

# CWIEME BERLIN

3-5 JUNE 2025  
MESSE BERLIN

● A Hyve Event

Welcome to CWIEME Tech Talk:

# INSIGHTS INTO THE EUROPEAN EVCI MARKET AND EMERGING TRENDS

# European EVCI Market at Crossroads: Market Drivers & Key Trends



**Hassan Zaheer**

Chief Operating Officer

hassan@ptr.inc



**Jannat Wasif**

Analyst - eMobility

jannat.wasif@ptr.inc



# Contents

<i>01</i>	Introduction
<i>02</i>	Current Market Landscape
<i>03</i>	Market Forecast
<i>04</i>	Market Drivers
<i>05</i>	Conclusion

# Introduction

01

# PTR Inc. Capability Statement



Enabling Proactive Decision Making by Empowering Businesses with Tools and Information Based on Transparent Methodologies.

PTR Inc. is committed to being your **Strategic Growth Partner** in the Electrical Infrastructure Manufacturing Sector. Leveraging our unparalleled expertise and diverse capabilities, we deliver tailored solutions and strategic insights to empower your growth and business development efforts. Through collaborative service offerings, we drive sustainable growth and ensure long-term success for our valued clients.

## Market Research

- Bespoke and syndicated market intelligence reports
- Extensive datasets and reports covering over 40 countries worldwide.
- In-depth research methodology backed by data accuracy & transparency.

## Marketing Support Services

- Content Creation, syndication, and marketing advisory services aimed at promoting cutting-edge technologies, products, and services for our clients across the energy value chain via content collaborations on:
- Whitepapers
  - Webinars
  - and more..

## Advisory

- Strategic growth partners for businesses, governments, and investors, specializing in,
- Commercial advisory
  - Go-to-Market Strategy
  - Opportunity Assessment
  - New Market Entry
  - Market Access and Policy
  - Pricing Strategy
  - And more.

## Cognito

- PTR Expert Network offers its clients a diverse panel of industry experts spanning multiple sectors across the energy value chain, delivering
- Broad Industry Coverage
  - Expertise Across Hierarchies
  - Global Reach

## Matos AI

- Industry Agnostic data automation tool
- Data acquisition and AI-powered market research
  - Bulk download options
  - Real-time data streams
  - Data outputs in several forms

# PTR's Electrical Assets & Infrastructure Topic Coverage

PTR's Coverage in terms of Be-spoke, Syndicated, and Advisory Services for Power Grid and New Energy Topics



**Transformers**  
(Distribution, Power)



**Substation Automation**  
(Dist. vs Cent.)



**EVCI (EV Charging Infrastructure)**  
(Public, Private, Passenger/Comm.)



**Switchgear**  
(HV, MV)



**Port Electrification**  
(Shore-to-Ship, Microgrid)



**Energy Storage Value Chain**  
(Utility Scale, C&I)



**Flexible AC Trans. Systems**  
(SVCs, STATCOMs)



**Smart Meters**  
(Power Quality, AMI)



**Commercial & Off-highway Vehicles**  
(BEVs, PHEVs, FCEVs, ICEs)



**HVDC Market Analysis**  
(VSC, LCC, Cables)



**Power Factor Correction**  
(Active, Passive)



**Hydrogen**  
(Tech., Demand, Value Chain)



**AI in Power Grid**  
(DERM, DR, VPP, & EVs)



**Grid Communication**  
(Private LTE, 5G)



**Impact of EVs on Power Grid**  
(Quantitative, Trafos, Switchgr.)



**Grid Investment Tracker**  
(TSOs & DSOs)



**Industrial Motors & Drives**  
(MV/LV - Custom)



**Financial Trackers**  
(Grid Investments,  
Company Financial Breakdowns)



**Grid Modernization & Flexibility  
Technology Leaderboard**

# Current Market Landscape

02

# Current Trends in the European EV & EVCI Market



Recent developments in the EV & EVCI market in Europe: Scaled-back incentives and Chinese competition

## 1

### European Countries Scale Back EV Incentives

- Germany
  - Eliminated **environmental bonuses** for EVs
  - Negative impact on consumer demand amid economic challenges
  - **32%** drop in sales in Europe's largest market
- France:
  - Suspended an **EV leasing subsidy** for low-income individuals
  - Withdrew **purchase incentives** for corporate EVs, retained home charging support
  - **20%** reduction in subsidies for higher-income car buyers on purchasing EVs and PHEVs

## 2

### EU Shielding Domestic Auto Industry from Chinese Competition

- **Strong competition** from affordable Chinese EV OEMs like BYD, Nio, and Xpeng
- EU raised tariffs on Chinese EVs to **38%**, in addition to **10%** duty on EVs imported from China
- Chinese EV OEMs investing in countries with **open access** to Western markets
  - **BYD**: 1 billion USD plant in Turkey to produce 150,000 vehicles/year by 2026
  - **BYD**: Another plant in Hungary to produce 200,000 vehicles/year
  - **Cherry**: Plant in Spain to produce 150,000 vehicles/year by 2029
  - **SAIC** and **Xpeng Motors**: Announced plans to establish a plant in Europe



