ECONOMIC TRANSFORMATION PROGRAMME

Bright future for LED industry
Light emitting diodes kinder to the environment as well

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The move by the Malaysian Government to phase out the use of traditional light bulbs or "round bulbs" is seen as a positive move by many, not only for its environmental significance but also the benefits it brings for manufacturers of light emitting diodes (LEDs).

In March 2010, Energy, Green Technology and Water Minister Datuk Sri Peter Chin Fah Kooi announced that the government would phase out the use of such light bulbs by 2012, leading to a complete ban in 2014.

The government will stop import and sale of all bulbs by the end of this year as part of its efforts to save power.

Traditional light bulbs, also called incandescent light bulbs, are considered less energy-efficient and, as a result, not environmentally-friendly in comparison with fluorescent lamps, fluorescent tubes and LEDs.

Chin said the use of these bulbs would help reduce carbon dioxide emissions by 732,000 tons a year.

"The policy will enable the use of energy more effectively and wisely as utilities will be encouraged to use compact fluorescent lamp (CFL) and LED," he said.

He added that the move will also part of the Government's commitment to reduce carbon intensity by around 40% by 2020.

The Department of Standards Malaysia (Standards Malaysia) an agency under the Ministry of Science, Technology and Innovation is expected to make available the standards in response to the impending policy changes.

Standards Malaysia, through its technical committee, has been able to fast-track the development of 12 Malaysian Standard (MS) related to LED based products. The MS is expected to ensure the quality of local LED products is suitable for both domestic and international use.

"A total of 12 Malaysian Standards (MS) have been published covering the safety, testing and performance of LED bulbs. All 12 standards are related to the LED lights that were adopted from the available international standards from the International Electrotechnical Commission," says Standards Malaysia director-general Fadhlul Bahar.

These standards were developed based on the accelerated timelines approved by the International Cooperation and Reform Initiatives (SIRI) lab under the Department of Standards, the Ministry of Science, Technology and Innovation.

"The importance of developing new standards at a step-up pace reflects the urgency of the Government's plan, under the SIRI, on the use of international best practices and the adoption of international standards to build a solid and competitive economy," says Performance Management and Delivery Unit (Pemandu) director of the Department of Competition, Standards and Liberalisation (strategic reform initiatives division) Fadhlul Bahar.

Fadhlul also added that currently, the standards are "not mandatory but highly encouraged."

"Before the regulators can make it mandatory, they need to ensure that industry is ready and the necessary testing facilities are in place orulators have to decide on the Asia Pacific Laboratory Accreditation Cooperation (APLAC) Mutual Recognition Arrangement (MRA) signatories," he added.

Fadhlul said the APLAC is a cooperation of accreditation bodies in the Asia Pacific region that accredit laboratories, certification bodies and companies, as well as reference material producers.

"However, standards are regulated on the aspect of public health and safety to ensure that manufacturers meet the specifications," he added.

Sinarern points out that by using these standards, manufacturers can be benchmark against established global specifications that will ensure the quality and reliability of the LED lights meets with international export requirements. Compliance to MS will enhance initiatives to increase local producer's access to international markets, making Malaysian LED producers more globally competitive and eventually establish a framework to ensure compliance and consumer protection.

According to McKinsey's 2011 lighting market report, the estimated global revenue from the LED lighting market will grow at 30% per annum, amounting to almost 65 billion Euros (RM227bn) by 2020, almost 6% of the overall lighting market.

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"All segments, government, enterprises and consumer will be faced with a choice of technologies in transitioning to more efficient lighting solutions. LEDs are mathematically or scientifically proven to be more cost-efficient over the entire lifetime of ownership."

"The slightly higher initial acquisition costs are easily recovered via savings in reduced electricity consumption," he says.

Tan says "scale enterprises" customers also enjoy significant operational savings via improved maintenance and inventory management efficiencies due to the reliable and scalable nature of LED. Customers thus have savings realised only if manufacturers produce products that comply with the standards and that ensure the promised performance.

He points out that consumers are usually tempted to buy the cheaper product, only to end up being disappointed with their purchase, eventually, because these products don't perform up to expectations. This will present the industry with multiple cost effects: the negative perception created by cheap substandard products will affect the prospects of manufacturers who do invest in the technology to produce the best products according to international standards.

"This may then result in a situation of the industry as a whole, and sub-optimization on both our industry development and energy efficiency initiatives," he adds.

"In the case of the EPA in which the LED sub-sector is expected to be a major contributor of gross national income, it is imperative that the MS being developed by Standards Malaysia and regulated by the Energy Commission, be adopted and eventually enforced. LED players get the position they deserve in this exciting new industry.

"Currently, international certification within Malaysia is possible. The first of its kind LED-SEL Certification Center is currently up and running in Penang in 2011."

Developed jointly by Northern Electric Lighting (M) Sdn Bhd (NEL), formerly Nasional Certifikasi Pusat (NCP) and QAV Technologies Sdn Bhd (QAV), the LED-SEL Certification Centre has been designed to perform testing in accordance with the standards of the American National Standards Institute (ANSI).

The centre serves as a platform to verify the compliance of Malaysian products to global standards as well as to help local companies develop their test and certification capabilities, so that Malaysian companies can be more competitive in capturing customers from not only within Malaysia, but also from Asia, United States and Europe.

The testing and certification facility under the Centre has been in operation since April 2011.

QAV Technologies, set up in 2002, specialises in product design, prototyping, test equipment customisation and test technology development, among others.

It is the first firm, outside the US to be certified by ANSI and boasts a lab under the standards of the top global technology firms.

This initiative is in line with the government's efforts to speed up the domestic electrical and electronic sector.

The proposed centre is expected to see the creation of some 1,000 new jobs in the sectors of supply chain, logistics and transportation in the LED and solar lighting industries.

QAV Technologies managing director John See believes the standards will not only help manufacturers continue producing good-quality products without fear of unfair competition, but also improve their export capabilities.

"With these standards, we can safeguard all Malaysian firms for their best interests that they are buying good quality and safe lamps," he says.

"It will cut our unfair competition for good quality manufacturers as they will not need to compete with their good quality product with inferior quality products. Products that passed the tests can be exported easily and this will reduce the possibilities of Malaysia from becoming a dumping ground for inferior products."

"Consumers can also have peace of mind in knowing the quality of the products as they will come with warranties."