

Belgian frozen food delivery SME looking for technical solutions for (1) last-mile delivery of frozen products and (2) battery or thermal storage for PV-produced energy

Summary

Profile type

Technology request

Company's country

Belgium

POD reference

TRBE20230524002

Profile status

PUBLISHED

Type of partnership

**Commercial agreement with
technical assistance****Investment agreement****Research and development
cooperation agreement**

Targeted countries

• World

Contact Person

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Term of validity

24 May 2023**23 May 2024**

Last update

24 May 2023

General Information

Short summary

The Belgian SME specialised in delivery of frozen food is looking for:

1. Partners for the identification and adaptation to the niche refrigerated market of electric moped-cargo in an urban last-mile delivery context
2. Partners to identify, adapt and install a battery, or thermal storage solution, to store surplus produced each day by the PV panels of the warehouse

Full description

The Belgian SME is specialised in delivery of frozen food, tailoring its solutions to its clients and products. Its existing fleet is composed of 11 trucks, covering 30,000 deliveries per year for products guaranteed to remain below -22°C until the point of sale. In addition, the roof of the SME's warehouse is covered with 1,000 photovoltaic panels allowing self-consumption of the site up to 50%. The warehouse is continuously kept at very low temperatures to protect the products, which produces excess cold (mist / ice / frost) on-site, which is not currently re-used.

The company is therefore looking for partners to work together on possibly inter-linked technical solutions for its 2 main challenges listed below:

1. Short-term challenge: Partners for the identification and adaptation to the niche refrigerated market (-22°C) of electric moped-cargo (or other green mobility solutions) less than 1 meter wide that can move 300-500kg of goods in

an urban last-mile delivery context

2. Medium-term challenge: Partners to identify, adapt and install a battery, or thermal storage solution, to store in a short cycle (no more than 6-8 hours) the 100 MW of surplus produced each day by the PV panels of the warehouse and reinject them into the loading of cold trucks, in a financially advantageous way (possibly as a demonstrator / pilot for the battery as part of an R&D project, incl. Horizon Europe)

Advantages and innovations

Technical specification or expertise sought

In all cases, the products delivered by the Belgian company have to remain below -22°C. This requires energy in the delivery vehicle (mostly trucks currently, especially for long distance), which in turn has a weight. For the 1st (short-term) technical challenge: the Belgian SME has not yet found a solution for urban last-mile delivery for frozen foods on the model of what exists for refrigerated food / drinks. The partner here would bring an expertise in how to adapt these existing solutions (such as e-moped used to deliver refrigerated products, or other green mobility solutions) to the frozen products delivery specifications (being able to move 300-500kg of goods) in an urban context (less than 1 meter wide vehicles).

For the 2nd medium-term technical challenge, the expertise sought would be focused on optimising the energy used and produced on-site in and by the warehouse rather than the vehicles during their delivery activities. Regarding this technical challenge, the PV panels are already operational but the energy produced is not currently stored and therefore does not lead to its optimal use. Partners sought would have the expertise to identify, adapt and install a battery or thermal storage solution, to store in a short cycle (no more than 6-8 hours) the 100 MW of surplus produced each day by the PV panels of the warehouse and reinject them into the loading of cold trucks, in a financially advantageous way (possibly as a demonstrator / pilot for the battery as part of an R&D project, incl. Horizon Europe).

Stage of development

Sustainable Development goals

• **Not relevant**

IPR Status

Partner Sought

Expected role of the partner

Companies of all sizes and from all countries are welcome to bring their technical expertise to work together with the Belgian SME to develop solutions to one or more technical challenges described. R&D centres, especially focused on energy / e-mobility, are also welcome to get in touch.

Type of partnership

Type and size of the partner

Commercial agreement with technical assistance

Investment agreement

Research and development cooperation agreement

- **Big company**
- **SME 11-49**
- **R&D Institution**
- **SME 50 - 249**
- **Other**
- **SME <=10**
- **University**

Dissemination

Technology keywords

- **02010003 - System and transportation**
- **02009002 - Hybrid and Electric Vehicles**
- **02009001 - Design of Vehicles**
- **04001003 - Storage of electricity, batteries**
- **04005005 - Solar/Thermal energy**

Targeted countries

- **World**

Market keywords

- **06008 - Energy Storage**
- **06011 - Energy for Transport**
- **06003001 - Solar/thermal energy**
- **09001002 - Trucking**

Sector groups involved

- **Mobility - Transport - Automotive**