# Current Trends in the European EV & EVCI Market



Recent developments in the EV & EVCI market in Europe: Financial turmoil and grid connectivity issues

## 3

### Financial Turmoil Grips Companies in the EV Industry

- Charger OEMs struggling to achieve **profitability**
- Net losses exceed revenues, prompting **insolvency** and **bankruptcy** filings
  - Tritium, EnerCharge, and Charge Enterprises
- EV and EV battery OEMs also succumbing to **financial collapses**
  - Fisker Group, Lordstown Motors, Proterra, Volvo Trucks, and Arrival
  - Britishvolt, Blackstone Technology, Northvolt, Alelion Energy Systems, and EnerDel

## 4

### Grid Connection and Permitting Process: A Bottleneck for European CPOs

- European CPOs face significant **grid connectivity issues**
  - Lengthy and complex process of obtaining a grid connection
  - Access to sufficient grid capacity across countries
  - Additional organizational and financial resources employed
- CPOs willing to **collaborate** with Distribution System Operators
- Through ChargeUp Europe, **26 CPOs** have called for
  - Standardization
  - Transparency
  - Predictability
  - Harmonization
  - Faster connection and permitting processes

# Current Trends in the European EV & EVCI Market



Recent developments in the EV & EVCI market in Europe: EV OEMs realigning their strategies

# 5

## EV OEMs Realign Strategies: Pivoting to PHEVs Amid BEV Slowdown



Volkswagen plans to **expand** its PHEV lineup, with potential **factory closures** in Germany to reduce costs



Volvo Cars **revised** its 2030 EV sales target to include **hybrid** models



Aston Martin **delayed** the launch of its 1<sup>st</sup> BEV from 2025 to 2027, shifting focus to **increased investment** in PHEV



Audi **slowed** the rollout of its BEV model launches



Mercedes-Benz **pushed back** its target of achieving 50% EV sales from 2025 to 2030, delaying the development of the all-electric MB.EA Large platform



Jaguar Land Rover **postponed** the launch of two electric models originally scheduled for 2026, citing **unexpected demand** for their PHEVs



Bentley **postponed** the launch of its 1<sup>st</sup> EV and **shifted** its BEV-only target from 2030 to 2033



Ford is **reevaluating** its BEV strategy in Europe beyond 2030 and has **delayed** the release of a BEV by two years

