GREENBOX MOBILE ENERGY

WE MANAGE THE ENERGY CLOUD

COMPANY PRESENTATION, Status: 6/2023

GREENBOX MOBILE ENERGY
SUMMARY

MARKET AND OPPORTUNITY

- **65 million Electric Cars** on European roads by 2030 will need to be supplied with energy
- The **Grid-Based Infrastructure will not be able to supply** this demand
- GME is creating a competitive decentralized **OFF-GRID Alternative,** where the customer needs it

BUSINESS MODEL

- **Energy as a Service** (El. Energy) starting with the Mobility Market
- Demand-driven **PoS location scouting and permanent asset optimization**
- **Direct Purchase** of Renewable Energy at dedicated sources

IP AND USP

- **AI based Operating Software** for Asset and Service Optimization
- **Standardized Packaging** for Storage and Dispensing Systems
- **Efficient logistics**: Easy, quick and safe dispatching of dedicated GME energy Assets

THE CURRENT ENERGY-MARKET
THE PROBLEMS WE SOLVE


Steil, Steiler, Strombedarf

Vorsichtigen Schätzungen zufolge dürften 2030 rund 65 Millionen Elektrofahrzeuge auf den europäischen Straßen unterwegs sein. Um diesen massiven Anstieg von Stromern bewerkstelligen zu können, werden auf dem gesamten Kontinent rund 34 Millionen Ladepunkte benötigt. Dadurch dürfte auch der Strombedarf massiv ansteigen, vermutet werden etwa 200 Terawattstunden für die Betankung von E-Autos. Im Jahr 2021 lag dieser Wert bei lediglich 30 TWh.

Around 65 million electric vehicles will be on European roads by 2030.


LADESTATIONEN

Trafostationen werden zum größten Hindernis für den Ladesäulenausbau

Für Schnellladestationen werden Abertausende Transformatoren benötigt. Doch weil die Bauteile fehlen, drohen die ehrgeizigen Ausbauziele zu scheitern.

Transformer stations are becoming the biggest obstacle to the expansion of charging stations

The gas grid can currently only provide *grey hydrogen*

- **65 million electric cars** on European roads in **2030** will need to be supplied with energy
- EV Drivers want to minimize the recharging time: **DC charging** and **H2 refueling** are existing options
- **The current grid-based infrastructure is not able to supply this demand!**

OUR OPERATING MODEL
MOBILE ENERGY AS A SERVICE

ENERGY CREATION HUB

Access to competitive
local renewable energy

E

INFRASTRUCTURE OPERATION

POINT OF SALE (B2C, B2B)

- Retail parking
- Gas stations
- Fleet hubs
- Residential parking
- Remote locations
- Cities & communities

