



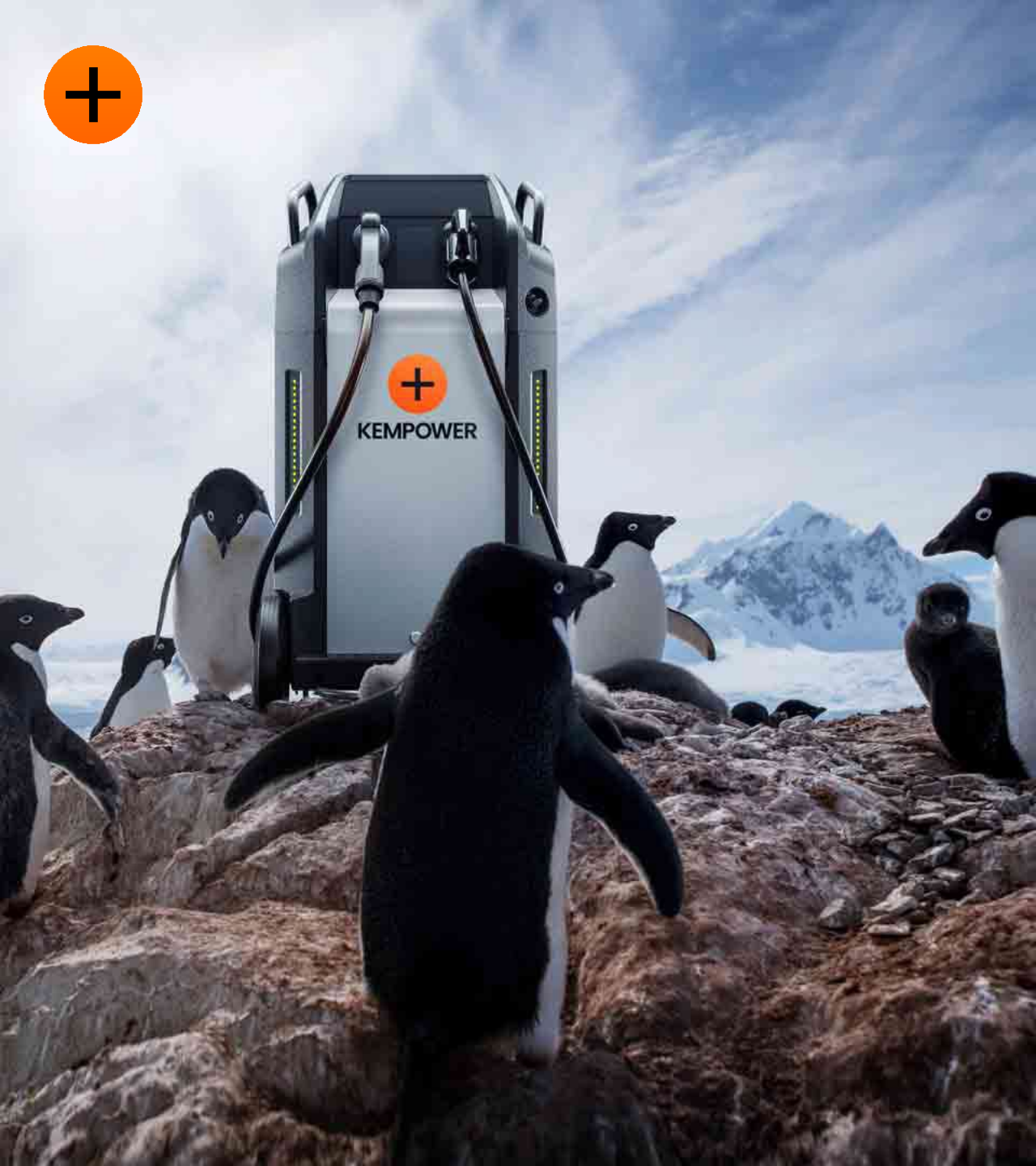
Kempower

"Nu handlar det om laddinfrastruktur" 2023-04-19

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Henrik Holmér

- Försäljnings- och projektansvarig för laddlösningar hos ABB (2009-2019)
- Försäljningsansvarig export och större e-mobilityprojekt hos CTEK (2019-2020)
- Försäljningschef, VD och Ägare i Laddalliansen Nordic AB (2020-2021)
- Försäljningschef hos Wennstrom Fuel Systems AB (2021-2022)
- Försäljningschef (Sverige) hos Kempower OY (2022-)



Kempower in a nutshell

Finnish electric vehicle fast charging equipment manufacturer

- Power range: 40 kW – 4 MW+ (no absolute limit)
- Suitable for all electric vehicle types, like electric cars, buses, boats, and machines
- Listed in Nasdaq First North Growth Market since December 2021

New company with a strong history

- Charging business as own company since 2017
- 70 years of experience on DC-power sources (Kemppi Group)

Production and head office in Lahti, Finland

- 2 factories with ~12 500 m² production space
- R&D Center in Tampere University and office in Helsinki
- Subsidiaries in Germany, Netherlands, Norway, Spain, France, Italy, Sweden and the UK





- Regional sales organizations
- Global key account managers
- Partner network



Kempower customer groups

Bus and truck operators



En-route & overnight charging



Device manufacturer and system supplier

Original equipment manufacturers (OEM)



Various locations



Device manufacturer and component subcontractor

Retail chains



Parking spaces by, e.g. department & grocery stores, hotels, restaurants etc.



