

Jointly Build a High Quality and Sustainable Smart Charging Network



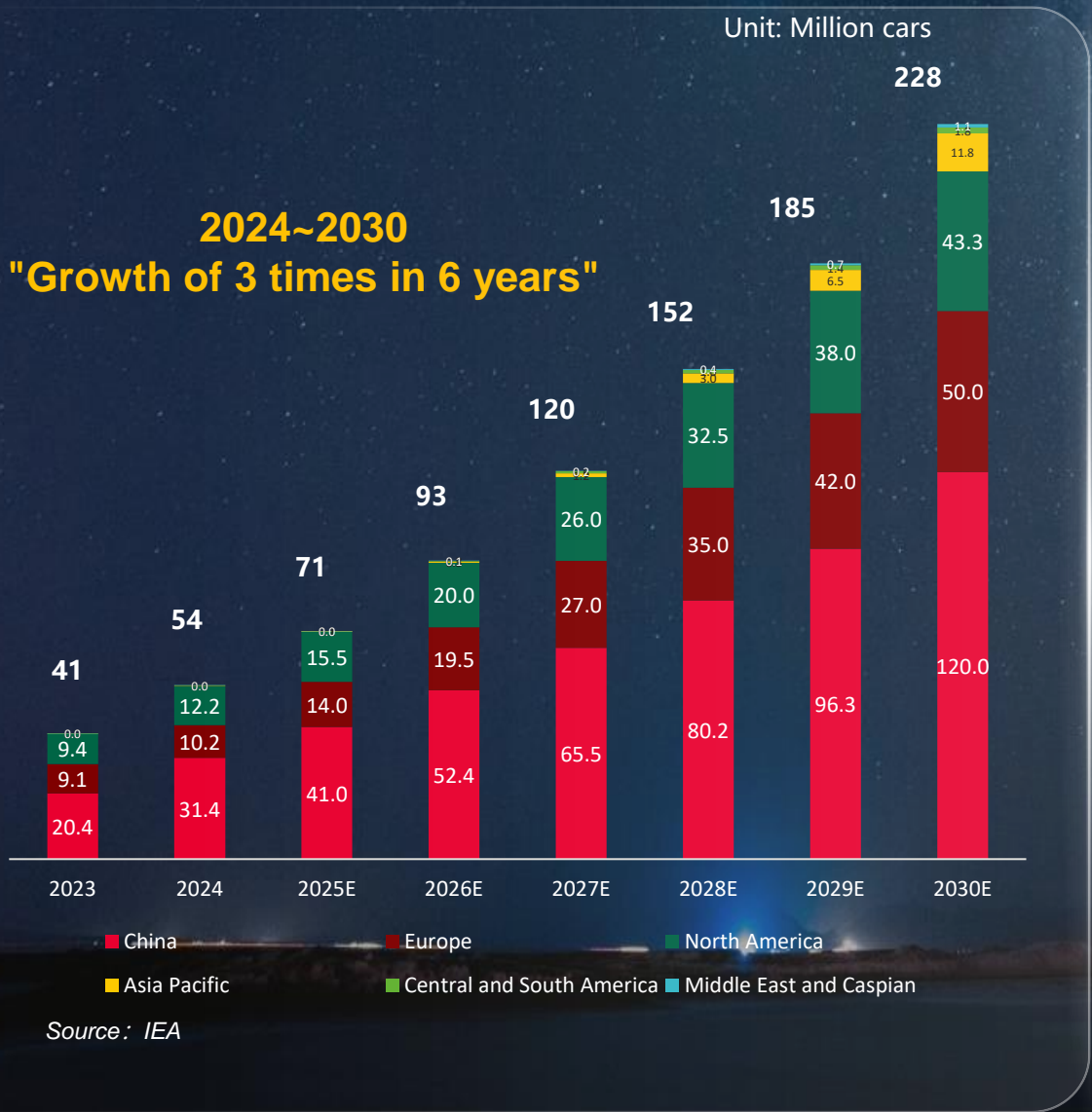
Spyros Kalos
Head of EV Charging Network Business SEE