# Market Forecast

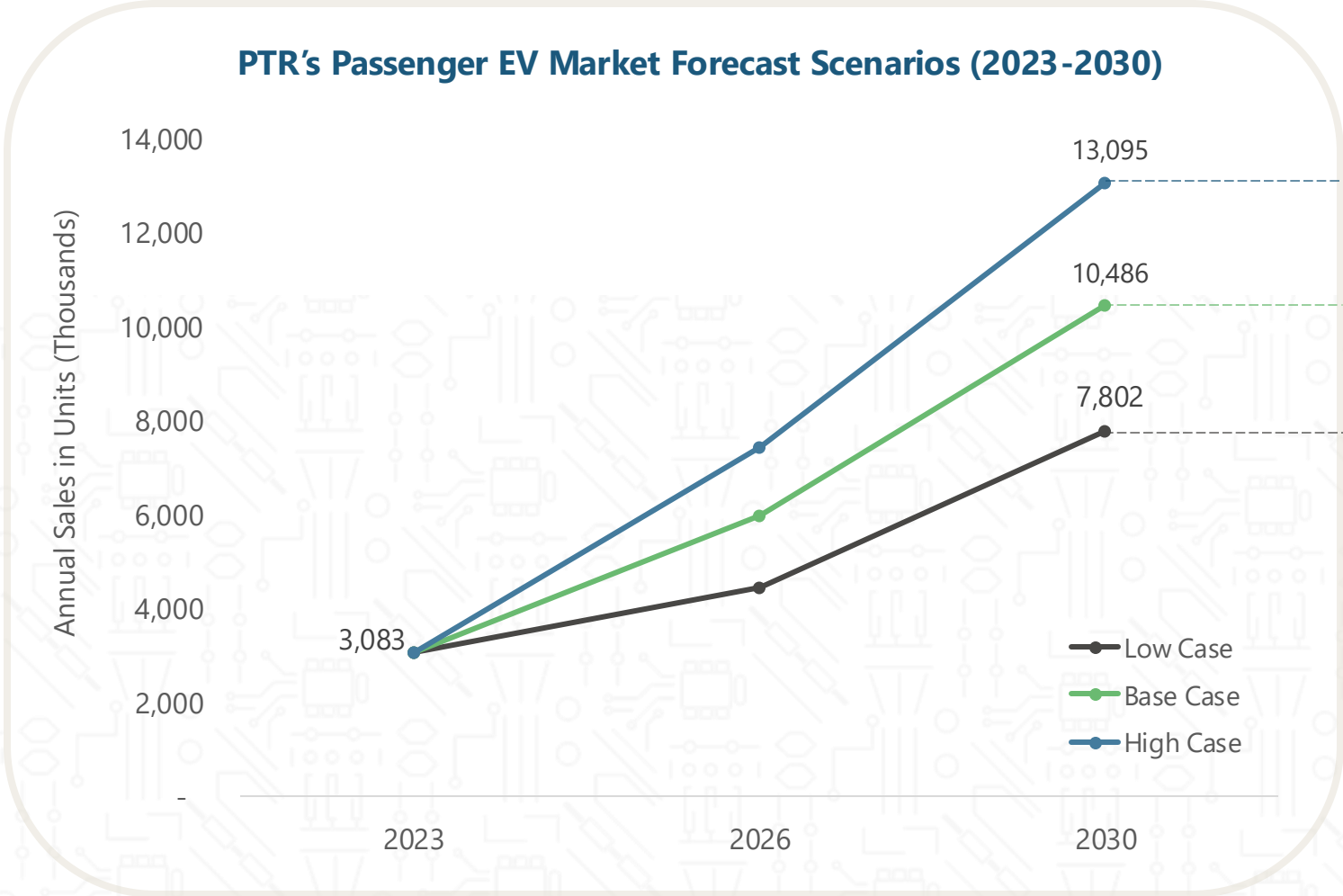
- European EV and EVCI Market Forecast

# 03

# European EV Market Forecast



European passenger EV market forecast till 2030 by different case scenarios



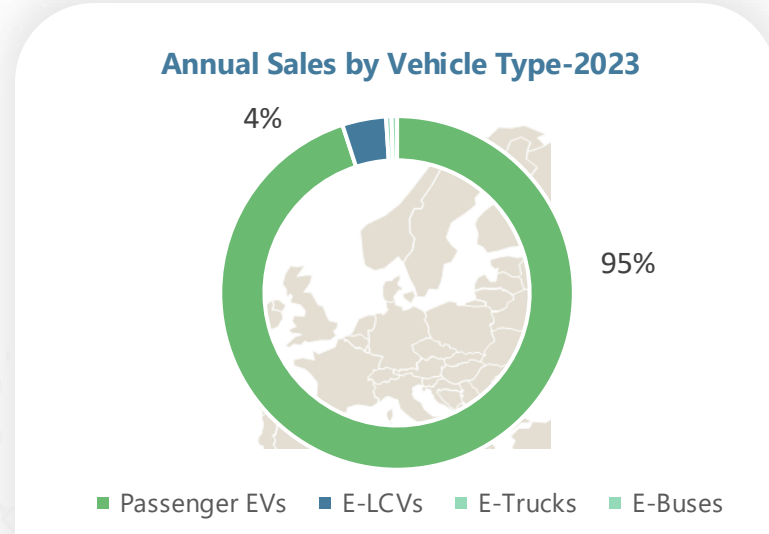
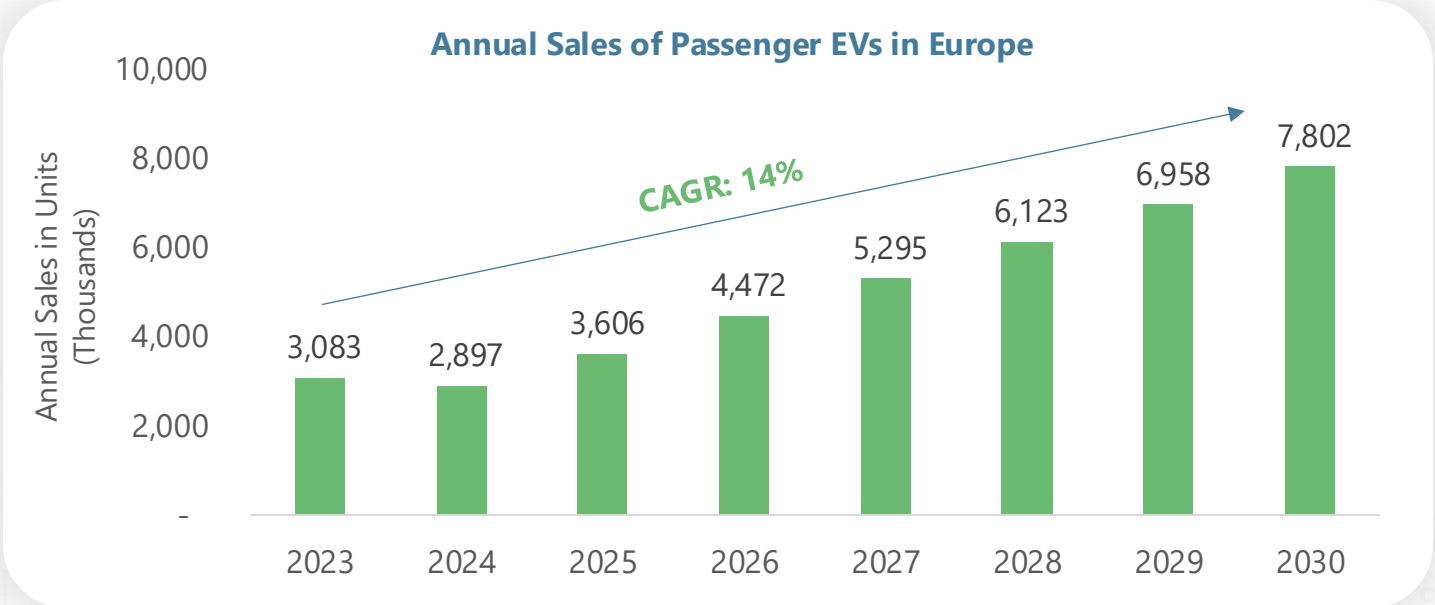
#### Market Growth Rates

