FEBRUARY 2024 - EV CHARGING INFRASTRUCTURE FORUM

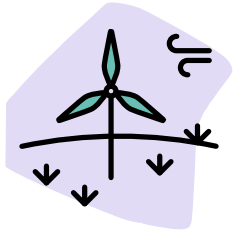
EV business case and financing trends

Green Giraffe Advisory

With our pioneering and independent advice, we help our clients accelerate the energy transition at scale

More than **EUR 45 bn** funding raised over **14 yrs** of specialised advisory

110+ professionals globally in 10 offices in 10 countries on 5 different continents



310+ transactions or projects
267+ GW total capacity

A global and independent financial advisory firm launched in 2010

- Part of the Green Giraffe Group, providing finance solutions for capital intensive renewable projects and energy transition initiatives
- Pioneer from the early days and today the largest financial advisor specialised in the energy transition
- One integrated team – acting on a global scale

An ambition to provide high quality, specialised advice

- Proven track record in renewable and energy transition technologies
- High value-added from our specialised expertise on all our missions
- We build long-term relationships with our clients

Green Giraffe Advisory follows a simple strategy

- Provide a holistic and multi-disciplinary approach, coupling sector-specific tasks and traditional debt or M&A advisory services
- We are connected locally and globally to industry expertise, and we bring this pool of knowledge to you
- We are committed to the industry, we believe in the countries we are active in, and we have the skillset it takes to **get deals done**

Over a decade of growth and industry recognition as a leading financial advisor, with a presence globally

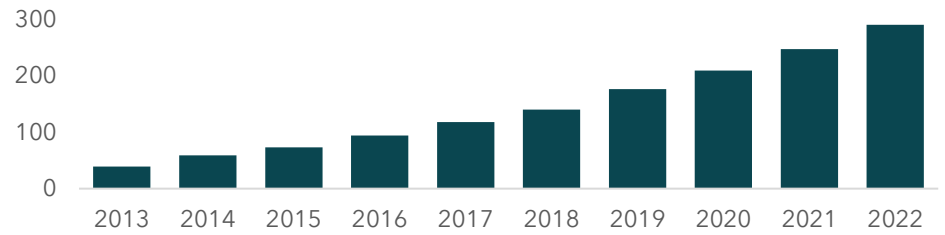
Leading renewables financial advisor by global rankings

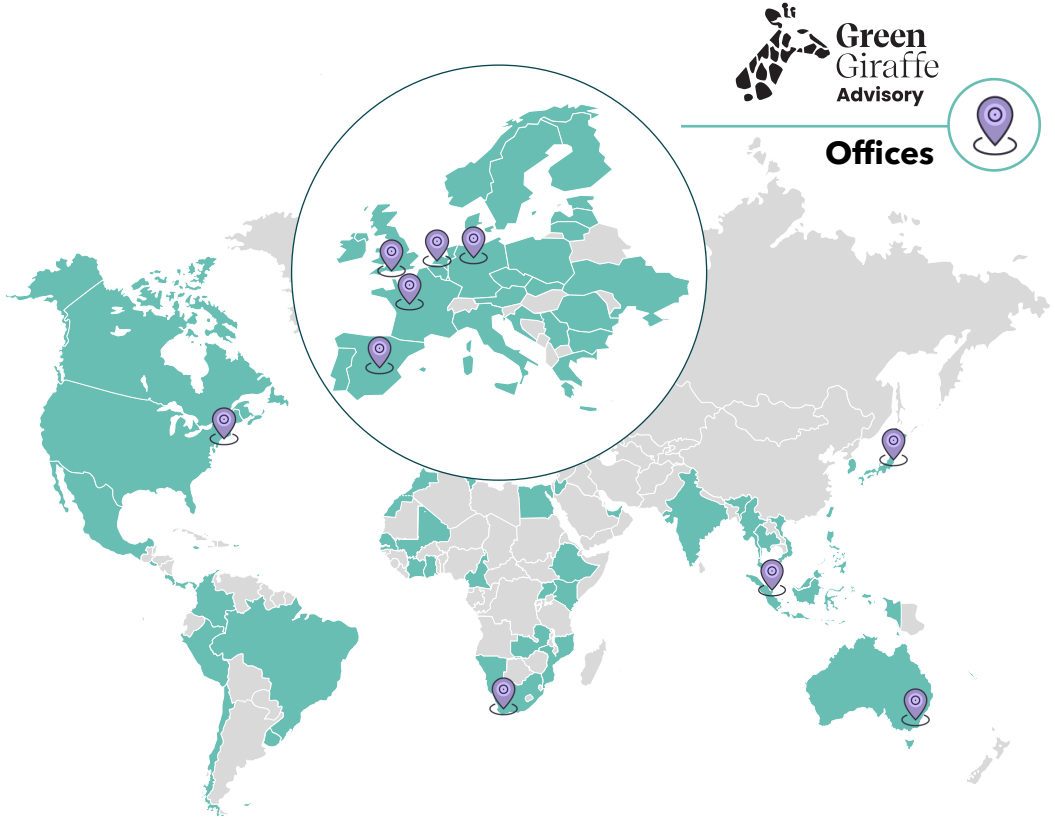
Rank	Company[1]	Total (USD bn)[1]
1	Macquarie	75
2	**Green Giraffe**	**53**
3	BNP Paribas	49
4	EY	48
5	Santander	47
6	Société Générale	45
7	Mitsubishi UFJ	45
8	KPMG	34
9	Citigroup	34
10	UBS	28