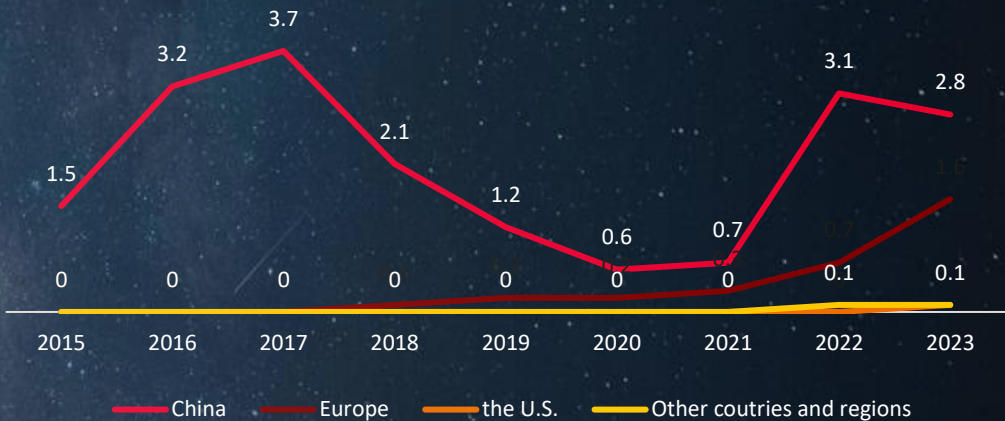
Trends and Challenges

New energy vehicles 228 million worldwide by 2030

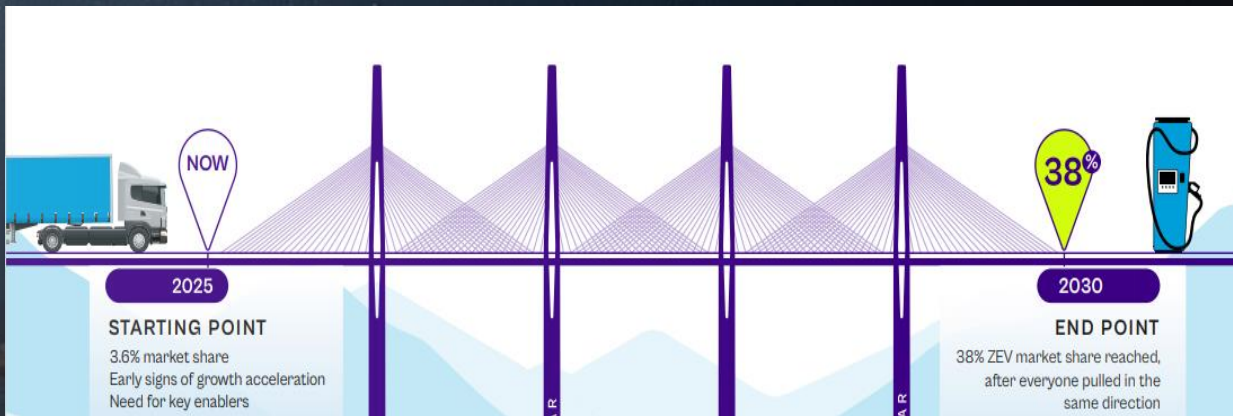
NEV@2030 : 228Million, CN52%, EU22%



Electric trucks account for truck market share worldwide (%), 2015-2023

