

MEMORANDUM

RE: Ex Parte Communication In Connection with
Docket No. EERE-2010-BT-STD-0027
Energy Efficiency Program for Certain Commercial and Industrial Equipment: Public Meeting and
Availability of the Framework Document for Commercial and Industrial Electric Motors,
75 Fed.Reg. 59657 (September 28, 2010).

To: expartecommunications@hq.doe.gov

From: Clark R. Silcox, General Counsel
National Electrical Manufacturers Association

Date: March 9, 2012

cc: Bill Hoyt, Alex Boesenberg, Rob Boeteler, John Malinowski, Andrew DeLaski, Neil Elliott, Dan
Delaney, Michael Bruin, Tim Schumann

The purpose of this memorandum is to memorialize a meeting and conversation on March 7, 2012 at
the Department of Energy (DOE) pursuant to the DOE's Guidance on Ex Parte Communications.

In attendance at the meeting were:

Neil Elliott	American Council for an Energy-Efficient Economy
Andrew DeLaski	Appliance Standards Awareness Project
Alex Boesenberg	National Electrical Manufacturers Association
Bill Hoyt	National Electrical Manufacturers Association
Clark Silcox	National Electrical Manufacturers Association
Rob Boteler	Nidec Motor Company
John Malinowski	Baldor Electric Company (ABB Group)
Dan Delaney	Regal-Beloit (by phone)
Paul Lin	Regal-Beloit (by phone)
Laura Reamer	Regal-Beloit (by phone)
Michael Bruin	General Electric Company (by phone)
Tim Schumann	SEW Eurodrive (by phone)
Daniel Cohen	US Department of Energy
Amy Grace-Tardy	US Department of Energy
Ashley Armstrong	US Department of Energy
John Cymbalsky	US Department of Energy
Jim Raba	US Department of Energy
Michael Kido	US Department of Energy

The non-governmental participants at the meeting are part of an informal group calling itself The Motor Coalition that has formed to submit joint views on a motor efficiency proposal in connection with the proceeding identified above. This coalition has already submitted, on April 19, 2011, joint comments in response to the DOE's Request for Information in this proceeding. 76 Fed.Reg. 17577 (March 30, 2011).

The purpose of the conversation was to update DOE on the coalition's views regarding the best way to increase energy conservation from motors. As expressed previously in the joint comment, the coalition believes that further incremental increases in efficiency standards on already covered motors are running up against their limits in terms of economic justification and that very substantial opportunities exist for gains in energy conservation from expanding the scope of regulated motors so that standards could be applied more broadly. Andrew DeLaski began the meeting by sharing a copy of a presentation that he gave to the EEMODS 2011 Conference in Alexandria, Virginia last November 2011, a copy of which is attached to this memorandum.

It is believed that the approach outlined will be able to rely on existing EPA 1992 and EISA 2007 test standards, labeling, lab accreditation, and compliance certification requirements. In response to questions, there was a discussion of whether that was true for expanding the scope to partial, gear motors, vertical shaft motors, and component sets, and the responses indicated that there might need to be some guidance issued for compliance and enforcement testing purposes so that there was clarity and uniformity. Testing these types of motors was something that manufacturers and test labs already do. The coalition will provide some further input to DOE on this issue.

There was also discussion about specific types of motors that were included and excluded by the proposal. The primary driver behind excluding motors from coverage was the absence of an applicable test procedure. But there were some motors that might be excluded because of unique issues. A question came up about the relationship between 56 frame motors 1HP and greater and the coverage of such motors under the Small Electric Motor Rule. The desirability of harmonizing standards for 56 frame size motors with 140 frame size motors (which are not covered by the Small Electric Motor rule) was explained, because they are essentially the same motor. It was noted that the Small Electric Motor rule only covered open construction motors, and the enclosed 56 frame size motors were not regulated. Coalition members indicated they would supply a list of included and excluded motor types and discuss the 56 frame size motor issue that might be useful in making a coverage determination.

