Solar powered trucks:

Midsummer's solar cells can reduce truck fuel emissions by up to 20 percent

[Stockholm, Sweden, October 7, 2020.] Swedish solar technology leader Midsummer participates in a development project with e.g. Swedish manufacturer of commercial vehicles Scania in which Midsummer's solar panels are installed on a commercial truck trailer. The objective is to investigate how much the range can be improved on a hybrid truck using the electricity that the solar panels generate. Theoretical calculations show fuel savings of up to 20 percent. The project is partially financed by Sweden's innovation agency Vinnova.

Midsummer participates in a development project in which Midsummer's solar panels are installed on a truck trailer operating commercially in Sweden. The objective is to research how much the electricity generation from the solar panels can extend the range of a hybrid truck and ultimately both save fuel and reduce carbon dioxide emissions. Measurements will also be made whether the trailer can feed electricity into the grid when not running. Theoretical calculations by the University of Uppsala indicate fuels savings of 5-10 percent in Sweden and 10-20 percent in Malaga, Spain.

"Our technology has previously successfully powered electrical vehicles such as buses and smaller vehicles," said Sven Lindström, CEO, Midsummer. "It is promising that project calculations indicate good possibilities for actual fuel savings. Our type of flexible and thin film solar cells is necessary to drive the development in the direction that the automotive industry needs to take in order to reach global climate goals."

"We have high expectations for this project," said Eric Falkgrim, Technology Leader in Vehicle Design, Scania R&D. "Being able to power our trucks with solar energy would be a massive breakthrough for the truck industry that is working relentlessly to reduce carbon dioxide emissions."

Commercial trials will run throughout 2021. In June 2020, Sweden's innovation agency Vinnova announced that the project has received financing to the tune of SEK 8.3m (USD 0.93m) for phase 2 and that the participants also commit to financing.

The project has the following participants; Midsummer as manufacturer of the light, flexible and thin solar panels for the truck trailer; Scania as constructor of the hybrid truck, the University of Uppsala as project managers; Eksjö Maskin & Truck as constructors of the trailer; Ernst Express that will commercially operate the truck and the trailer; and Dalakraft contributing with competence and project management for safe and sustainable energy transfer.

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About Midsummer

Midsummer is a leading developer and supplier of advanced solar energy technology solutions for the production and installation of thin film solar panels. Its business offering includes equipment for cost-effective manufacturing of thin film solar cells as well as building-integrated photovoltaic (BIPV) solutions. Midsummer's production process for thin film solar cells has a minimal carbon footprint compared to other production processes for solar modules. Midsummer's DUO system has taken the position as the most widespread manufacturing tool for flexible CIGS solar cells in the world.

Midsummer develops and markets solar panels directly to end customers from its own production and via contract manufacturers. The <u>Midsummer Solar Roofs</u> product range <u>Midsummer SLIM</u>, <u>Midsummer WAVE</u> and <u>Midsummer BOLD</u> offers customers light, thin and flexible solar panels that result in attractive solar roofs.

Midsummer's technology is based on a rapid process for the production of durable, flexible CIGS solar cells using sputtering of all layers of the solar cell in a sealed vacuum chain. The Company's share (MIDS) is traded on Nasdaq First North Growth Market with G & W Fondkommission as Certified Adviser, phone: +46 (0)8-503 000 50, email: ca@gwkapital.se. For more information, please visit: midsummer.se