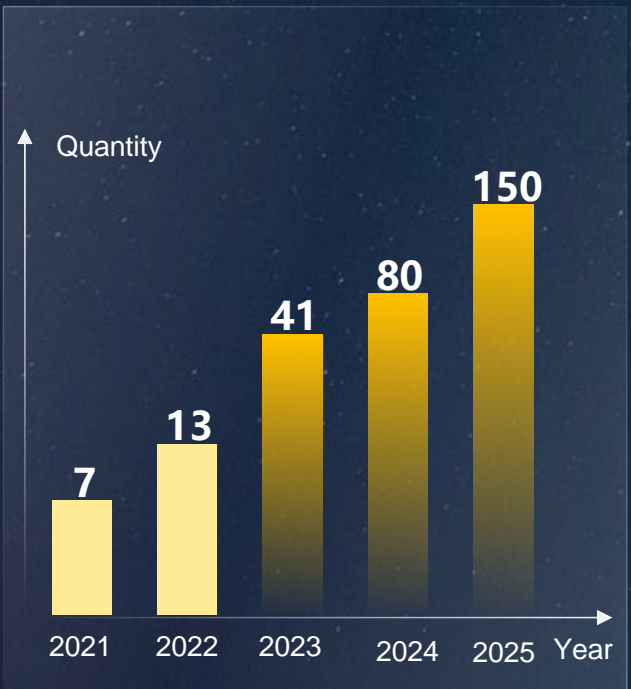


Electric trucks booming from 3.6% to 38% by 2030



EV Cars & EV Chargers Growth

OEMs Accelerate Launching the Ultra-fast Charging EVs

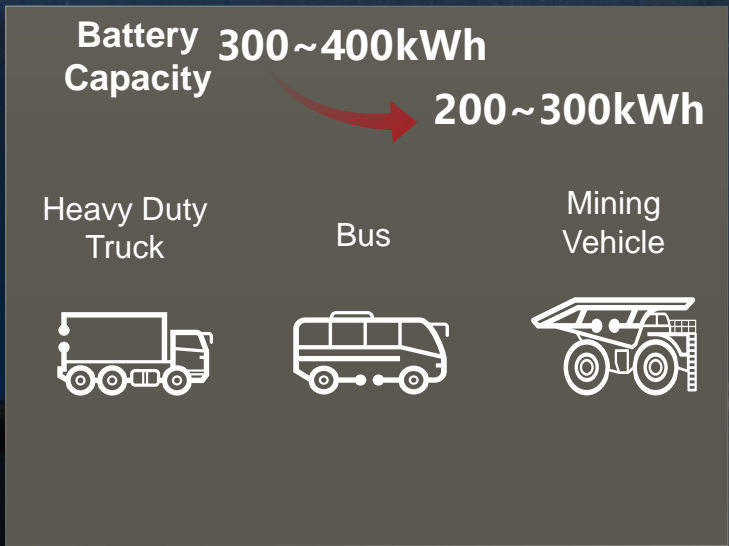


60+ Models with 800V High-Voltage Ultra-Fast Charging Platform in Guangzhou Car Show