#2

Ranked **in the world** by deal values over the last decade

10-year growth in deal count





Countries in which Green Giraffe Advisory has been active

1. IJGlobal – global renewable financial advisors by deal value as of Q3 2023 for the period 2010-2023

Green Giraffe Advisory

Green Giraffe offers a range of financial advisory services globally, throughout the EV value chain

Clients & services

Debt raise

We support our clients in predominantly non-recourse finance debt raises

Equity raise

We leverage our network to find suitable investors for equity injections

M&A

We support on the buy- and sell-side, at project, portfolio and corporate level

Strategic support & modelling

All complimentary support connected to overall and financing-adjacent strategy

Selected on-going mandates

- Providing **strategic support** on the business case, financing and roll-out of chargers for an **OEM**
- Supporting in the early-stage **equity raise** for an **EV truck** fleet and charger business operator
- Support in **equity raise** for **CPO** with portfolio of slow destination chargers on private & public land
- **Modelling and PPA support** to an **CPO** to secure energy for portfolio of chargers

Green Giraffe Advisory

EV charging connects multiple disciplines of the energy transition driving rapid market growth

OEMs
Cars
Trucks, buses
Charging Hardware

Software developers
Back office/ charging software
Energy Trading
User application

CPO
Develop, install, own and operate the CSs

Individuals
(clients of OEMs and CPOs)