- CAGR (2023-2030): 23%**
- CAGR (2023-2030): 19%**
- CAGR (2023-2030): 14%**

# European EV Market Forecast

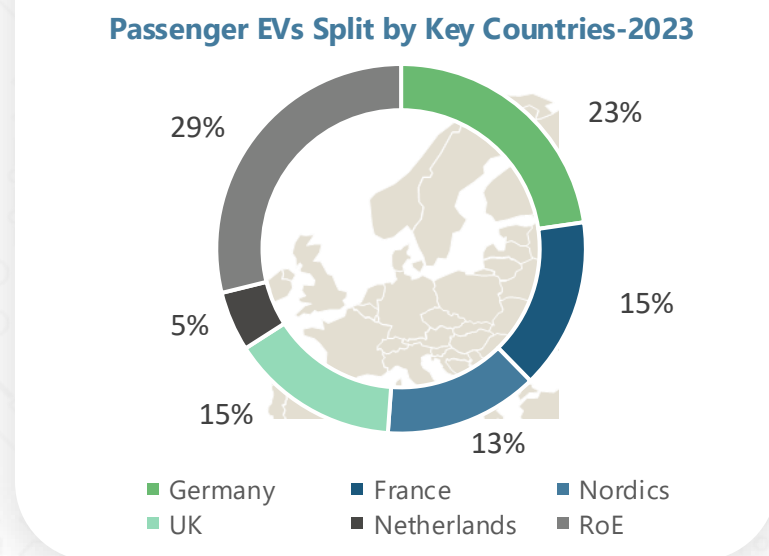


European passenger EV market forecast by annual sales, vehicle type, and major players



