



ICP supports Sabah sustainable energy research, STEM education

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A RM76,000 ICP project in Sabah will develop a battery-free thermal energy lighting system and advance energy research and STEM education.

A RM76,000 research project to develop a battery free lighting system using thermal energy will be carried out in Sabah under the Industrial Collaboration Programme (ICP).

The project, involving Universiti Malaysia Sabah (UMS) and Seni Gemilang Sdn. Bhd., aims to advance sustainable energy studies while developing a Science, Technology, Engineering and Mathematics (STEM) learning module for schools in Sabah.

The ICP is a Government initiative led by the Ministry of Finance that uses selected government procurement projects to encourage technology adoption, research partnerships, innovation and talent development. The programme is monitored by Technology Depository Agency Bhd (TDA).



During the Secondary ICP agreement signing ceremony

The research forms part of the ICP for the 132/11kV Karamunsing Main Intake Substation Transmission Project implemented by the Ministry of Energy Transition and Water Transformation (PETRA).

Under the initiative, Seni Gemilang Sdn. Bhd., as the ICP Provider, has partnered with UMS to undertake the project titled Investigation of Sustainable Free Battery Self Power Lighting System Module Powered from Thermal Energy for Sabah STEM Education Module Kit.

ICP drives technology transfer through collaboration

TDA chairman [Tan Sri Liew Yun Fah](#) said the ICP creates long term value beyond government procurement by advancing capability building and technology application.

He said partnerships between the government, industry and universities play an important role in improving expertise and nurturing local talent.

“The Industrial Collaboration Programme ensures that every strategic Government procurement delivers sustainable value to the nation.

“By fostering collaboration between government, industry and academia, the ICP accelerates technology transfer, strengthens research capabilities and develops highly skilled local talent to support Malaysia’s transition towards a high value, technology driven economy,” he said. [Panduan Perjalanan & Kisah Perjalanan](#)



At the Secondary ICP agreement signing ceremony

The project focuses on creating a battery free lighting system that uses thermal energy as an alternative source of electricity generation.

Besides producing the technology prototype, the initiative will also introduce a STEM learning module for schools across Sabah. The module is designed to encourage students’ interest in STEM through hands-on activities and practical applications of sustainable energy technologies.

The initiative is expected to contribute to Malaysia’s research, development, commercialisation and innovation ecosystem while encouraging greater cooperation between the public sector, industry and higher education institutions in advancing sustainable energy solutions. [Panduan Perjalanan & Kisah Perjalanan](#)