High-Voltage System Extends to Compact EVs

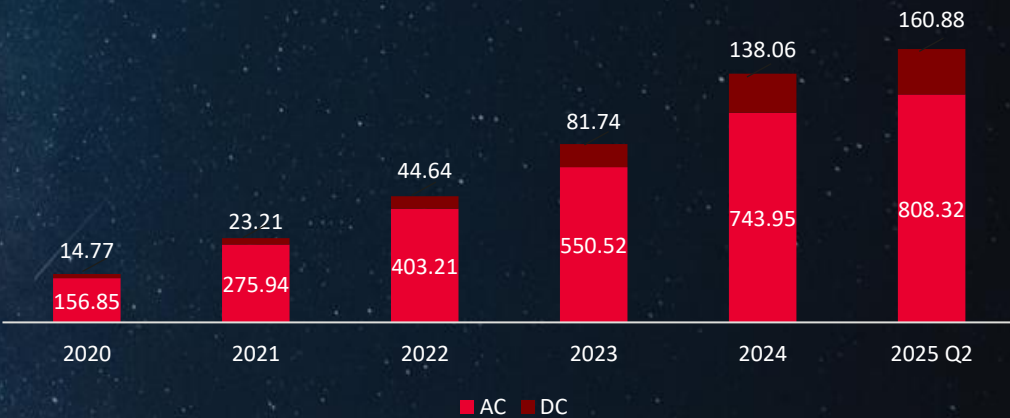


High-Voltage System to Commercial EVs

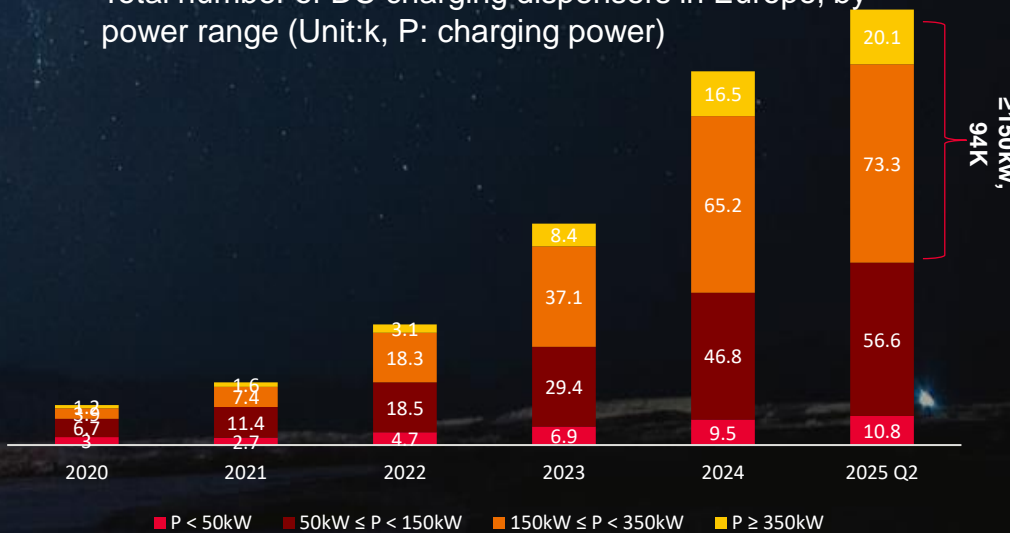


≥150kW charging dispensers towards 100K

Total number of charging dispensers in EU (Unit:k)



Total number of DC charging dispensers in Europe, by power range (Unit:k, P: charging power)



Source: European Commission

Europe: "0" carbon by 2035, 3 million Charges by 2030

Policy motives EV Growth

Europe: "0" carbon by 2035, 30 million BEV by 2030



- One of the EU's seven flagship projects: building fast charging stations along the EU road network
- 1 million publicly accessible recharging points by 2025, and 3 million by 2030 (Sustainable and Smart Mobility Strategy).



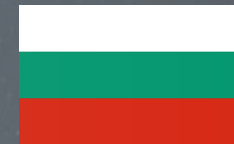
- Over 4,500 public charging points today, with a national target of 30,000 by 2026 under the PNRR.
- Incentives up to €30,000 for installing chargers and tax benefits accelerating EV adoption.

Proposals facilitate industry development



Albania

Aiming to install 200–300 EV charging stations by 2025 and reach ~18% BEV + PHEV sales by 2030, with EVs to account for ~3% of passenger-km by 2030.



Bulgaria

Build 10,000 charging stations to facilitate at least 30,000 EVs by 2026.



Cyprus

Aims for **25% of new vehicle registrations to be fully electric by 2030** and 100% by 2035, and plans to reach **~85,000 EVs on the road**



Greece

Targets **40,000–100,000 publicly accessible EV charging points** by 2030, with total installed charging power exceeding **550 MW**.



Moldova

Developing a **national e-mobility strategy** focused on transport electrification to achieve climate neutrality; it includes fleet electrification, stricter emissions standards, and fiscal incentives for EVs.



N. Macedonia

Rolling out public fast-charging points up to 150–180 kW through national and private operators by 2028

Grid Capacity is a bottleneck for EV Charger, ESS is the best solution

The remaining power capacity is insufficient, and the construction costs are high.



Customer A
in Spain

50 sites planning, 32 sites will be facing insufficient grid power, account for **64%**



Customer B
in French

260 sites planning, 260 sites will be facing insufficient grid power, account for **100%**



Customer C
in Italy

150 sites planning for 3 years, **100%** sites need expansion from 100kW to 300kW