## Heterogeneous Nature of the European EV Market

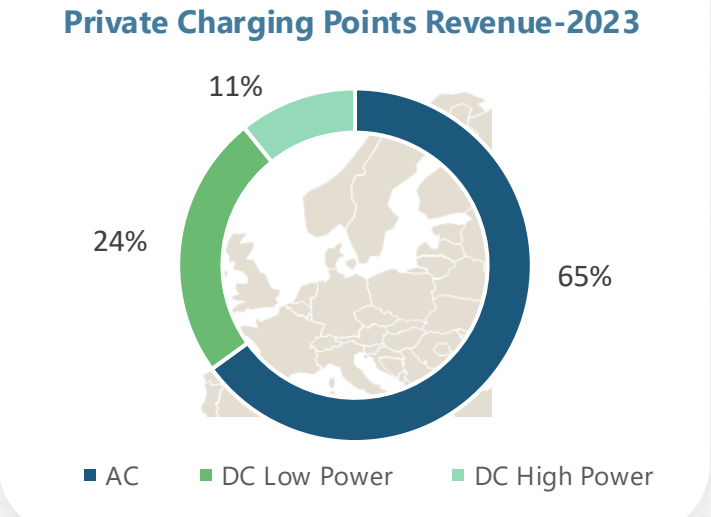
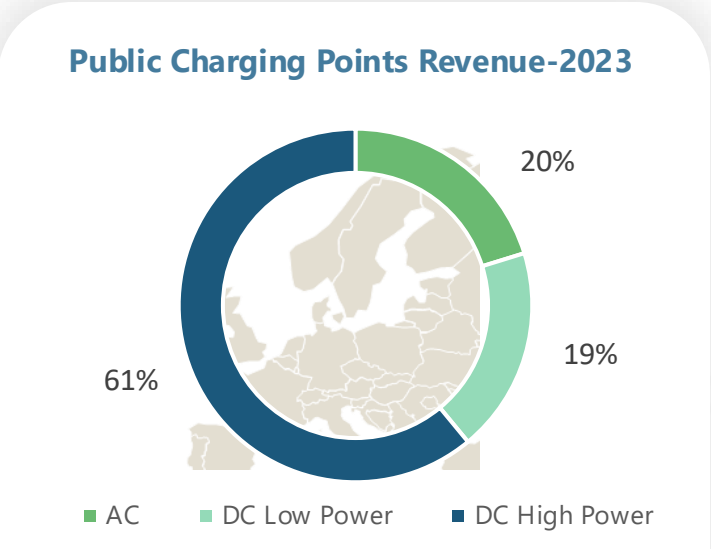
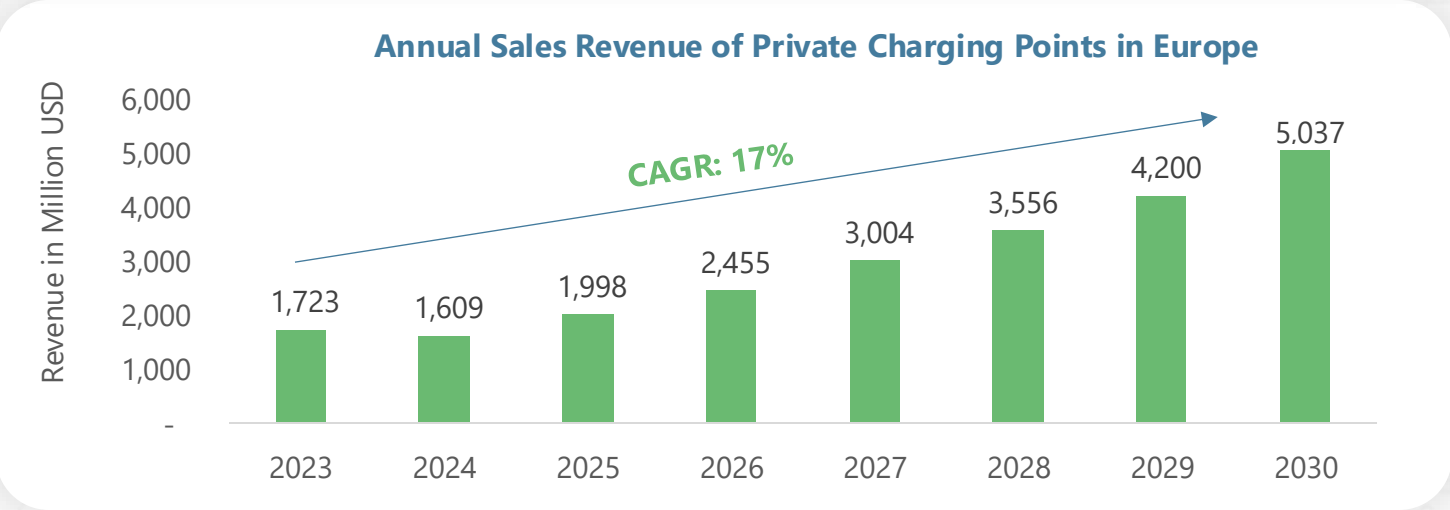
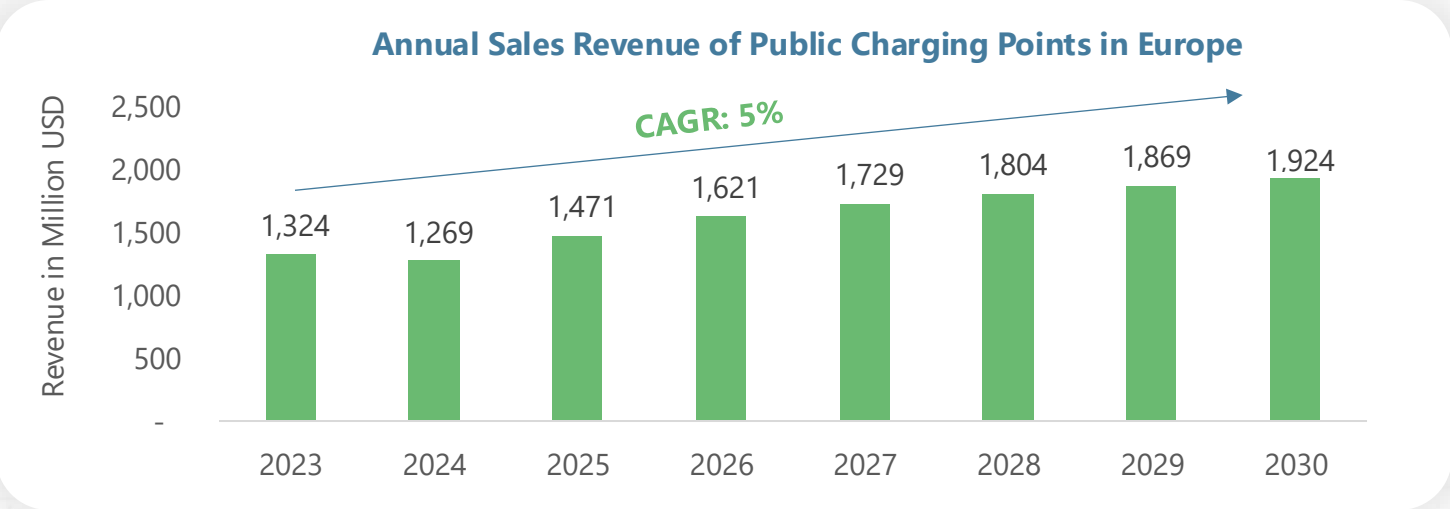
- **6%** decline is expected in 2024 YOY annual sales of passenger EVs
- Notable Market Drop-offs for BEVs\*:
  - Germany (-32%), Italy (-12%), Sweden (-21%), Norway (-3%)
- Strong Market Performers for BEVs:
  - France (+8.01%), UK (+10.5%), Denmark (+50.8%), Belgium (+41.3%), Netherlands (+4.5%)
- Prominent Market Gains for PHEVs:
  - Germany (+9.2), UK (+24.9), Sweden (+3.8%), Netherlands (+3.2)