Device manufacturer and system supplier

Charge point operators (CPO)



Publicly available charging network



Device manufacturer



Charger location



Kempower desired positions



Globally managed



Locally managed

Distributor and installer networks



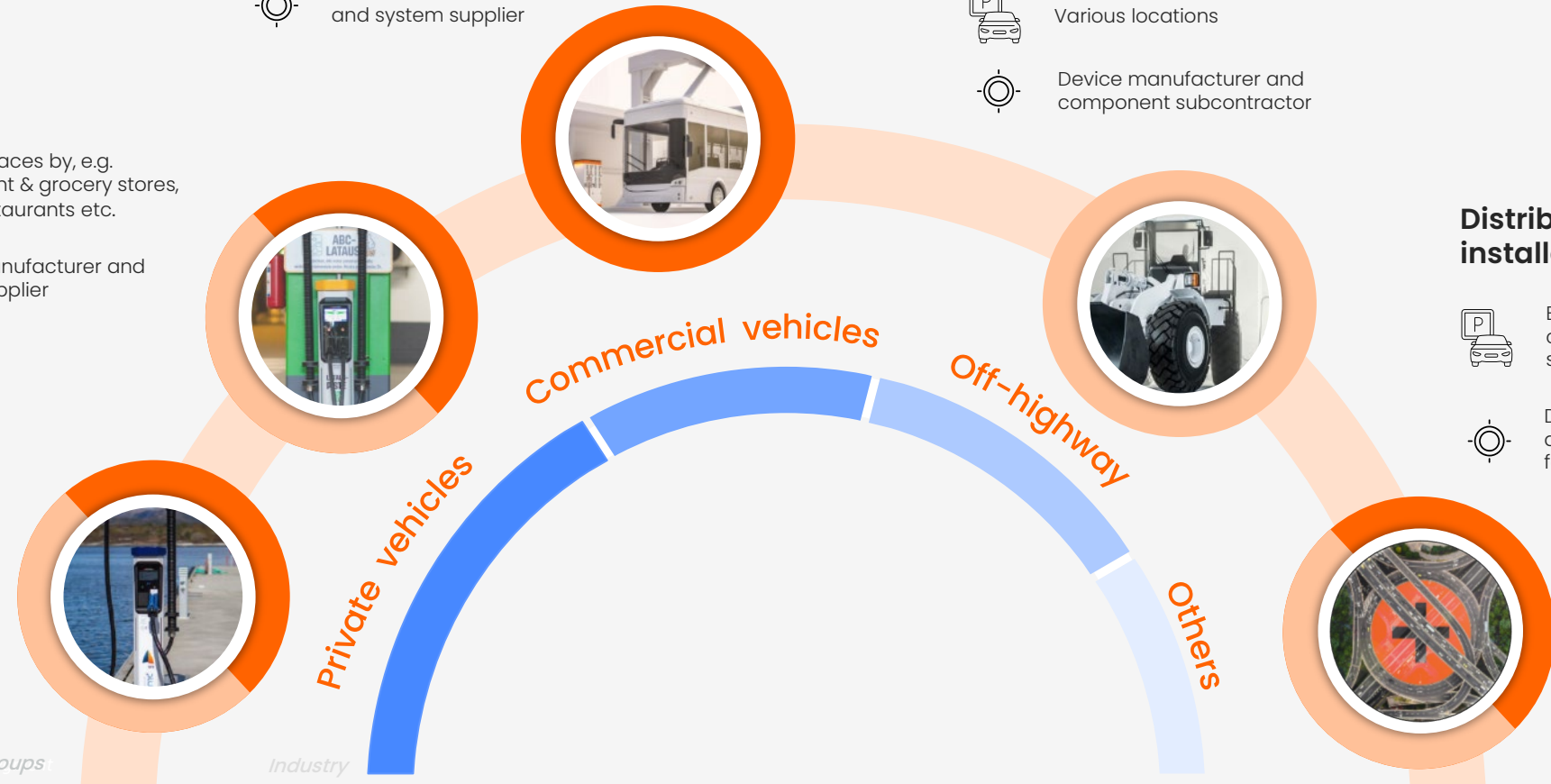
Business site parking lots, e.g. car dealers, car repairs and small stores



