

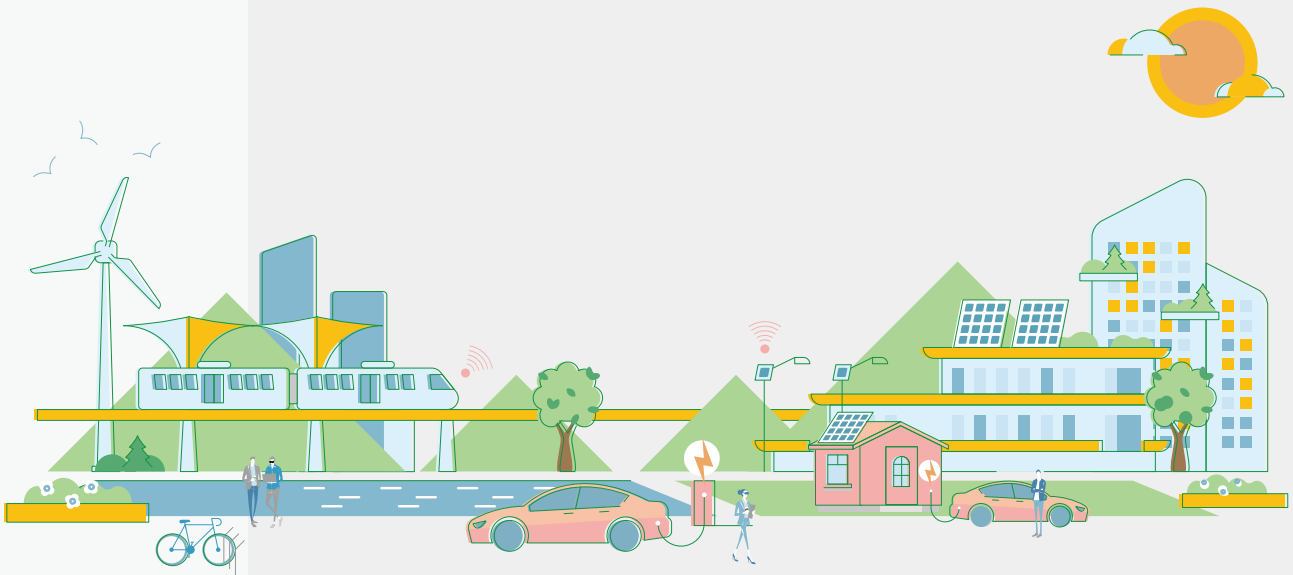


CHAdemo

ASSOCIATION & PROTOCOL

NOVEMBER 2021

Powering global zero-emission mobility for the happiness of future generations



CHAdeMO story

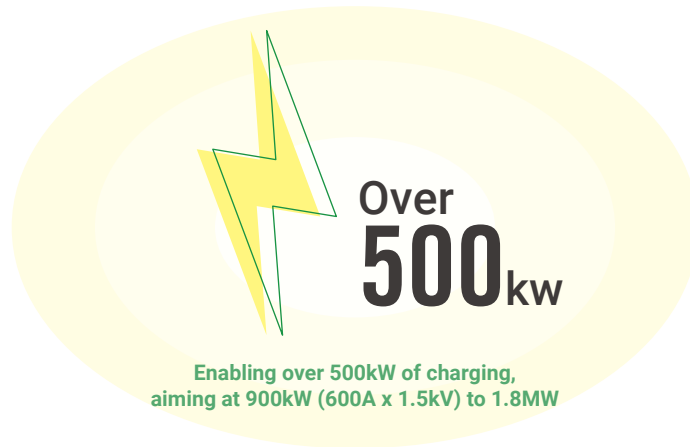
CHAdeMO Association was founded in 2010 to accelerate the electrification of transport and to reduce CO2 emissions.

Today, the CHAdeMO DC charging protocol has become a global standard using an identical connector all over the world.

The Association continues to pursue its mission of bringing safe, affordable and interoperable charging to all EV drivers, along with its over 500 members.