E as a service
delivered to our customers

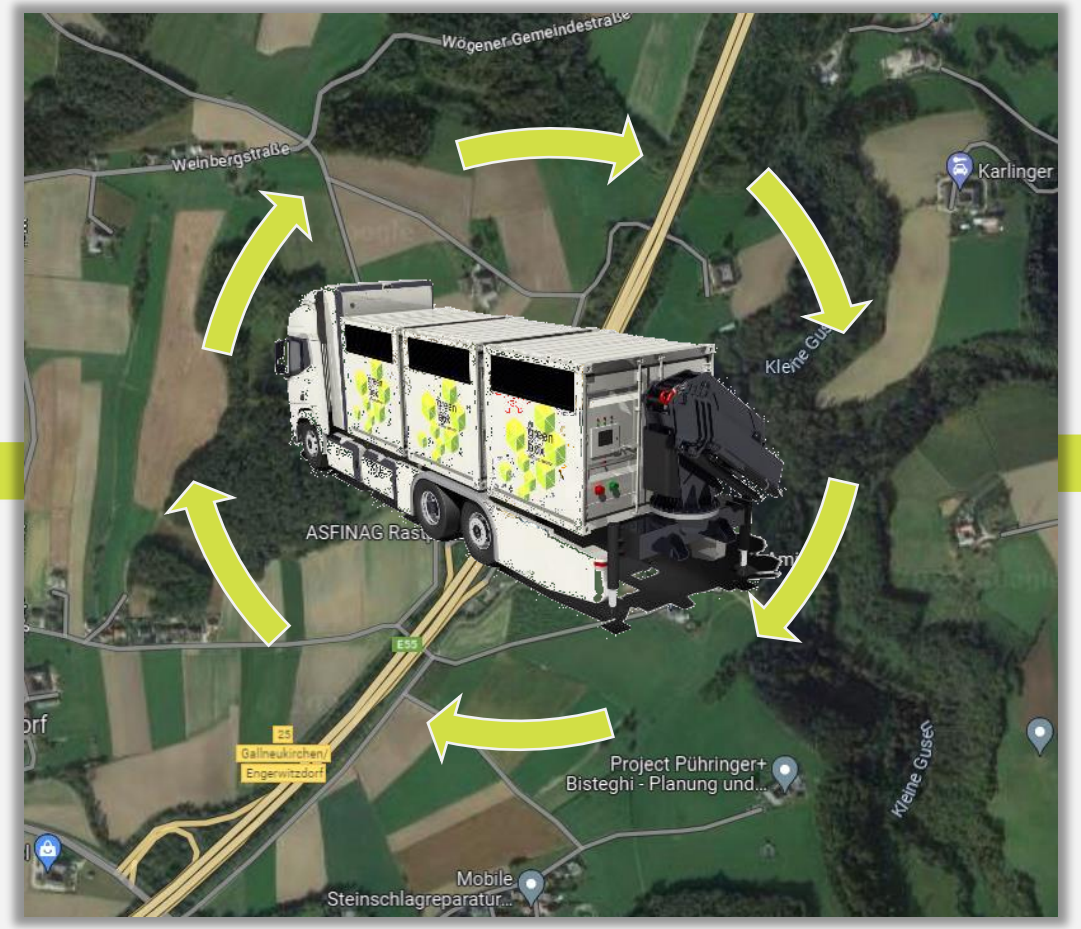
GREENBOX MOBILE ENERGY
PILOT PROJECT - Q4/2023

Off-Grid-Charging Einrichtung

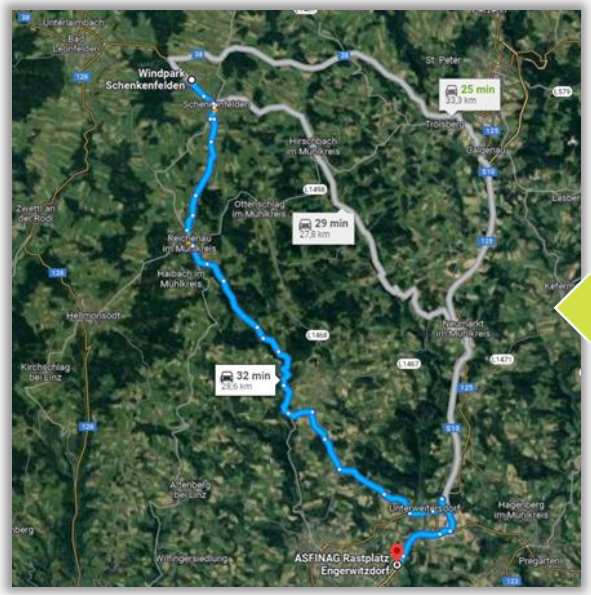
POINT OF SALE
ASFINAG Rastplatz Engerwitzdorf