Device manufacturer with distribution network utilized for sales

Customer groups

Industry





Modular, scalable, dynamic and user-friendly EV fast charging solutions



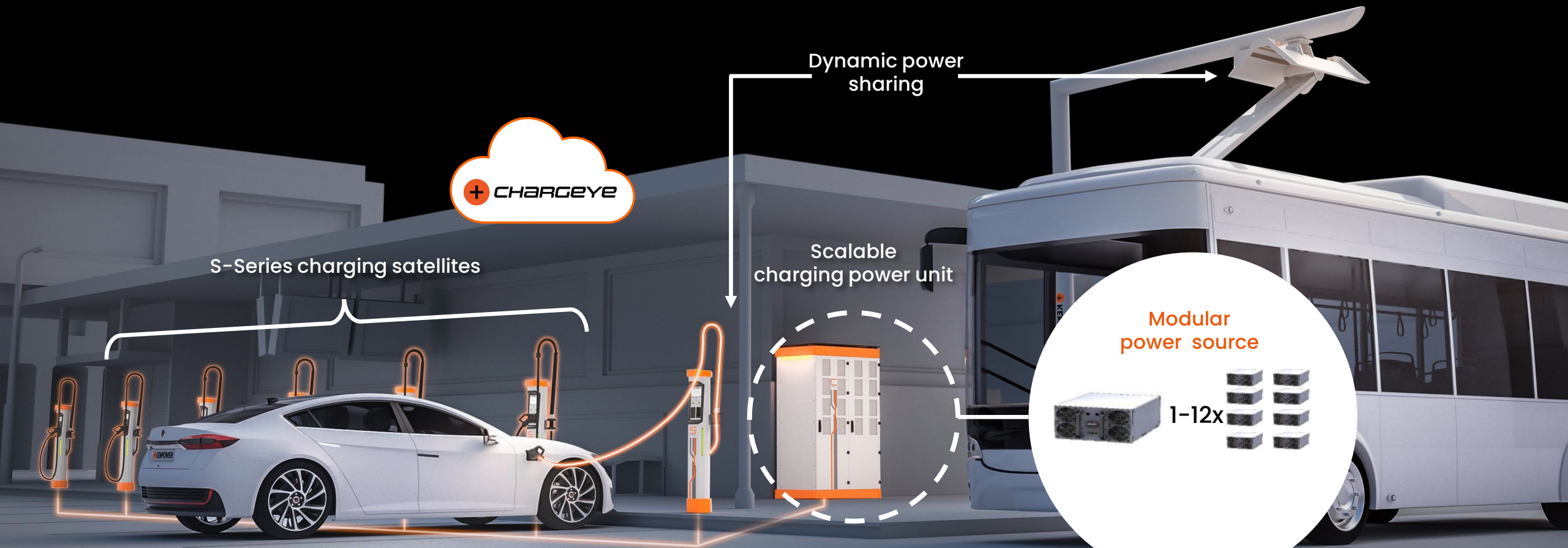
S-Series charging satellites

Dynamic power
sharing

Scalable
charging power unit

Pantographs

Modular
power source





Our products and services



Connectivity Services





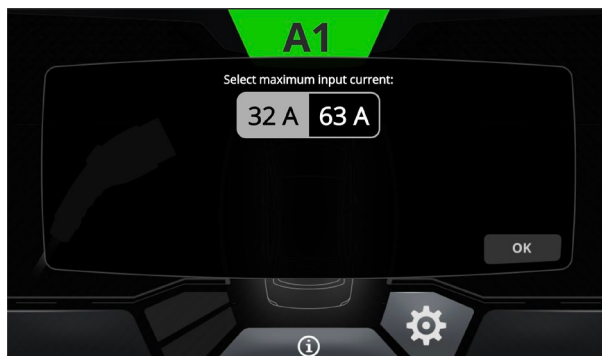
Movable charger



Movable

charger

4/24/2023



1. 7" touch screen display
2. RFID reader (ISO14443A)
3. Charging plugs and holders
4. Charging status indication LEDs
5. Removable wheels
6. Mounting pad





Movable Charger



- Laddaren kopplas direkt på ett industridon som klarar 63A alternativt 32A (Snabb installation)
- Förmonterad 3-fas kabel som klarar effekter upp till 400V, 63A, komplett monterad med uttagsdon av högsta kvalitet.
- Godkänd för utomhusbruk enligt skyddsklass IP44
- 40kW laddning (63A), 20kW laddning (32A)
- Laddaren klarar drivlinor från 150–500VDC (Personbilar)
- Laddaren klarar drivlinor från 500–800VDC (Tunga fordon)
- En eller två laddpunkter (Kablar)
- Remotuppkoppling via molnet
- Tydligt användargränssnitt (7" touch screen)