Installers/EPCs

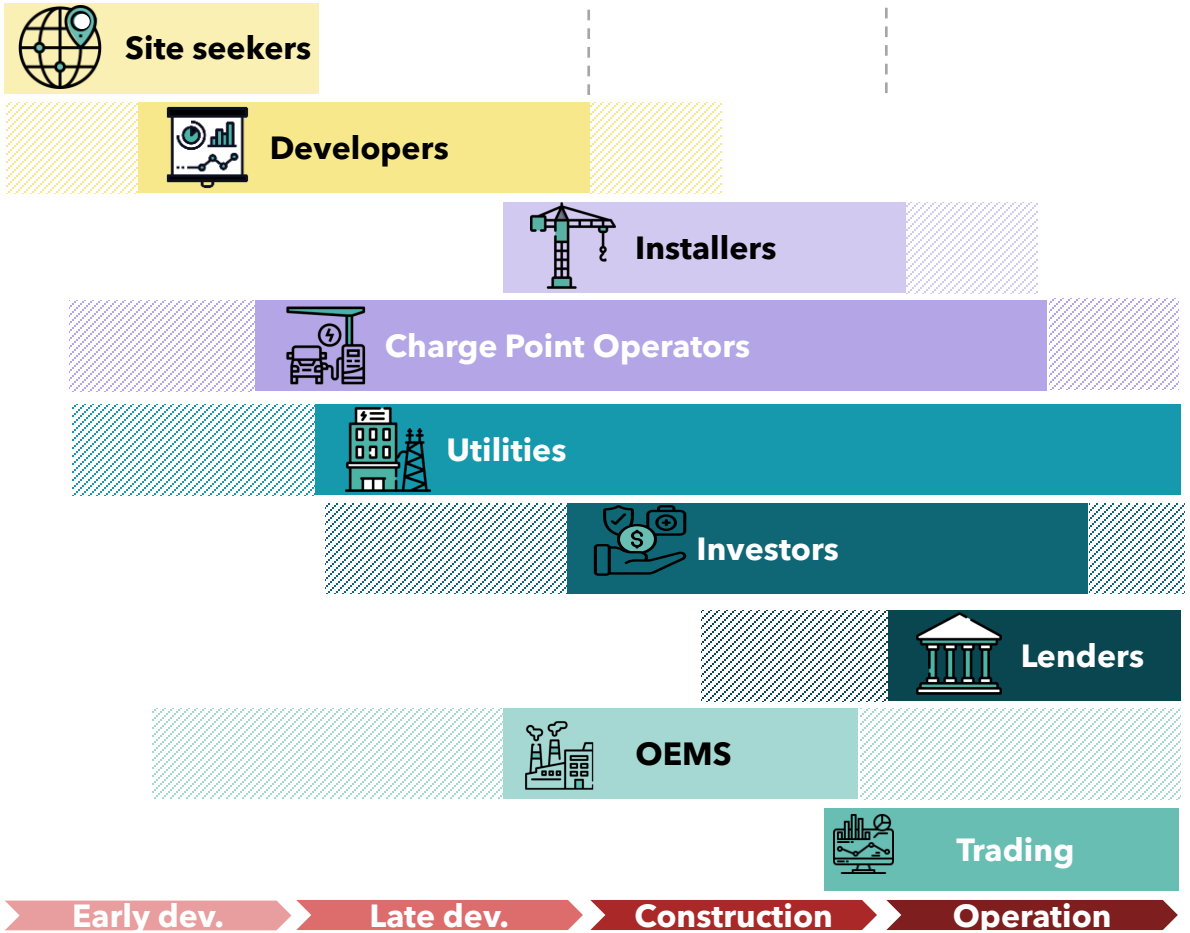
Utilities
Counterparty for CPOs wrt grid connection
Also act as CPO

EV fleet managers
Provide turn-key solutions for corporates

Government
Provide support / subsidies
Regulatory framework for charging locations

Corporates
provide space for CPO at destination, or clients of fleet managers

Different stakeholders are active and contribute during different phases of the projects' lifecycle



- Identify land/clients/parties for CSs
- Can support in securing agreements

- Work on securing necessary land agreements
- Secure grid connection and technical design

- Usually provide turn-key solutions
- Predominant work on private (slow) chargers

- Involved throughout most of charger lifecycle
- Develop, install, own and operate the CSs

- Can be involved as early as development
- Seek to stay long-term and until decom

- Prefer to see some operational assets
- Can come in earlier if land/grid is secured

- Won't enter before projects are shovel ready
- Prefer entering during ops for nascent markets

- EVs, chargers & E-MSPs involved throughout lifecycle
- Predominantly active around construction

- Consumers are slowly getting access to dynamic pricing
- EVs are essentially mobile BESS – interesting potential

The sector can be divided into various segments either by CS location or type of EV owner

Public charging

Public Land: Municipal/street parking
- Slow chargers, competitive public tenders, low margin
- Predictable utilisation patterns, good available historical data