GREENBOX MOBILE ENERGY
PILOT PROJECT - Q4/2023

INFRASTRUCTURE OPERATION

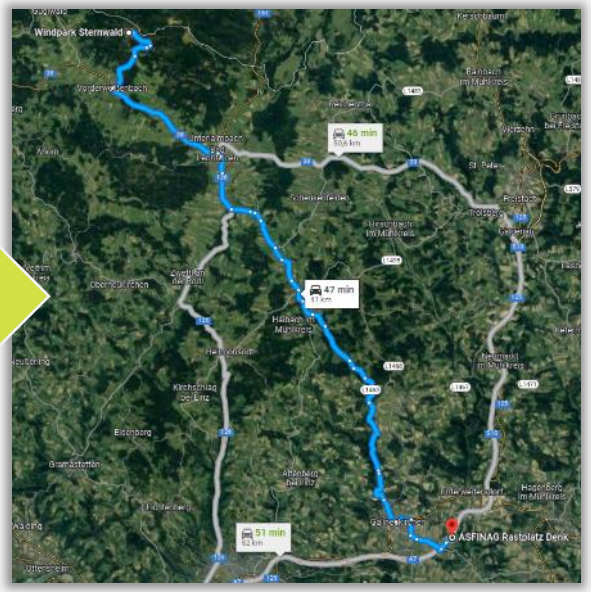


ENERGY CREATION HUB
Wind Parks



Windpark Schenkenfelden
(30km Entfernung – 1.2 MW)

ENERGY CREATION HUB
Wind Parks



Windpark Sternwald
(40km Entfernung – 20 MW)

LOGISTICS AT THE PV-FARM

- Flexible **Energy Storage Solutions** directly located at solar-or wind parks
- **Off-grid** or On-grid utilization
- Maximum availability for all **ESS business models** such as peak shaving, load shift, etc.