Key facts about CHAdeMO



Truly global standard

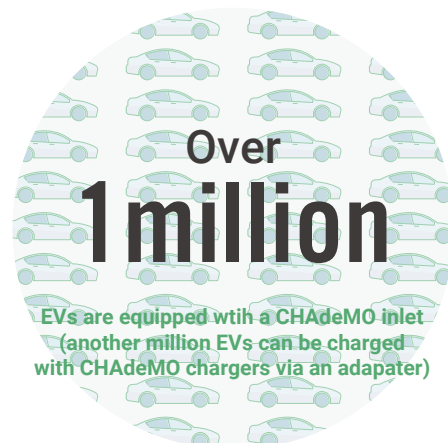
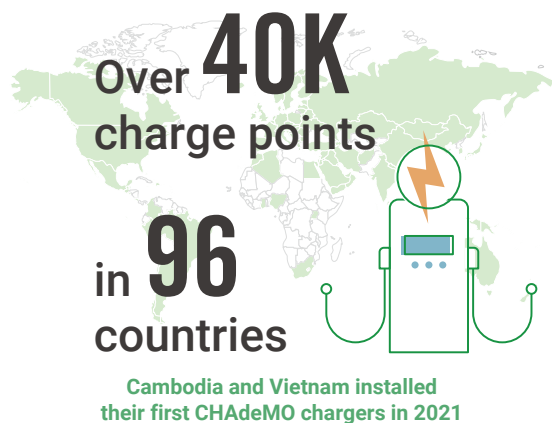


Published under IEC & EN (61851-23, 61851-24, 62196-3),
and IEEE (2030.1.1)

Flexible and extensible



Adaptable to all levels of power
and all categories of vehicles



CHAdEMO certification system

CHAdEMO certified means the charger conforms to the highest safety standards mandated by CHAdEMO and is fully compatible with all CHAdEMO EVs. Our certification tests are performed by the accredited third-party certification bodies.

Applus⁺
IDIADA

ARAI
Progress through Research

DEKRA

JET

kti

TERTEC

TÜVRheinland

UL

CHAdEMO products

Recent CHAdEMO chargers

First-generation CHAdEMO chargers hit the global market in 2010. Since then, the portfolio of certified chargers has grown to 260. All leading charger manufacturers as well as a broad range of SMEs providing fast charging infrastructure are our members, testimony to the Association's reach and global recognition.



ABB



Andromeda



Astragam



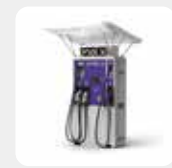
BTC Power



DBT



Delta
Electronics



Enel X



Hasetech



JFE



Lafon



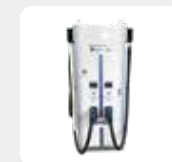
Nichicon



Shindengen
Electric



Signet EV



Takaoka Toko

The full list of CHAdEMO certified chargers is available at:
<https://www.chademo.com/products/chargers/>

Examples of CHAdeMO compatible EVs

CHAdeMO chargers are compatible with numerous plug-in vehicles, including PHEVs and Tesla EVs.



Bollinger
B1



Citroen
Berlingo



Citroen
C-Zero



ENERGICA
MY2021



Honda
e



ISUZU
ELFeV



Kia
Soul



LEXUS
UX300e



Mitsubishi
i-MiEV



Mitsubishi
MINICAB-MiEV



Mitsubishi
MINICAB-MiEV Truck



Mitsubishi
Outlander



Mitsubishi
Eclipse Cross PHEV



Mitsubishi Fuso
eCanter



Nissan
e-NV200



Nissan
LEAF



PEUGEOT
e-208



Peugeot
iOn



Peugeot
Partner



Peugeot
Partner Tepee Electric



Porsche
Taycan



Subaru
Stella



Tesla
Model S (adapter)