Transformer construction costs high and takes long time

Transformer Upgrade



Cost

€300K

@ 630kVA

Time

>1 Year

@ 10-35m²

ESS, avoiding AC expansion and support New BC

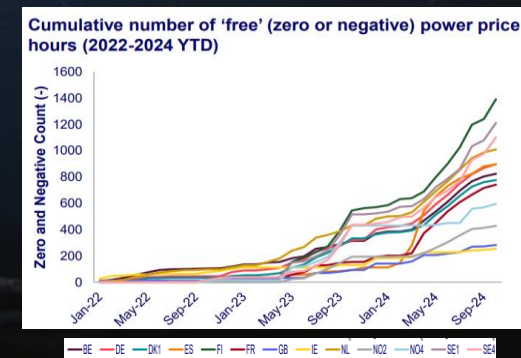
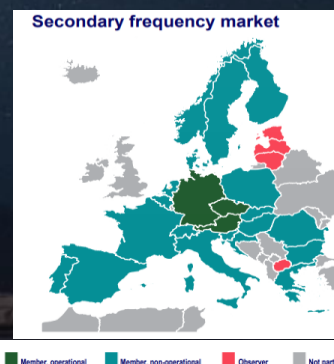
Now: Peak shaving to avoid Grid power addition



Ongoing: Peak shaving to deal with grid supply alternation

Frequency balance market is available in most EU countries

Arbitrage: renewable energy will enlarge electricity price fluctuation



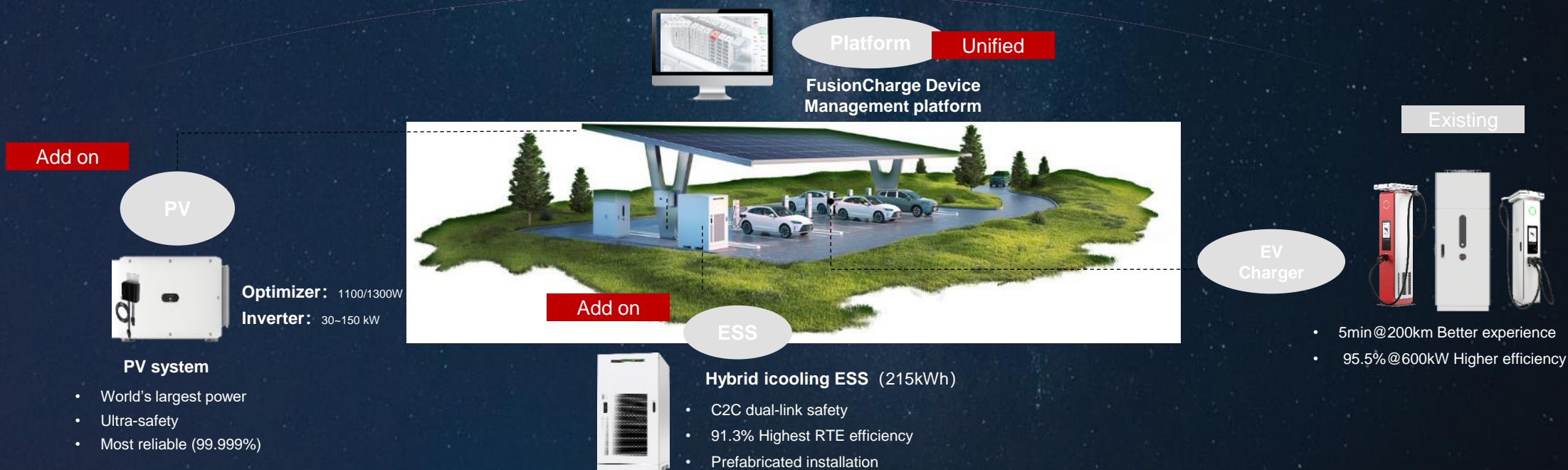
Source: Wood Mackenzie



Fusion Charge DC Liquid Solution

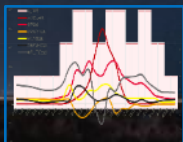
One Fits All

End to end solution managed by one cloud platform: ultra safety, better revenue, high quality



4 Business models

Electricity price optimization



Site power addition



Input power self-adjustment



Maximum solar self-usage



One Investment for different scenarios and EV models

One investment



DS720-720LEUA4: 600kW+720kW
DS720-720LEUA4: 240kW+360kW

Return 1:
Passenger EV charging



Ultra-fast charging: 480 kW, 500 A



Return 2:
Heavy-duty truck charging



Dual-connector charging: 720 kW, 1200 A



Return 3:
Megawatt charging



Megawatt ultra-fast charging: 1.5 MW, 2000 A



Applicable to multiple scenarios

Scenario 1: Enroute



Highway service area



City Public

Scenario Features : On the go, charging time 10-30min, typical scenarios of ultra-fast charging