THE GME KEY SYSTEM ELEMENTS

ACCESS TO
renewable energy

GME OPERATING SW

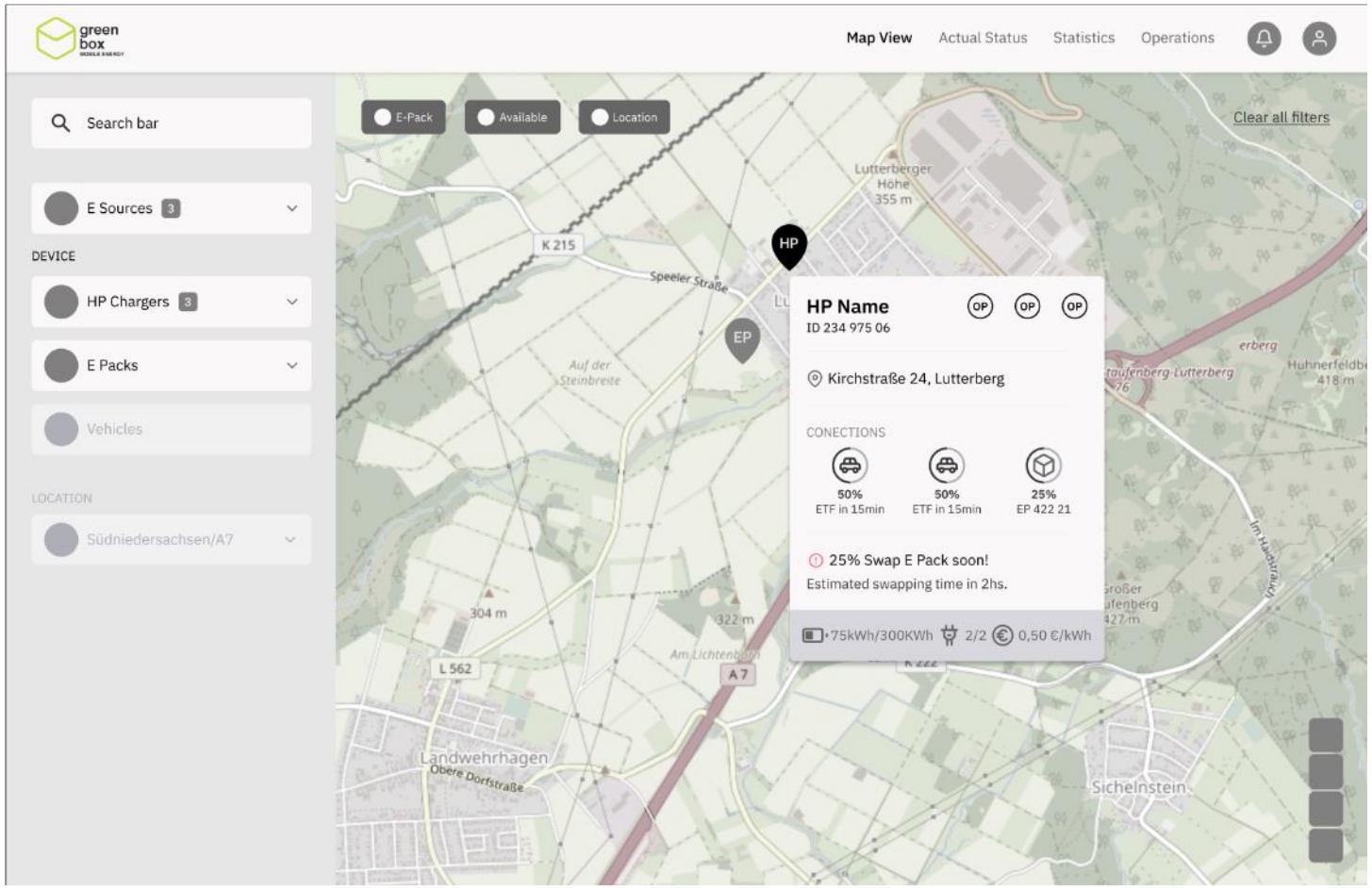
Standardized Storage
- Battery

Energy Dispensers
- DC Hyperchargers

Greenbox Fleet Vehicles

Access to "Prime Real Estate"
- Retail parking
- Gas stations
- Fleet hubs
- Residential parking

THE GME ECOSYSTEM
OPERATOR VIEW



Overview of current system **status**, activity **history** and **forecast**

Optimization of system **availability** and **productivity**

Intuitive **supervision** and **control** of the GME system objects

HYPERCHARGING

WITH GREENBOX MOBILE ENERGY

GREENBOX MOBILE ENERGY

HYPERCHARGER AND EACCU 400kWh

DATA HYPERCHARGER	
POWER	150-400 kW
ENERGY	-
PRODUCT	DC High Power Charger
PRICE MODEL	0,49 € / kWh

DATA EACCU 400 kWh	
POWER	400 kW
ENERGY	400 kWh
PRODUCT	electrical energy
PRICE MODEL	-

GME EV CHARGING TECHNOLOGY

- We integrate all available high-power Chargers in our pack-system
- Industry standard HMI for customers including pay systems (card, credit card)
- HPC DC charging cable (fluid cooled):

GREENBOX MOBILE ENERGY
LOGISTICS SOLUTIONS

- **Step 1:** Outsourced fleet, ideally electric Vehicles operated by contracted logistic service providers
- **Step 2:** GME specialized fleet of B EV and FC EV customized to handle the dispatching and swapping of the GME containers

GREENBOX MOBILE ENERGY
EACCUS

In total, we offer three different versions of our EACCUs. The **EACCU 2,2MWh**, **EACCU 1MWh**, and the **EACCU 400kWh** (our mobile version).

GME PILOT
COMPONENTS

HARDWARE

- **ONSITE:** 2 hyperchargers at Point of Sale
- **MOBILE:** 3 Battery Storage Packs (moved between PoS and Energy Source)
- **SOURCING: SCU** serial standardized products
- **DIFFERENCE:** No connection to the electricity grid needed

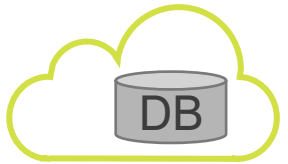
SOFTWARE + MIDDLEWARE

GME Operator Dashboard

Frontend

Data Management

Backend



Database

Cloud

4G IoT

4G Simcards

- **IN-HOUSE DEVELOPMENT:** Software (Front + Backend)
- **OUTSOURCED**: Middleware (IoT + Cloud)
- **GME OPERATOR SOFTWARE** (Pilot Version): Working Test Version
- **GME OPERATOR SOFTWARE** (2nd Version): Logistics Automation and Optimization

MEGAWATTCHARGING

WITH GREENBOX MOBILE ENERGY

GREENBOX MOBILE ENERGY
MCS – MEGAWATT CHARGING SYSTEM

Together with our **H2ACCU C745**, **PANTHER 1MW**, and our **MCS-Charger**, we can make it possible to charge, especially heavy-duty trucks.