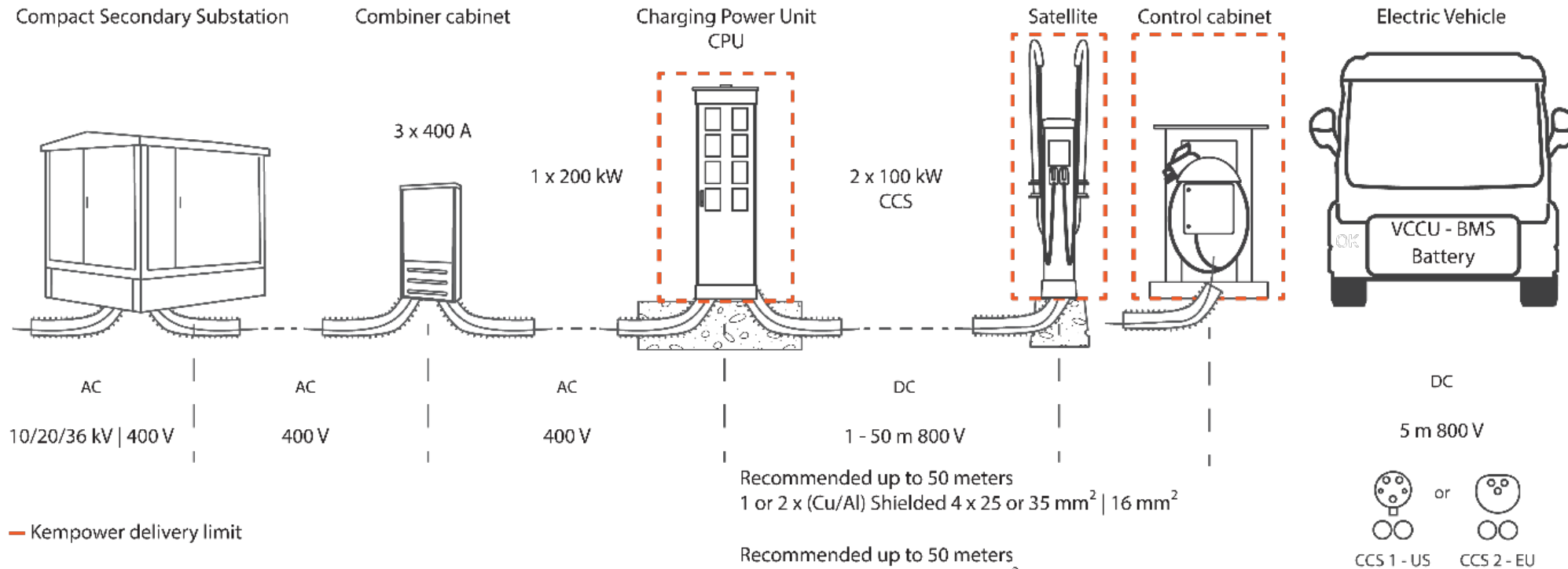




Power Units and Satellite posts



SLD(Single Line Diagram)Power Unit to Satellite post

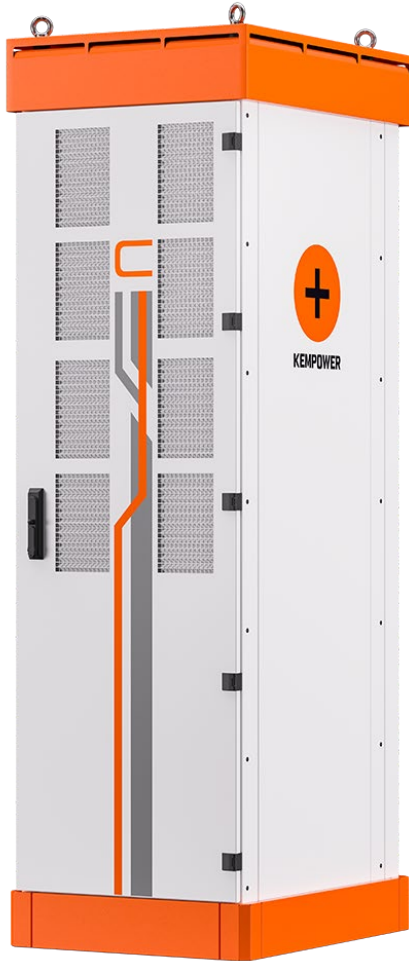


NOTICE!

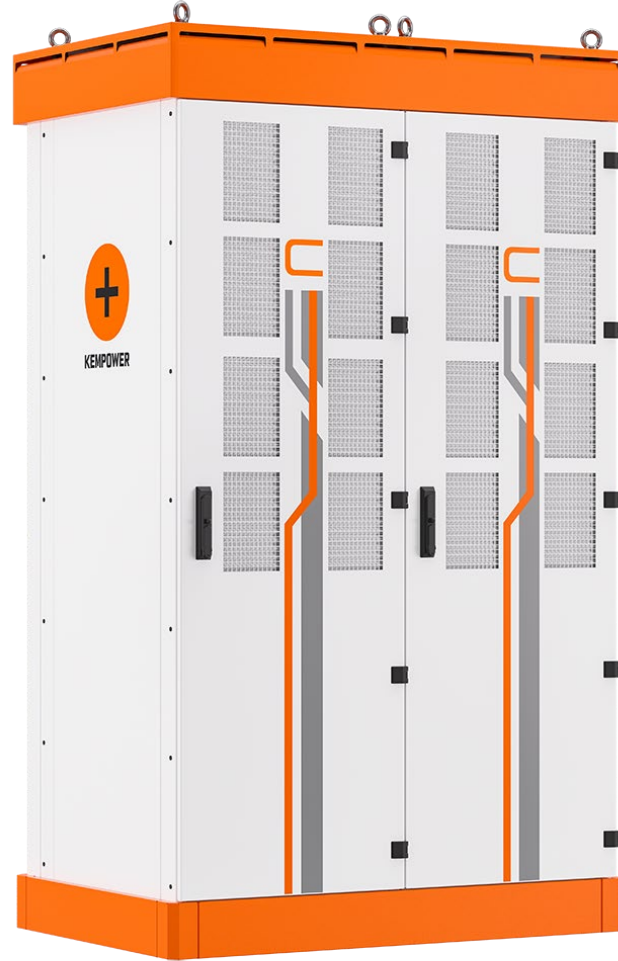
Cable sizing according to local installation rules depending on each site and system configuration



