Press Release

**CP, True Leasing, SCG, Toyota, and CJPT sign Memorandum of Understanding to Further Accelerate Cross-Industry Efforts**

**Towards Achieving Carbon Neutrality in Thailand**

Charoen Pokphand Group (CP), True Leasing (TLS), Siam Cement Group (SCG), Toyota Motor Corporation (Toyota), and Commercial Japan Partnership Technologies Corporation (CJPT) have signed a Memorandum of Understanding (MOU) to further accelerate collaboration towards achieving carbon neutrality in Thailand. This MOU is based on achievements to date in our joint efforts, including logistics efficiency at CP and SCG sites and the introduction of carbon-neutral mobility based on usage in Thailand.

Based on an agreement built on the deep trusting relationship between CP's Senior Chairman Dhanin Chearavanont, President and CEO of SCG Roongrote Rangsiyopash, and then-President Akio Toyoda of Toyota; CP, TLS, SCG, Toyota and CJPT have been promoting initiatives in the three areas of data, mobility, and energy. This MOU is signed by Soopakij Chearavanont, Chairman of CP Group; Koji Sato, CEO of Toyota; Roongrote Rangsiyopash, CEO of SCG; Hiroki Nakajima, President of CJPT; and Kachorn Chiaravanont, President of True Leasing. Efforts are underway while considering how they can contribute to the happiness of the 67 million Thai citizens under the concept of **doing what can be done now, together with like-minded partners**.

There are three areas of focus: Data Solutions, Mobility Solutions, and Energy Solutions. In **Data Solutions**, we improved loading efficiency and optimized delivery routes by utilizing big data from CP and SCG's retail and logistics operations as well as traffic flow and vehicle data. At the stores where we conducted the demonstration, we confirmed approximately 15%\*1 **immediate** reduction in CO2 emissions.

For **Mobility Solutions**, we introduced a variety of vehicles, including FC Trucks, the Hilux Revo BEV concept, the JPN TAXI LPG-HEV, and mini-commercial light vans (Kei) based on how they are used in Thailand. The vehicles were used in the demonstration for logistics and human flow operations. We confirmed approximately 68 tons/year\*2 reduction in CO2 emissions. In addition, we succeeded in flight verification of the FC Drone for fertilizing, seeding, and other tasks at a CP Farm.

For **Energy Solutions**, we introduced, for the first time in Thailand, equipment to produce hydrogen using biogas derived from Charoen Pokphand Foods poultry farm manure and food waste at Toyota's bases, for the effective use of energy **unique to Thailand**. The hydrogen was used as fuel for FC Trucks and the FC Drone—and in a racing car at the end of December. In addition, we have plans to conduct a demonstration on energy management at our sites using solar power generation and a Battery Energy Storage System.

As the next step, under the concept of various approaches and depending on the usage in Thailand, we will contribute to carbon neutrality using HEVs or **Kei** that are immediately required in Thai society, as well as the further introduction of FCEVs and BEVs.

We are also taking on the challenge of energy efficiency improvement and cost reduction throughout the entire process of **producing**, **transporting**, and **using** energy by using renewable energy suited to resource conditions and usage in Thailand.

To improve logistics efficiency through data, we will utilize CP and SCG's data in retail and logistics as well as Toyota’s **Digital Twin Technology** to optimize the flow of personnel, logistics, and energy by collaborating with a social system, such as energy management and traffic control, etc.

To accelerate those initiatives, under the unified MOU and with the new company Commercial Japan Partnership Technologies Asia Co., Ltd. established in Thailand, we join forces across industries to realize a carbon-neutral society that is unique to Thailand, starting from Thailand and needed by other countries.



(Left to right) Hiroki Nakajima, President of CJPT; Soopakij Chearavanont, Chairman of CP; Koji Sato, President and CEO of Toyota;

Dhanin Chearavanont, Senior Chairman of CP; Akio Toyoda, Chairman of Toyota; Roongrote Rangsiyopash, President and CEO of SCG;

Suphachai Chearavanont, CEO of CP; Kachorn Chiaravanont, President of True Leasing and Member of Executive Committee of CP



(Left to right) Hiroki Nakajima, President of CJPT; Koji Sato, President and CEO of Toyota; Soopakij Chearavanont, Chairman of CP;

Roongrote Rangsiyopash, President and CEO of SCG; Kachorn Chiaravanont, President of True Leasing and Member of Executive Committee of CP



CP and SCG’s logistic site visit in Thailand



Various carbon neutral mobility demonstrated through logistics in Thailand

\*1　Converted CO2 equivalents from driving distance reduction by improved loading efficiency

and optimized delivery routes as an effect of the demonstration

\*2　Converted to a full year’s worth of CO2 emissions from “Tank-to-wheel” CO2 reduction

compared to conventional vehicles, based on total fuel consumption during the demonstration

trial.