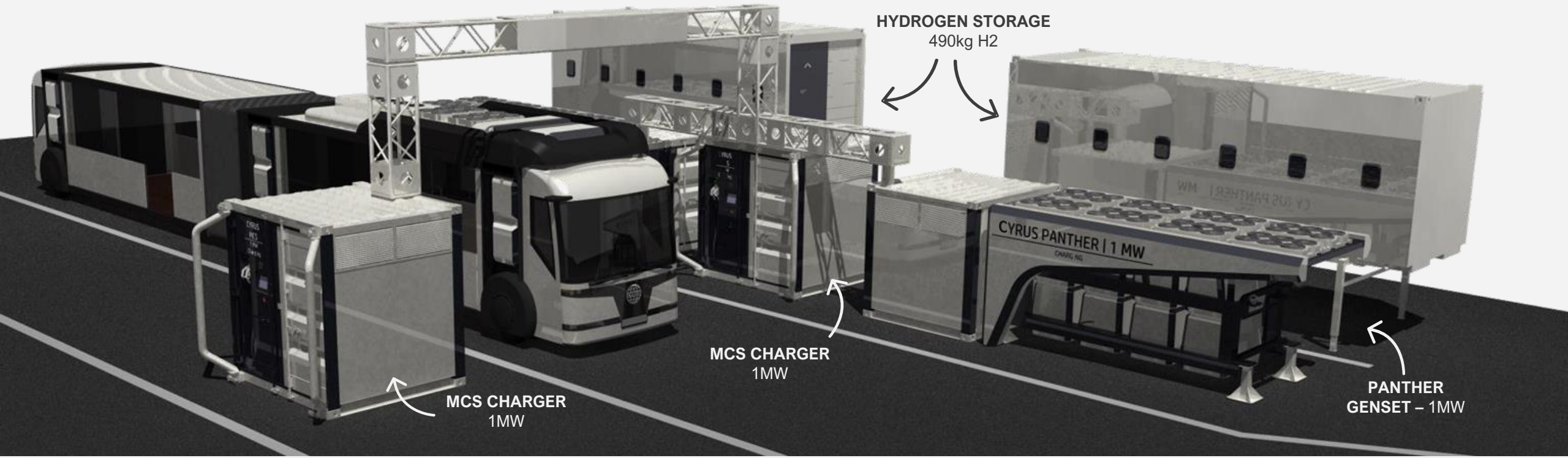
But how does megawatt charging work?

GREENBOX MOBILE ENERGY
THE MCS-STATION

MCS Charger– 1MW
(charging 500 kWh
in half an hour)

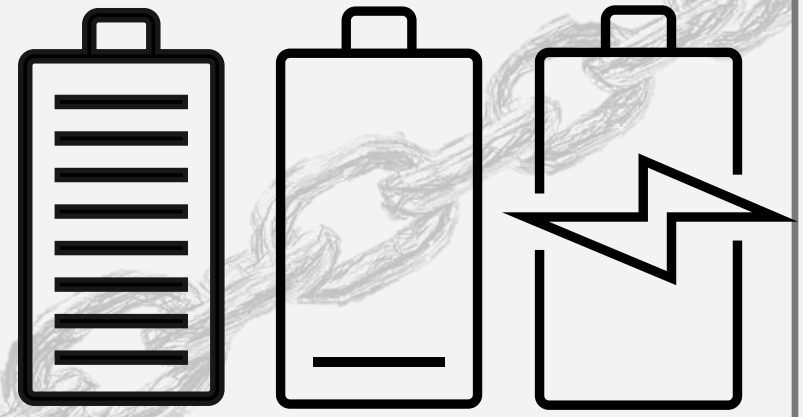
Hydrogen to Electric
Energy with the **GenSet**
Panther – 1MW

Hydrogen Storage
(Swap Container
with 490 kg H2)



