



ChaoJi



ChaoJi Standard

Faster, Safer, and Compatible to All

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China Electricity Council
Director

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CHAdeMO
Secretary General



Purpose

- Update ChaoJi Technology constantly to introduce into the market
- Ensure compatibility between ChaoJi and GB, CHAdemo, CCS for smooth transition and harmonization
- ChaoJi as common language between Car and Charger
- ChaoJi as the base for future international harmonization



Process

- China and Japan jointly lead the project
- Welcome participation and contribution from the world
- Vehicle side and grid/charger side work together



Technical Target

- With updated technology, develop safest and lowest cost charging service
- With high quality of service, make our EV customers comfortable and feel the advantages of EVs
- Contribute to deploy EVs into the market by fully compatible ChaoJi globally

Status of Charging Standards



↓ ↓ ↓ ↓ ↓

Compatible

	CHAdeMO	GB/T	US-COMBO CCS1	EUR-COMBO CCS2	Tesla
Connector					
Inlet					
	✓	✓	✓	✓	
	✓			✓	
	✓	✓	✓	✓	
		✓			
Protocol	CAN		PLC		CAN
V2X Function	✓				?
Max Power	400kW 1000x400	185kW 750x250	200kW 600x400	350kW 900x400	?
Market Power	150kW	125kW	150kW	350kW	120kW
Start @	2009	2013	2014	2013	2012

ChaoJi



Proposing

?

?

✓

✓

CAN

✓

900kW 1500x600

50–900kW (TBT)

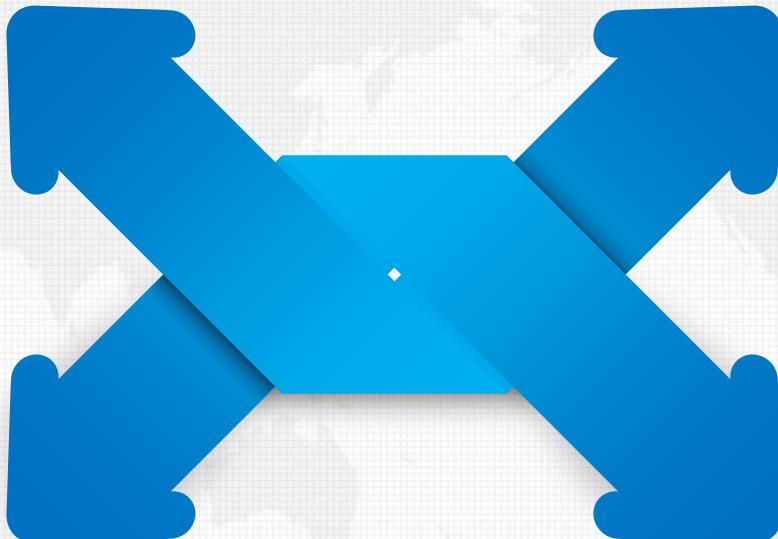
2020

High Power

- Short charge duration
- Higher utilization rate
- Improved efficiency by focused investment

Direct Current

- Higher efficiency
- Stable for Power Grid
- No on-board charger on the EV side



Charge and Feed

- V2X function

International

- Safe and reliable standard
- Harmonization

ChaoJi Project History



ChaoJi Members

TEPCO



ISUZU



TOYOTA



HASETEC
Electronics Planning & Manufacture

nichicon

NS-TEXENG

ShinDenger
New power. Your power.

株式会社 東光高岳
TAKAOKA TOKO CO.,LTD.

ABB

Fujikura

JAE

SUMITOMO ELECTRIC

E-TE

YAZAKI

TÜV Rheinland

UL

TOSHIBA
Leading Innovation >>

e MOBILITY
POWER

STATE GRID
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BYD

XUJI

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Audi

VW

CHERY

YUTONG

ATC
Power up your life!