# European EVCI Market Forecast



European EVCI market forecast by accessibility, revenue, and charger type



# Market Drivers

- AFIF, Targets and Incentives
- Vehicle Electrification Targets: Europe vs. the Global Landscape
- AFIR: Key EU Legislation Shaping EVCI Development Across Europe
- Emerging Technologies

# 04

# European EV & EVCI Market Drivers: AFIF, Targets and Incentives



Despite EV slowdown in some countries, the region's market will expand driven by ambitious policies and incentives in the long run

## Alternative Fuels Infrastructure Facility

- **1.3 billion EUR** granted since 2021
  - **26,396 CPs\***
  - **202** hydrogen refueling stations
  - Electrification of ground operations at **63** airports
- Phase 1 (2024 – 2025):
  - **424 Million EUR**
  - **4,200 CPs** (150 and 350 kW)
  - **48** hydrogen refueling stations
  - Electrification of ground operations at **21** airports
- Phase 2 (2025-2027):
  - **Megawatt charging stations** for HDVs
  - Electricity supply and ammonia and methanol bunkering facilities at **ports**

## Targets & Incentives in Major European Markets

### United Kingdom:

- **300,000 CPs** by 2030
- **1.6 billion GBP** for EVCI by 2030
- ZEV Mandate:
  - **22%** of each carmaker's sales to be ZEV in 2024
  - **80%** by 2030
  - **100%** by 2035
- Financial incentives for EVs and EVCI

### Nordics:

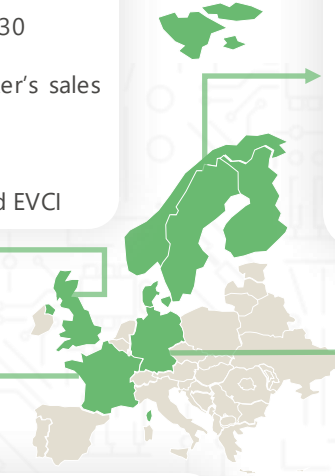
- Norway:
  - **82%** new vehicles sold were electric in 2023
  - **42.7 million EUR** annually for EVCI built by private companies until 2025
  - All new LDVs to be ZEVs by 2025
  - All new trucks to be electric by 2030
- Finland: **25,000 CPs** by 2030
- Denmark: **300,000 CPs** for private use by 2030
- Tax exemptions and financial incentives for EVs and EVCI

### Germany:

- 2030 Targets:
  - **15 million EVs** on roads
  - **1 million CPs**
  - **9,000 fast CPs** across **1,000** locations
  - **7 billion EUR** for EVCI
  - Tax exemptions for EVs only

### France:

- France 2030 Investment Plan:
  - **3.6 billion EUR** for EVCI development
  - Produce **2 million ZEVs**
  - Tax exemptions and financial incentives for EVs only
- ADVENIR Program 2025:
  - **320 million EUR**
  - **125,000 CPs** funded. Target: **175,000**



CPs\*: Charging Points



# Vehicle Electrification Targets: Europe vs. the Global Landscape



Feedback from the supply side and consumers to the policymakers is resulting in the realignment of e-mobility targets