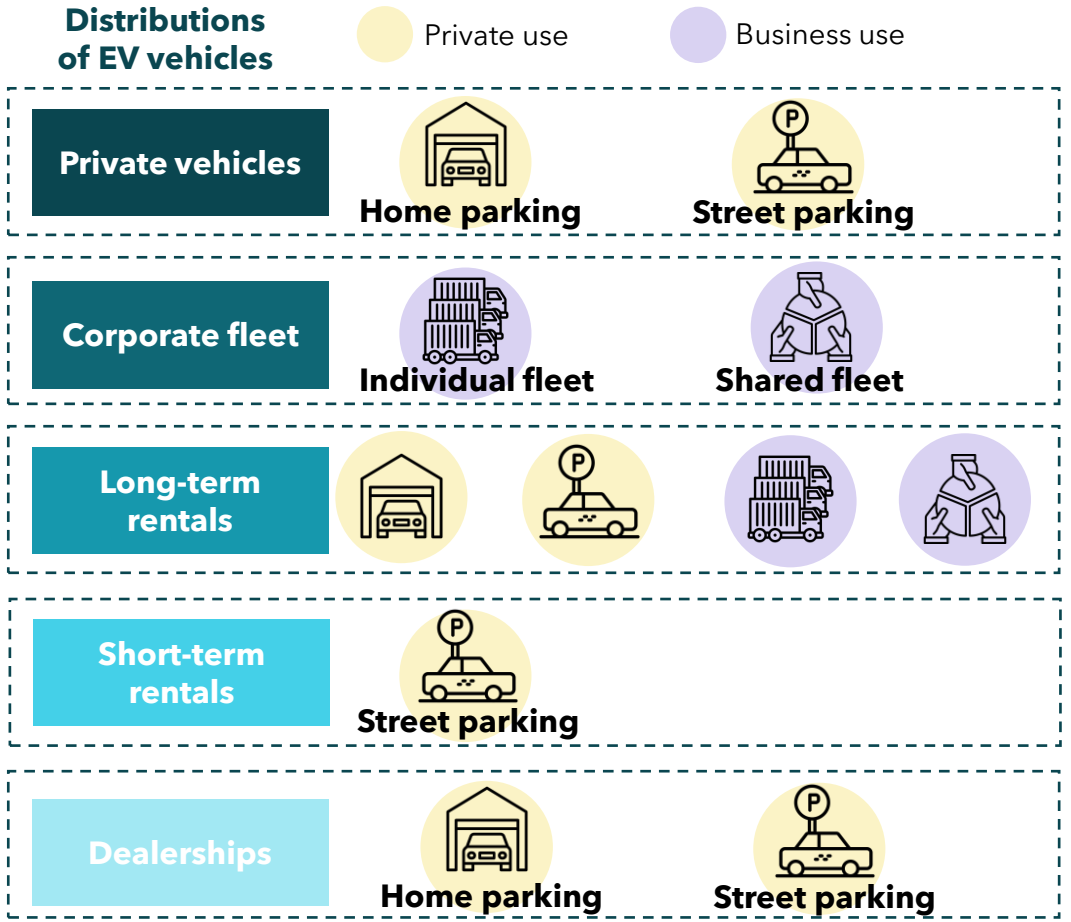
Private land (destination): Retail, hospitality, stadiums etc.
- Mix of slow/fast, mix of AC and DC, sized on utilisation
- Longer leads required for land and grid connection

Private land (Arterial roads & highways): Service stations
- Fast to ultrafast chargers, high capex
- Long(er) detailed and development for more complex CSs

Private Charging

Corporate: Usually owned and operated by landowner
- Mix of slow/fast, end-user can, but doesn't need to be owner
- Predominantly installed for the benefit of employees or fleet

Private: Residential properties for property owners use
- Usually wall mounted box, owner is end-user



High-speed DC charging is expected to take the majority of market share as EV uptake accelerates

Drivers:
Utilisation & charge times

- **Capex/MW** is higher for fast chargers
- Lower utilisation makes DC business case trickier
- As utilisation ramps up, the **land/location** will become the most valuable aspect of the CS
- DC allows for more **MWh re-recharged per day**

Concern:
Pricing & charging behaviour

- Current EV owners are higher earner and **price elastic**
- CS-choice is driven by **convenience** more than price
- Increases in CS will lead to more **competitve pricing**
- EV uptake is expected to **exceed CS installation**
- (i.e. utilisation will still maximise)

Consideration:
Capex & investment

- **Higher capex attracts investors** with bigger minimum ticket
- DC's business cases can **accommodate O&M costs**
- Results in **higher quality asset** and long-term investment

How do future trends and DC charging influence the different EV owners

Home parking

Moderate growth in demographic

Moderate increase in need for public charging with long-range journeys increasing

Street parking

High growth in demographic

High need for public charging (no change over time)