Scenario 2: Fleet



Logistics Park



Bus



Mining area



Port

Scenario Features: Dedicated vehicle model, Charging time 1~2 hours

Scenario 3: Destination



Shopping Mall



Campus



Residential area



Leisure park

Scenario Features : Charging time 2-4 hours

Intelligent Architecture and Design

Liquid Cooling Design

< Doubled reliability, noise ≤ 55 dB, applicable to residential scenarios >

- 55% Component failure due to high temperature
- 15% Pin failure due to corrosion by high salt
- 15% Component moisture absorption failure due to high humidity
- 15% Arc failure due to dust and condensation



Traditional solution

- 3 to 5 years of service life
- 4 site visits/year for dust removal
- 70 ~ 80+ dB

VS

Liquid cooling design

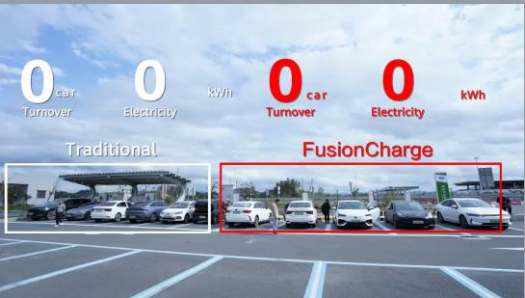
- 10 years of service life
- No manual dust removal
- ≤ 55 dB



Power Pooling Intelligent Design

Total power charged x 3 times

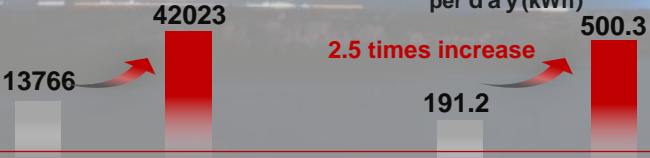
Turnover rate x 5 times



Waxi Station in Guangdong, China

Total power charged (kWh)

Power charged per connector per day (kWh)