## Recent Developments

### USA:

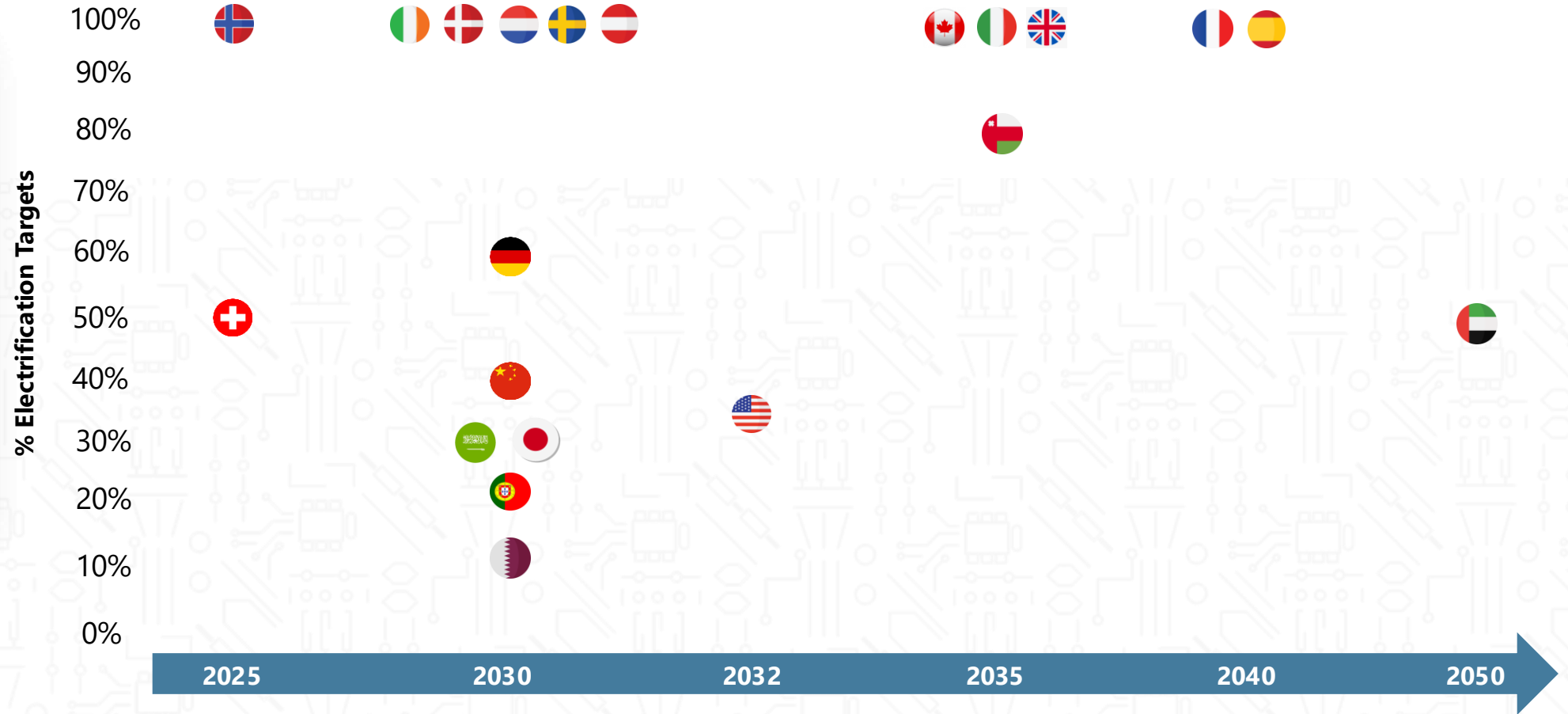
- USA reduced its target from 67% electrification by 2032 to as little as 35%

### Germany:

- Target to now include PHEVs instead of BEVs only

### UK:

- 80% of new cars and 70% of new vans to be ZEV by 2030
- 100% by 2035



# AFIR: Key EU Legislation Shaping EVCI Development Across Europe



Implementation of AFIR is a crucial component in shaping the EVCI development across Europe

## Alternative Fuels Infrastructure Regulation: Solution to Uneven Development of EVCI in the EU



### The 60 km Rule Along the TEN-T Network

- For LDVs, **150 kW** charging station every **60 km**
- Charging capacity of at least **1.3 kW** per registered BEV
- For HDVs, **350 kW** charging station every **60 km**



### Smart Charging

- All public charging stations should have the ability to **charge smartly**



### Enabling Card Payments

- Ad hoc card payments to be available at all charging stations above **50 kW**



### Open Data

- Unrestricted access to the **availability, location, waiting time, operational status, and price** at charging stations



### Pricing Transparency

- At charging points above **50 kW**, pricing should be **energy-based**, i.e., per kWh

# Emerging Technologies: Wireless and Battery-Buffered EV Charging



Emerging technologies that will drive the European EV and EVCI market



## Wireless Charging: A Paradigm Shift in EV Charging

- Seamless convenience
- **High appeal** for luxury vehicle owners
- **Reduced** maintenance costs and associated risks
- Growing interest in **autonomous vehicles**
- Low-power static charging ideal for **residential sector**
- High-power static and dynamic charging ideal for **commercial fleets**

### Key Challenges

- Inadequate current standards
- High cost of chargers
- Trade-off between convenience and charging speed

### Solutions to Address Challenges

- High-power and dynamic charging standards being developed
- Decreasing costs through technological progress