Individual fleet

High growth in demographic

Moderate / **high** increase in need for public charging

Long-haul = high, intercity = lower

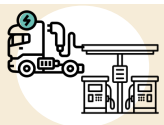
Shared fleet

High growth in demographic

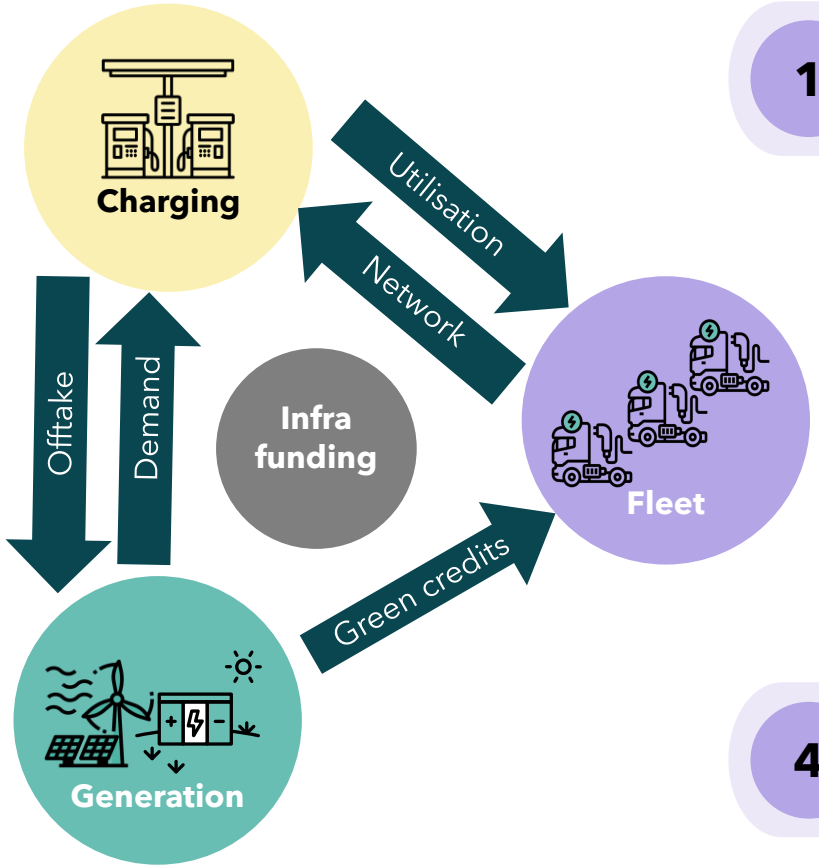
Moderate / **high** increase in need for public charging

Long-haul = high, intercity = lower

Overview of select business cases, their pros & cons, and ability to attract capital

	Pros	Cons	
 **Public slow AC charging stations (CS)**	Predictable utilisation Good historical data	Low capex, fragmented Ultra competitve	TotalEnergies, VATTENFALL
 **Private land AC/DC destination CS for cars**	Highest growth segment	Unknown utilisation Land leasing Grid connection	Allego, EVBOX
 **Private land DC CS on highways for cars**	Infra-like investment High value creation	Long development Grid con. restraints	FASTNED, IONITY, Allego
 **Private land DC CS on highways for trucks**	Infra-like investment Low competition	Grid con & land Dependent on uptake on EV trucks	milence, NewVolt
 **EV truck fleet lease + onsite CS installation and O&M**	Turnkey solution	Large portion of value captured by OEM Capex shifted onto end user	einride, eo
 **EV truck fleet lease + CS route network**	Turnkey solution Ideal infra investment	Complex, many moving parts	WattEV, alt. mobility
 **CS with renewable energy and/or BESS**	Alleviate grid issues Maximise "green"	Long development Land constraints Gen. vs consumption	TotalEnergies, FASTNED, Allego

Considerations around optimisation & value creation that apply to multiple business cases



1 Creating an ecosystem that doesn't rely on player moving first

- EV is more capex intensive that ICE but has less opex
- Creating a leasing, turnkey solution will be easier for adoption

2 Secure offtake, fix LCOE and green energy credits

- Combination RE & EV charging also compounds green credits
- BESS + RE can also mitigate grid connection challenges

3 Capture value across a large section of the value chain

- Cut out middle-men, consolidate profits
- Cross-subsidize individual pillars for most competitve package