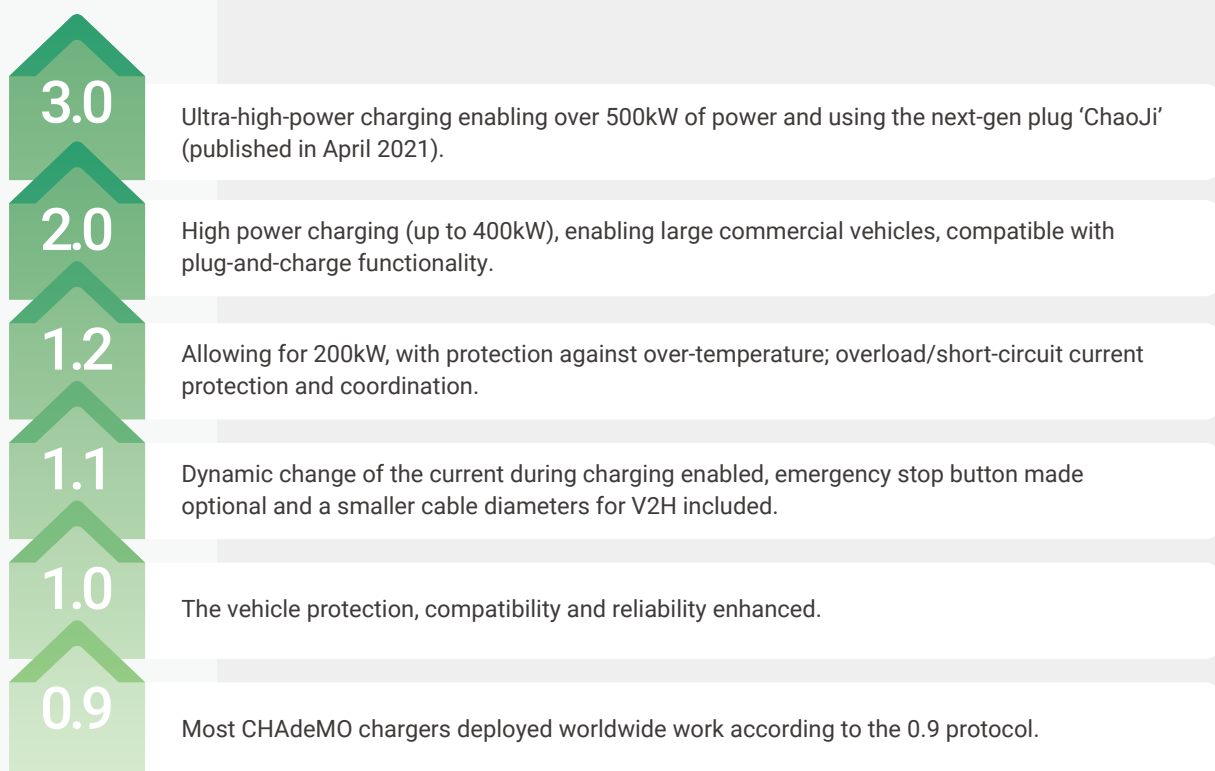
Toyota
Prius PHV



Xpeng
G3

CHAdeMO protocol development

The CHAdeMO protocol enables seamless communication between the car and charger. The protocol continues to be improved, refined and advanced in order to respond to the changing market environment and to the needs of e-mobility stakeholders.



CHAdeMO 3.0: the next-generation standard

ChaoJi is the next-generation ultra-high-power DC charging standard designed to ensure backward compatibility with CHAdeMO, GB/T and CCS. V2G and PnC functions are also ready to be made available. ChaoJi is a breakthrough solution to harmonise charging standards and accelerate the transition towards our common climate goals.



VGI/V2G: enabler of a carbon neutral society

Standardised bi-directional charging is only possible with CHAdeMO. Robust and flexible, CHAdeMO enables scalable VGI/V2G services. Making the total cost of ownership of EVs lower and accelerating EV adoption, while providing grid support to integrate more renewable energy sources, VGI/V2G can help reduce GHG emissions from the transport and the energy sectors.



