Motor Mouth: Stop Talking About Motor Repair Savings and Quantify Them.

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The Northwest Energy Efficiency Alliance (NEEA), through its Drive Power Initiative (DPI), has attempted to transform the motors market in the Pacific Northwest by promoting the NEMA PremiumTM brand and energy efficient motor rewind practices.

Energy efficient rewinds will be an important source for energy savings from electric motors in the future as NEMA premium motors have become federal standard as of December 2010. Evaluation of these rewinds is difficult as these are harder to identify, track and quantify. Through the work done for the Long Term Monitoring and Tracking (LTMT) project for NEEA, a methodology has been developed to identify energy efficient rewinds and quantify energy savings from these rewinds that can be applied to other regions as well

"Energy Efficient" Rewinds

An "energy efficient" rewind is defined as a rewind that is performed strictly according to the Electrical Apparatus Service Association (EASA) Tech Note 16 guidelines. To accurately quantify energy savings from NEEA's effort to promote efficient rewinds, data is needed on the number and size of motors being rewound according to EASA Tech Note 16 and establish a market baseline for efficient rewinds. Evaluation of these rewinds is difficult as these are harder to identify, track and quantify.

Research Design and Methodology

The evaluation team overcame these hurdles in the market by interviewing local repair shops and regional market actors to establish the state of the current market and a baseline of efficient repair practices against which program efforts can be measured. An interview guide was developed through which service centers were asked to provide estimates of total rewinds they perform yearly and how this number had changed in the past. They were also asked questions to gauge their understanding of efficient rewind practices and understand the baseline repair practices in the Northwest. Regional market actors were interviewed to provide perspective on the current state of the market and to help establish a baseline for efficient motor repair practices in the northwest.

Research Results

Savings from efficient repair practices in 2009 alone were estimated to be about 3,500 MWh. The study also concluded that through 2009, the regional effort had resulted in an additional 75,000 NEMA PremiumTM motors resulting in total savings of about 40,000 MWh.