Star Charge

WOER

HUBER+SUHNER

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ktl
Korea Testing Laboratory



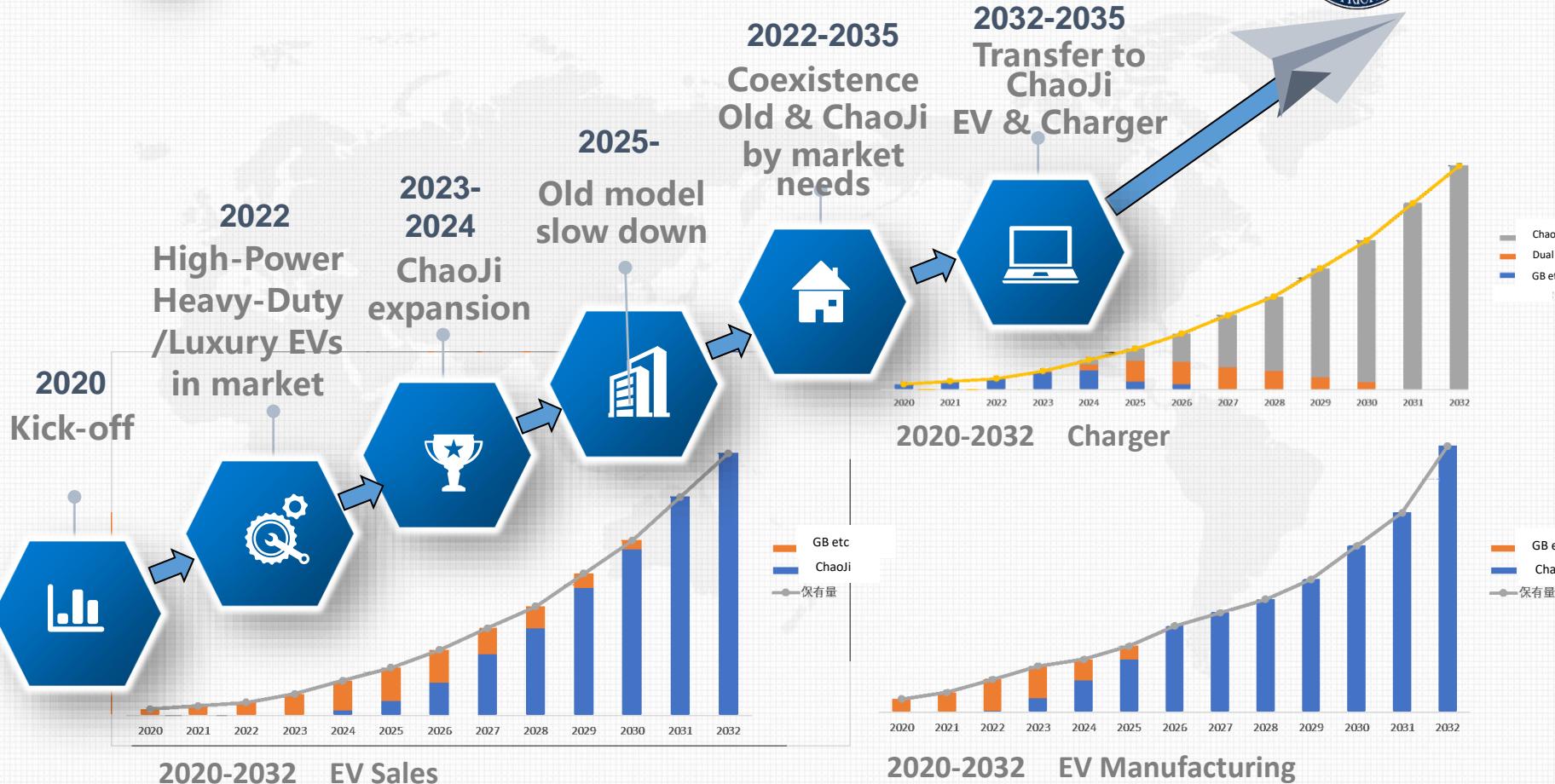
CHAdemo

中国电力企业联合会
CHINA ELECTRICITY COUNCIL



Bureau of Indian Standards
The National Standards Body of India

ChaoJi Development Plan





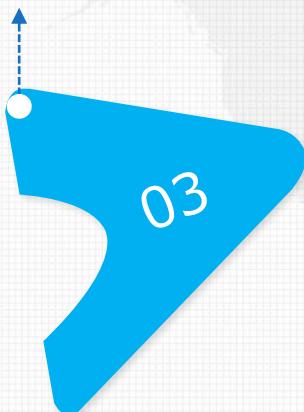
Increasing ChaoJi Attractiveness

- Ensure backward compatibility with ALL global standards
 - > Utilizing current existing asset for EV and chargers
- Provide safe and reliable charging service with minimum Cost
- Applicable from heavy-duty, large vehicles to small cars
- Localization with certification system
 - > Empower local businesses and support local deployment
- Propose as international standard



