



CHAdemo

CHAdemo Overview 2015 Strategy 2016

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**CHAdemo Europe Annual Member Meeting
20 October 2015**

Overview of 2015

- 1. Standardisation of CHAdeMO protocol**
- 2. CHAdeMO V2H guideline**
- 3. Improve the CHAdeMO specification**
- 4. Charging infrastructure promotion**



Standardisation of CHAdeMO protocol

■ Officially in Effect as EN

EN 61851-23:2014

Jan. 2015

EN 61851-24:2014

Jan. 2015

EN 62196-3:2014

May. 2015



■ Officially in Effect as JIS

JIS D61851-23

Oct. 2014

JIS D61851-24

Oct. 2014

JIS D62196-3

Oct. 2014



■ IEEE wait publication

P2030.1.1

Agreed in Sept. 2015



CHAdEMO V2H Guideline

■ V2H Guideline Revision

Guideline 2.0 published Apr. 2014

Guideline 2.1 published Nov. 2014

Certification Standard published
Mar. 2015

■ Homologation for V2H Grid Connection

Standard published Aug. 2015

Homologation started Sept. 2015



CHAdeMO Specification 1.1

- Working Draft completed Sept. 2015
 - ✓ Under deliberation process

- Functional improvement from of Ver. 1.1
 - ✓ Dynamic control of maximum power output (during Charging)
 - ✓ Low capacity cable use policy
 - ✓ Introduce Maker Option



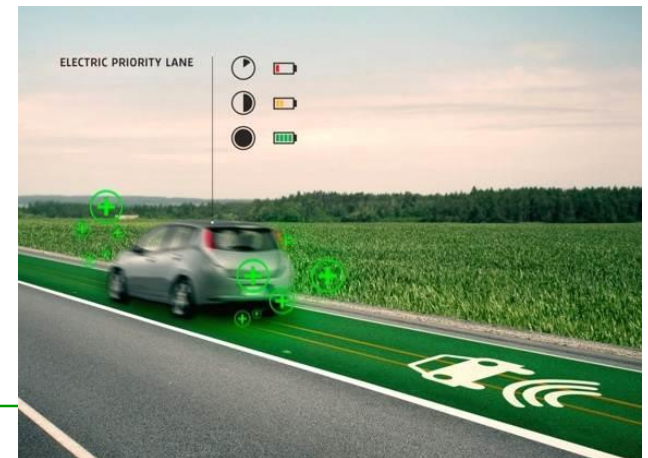
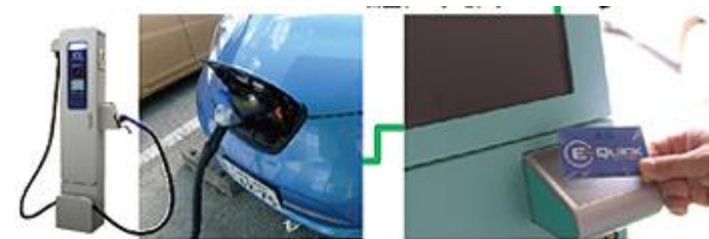
Charging Infrastructure Promotion

■ NCS (Nippon Charge System LLC)

- ✓ Established by Toyota, Nissan, Honda, MMC, Tepco, Cepco, & DBJ (Development Bank of Japan)
- ✓ Deploy Charging Infrastructure
- ✓ Enrich the Charging Network (ex; Billing system)

■ Government Affairs

- ✓ CPT Directive
- ✓ Incentive, Subsidies



Strategy for 2016

1. Future Vision of Charger

2. New Possibility of CHAdeMO

- **Multi Charger**
- **High Power**
- **V2H Expansion**
- **Wireless Charging**
- **Promotion**