4 Increase in capex reduces WACC attracts large investors

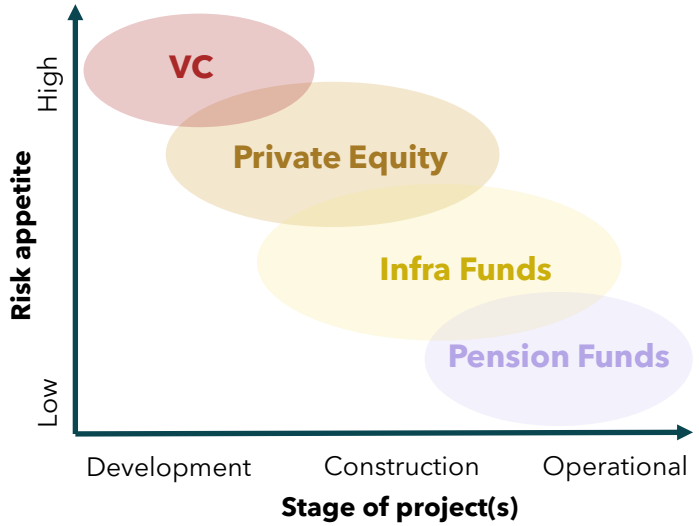
- Developing and controlling multiple variables also de-risks them
- Large ticket, asset-heavy ventures attracts low-interest rate capital

Perspectives of Equity Investors on the EV charging market dependent on their risk appetite

Investor	Key considerations
Venture Capital	Looking for scale-up with unique competitve advantage Value on IP & management (experience and business development)
Private Equity	Focus on project pipeline: Size, permits, agreements, grid connection Offtake structure: empirical data on utilisation rates
Infra Funds	Investment characteristics to mirror traditional energy infra investments Prefer structured revenue schemes and a first operational base
Pension Funds	Seek to decarbonize their portfolio Require secure cash flows to limit risk exposure for volume & price risks Want to minimize and share the risks of project execution, operation and liquidity with other investors

Type of funding provided

- VC funds tend to prefer **seed funding** at a **corporate** level
- Other investors look at direct investment at **asset or corporate**-level
- Typical instruments include **share capital, SHL, bridges and convertibles**



High-return seeking investors currently dominate the market, but larger institutional investors are gearing up

Debt financings of EV charging will transform from isolated transactions to broad sector funding

Today most of EV charging is financed by Shareholders through equity investments, private debt or indirectly via corporate debt

The availability of bank financings remains low with market risks (price and volume) remain the key hurdle

While current debt financing approaches face challenges and risks, future long-term bank financings will unlock cheap capital

Status quo of bank financings

Bank financings seen in 2022

- Allego, EUR 400 M, infrastructure finance
- InstaVolt, GBP 110 M, infrastructure finance
- Einride, USD 300 M, asset-backed

Challenges

- Short- to medium-term financings pose a refinance risk
- Limited flexibility due to cover ratio testing prior to drawdowns

Future of bank financings

Objective

- Attract cheap and flexible debt capital to refinance existing operational CSs
- Contracted cash flow horizon to match tenor

Requirements

- Long-term stabilized cash flows to be proven via historic data and/or diversified portfolios

Unlocking further investment capabilities

- Dividends earned on such transactions will further increase future equity investments
- Ultimately, debt could be drawn for CAPEX of projects, further alleviating shareholders

The trajectory of infrastructure finance from proven asset classes to innovative business models

Risk	Road & Railway Infrastructure + PPPs	Digital Assets	EV Charging
Technology	Proven at scale for decades	Innovations often evolve proven technology	Proven technology used in unproven high scale
		Manageable	
Construction	Highly proven EPC	EPC or Multi-Contracting	EPC or Multi-Contracting
Operations	Experienced contractor's availability guarantee	Performance guarantees available	Performance guarantees available
Market	Government-backed and highly predictable	Established markets often being revamped or expanded	Limited historical data and uncertainty on volume and price
	Bankable	**Bankable**	**Demanding**

Others (e.g., sovereign risk) avoidable with careful project selection

Solving market risks allows for stabilized cash flows and unlocks project finance opportunities

EV is destined to be the dominant technology for the vast majority of road vehicles in the near future

1. EV is primed for adoption and consolidation
2. Unlocking more (empirical) data will unlock access to cheaper capital
3. There is still untapped potential in most business cases – whether this is in energy trading, grid stabilization or alternative income streams next to EV charging
4. The market is stable/proven enough to make large investments. Key is to find the right investment!

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