Recent CHAdeMO VGI/V2G products



ABB



AME



Ampere Energy



Delta



Enel X



eNovates



Indra



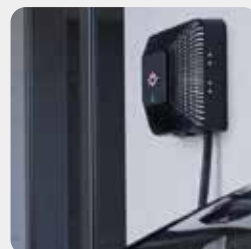
Magnum Cap



Nichicon

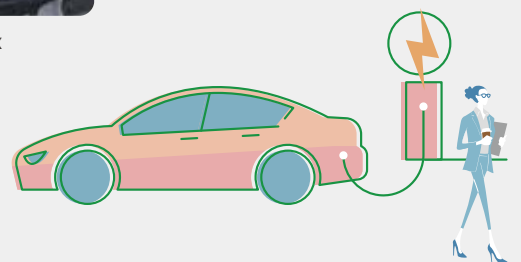


Tsubakimoto



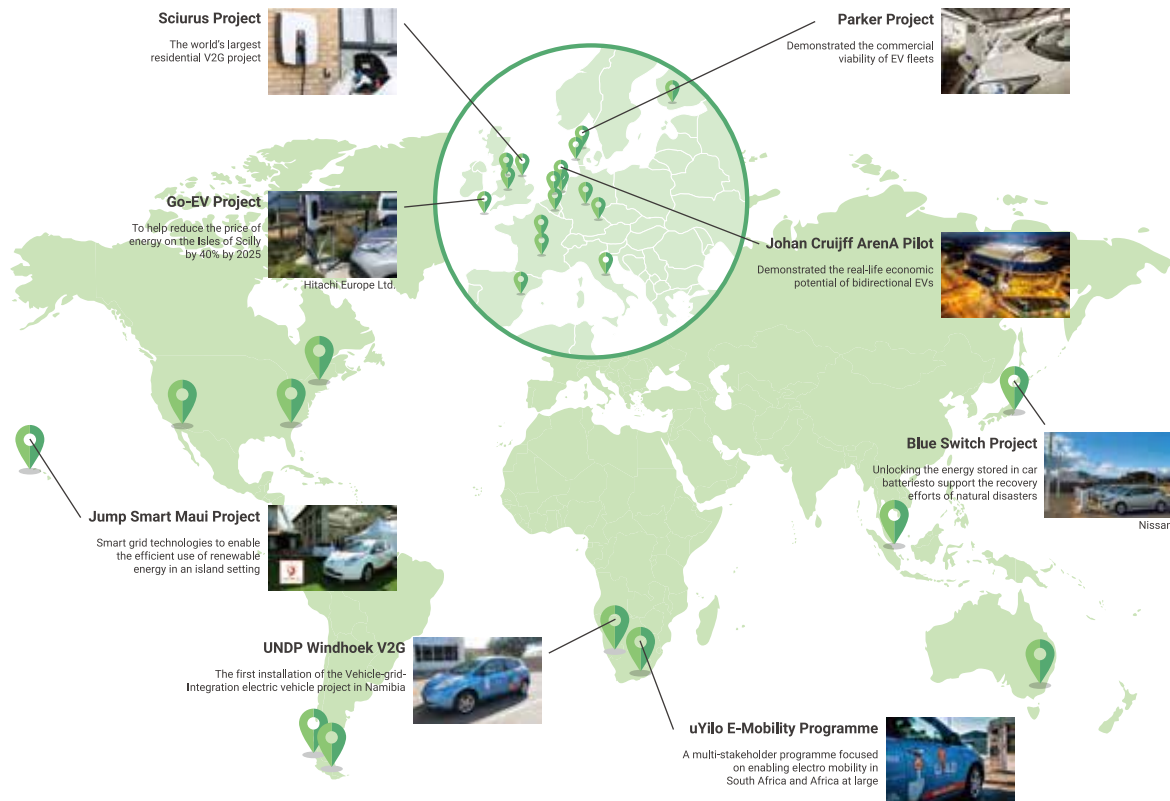
Wallbox

The full list of CHAdeMO certified chargers is available at:
<https://www.chademo.com/products/chargers/>



VGI/V2G projects and commercial applications

Recent demonstration and commercial projects have proven that the adoption of VGI/V2G can create new values to stakeholders.



Australia
Realising EV to Grid Services



Belgium
V2G Zelzate



Canada
PowerStream / Peak Drive



Denmark
ACES Project



Finland
Suvilahti Pilot



France
Nissan HQ Project / GridMotion



Germany
i-rEzEPT Project / Redispatch V2G



Italy
Genoa Pilot



Japan
Yokohama Smart City Project / Leaf to Home



Netherlands
Amsterdam Smart City Project / NewMotion V2G Project
Direct Solar DC V2G Hub / Share the Sun Project



Singapore
MASERA Microgrid Project



Spain
Grow Smarter



UK
Nissan-Enel Project / Domestic Energy Balancing EV Charging Trial
Electric Nation V2G Trial / V2X By Marubeni / EV-elocity
e4Future / Bus2Grid / V2Go! / Smart HUBs / e-flex / Powerloop



USA
LA Air Force Base / UCSD Invent



Norway, UK, Netherlands, Belgium, Germany
SEEV4-City

Source: CHAdeMO website, <https://www.v2g-hub.com>

Key figures from the recent VGI/V2G projects

The technical demonstration phase is already surmounted and recent trials and projects demonstrated that financial gain for EV users and saved costs for grid operators can be achieved, quantifying social and environmental impacts such as CO2 emission reduction.