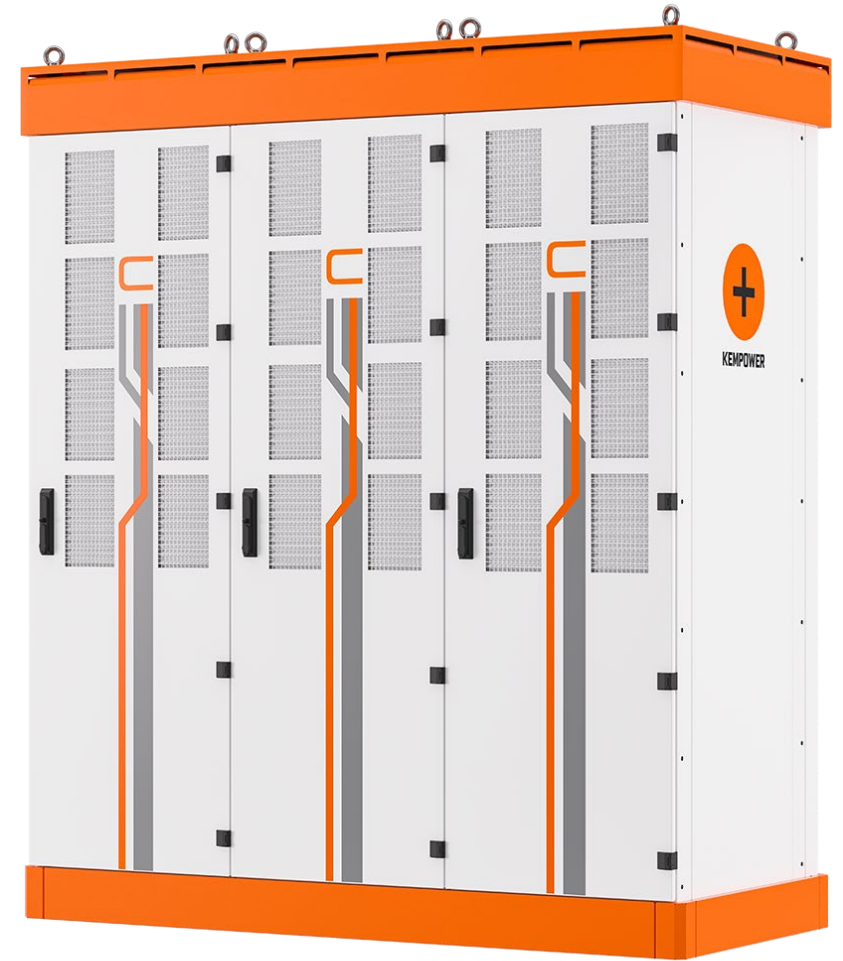
Charging Power Unit Cabinets



C501/C801 200kW



C502/C802 400kW



C503/C803 600 kW



Satellite post





Variants



CCS



2 x CCS



CHAdeMO & CCS



DC satellite 500A

Q3/23

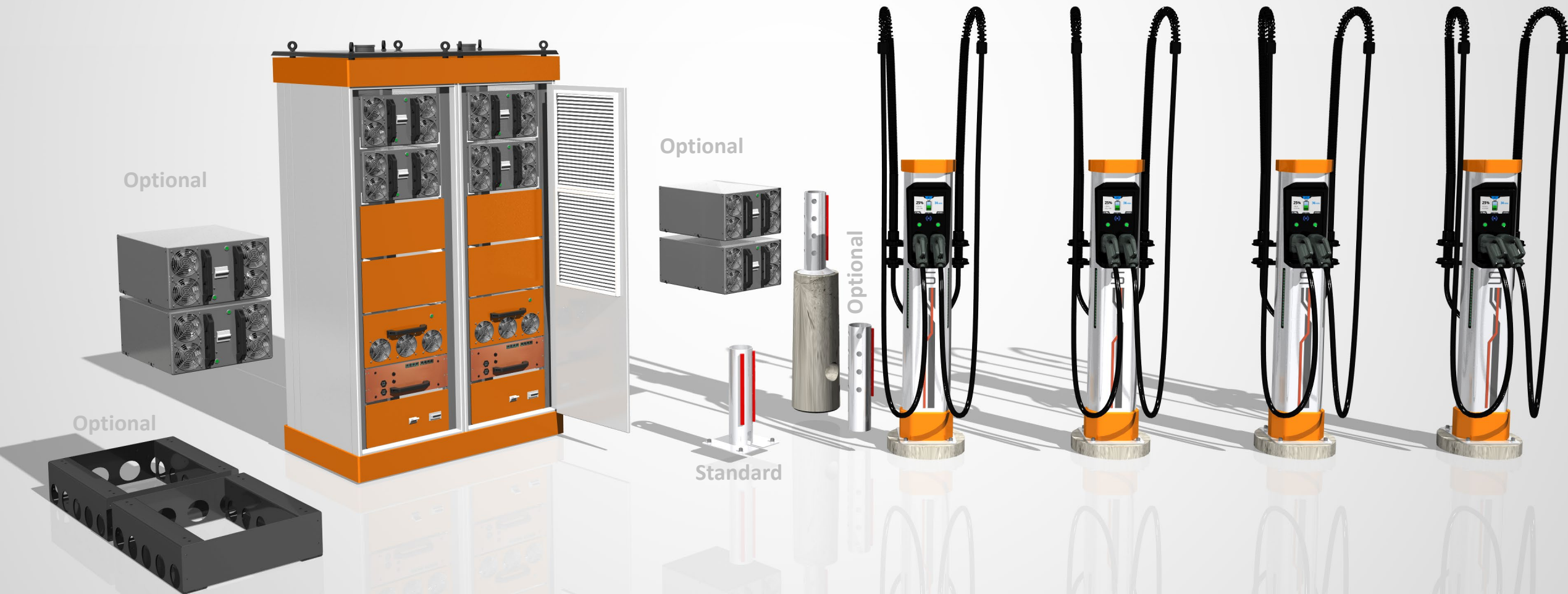


Notice!
Liquid cooled
Single charging plug
Up to 350 kW charging power



