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MOSTI evaluating use of graphene-based nanofluids in Malaysia



**KEMENTERIAN SAINS,
TEKNOLOGI DAN INOVASI**
MINISTRY OF SCIENCE, TECHNOLOGY AND INNOVATION

PUTRAJAYA, April 18 (Bernama) -- Ministry of Science, Technology and Innovation (MOSTI) is in the midst of evaluating the use of graphene-based nanofluids in Malaysia to reduce the central air-conditioning energy consumption.

In a statement, MOSTI said graphene-based nanofluid produced by Blue Snow Consulting & Engineering Sdn Bhd can replace water as a medium in refrigeration systems and is used in all refrigeration-based commercial central air conditioning systems to reduce energy consumption.

Compared to water, graphene-based nanofluids are able to increase heat transfer and reduce energy consumption (kWh) at an average rate of 20 to 30 percent and can significantly reduce carbon emissions.

“This is in lined with the Malaysian government’s initiative to address the issue of climate change and become a carbon neutral country by 2050.

“Apart from being able to save costs with a return on investment can be obtained in less than three years , the nanofluid does not leave a trace of installation because it still uses the existing piping infrastructure,” the statement read.

The statement was issued in conjunction with the technical visit by Minister of Science, Technology and Innovation Minister Datuk Seri Dr Adham Baba, together with MOSTI secretary-general Datuk Zainal Abidin Abu Hassan and Syarikat NanoMalaysia Berhad (NMB) Group chief executive officer Dr Rezal Khairi Ahmad to Blue Snow in Petaling Jaya, earlier today.

The graphene-based nanofluid project developed by Blue Snow under the National Graphene Action Plan (NGAP) 2020 in collaboration with NMB which is a leading agency in Malaysia in the commercialisation and industrialisation of nanotechnology through a joint-venture development model.

The collaboration has been implemented since 2018 from the Proof of Concept stage to the current Scale Upgrading stage, MOSTI said.

It added that the market size for heat-transfer fluids for Malaysia in 2024 is estimated at RM71.3 million while for the Asia-Pacific (APAC) market, US\$1.253 billion.

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