a few basic models per AEDM, test them and prepare the necessary documentation for record-keeping. We analyze the database of your motor models on file with the DOE each year and make sure we vary testing to include as many basic models (over time) as possible.

We are thankful for your business and want to make sure all of our clients remain successful in the U.S. market. Being prepared for any potential DOE investigation is the best defense, and Advanced Energy has proven it can help customers achieve and stay in compliance.

Please contact us to discuss the regulations and verify that your AEDM maintenance program is consistent with the DOE requirements. Thank you for your time and your business.

Sincerely,

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