The coalition also shared a legislative proposal that it was discussing with Congress, consistent with its prior comments to DOE on increasing energy savings by expanding coverage, but also including a provision unrelated to the pending regulatory proceeding, relating to future energy conservation strategies for electric motors over the course of the decade. This involved advanced motor technologies, and it was explained that the coalition did not have a specific proposal in mind now. This was a small part of the current market, but was expected to become more significant toward the end of the decade and from a longer-term strategy point of view the coalition felt this was the direction DOE ought to be taking in the future. The coalition also noted a current proposal in S.398, now pending in the Senate, that would ask DOE to conduct a motor market assessment study. The last time DOE conducted such a study was in the late 1990s. The coalition felt that this study could be valuable in informing the public and DOE about future energy conservation strategies.

The Motor Coalition Members

- American Council for an Energy-Efficient Economy
- Alliance to Save Energy
- Appliance Standards Awareness Project
- Earthjustice
- Natural Resources Defense Council
- Northeast Energy Efficiency Partnerships
- Northwest Energy Efficiency Alliance
- National Electrical Manufacturers Association
- Pacific Gas and Electric

March 2012

Motors

2010-11 Coalition Strategy

- Determine and document a plan to improve the efficiency of the greatest number of units providing the **greatest savings impact** while **reducing potential enforcement issues** within the **least amount of time**.
- Deliver a plan to DOE as a **platform for a consensus rule** that can be acted upon within the **least amount of time** delivering **large net benefits**.

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Motors

2 options

- 1- Increase nominal efficiency level for the existing scope of covered motors.
- 2- Expand scope of covered motors using existing efficiency levels.

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Motors

Motor Coalition Proposed Approach

- Base future regulations on existing Epact 92 and EISA test standards, labeling, lab accreditation, compliance certification requirements
- Expand the scope of covered products to more than double the number of motors regulated
- Maintain the nominal efficiency levels at the current NEMA 12-12 (12-11 for some motors)
- Simplify how "coverage" is defined in order to ease compliance and enforcement.

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Motors

MC's Proposed Expanded Scope

- Partial motors
- ¾ motors
- Gear motors
 - Integral shafts
- Definite purpose
 - Special shafts
 - Special flanges
- Special purpose
 - Vertical
- 56 or 90 Frame motors
- TENV
- NEMA or IEC

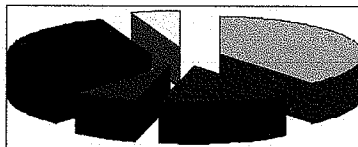
More effectively capture motors imported as a component or finished good for both general purpose and the new categories.

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Motors

MC Expanded Product Scope Millions of unit per year

Total 4.4 million units USA per year



- Type 1 and 2
- Partial & Gearmotor
- Definite & Special
- Imported motors or component
- 56 Frame

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Motors

Average efficiency gains by motor sizes

	Table 12-12 Efficiency	DOE 1998 Average Installed Efficiency	Efficiency Percent gain	Estimated Kilowatts Saved per Hour	Estimated Kilowatts Hours Saved per year @ 4000 hours of operation
1 to and including 5 HP	89.5%	82.7%	8.2%	205,300	821,199,187
>5 to and including 20 HP	91.7%	86.8%	5.6%	375,480	1,501,920,413
>20 to and including 50 HP	94.1%	89.2%	5.5%	244,605	978,421,429
>50 to and including 100 HP	95.0%	91.9%	3.4%	124,166	496,663,025
>100 to and including 200 H	95.4%	92.7%	2.9%	51,431	205,723,427
>200 to and including 500 H	95.8%	93.4%	2.6%	41,595	166,379,547
					4,170,307,027

All data at 100% load; power quality per NEMA standards; Kwh saved based on 4000 hours / year of operation

March 2012

Motors

Comparing the Two Options Savings Potential

Option 1

- Two efficiency bands average 1.4% increase over current NEMA Premium levels
- Incremental energy saved calculated to be 600 million Kwh using current product scope

Option 2

- Compared to 4.2 billion Kwh Motor Coalition proposal
- Annual Motor Coalition incremental savings 3.6 billion Kwh

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Motors

Conclusions

- Two decades of cooperative development of new motor standards have delivered large benefits
- Greatest current opportunity lies in expanding scope
- This approach is supported by a broad coalition of motor manufacturers and efficiency proponents.