The Color of Money

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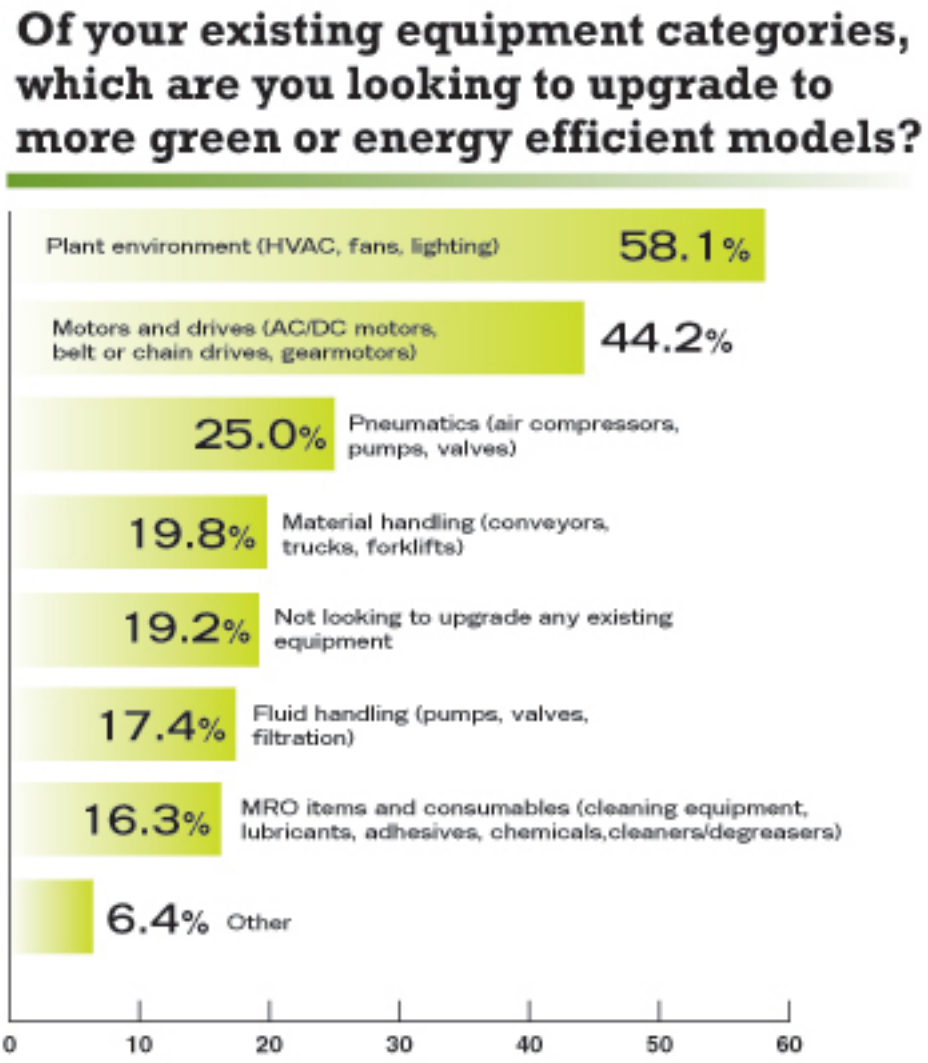

We kicked off this year's *IMPO Energy Intelligence Report* by going straight to the source to determine which energy and sustainability variables were really driving purchasing decisions among manufacturers. Much like last year's report, this competitor breakdown aims to give you a cross-sectional view of what other manufacturers are looking at when trying to make their operations more efficient.

The following analysis reflects the results of a survey of *IMPO* readers deployed via email in May of this year. The *IMPO* subscriber base consists primarily of plant operations and maintenance management in medium- to large-sized facilities in North America.

Purchase Goals

When we asked our readers whether they were looking to purchase new equipment based on energy efficiency variables in the next six months or so, around 57 percent said yes. This is an increase over last year, when 52 percent of survey respondents said they had plans to do so.

