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TOYOTA INDONESIA ELECTRIFICATION LEARNING FACILITY LAUNCHED



Karawang - Ministry of Industry today (Thursday/May 19), visited and inaugurated the “xEV Center”, a facility for learning and developing capabilities in electrification and green energy from PT Toyota Motor Manufacturing Indonesia (TMMIN).

“In line with the Government's efforts to create environmentally friendly vehicles, the construction of the xEV Center by TMMIN plays an important role in educating and inspiring the public, including the next generation, to innovate and develop electrification vehicle technology in the country. We hope that the Toyota xEV Center can become a catalyst for technology development and industrialization of electrified vehicles in Indonesia,” notes Minister of Industry Agus Gumiwang in his written remarks.

Indonesia is transitioning towards low-emission transportation that is more environmentally friendly. President Joko Widodo has also ratified a Presidential Regulation (Perpres) on the Economic Value of

Carbon (NEK), which will reduce carbon emissions by 41% with international support by 2030. Thus the active participation of society, stakeholders, and industry play a crucial role in achieving Carbon Neutrality for a sustainable future.

The automotive industry has a role in disseminating understanding and knowledge about the importance of Indonesia's transformation towards the era of electrification. The main goal is to minimize emissions by using various electrified vehicles options.

"The xEV Center is an actualization of the triple helix collaboration and synergy between the Government, Academia, and Automotive Industry. We fully support the government in its ongoing efforts to achieve the Carbon Neutrality target, therefore our xEV Center is developed as part of the electrification era ecosystem through public advocacy on various electrification options and technologies. Toyota believes that to achieve Carbon Neutrality there must be practical and sustainable solutions through various technology options (multi pathways) such as vehicles with high fuel efficiency, Flexi Engine (bio-fuel), HEV, PHEV, BEV, and hydrogen-fueled FCEV that are in accordance with Indonesian consumer needs and conditions," said Warih Andang Tjahjono, President Director of PT TMMIN.

xEV Center Development Philosophy

xEV Center was established at the TMMIN Karawang 3 factory site with an area of 600 m². The first phase of the construction process began in July 2020. The architectural design of the xEV Center with the Triangle Shape pattern is inspired by the triple helix of government, academics, and industry.

The x in front of the EV is an extension of electrification—showing various electrification technologies that already exist and can be applied according to the situation. Thus the xEV Center can help with advocacy to the public with a variety of technologies information.

The xEV Center will also become an education facility that can be easily accessed by school students, academics, the Government and the general public. xEV Center aims to increase public awareness and the importance of achieving emission reduction through various electrification technologies in Indonesia.

Toyota Indonesia's step towards the electrification era in Indonesia is brought out by considering many things, from supply chain readiness, human resources to after-sales service. Toyota Indonesia believes that there must be practical and sustainable solutions by combining various options and technologies such as LCGC, flexi-engine, HEV, PHEV, BEV and FCEV to suit the diverse needs of consumers. The transition of human resources, technology, and supply chain readiness in facing the electrification era is expected to increase national economic growth for the 1.5 million human resources involved in the automotive sector.

xEV Center Facility

In Phase One, the xEV Center is focused on presenting various information related to electrification including 1. HEV, PHEV, BEV Showcase & Driving Experience, 2. Electrified Vehicle Cut Body, 3. xEV Main Components (Battery, Power Control Unit, Transaxle) and 4. Outdoor Charging Station. The detailed exhibition at the xEV Center is divided into 4 zones to make it easier for the public to understand the latest type of information related to electrification, including:

Zone 1 - Environmental Initiatives. This zone explains the global environmental conditions and the Paris Agreement, the basis for the national target to achieve carbon neutrality. It also presents the energy roadmap in Indonesia to support efforts to create a greener environment and Toyota's active participation in the Toyota Environmental Challenge 2050.

Zone 2 - Technology. This zone consists of explaining the classification of ICE and xEV vehicles equipped with a video demonstrating how xEV vehicles work and to make easier for the public to understand. In addition, there is also an xEV Cut Body display in the technology zone to illustrate xEV vehicles energy simulations. xEV main components are also explained through wallcharts and displays. Detailed explanations of components can also be accessed through today's technology, using Virtual Reality and Augmented Reality.

Zone 3 - Green Ecosystem. In this zone, the concept explanation of well-to-wheel emission is supported by an easy-to-understand diorama. The xEV ecosystem, charging types, and electrical equipment are also available in the green ecosystem zone. Visitors can easily see PHEV vehicles and charging stations in this zone, the use of xEV as a power source and vehicle life cycle, and a complete 3R process battery.

Zone 4 - Sustainable Communities. This zone is the last zone in the xEV Center which contains an E-Library that summarizes the activities of the Government of Indonesia and Toyota Indonesia in realizing the transformation to the electrification era.

In addition to the four zones targeted to provide education, visitors can also experience real driving sensations using various electrified vehicle technology in the Driving Experience area, and charging facilities are also provided through the Outdoor Charging Station.

Future Phases of xEV Center Development

In the future, the xEV Center will improve its facilities as a Toyota Capability Center with expansion of the Eco-Renewable Energy and Research area, followed by the Mobility area. With the main focus on electrification technology in the first phase, a focus on green energy will be TMMIN's target in the second phase of the xEV Center construction while Mobility will be the focus in the third phase. In the green energy phase, various technologies and facilities whose energy sources come from renewable energy such as Hydroelectric Power Plants, windmills, waterwheels, hydrogen, and solar panels will be presented at the xEV Center to show the electrification ecosystem from upstream to downstream. Meanwhile, in the Mobility phase, the xEV Center will present a showcase on the Intelligent Transport System.

"The xEV Center will become a Learning, Capability and Research Facility for Electrification, Green Energy, and Mobility as a means for Indonesian human resources to develop their understanding about the technology and ecosystem of the automotive industry in the future so that Indonesia continues to be an important part of the world automotive industry," said Bob Azam Director of Corporate Affairs of PT TMMIN.