## Navigating Grid Challenges with Battery-Buffered EV Charging

- Enhances grid stability and eases grid strain
- Optimizes cost savings
- Ideal for
  - **Densely populated** urban areas
  - **Remote areas** with limited or unreliable grid capacity
  - Regions with **high renewable energy integration**
  - Areas prone to **extreme weather conditions**

### Key Challenges

- High cost of installation
- Battery degradation due to frequent use
- Space constraints and increased maintenance requirements

### Solutions to Address Challenges

- R&D on advanced battery management systems
- Compact and modular designs

# Emerging Technologies: Megawatt Charging and V2G Technology



Emerging technologies that will drive the European EV and EVCI market



## Megawatt Charging: The future of Heavy-Duty EVs

- Power levels in MW range allow multiple vehicles to **charge simultaneously**
- **Reduced** charging time
- Equipped with **advanced cooling systems**
- Ideal for **logistics companies** and **public transportation networks**



## Vehicle to Grid (V2G) Technology: A Groundbreaking Innovation

- Enables EVs to function as **mobile batteries**
- **Balances energy** demand, reduces strain on grid
- **Enhanced** grid reliability and disaster response
- Ideal for **private charging spaces** like homes, workplaces, and depots

### Key Challenges

- Strained power grids requiring grid capacity enhancement
- Significant infrastructure costs
- Complex cooling systems
- Additional maintenance required

### Solutions to Address Challenges

- Battery-buffered EV charging: Reduced infrastructure upgrades, grid stability, and low-cost charging

### Key Challenges

- Limited EV compatibility and accelerated EV battery degradation
- Grid overloading
- High implementation cost

### Solutions to Address Challenges

- R&D on advanced battery management systems
- Government incentives and investment in grid infrastructure
- Employing demand response strategies

# PTR's EVCI Market Research



Analysis of the EV & EVCI Market Around the Globe



## EVCI Hardware Market

- Installed and Annual Market forecast in Capacity, Application, and Owner's views from 2020-2030 (Units, Revenue)
- Public Policies and Plans
- Charger Pricing
- Market Shares, Top Suppliers
- Presentation of data in the PowerBI platform



## EVCI Ancillary Service Market Sizing

- Installed and Annual Market forecast from 2020-2030 (Units, Revenue)



## EVCI Software Service Market Sizing

- Installed and Annual Market forecast from 2020-2030 (Units, Revenue)



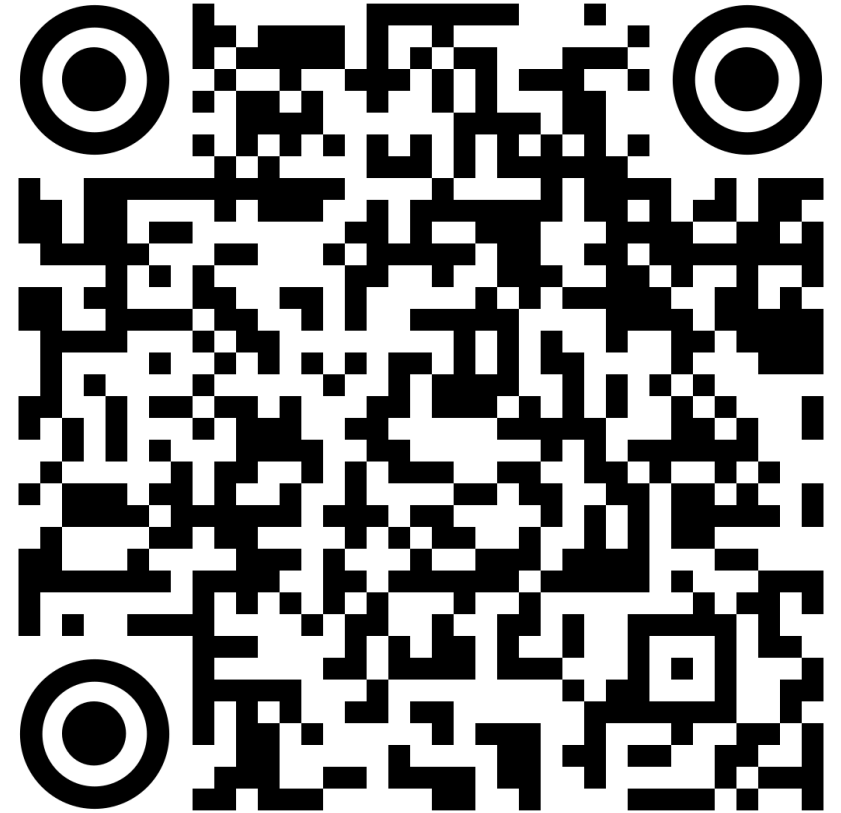
## EVCI Market Competitive Analysis Report

- Mergers & Acquisitions (M&A)
- Company Profiles of 20 leading EVCI OEMs



## PTR Sonar EVCI

- Weekly updates on key market happenings
- Proprietary desktop/mobile app



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## Q&A Session

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