Battery Swap for Electric Trucks
The fast & flexible electrification of fleets

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Road freight causes **220m tons of CO_2** per year in Europe

Costs for operating Diesel trucks have increased dramatically with **new road toll**

eTrucks start to have **TCO advantage** over Diesel trucks

So, what is **stopping the electrification** of road transportation?

TOP 3 issues blocking the electrification

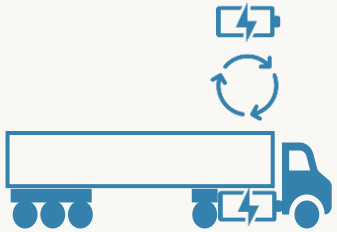
Grid connections are the bottleneck to building public and industrial charging sites and **grid connection projects can take >5 years**

Because of the batteries, eTrucks are about **2 times as expensive** as equivalent Diesel trucks

eTrucks require **very long charging times**, so recharging must coincide with driver break times

The battery swap concept overcomes these challenges – and comes with further benefits

Charging batteries at a swap station allows **24/7** use of grid connection and direct feed-in from PV, **reducing** grid connection requirements by up to **80%**



By decoupling the battery from the truck, **Battery-as-a-Service (BaaS)** will be introduced, bringing the purchase price of eTrucks to the **same level** as Diesel trucks

A battery swap can be done in **5 minutes** and thus swaps can be done at **any time**, no need to match booked time slots or match with driver brakes

It is not just a theory - our first station has been live and operating for 1 year

Expandable
of batteries based on customers served, truck & semi tractor compatibility

Grid Services
battery-to-battery charging, peak shaving, station-to-grid services and direct feed-in

Network approach
control center managing a network of stations incl. remote access

Operating
24/7

Battery swap
5-10 min

Fully
autonomous

Capacity
>50 trucks/day

Grid connection
1,000 kW

Swap stations help electrification of road transport while also providing grid services

Use Case 1

CT-Terminals and Logistics Hubs

Battery swap stations can be located at or in proximity to logistics hubs as dedicated infrastructure for one or several freight forwarders

Use Case 2

Highways

Establishment of a network of charging stations adjacent to highways & Autobahn will facilitate daytime charging and long-distance transportation

Additional Value

Grid Services

Swap stations will provide grid services (peak shaving, bi-directional station-to-grid services) while reducing energy costs (direct feed-in, no peak-demand surcharges)

Contacts

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