Introduction

- ✓ IEC TC69 WG12 use of adapters
- ✓ IEC TC69 MT5 CHAOJI CP Circuit (61851-23AnxBB)



Acceleration

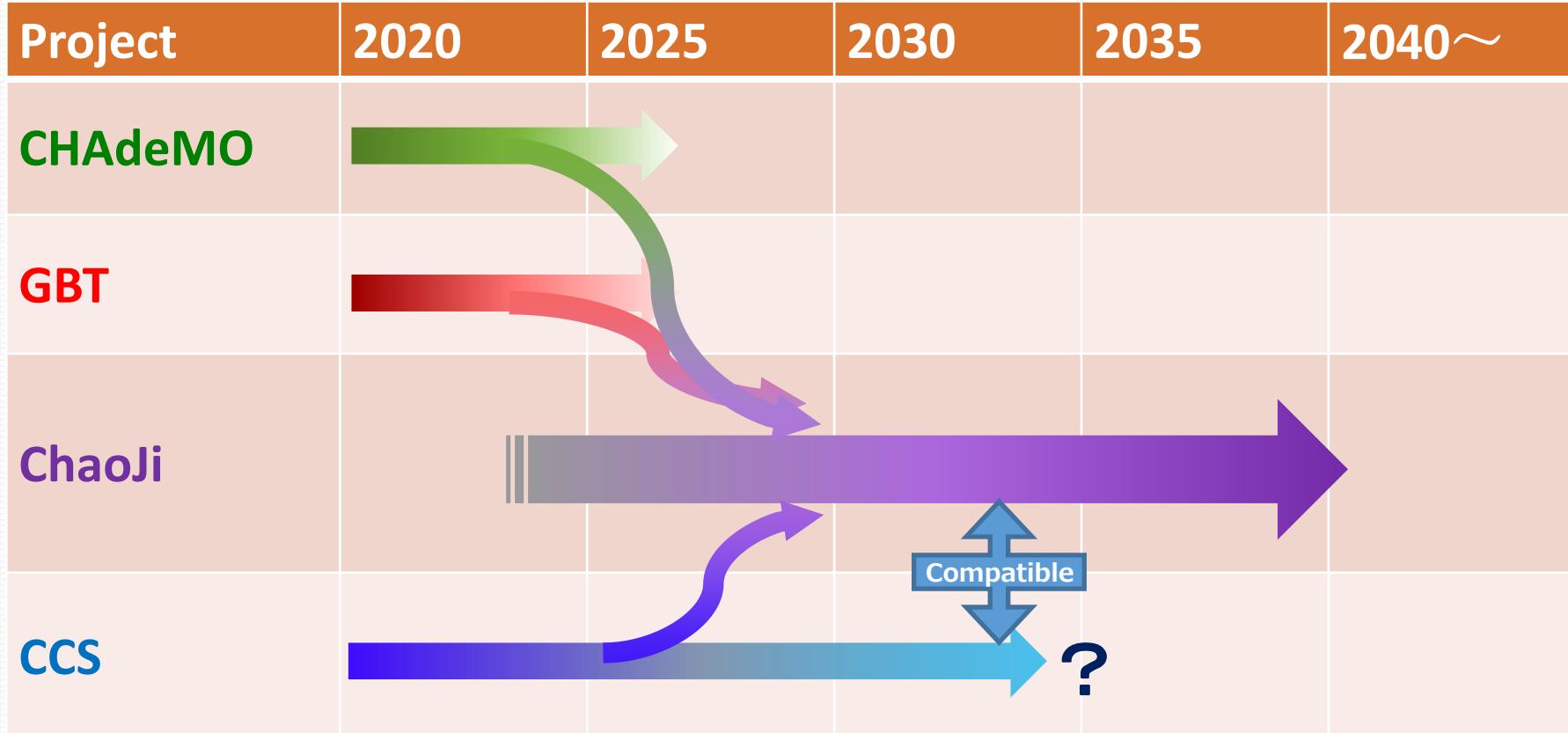
- ✓ IEC SC23H CHAOJI adapter proposal
- ✓ IEC TC69 CHAOJI Safety System Proposal

Harmonized
Compatible
International
Standard

Development

- ✓ IEC SC23H 62196 CHAOJI connector Assy proposal
- ✓ Proposal to IEC 61851-23
- ✓ CHAOJI Control Pilot proposal

ChaoJi Towards Harmonization





Thank you!
谢谢！
ありがとうございました！