Greenet

The network of Horizon Europe Cluster 5 National Contact Point.





Smart charging & depot management for electrified commercial fleets

Fenexity – TU Darmstadt start-up × IRM, Energy Systems Group

Entity profile · GREENET Brokerage Event · 19 November 2026

The GREENET project has received funding from the EU Horizon Europe programme under Grant Agreement No 101069604

Fenexity

Reliable Depot Charging

Who we are

- Start-up (SME), Darmstadt, Germany
- Spin-off of the IRM Energy Systems Group – in close, ongoing collaboration
- Serving operators of e-bus and e-truck fleets and their depots

fenexity.com

Charging management

Monitor and control chargers, alarms and analytics in one interface

Load management

Decides which vehicle charges when – within grid limits, at low prices

Depot optimisation

Modelling for infrastructure sizing and TCO decisions

Reliability

Charger faults and OCPP diagnostics in one operational workflow

Value for depot operators

- Fleet ready on time, every day
- Low energy costs without complex EMS
- Transparent, controllable charging decisions

Role in potential projects

Deploy and adapt our charging platform at demo depots, integrate PV, storage and EMS – and develop depot hardware with the consortium.

Greenet

TU Darmstadt

Institute for Robotic Systems in Mechanical Engineering

Who we are

- Public university, Darmstadt, Germany
- Prof. Debora Clever
  Prof. Stephan Rinderknecht
- Energy Systems Group, TU profile area “Energy Systems of the Future”
- Network with utilities, public transport and industry

maschinenbau.tu-darmstadt.de/irm

Partner institute: FAS

FAS-Logo

Vehicle Propulsion Systems (Prof. Andreas Viehmann): electric drivetrains, battery ageing and thermal management – with test benches.

1 **Smart grids & sector integration**
Coupling e-mobility, PV, storage and the grid

2 **Model-based & AI methods**
Optimisation, control and machine learning for energy systems

Project experience

STEPS (Interreg NWE, 2021–23) energy storage
GEMS (Interreg NWE, 2025–27) energy management systems
DELTA (Federal Ministry, 2021–26) data infrastructure at an e-bus depot
KI4ETA (Federal Ministry) hybrid storage, bidirectional charging (V2X)
StoLaNKI (Hessian Ministry, 2025–27) charging management for e-fleets

Role in potential projects

Research partner for charging & energy-management methods (forecasting, optimisation, simulation, KPIs) – from task contributions up to scientific lead.

What we deliver together

One team from research to operation: charging and depot management for electric fleets.

1 Plan	2 Integrate	3 Operate	4 Evaluate
▸ Depot, charger & grid connection sizing ▸ PV, storage dimensioning, TCO	▸ Charger connection, e.g. via OCPP ▸ Connected to fleet & energy management systems	▸ Charging plans based on timetables and live data ▸ Load & price optimisation	▸ Transparent KPIs: availability, cost, CO_2 ▸ Depot simulation & scale-up

Grid-aware
Charging within grid-connection limits and at low energy prices

Open interfaces
OCPP connects chargers from different manufacturers

Research-based
Methods validated in national and EU research projects

Relevant CL5 2027 topics

D5-04 Zero-emission coaches & buses in long-distance operation · **D5-05** MCS-compatible modular powertrain for heavy-duty vehicles
D3-17 PV-based electrification of the economy · **D3-26** Advanced distribution management systems

Cooperation with existing and new consortia

Our role: partner for charging and depot management, contributing to or leading a work package.

Existing consortia

We can contribute to proposals on:

- Zero-emission bus and truck demonstrators
- PV, storage and microgrid projects with e-fleets
- Grid flexibility and distribution grids
- Electrification of logistics hubs and depots

New consortia

We are looking for partners such as:

- Bus, truck and logistics fleet operators
- Vehicle and charger manufacturers
- DSOs, energy suppliers and aggregators
- Microgrid, PV and storage integrators

Contact us

Dr.-Ing. Thomas Franzelin

Fenexity & TU Darmstadt – IRM, Energy Systems Group

thomas.franzelin@tu-darmstadt.de

fenexity.com · maschinenbau.tu-darmstadt.de/irm

Meet us at the bilateral meetings – 19 November, 17:00–19:00