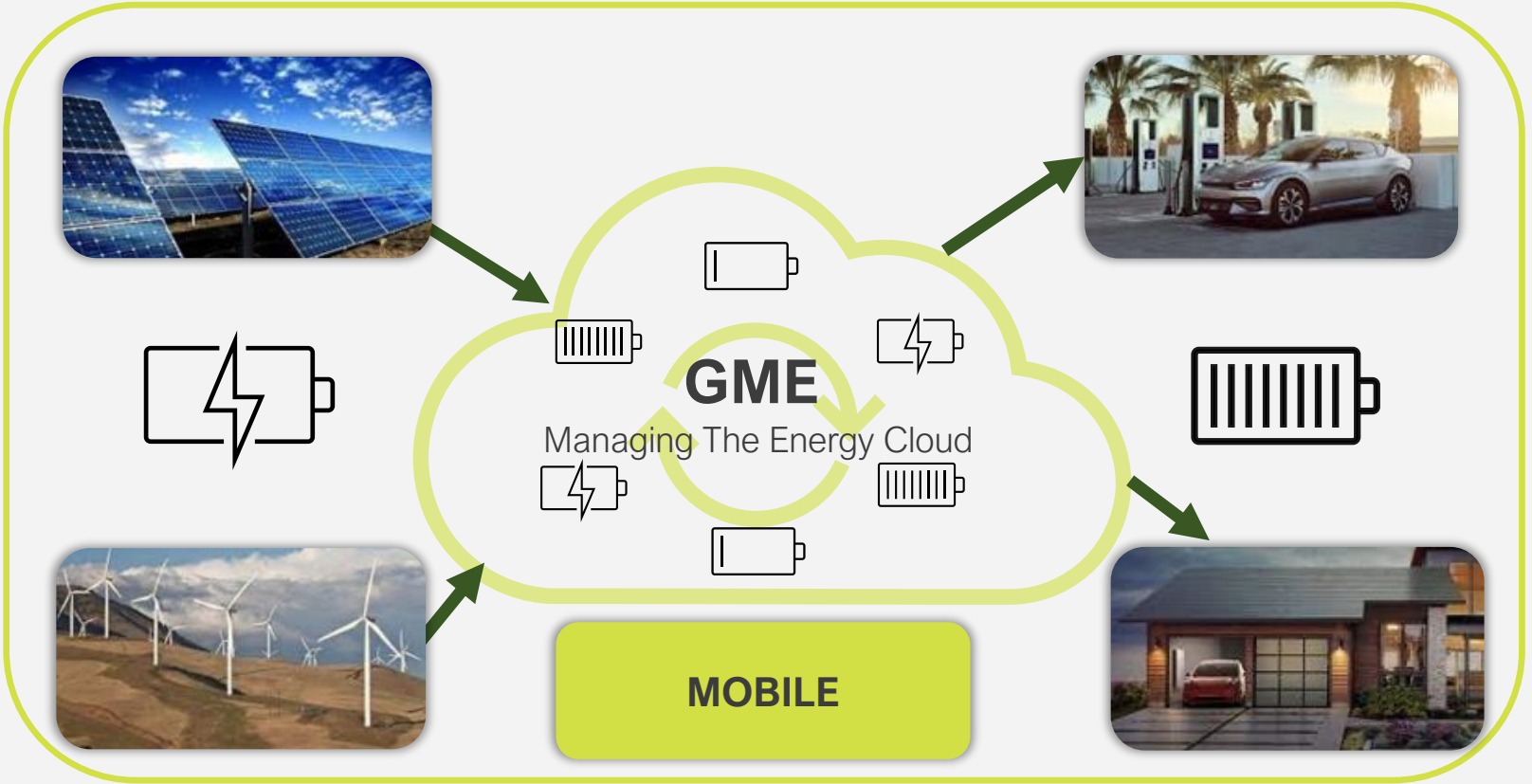
THE GME BIG PICTURE

TRADITIONAL VIEW:
800MWh Battery Capacity



STATIONARY

(at 1000 GME EV CHARGING STATIONS)



GME DISTRIBUTED ENERGY STORAGE MANAGEMENT

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