Advanced satellite charging system 200 kW

Dynamic 8 x 25 kW ... 2 x 100 kW





Advanced satellite charging system 400 kW

Dynamic 8 x 25 kW ... 2 x 150 kW





Advanced satellite charging sets



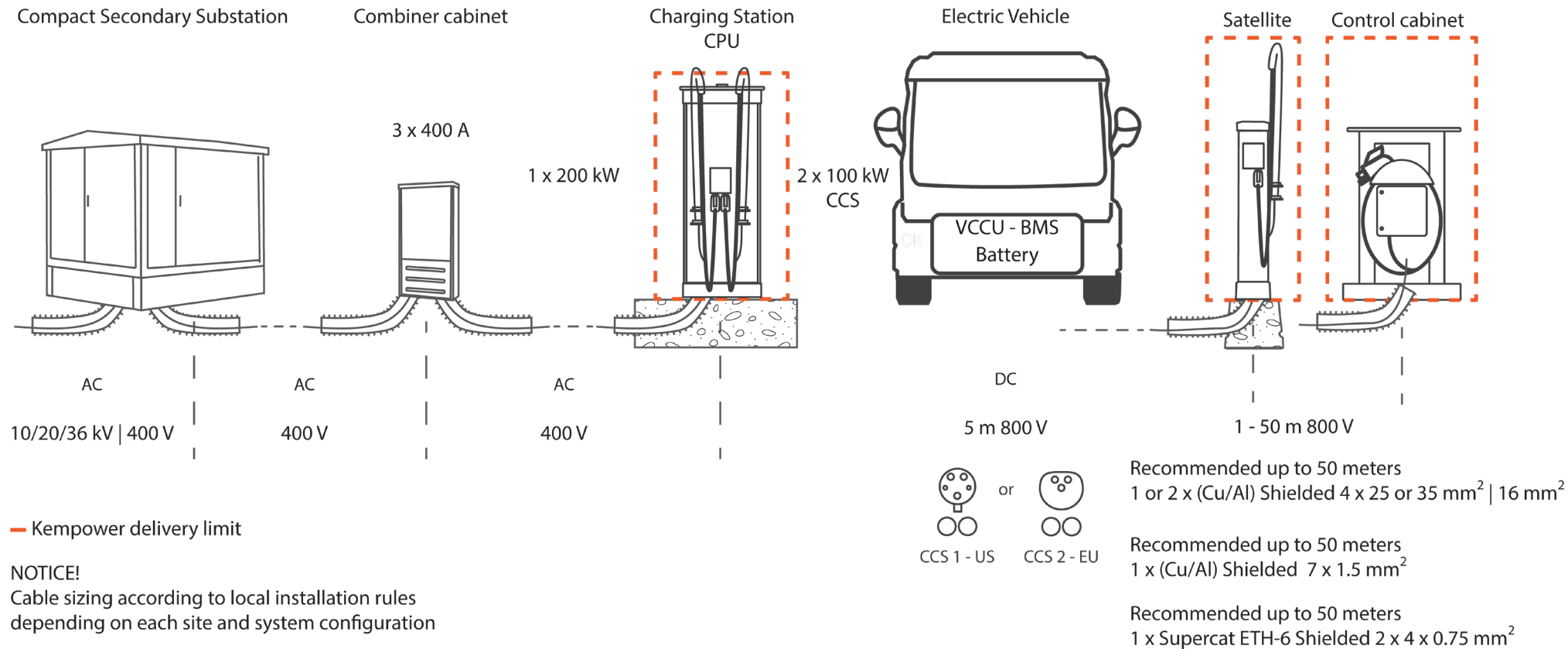


Charging station



SLD (Single Line Diagram) Charging station to Satellite post

Indicative recommendations





