Energy-efficiency solutions are vital to Malaysia's sustainable future

Energy efficiency is regarded by the International Energy Agency (IEA) as the "first fuel", because making the best possible use of energy that has already been produced is the smart and cost-effective way to simultaneously meet energy affordability, security and climate goals. Implementing energy-efficiency measures can reduce overall demand, putting downward pressure on both energy prices and CO_2 emissions. That is why the IEA believes it has a critical role to play in global efforts to achieve net zero by 2050.

But how do you improve energy efficiency in practice? The good news is that the technologies needed to deliver efficiency and accelerate progress towards net zero are already available. Furthermore, not only will they drive down carbon emissions, but they also offer a fast return on investment — sometimes measured in months rather than years. The challenge is how we can scale up and speed up actions to deploy these technologies.

A major worldwide effort to boost awareness of energy efficiency is gaining momentum through the Energy Efficiency Movement founded by ABB Ltd. With more than 350 partners, this movement is a cross-industry effort that brings together like-minded stakeholders to innovate, share knowledge and commit to action for a more energy-efficient world.

As a global technology leader in electrification and automation, ABB is well placed to lead the drive for a more sustainable and resource-efficient future. Its solutions connect engineering and software to optimise how things are manufactured, transported moved, powered and operated.

Stefan Floeck, president of the IEC Low Voltage Motors Division at ABB Motion, says what sets it apart from its competitors is its stellar reputation and consumer perception in the marketplace.

"ABB is the worldwide leader in the majority of applications and industrial sectors we operate in. We aim to build solid, last-lasting relationships with our customers. That commitment to service, combined with our state-of-the-art technology, means we have established an excellent reputation for delivering innovative solutions. That includes our high-quality motors that continue to push the envelope in terms of energy efficiency, performance and reliability."

ABB's extensive range of energy-efficient motors ensures that customers can ultimately improve the performance of their machines while lowering energy costs and making a positive impact on the environment. A good example is ABB's synchronous reluctance motor (SynRM). This motor operates



IE5 Ultra-Premium Efficiency SynRM motors reduce environmental impact compared with regular IE3 motors



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as a package solution together with a variable speed drive (VSD) to achieve the highest energy efficiency commercially available — IE5. In practice, that means a SynRM motor will offer 40% lower energy losses than an equivalent IE3 motor, helping businesses save energy and boost productivity.

"The rising energy costs for end-users and the impact on their monthly bills is an eye-opener. That's why we are talking to end-users and associations to ensure that governments understand the issues and have the knowledge to make fully informed decisions," says Floeck.

The IEA reports that electric motors consume over 45% of the world's electricity. And, by 2040, the number of motors will double. However, it is estimated that, if all the more than 300 million industrial electric motor-driven systems currently in operation were replaced with optimised, high-efficiency equipment, global electricity consumption could be reduced by up to 10 %.

Clearly, promoting the adoption of high-efficiency motor systems is a crucial element in tackling climate change. That is why, in 2021, ABB signed a memorandum of understanding (MoU) with the Malaysian Green Technology and Climate Change Corp (MGTC) to officiate their collaboration on energy efficiency.

Through the agreement, various areas of cooperation were outlined, including creating awareness, advocating for the establishment of minimum efficiency standards for electric motors, facilitating discussions among key stakeholders to share knowledge, and establishing partnership networks. These efforts aim to assist industries in identifying energy-efficient technology and solutions that offer the highest benefits.

In line with ABB's core values of courage, care, curiosity and collaboration, the MoU proves ABB's commitment towards building a sustainable and greener future.

To find out more, visit https://global.abb/topic/synrm-drivepackage/en