3. Certification and Homologation

4. Cooperation with other organization



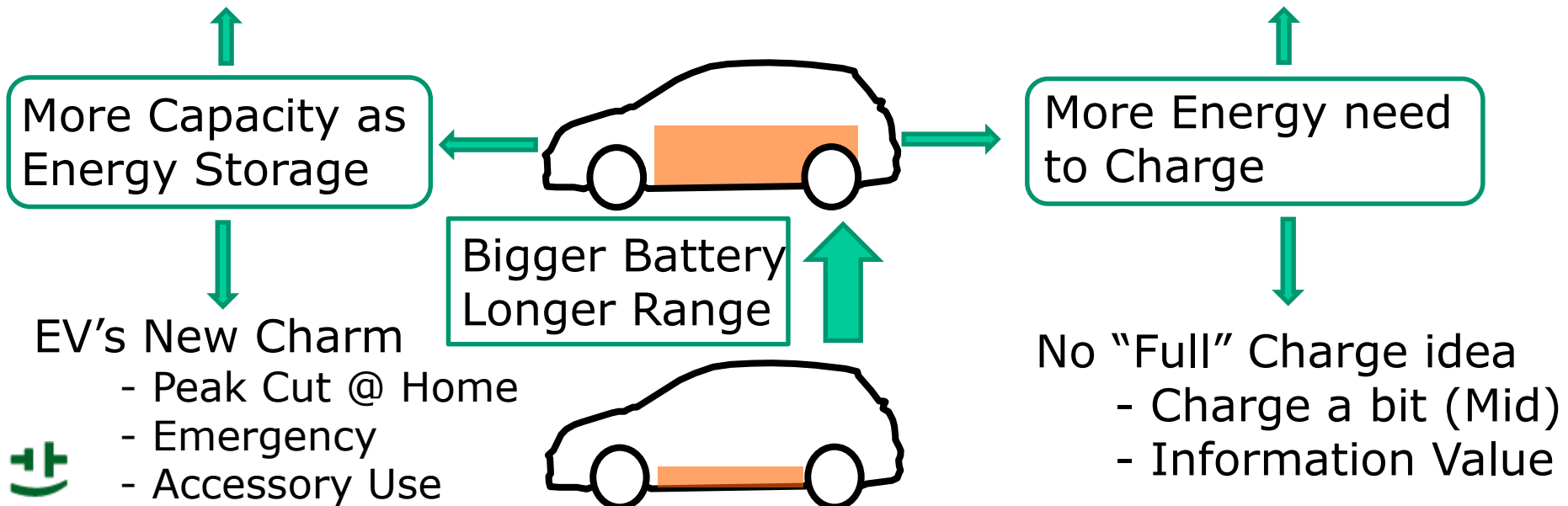
Future Vision of Charger

■ Tri-polarised as

- ✓ Normal (3-7kW) @ Home, Office (maybe w/V2H)
- ✓ Medium (10-25kW) @ Destination (Stores, Shop)
- ✓ High/**Super High** @ Highway, Long Drive use

Benefit to install Charger (Peak Cut)

Super High Output Charger



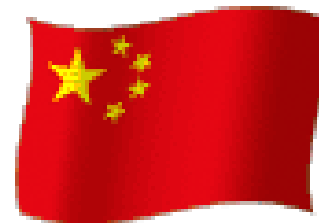
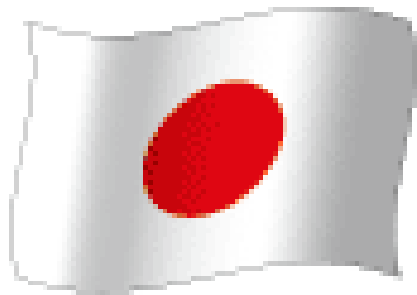
New Possibility of CHAdeMO

- Multi System Charger
 - ✓ Local Best Combination (w/CCS, Tesla, AC)
- High Output Power
 - ✓ Bigger Battery -> De-facto 30 60 min
 - ✓ Output (kW) TBD w/ technical task considered
- V2H Expansion
 - ✓ Compatibility to Global (Local) Electrical Grid
- Wireless Charging System
 - ✓ Standard on going (CHAdeMO to watch)
- Promotion
 - ✓ Diversify “Charger Mapping”
 - Location, Power, Vacancy, Gun type, Billing etc...



Certification and Homologation

- Guarantee the Connectivity, Capability, and Compatibility.
- Crucial for the Reliability and Credibility.
- CHAdeMO has Experience for Years
- System Establish for Japan, Europe discussion ongoing with China, India



Cooperate with CharIN

- Since Multi System Charger exists, Competition become Cooperation
- Respect Identity. Respect Responsibility.
- CHAdeMO welcome contacts with CharIN
- Exchange Technical Info. & Experience



Thank you for your Attention



CHΛdeMO