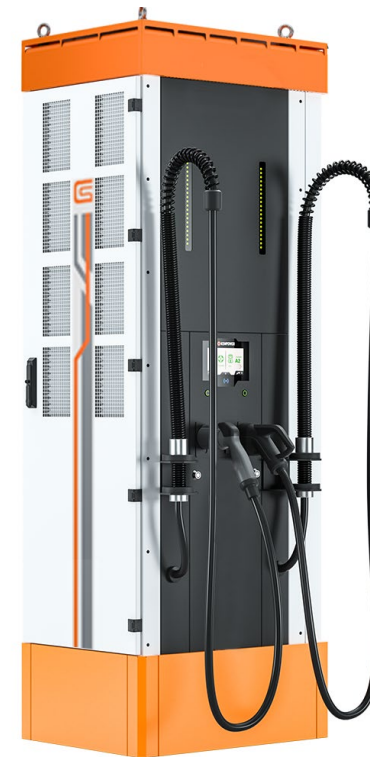
Charging Station variants



2 x CCS
Double cabinet



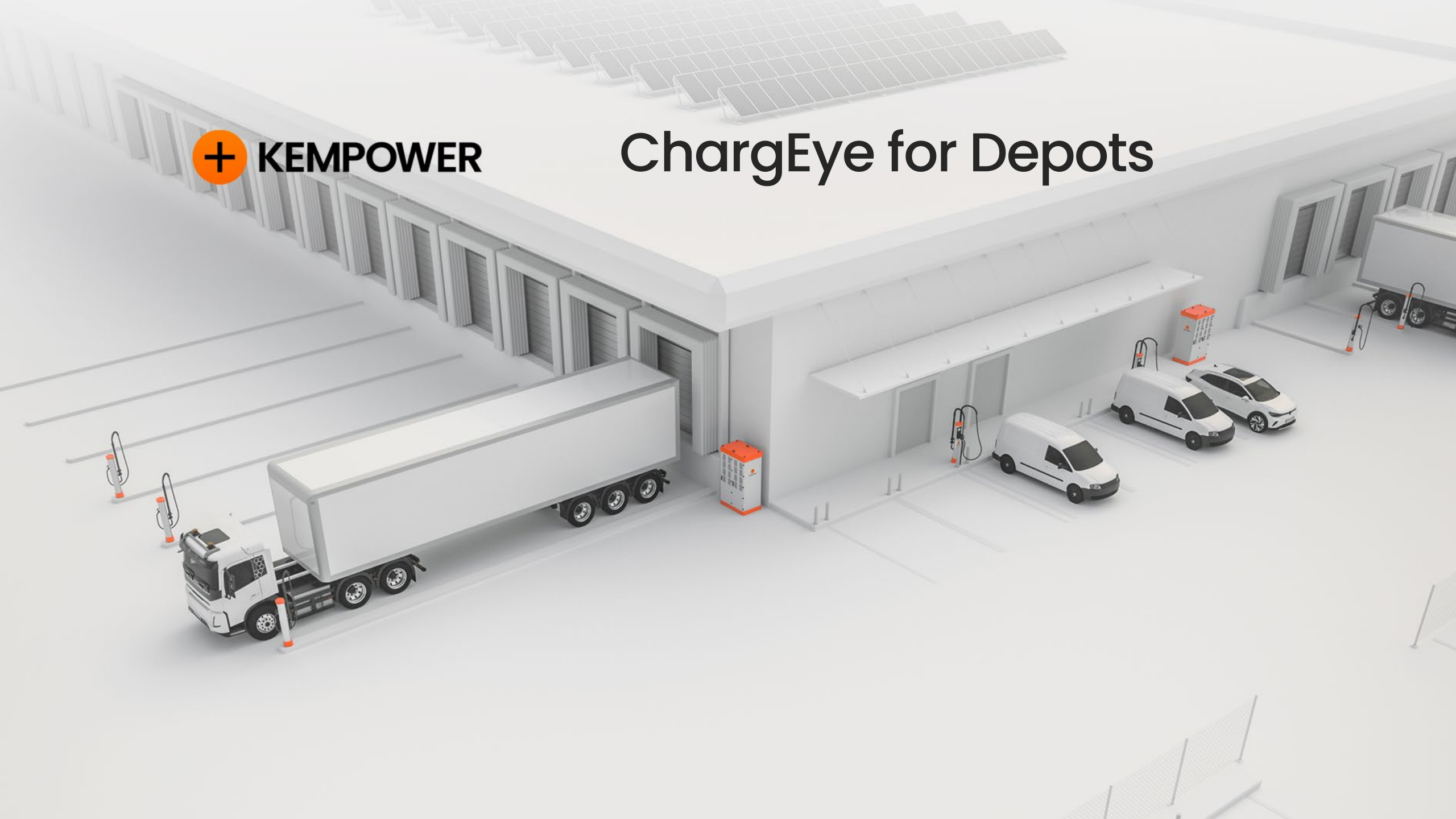
2 x CCS



CHAdemo & CCS



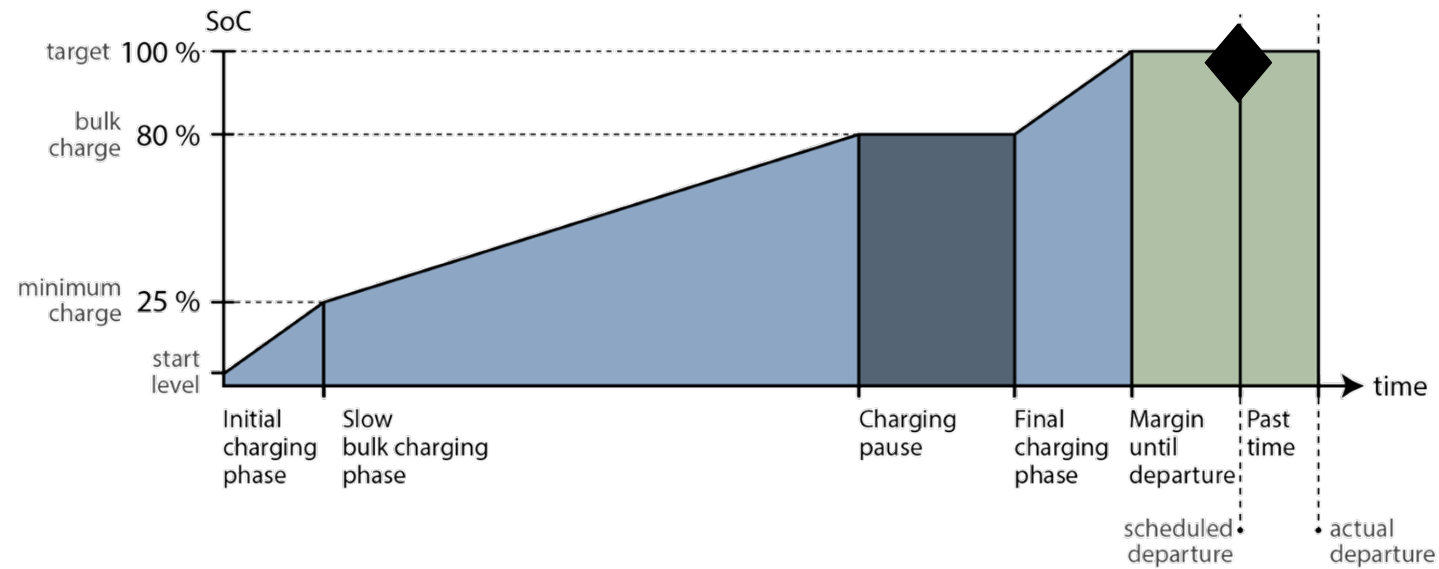
ChargEye for Depots





Charge scheduling

- Charging with full power is not ideal
- A system that optimizes charging based on departure time of each vehicle