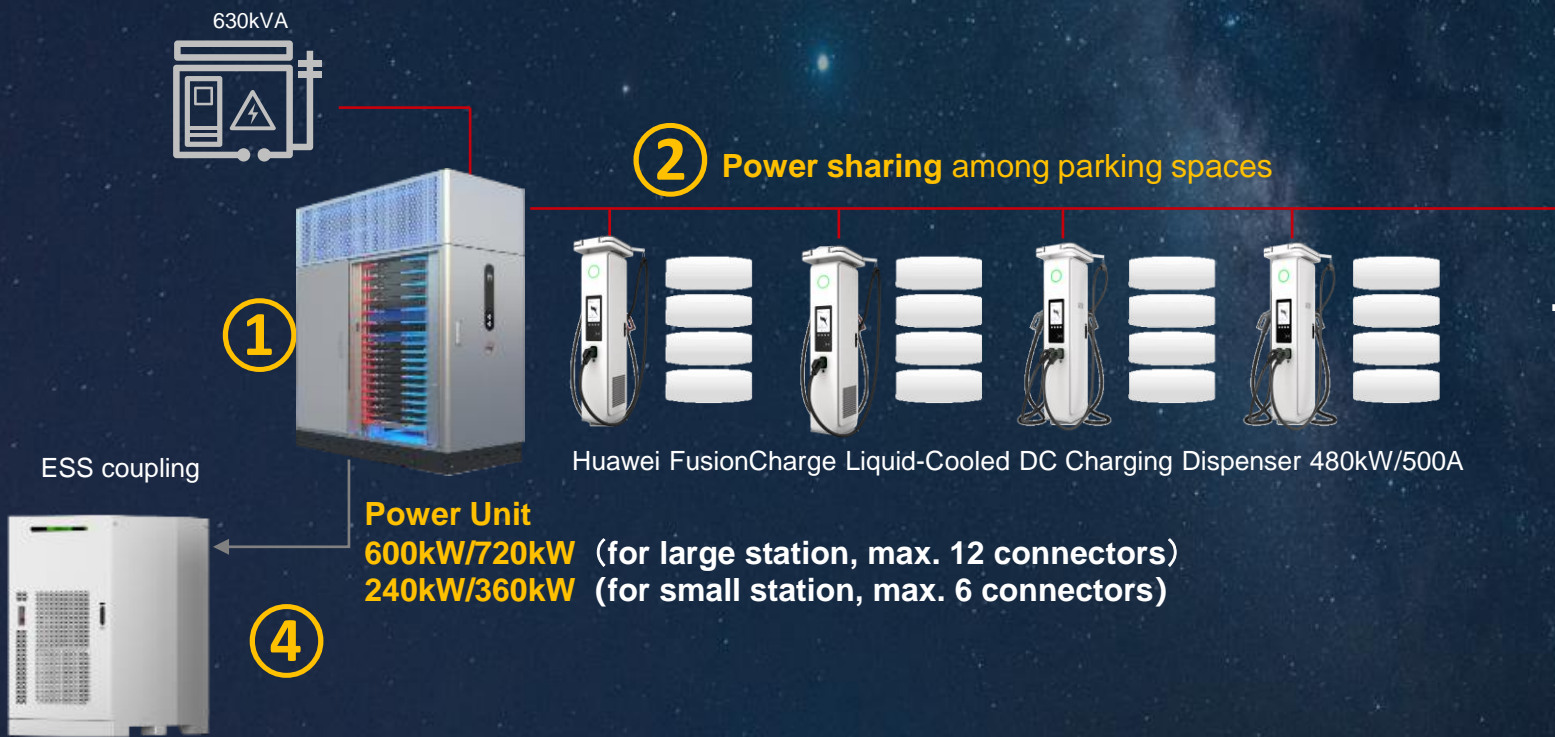


* Same grid capacity/Same park place @spring holiday

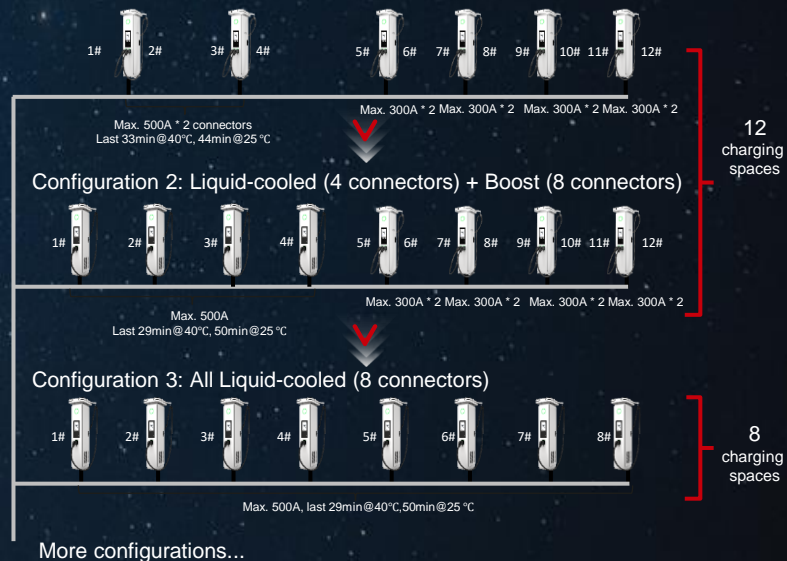
- Increasing power utilization
- 2+ times customer turnover rate in real case

As electric vehicles grow rapidly

Future-Proof EV Charger Solution for High Grid Capacity Site



Configuration 1: All Boost (12 connectors)



① Superior quality

Die-casted power modules, ceramic contactors
IP55 liquid-proof level
Annual failure rate < 0.2%(module)
Noise<50 dB@25°C, 1m

② Two-tier power pooling

AC/DC+DC/DC module Architecture,
Saving cost on transformer reconstruction
(around €700K/630KVA@EU)

Smooth Evolution

- ③ Support charging up to 12 cars
Support max 8x500A ultra-fast charging
- ④ Support PV/ESS/PV+ESS integration