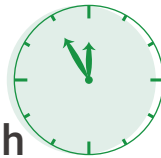


Parker Project (DK)

demonstrated the commercial viability of EV fleets

Total 13,000 hours
of demanding FCR
services

13,000h



An average revenue of
1,860 Euros car/year

1,860€



Johan Cruijff ArenaA Pilot (NL)

demonstrated the real-life economic
potential of bi-directional EVs

Energy autonomy increase of 1.2%

1.2%



CO2 Reduction
2,012t CO2 yearly
(ref. Y2017)

2,012t
CO2

Peak reduction
of 0.3MW (10%)

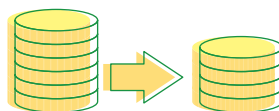
0.3MW (10%)



Sciurus Project (UK)

the world's largest residential V2G project

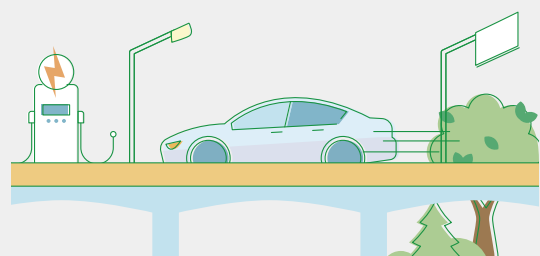
£360 (€411)
Annual bill savings



750MWh of energy offset
through V2G

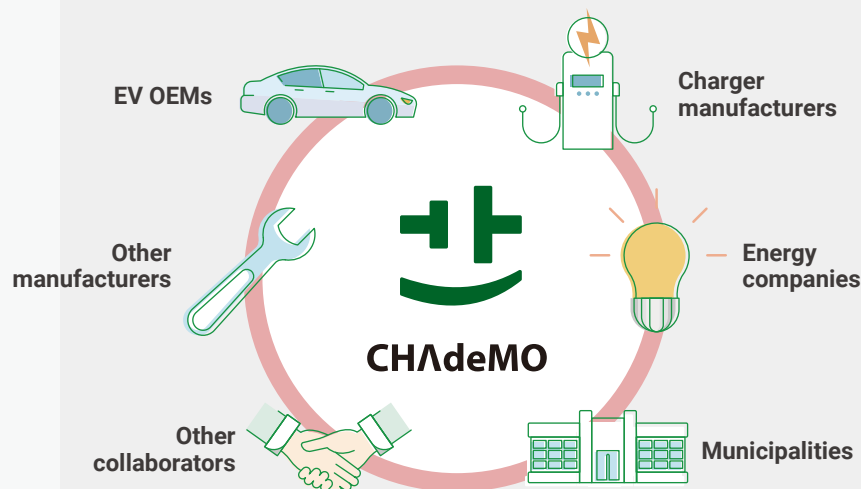


750MWh



Ecosystem of Members

Members of CHAdEMO Association represent a set of diverse partners from multiple sectors of the industry who share the same vision.



What we do

As an ecosystem of companies offering CHAdEMO related products and services, the Association provides a platform for its members to work together to promote and enable electric mobility on a global scale.



Enable the evolution of the CHAdEMO protocol, adapting it to changing market demand and stakeholders' requirements



Provide third-party certification of chargers to ensure safety and interoperability



Promote e-mobility through various PR activities such as the publication of position papers and lobbying



Give visibility to our members and their products via on- and off-line communication tools including shared exhibition booths at trade fairs

Member benefits

1. Access the CHAdEMO protocol and develop your own products*
2. Get your product certified and gain market advantages*
3. Participate in the making of future charging technologies through the WGs*
4. Join the CHAdEMO shared exhibition booths and expand global market access
5. Connect with other industry professionals and increase your business opportunity
6. Access the latest news and information about CHAdEMO developments and events

*Regular member only

Membership category

The Association has three classes of membership, all your company needs to do is to choose the most appropriate category and email the application form to the Secretariat (info@chademo.org; info@chademo.eu).

The membership application is reviewed by CHAdEMO's Executive Board, and if it is accepted, we send out the invoice for membership dues*. Once the payment is made, you officially become our member.

	REGULAR	SUPPORTING	SPECIAL
Annual member fee*	¥500 000 €4000	¥100 000 €800	¥0 €0
Benefits			
Protocol access	✓		
Tech WGs participation	✓		
Product certification	✓		
CHAdEMO exhibition booth participation	✓	✓	
Marketing opportunity	✓	✓	✓
Participation in member meetings	✓	✓	✓
Association's newsletter	✓	✓	✓

Our members (not exhaustive)



The full list of members available at:

<https://www.chademo.com/membership/members/>

Joining the Association is very easy -
email us at info@chademo.eu or visit
www.chademo.com for more details!

<https://www.chademo.com>