It's uncertain whether the trend towards energy efficient products is truly growing, or if this increase is simply a reflection of increased spend as the manufacturing industry continues to expand. While it's likely that cash flow has improved in the last year, it's also important to note that most respondents cited energy efficiency as a desirable variable in terms of equipment purchases, but only 10 percent said it was first priority. The majority of respondents -- 51 percent -- said energy efficiency is important, but not above other issues.

What's the Big Problem?

When we asked in our survey which category of product our readers found to be the least efficient, nearly 40 percent said general plant equipment such as HVAC/R, fans, and lighting. This coincided with what respondents are looking to upgrade, as 58 percent cited these as the investments they are likely to make.

It's no surprise that general plant equipment -- along with repeat offenders in the pneumatics and motors and drives categories -- would continue to serve as the biggest efficiency headaches: Not much has changed since last year in this regard, either. Luckily for manufacturers, some of the smaller equipment purchases in categories like lighting can yield big efficiency gains, contributing to a short ROI.

Unfortunately, components like motors and air compressors are outside of the low-hanging fruit category and require a bit more in terms of up-front investment. Still, these two categories, along with HVAC, have arguably made the biggest technological gains in recent years relative to their energy usage. Considerations in these areas should be scrutinized, as the payback might be quicker than you think.

That said, when we asked what it was that made this problem category so inefficient, a staggering 51 percent said that it was simply too expensive to replace existing equipment for more efficient models. Many respondents clarified that, in fact, they were dealing with extremely old equipment, or items that are leaky or ill-fitting. 18 percent said it was simply the natural quality of the product that made it so inefficient. While this may be true (some equipment just demands more energy), it also may be an indicator of the outdated equipment in some of these readers' facilities.

We also tried to determine what kind of equipment our readers were buying, energy efficiency aside, and most respondents came back with plant environment (nearly 50 percent) being a big area for spend. 39 percent said that they had made recent purchases in the motors and drives category, despite complaining of aging, ill-performing equipment. 66 percent said these purchases were, in part, based on energy efficiency, while 10 percent said that energy efficiency was wholly the reason for the purchase.

Green Consumables

The efficient use of energy is oftentimes dovetailed by programs that utilize consumables produced with green, organic, or recycled materials. While these items don't typically save energy, they are often considered sustainable solutions in an overall plant-wide initiative toward environmentally-friendly usage.

Readers cited green cleaning supplies and recycled towels and wipes as their primary areas of interest in the green consumables segment, followed closely by degreasers, absorbents, and lubricants. 16 percent of respondents said they had no interest in purchasing green consumables.

The Write-In Votes

In this year's survey, we asked IMPO readers to tell us about their "dream" products or opportunities for better energy efficiency. If they could have anything they wanted, what would it be? Some jokingly cited options like "free energy," but besides that there were varied responses that seemed to indicate which areas plant managers are truly concerned about:

- Heat loss through doors and walls.
- Increased use of DC electric tooling versus pneumatic.
- LED lighting.
- Green roofing.
- Air seals on industrial ovens.
- More efficient compressors and motors.

One of the descriptive phrases that came up numerous times in this response category was that of variable frequency technology -- namely relative to drives, chillers, pumps, and other big in-plant energy users. We also saw a trend towards renewable energy options for use onsite, including wind, solar, and geo-thermal.

One respondent's succinct and honest response probably hits close to home for manufacturers. This reader said his or her dream opportunity was, simply, "More money to spend on energy efficient equipment."

A Question of ROI

One thing is for certain: Despite our readers' desires to see their companies put money up for these types of capital purchases, the ideal ROI is still one to two years. In fact, any ROI over four years puts 79 percent of respondents out of the running.

As energy efficiency specifications continue to demand serious R&D focus and dollars, it might be a while before these manufacturers can get the instant payback they are looking for. Until then, we hope manufacturers are willing to take the long-view of energy efficiency purchases and their varying abilities to pay back: through improved relationships with suppliers and customers, better employee "ownership" of processes, or -- the most basic -- the greenbacks going back towards the bottom line.

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