

# Motor Madness

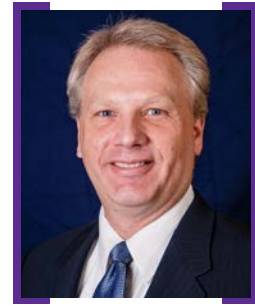
**This issue we take a long, hard look at motor efficiency, and you should, too.** After all, electric motors used in industrial settings are the single largest consumer of electricity in the United States. Upgrading your electric motors is not only good for the environment, but it's also good for your bottom line. Sure, saving electricity lessens the burden on our country's energy infrastructure. But it also saves you money in the long run.

You're probably aware that there have been many legislative efforts designed to force us to become more efficient. Most of that legislation is aimed at the manufacturers and suppliers of electric motors, who are required to sell only motors meeting certain energy efficiency levels, depending on the type of motor.

It's all very confusing, even to those involved in the industry. Most new electric motors are required to be NEMA Premium efficiency. This is roughly equivalent to the IE3 European designation. But fractional horsepower motors only recently came under these requirements, and even still, there are exceptions, including gearmotors, which are the subject of Assistant Editor Erik Schmidt's article on page 18. One of the last required to upgrade, soon even gearmotor manufacturers will have to conform to NEMA Premium efficiency levels. As you'll see from the article, some of these manufacturers are ahead of schedule and introducing these gearmotors now.

But what does all of this mean for you, the consumer? You're just going to buy the motor that makes most sense for your application, right? Most buyers will choose the least expensive motor that meets or exceeds the specifications. In general, that's true. But if you manage a facility with dozens or hundreds of motors, the decisions and the process become a lot more complicated.

For those facilities, it's important to have a plan. And that's exactly the focus of the article "Motor Management—Best Practices," which begins on page 24. This article is the first in a three-part series provided to us by the Copper Development Association. The series will walk you through the decision-making process for determining when to repair and when to replace. It helps you decide the best options both from an energy efficiency and a cost savings standpoint.



Finally, if you're looking for the latest and greatest in electric motor technology, there's probably no better place to look than the SPS-IPC Drives trade show and conference that takes place November 24-26 in Nuremberg, Germany. News Editor Alex Cannella's article previews the show beginning on page 58.

Of course, if motors aren't your thing, we also have some good articles this issue on custom bearings (page 34), aerospace actuators (page 36) and lubrication (page 48).

As always, we appreciate your feedback. Let us know what you like and don't like, which articles are useful and what topics you'd like to see us cover more frequently. Let us know how we're doing by sending an email to [wrs@powertransmission.com](mailto:wrs@powertransmission.com).

P.S. We've just come back from a very successful Gear Expo, and one of the highlights was the Ask the Expert Live presentation in our booth. In four separate sessions, our panels of experts answered gear-related questions with in-depth technical responses. Each session was video recorded and will be available online at [www.geartechnology.com/ask-the-expert/](http://www.geartechnology.com/ask-the-expert/).