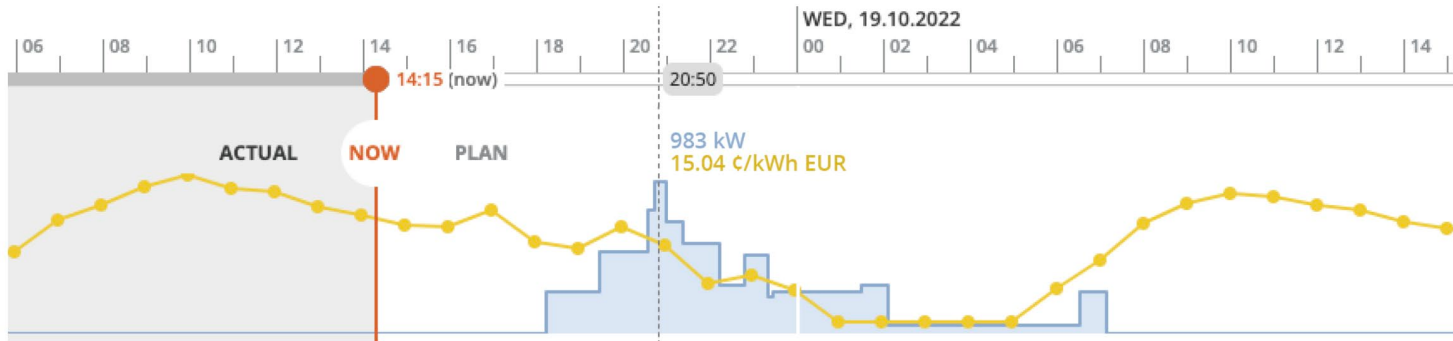


- Control charging power dynamically
- Stop charging, and resume later



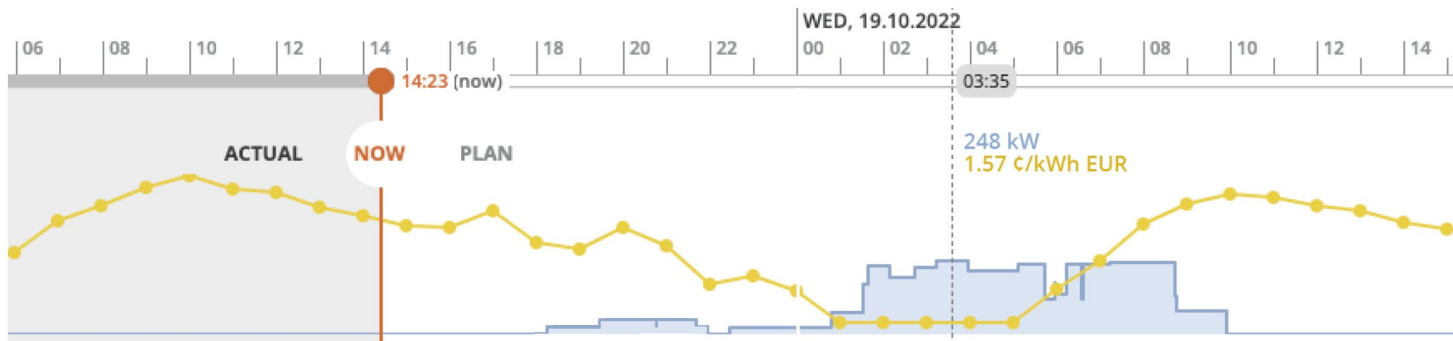
Energy cost

10 vehicles, total energy 3432 kWh



Without a system

Energy cost
378 EUR



With Depot Master

Energy cost
153 EUR

Yearly savings 56 000 EUR
(assuming 250 work days)

60% lower energy costs



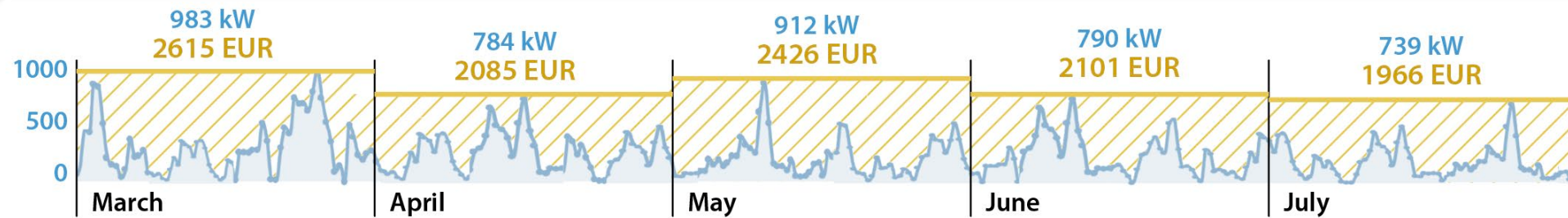
Power Tariff

2.66 EUR / kW

20 trucks, working 26 days a month, expending 60% battery every day

Without a system

Energy 720 MWh



Power Tariff, €
11193 EUR

Peak power, kW



With Depot Master

Energy 720 MWh



Power Tariff, €
4203 EUR

Peak power, kW

62% lower power costs

Yearly savings 16 700 EUR



Charging set up!



6

7

26



ag kör på 100% el.
Hållbar leverans av mat och dryck
till din restaurang.



**martin &
servera**







Powering Planet Cool.