Great reliability

Higher Grid utilization

Protecting
Investment



Case sharing

Altitude of 4285 meters

Liquid-Cooled Ultra-fast Charging Station at Mount Qomolangma

Max. 4 ultra-fast + 16 fast charging spots

Work perfectly in thin air, huge day/night
temperature difference, and harsh
environments

10+ years of service life

Easy maintenance

Lower operations pressure and costs



Hot as Fire: 45°C, Turpan

Maximum power of **600 kW**

30x↑ cooling achieved by
cutting-edge liquid-cooled modules

3000-ton integrated die-casting,
perfect collaboration of electrical and cooling
components for efficient heat dissipation

Long-term stable running



Extreme Cold: -35°C, Yakeshi

Fully enclosed liquid cooling
circulation

Core components isolated from the
outside

Outstanding thermal insulation,
effective temperature control

Reliable Stable

Long-term stable running in
extremely cold conditions



Huawei launched MegaWatt charging for heavy-duty truck



SOC 10%-90%
350+kWh battery

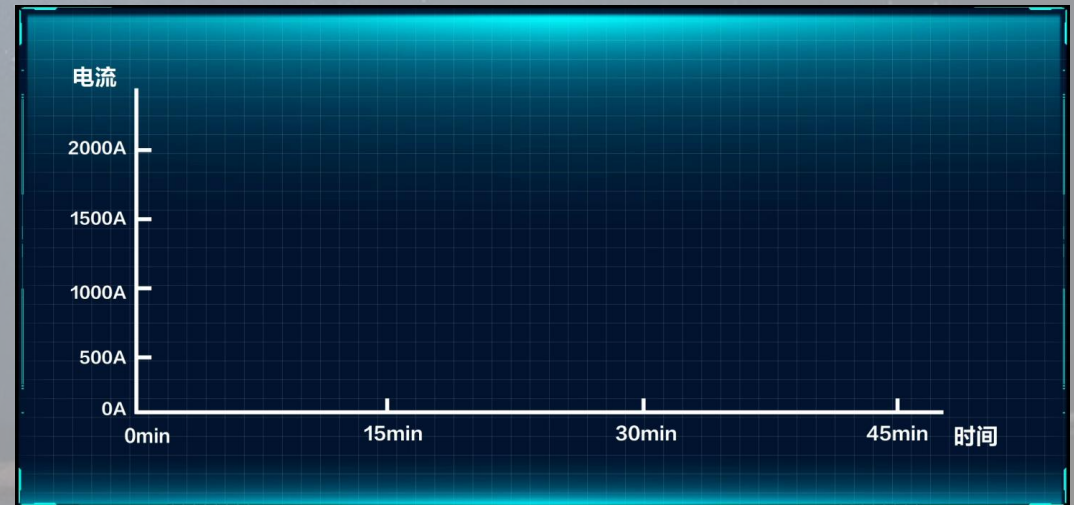


15 min

Continuous current



2400 A



Digital Power: Your Best Partner for a Better, Greener Future

By the end of March 2025, Huawei Digital Power has helped customers

generate green power

1,608.1 billion kWh

save power

96.2 billion kWh

reduce carbon emissions

810 million tons

equivalent to planting

1.1 billion trees



Conversion note:

Note 1: Conversion coefficient of electricity carbon emissions – 1 kWh electricity is equivalent to 475 g CO₂ (global average).
Source: IEA Global Energy & CO₂ Status Report 2018

Note 2: Lifetime CO₂ absorption of trees (equivalent number of planted trees) – A tree absorbs 18.3 kg of CO₂ a year, and each tree has a 40-year lifespan.
Source: Open data of the North Carolina State University website

Thank you.

把数字世界带入每个人、每个家庭、
每个组织，构建万物互联的智能世界。

Bring digital to every person, home, and
organization for a fully connected,
intelligent World.

**Copyright©2018 HuaWei Technologies Co., Ltd.
All Rights Reserved.**

The information in this document may contain predictive statements including, Without limitation, statements regarding the future financial and operating results, future product portfolio, neW technology, etc. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in the predictive statements. Therefore, such information is provided for reference purpose only and constitutes neither an offer nor an acceptance. HuaWei may change the information at any time Without notice.

