Valoe and TIP Collaborate for Cleaner Road Freight

Valoe Corporation *and* ***TIP Group****, a Dutch company specialising in lease and rent of road freight and intermodal transport equipment in Europe and Canada, have signed a contract for integrating Valoe solar systems onto TIP's refrigerated trailers. The intention of the contract is to equip hundreds of trailers by the end of 2025. The value of the three-year-agreement is approx. 20 M€, which is subject to achieving the mutually accepted KPIs.*

DIESEL USED BY REEFERS' REFRIGERATION UNITS PRODUCES SIGNIFICANT ENVIRONMENTAL DAMAGE

Reefers' refrigeration engines are diesel-powered producing carbon dioxide (CO2), carbon monoxide (CO), hydrocarbons (HC), nitrogen oxides (NOx), particulate emissions, and, especially in urban areas, noise pollution. By replacing diesel in trailers with electricity, a significant proportion of which is generated by trailer-integrated solar panels, emissions and other negative impacts are minimised.

TIP WANTS TO LEAVE A CLEANER ENVIRONMENT FOR FUTURE GENERATIONS

As Rogier Laan, VP Sales and Marketing at TIP, explains: *"TIP is a leader in Equipment Services, with a total fleet of over 120,000 units and more than 16,000 reefers globally. We play an important role in the industry and thrive to reduce the impact on the climate. We aim to significantly reduce the CO2 emissions and diesel consumption of refrigeration units in our current fleet, also by integrating solar power systems onto the trailers. In new refrigerated trailers, we can refrain from using diesel altogether and be at the cutting edge in implementing more environmentally friendly technology in the transport sector. We are looking forward to this exciting transition towards cleaner world in close cooperation with Valoe."*

In its sustainability strategy, TIP actively promotes the transition from fossil fuels to renewable electricity in road freight. Solar energy is an essential part of TIP's electrification strategy. The cooperation with Valoe aims to reduce carbon dioxide emissions in refrigerated transport. TIP's strategy is to reduce CO2 emissions by 12 million kilograms per year. Under ideal conditions, a photovoltaic system can save 3,500 litres of diesel and consequently reduce 9,000 kilograms of CO2 emissions annually for every single trailer. Electrifying 1,000 refrigerated trailers would meet 75% of TIP's annual target.

TIP'S AND VALOE'S COLLABORATION AIMS FOR ENVIRONMENTALLY FRIENDLY REFRIGERATED TRANSPORT GLOBALLY

"Valoe endorses TIP's strong, active environmental thinking and strategy. We know that the responsibility to pass on a cleaner environment to future generations is ours and that we need to start working now," says Iikka Savisalo, CEO of Valoe. "Valoe has been developing vehicle-integrated photovoltaic systems for temperature-controlled vans and trailers for some time. Now, the required technology is ready. TIP is one of the major players in the international road freight industry. In cooperation with TIP, Valoe has the potential to achieve a breakthrough in the international market for solar-powered refrigerated trailers.

VALOE'S SOLAR MODULE TECHNOLOGY SUITS WELL ROAD FREIGHT

In a Valoe solar module, the solar electricity is derived from a module-sized conductive backsheet, not through electrical wires. Therefore, the conductive backsheet is vibration-resistant and functions even if cells are mechanically damaged by an impact or other means.

The ideal truck panel is durable, lightweight, well insulated, easy to install and replace, and made from environmentally friendly components. Electricity alone is not always an option for all transport, and in such cases diesel is needed as a backup. The PV system must be able to switch automatically from electricity to diesel. The PV system's automatic optimisation system uses the electricity in the battery first and automatically starts the diesel engine when the electricity runs out.

Valoe's truck module is protected by a very strong and lightweight chemically tempered glass or polymer. The module is mounted on an aluminium fastening and cooling element. The floating structure cools the panel and prevents heat from transferring to the goods. Thanks to the fastening mechanism, damaged modules can be replaced quickly. In addition, the Valoe module meets EU lead-free criteria pursuant to the RoHS Directive.

EXPERIMENTATION IS NEEDED TO FIND THE RIGHT ANSWERS

There are many divergent arguments about the potential for utilising solar energy in transport. Road freight, in particular, is perceived as being very diesel-intensive. However, TIP's open attitude towards new technologies and commitment to zero-emission transport is highly appreciated. We can overcome prejudices and refine our photovoltaic products to optimum performance only through practical measures. Clean transport requires action now!

About the partners:

TIP Group: Headquartered in Amsterdam, the Netherlands, TIP is one of Europe and Canada's leading equipment service providers. We specialize in lease and rent of road freight and intermodal transport equipment, services such as maintenance and repair, sale of used equipment, and other value-added services, such as digital solutions. We provide these to transportation and logistics customers from more than 130 locations spread over 18 countries in Europe and Canada. For more information, please visit our website or follow us on LinkedIn.

Valoe Oyj is a Finnish solar technology company, specialized in IBC solar cells and PV modules for vehicles and other new Odd Form module solutions. The company's headquarters is in Mikkeli and the company has a solar module factory in Finland in Juva and an IBC cell factory in Vilnius, Lithuania.

For more information:
TIP Group: Rogier Laan, Rogier.Laan@TIP-Group.com
Valoe Oyj: Iikka Savisalo, iikka.savisalo@valoe.com Tel: +358 40 5216082

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