



**国家电网公司**  
**STATE GRID**  
CORPORATION OF CHINA

# Review on Sino-Japanese standardization collaboration

**NI Feng**  
**NARI GROUP**  
**September. 2022**



# C contents

**1** Significant meetings

**2** ChaoJi project

**3** Collaborations in IEC

**2018.8.28** CEC and CHAdeMO signed the MOU

**2018.10** 1st CEC-CHAdeMO standardization collaboration meeting (@TOKYO)

- CEC and CHAdeMO will establish a Joint Technical Working Group (JTWG) within each organization to consider the following key items: **HPC (incl. adapter, coupler, control pilot and other HPC related topics), V2X, PnC, certification.**
- China and Japan should strengthen the collaboration to standardize the ChaoJi specification in the relevant international standards (IEC, ISO, etc.), as well as inviting the international community (EU, US, South Korea, India, Tesla, etc.) to join and support the initiative for realizing the **unified, global DC fast-charging standard in the future.**
- Experts from both China and Japan are requested to **continue the detailed technical investigation and analysis** through simulation, prototyping and real-world evaluation

## 2019.3 2nd CEC-CHAdeMO standardization collaboration meeting (@Changzhou)

- Technical points regarding cable assembly, adapter, control pilot and communication protocol were discussed

## 2019.7 3rd CEC-CHAdeMO/1st international standardization collaboration meeting (@Yokohama/Tokyo)

- Technical issues and the standardization process were exchanged and discussed
- The plan for pilot project from both side were discussed

2020.3

## 4th CEC-CHAdeMO standardization collaboration meeting (Online)

- Technical discussion on ChaoJi coupler design, modify 2 was selected
- Communication solutions were discussed
- Follow up meeting on **2020.4**
  - ✓ Notification of the start of China's 18487.1 and 27930 standard revision approval process
  - ✓ Exchange the technical information in the ChaoJi white book pre-release version
  - ✓ Japan informs about CHAdeMO's promotion of ChaoJi (CHAdeMO 3.0) in overseas markets
  - ✓ Harmonization of ChaoJi-1 & ChaoJi 2 was discussed



# Significant meetings



国家电网  
STATE GRID

2020.9

## 5th CEC-CHAdeMO standardization collaboration meeting (Online/@Zhang Jia Gang)

- Coupler and Adapter technical discussion
- Harmonization between CHAdeMO 3.0 and ChaoJi white paper (Charging control/safety/protocol)

2021.3

## 6th CEC-CHAdeMO standardization collaboration meeting (Online/@Shen Zhen)

- Latest CHAdeMO 3.0 specification was introduced
- Coupler and Adapter technical discussion
- HPC/IMD
- Conformity assessment
- V2X

2022.9 7<sup>th</sup> meeting

3+1 SWG have been established since 2019.08

## ➤ SWG1



### Major topics

- Couplers/Adapter/Ultra ChaoJi connection interface.



### Frequency

- **32 meetings** have been held



### Progress

- The design of the ChaoJi connection components, experimental verification and testing methods are discussed in detail.
- The output supports both the Chinese and Japanese standards and IEC TS 62196-7.

## ➤ SWG1

### SWG1.1

- Established at 2019.11 , **9 meetings**
- Disband at 2021.3, the final output is regarding the specific design of ChaoJi for ACD system



## ➤ SWG2

### Major topics

- Control pilot/Charging safety model/Compatibility.

### Frequency

- **17 meetings**, suspended on 2021.6

## ➤ SWG3

### Major topics

- **new GB/T 27930 related:** Physical layer/transport layer/application layer of the ChaoJi Protocol
- **Harmonization** between ChaoJi-1 and ChaoJi-2
- **Future direction:** IP based/2 wire ethernet etc.

### Frequency

- 20 meetings starting from 19.12, suspended in 22.08

# Collaborations in IEC



国家电网  
STATE GRID

IEC

TC69 MT5

- WG12: 61851-1 Adapter Clause
- MT5: Future system D joint proposal
- 61851-23-1: Pantograph charging
- 61851-23-3: Ultra ChaoJi



SC23H

- PT 62196-7
- PAS 63454 ChaoJi coupler for system D

Support from JP

- TYPE 4

**SUPPORT**



**Thank you!**