

Software Solutions for EV Charging



About Us

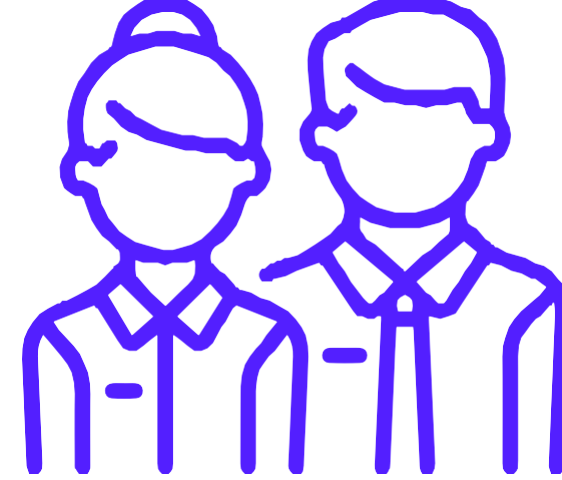


HEADQUARTER

Ankara University
Teknokent, Ankara,
Turkey

BRANCH

Ulutek Technology
Development Area,
Bursa, Turkey



PERSONEL

60+



CERTIFICATES

ISO 9001

ISO/IEC 27001

TEMPEST

NATO/National Facility Security

ASELSAN Approved Design

ASELSAN Strategic

Partnership





Objectives

- Clean Energy
- System and Software Solutions
- Technologic Leadership

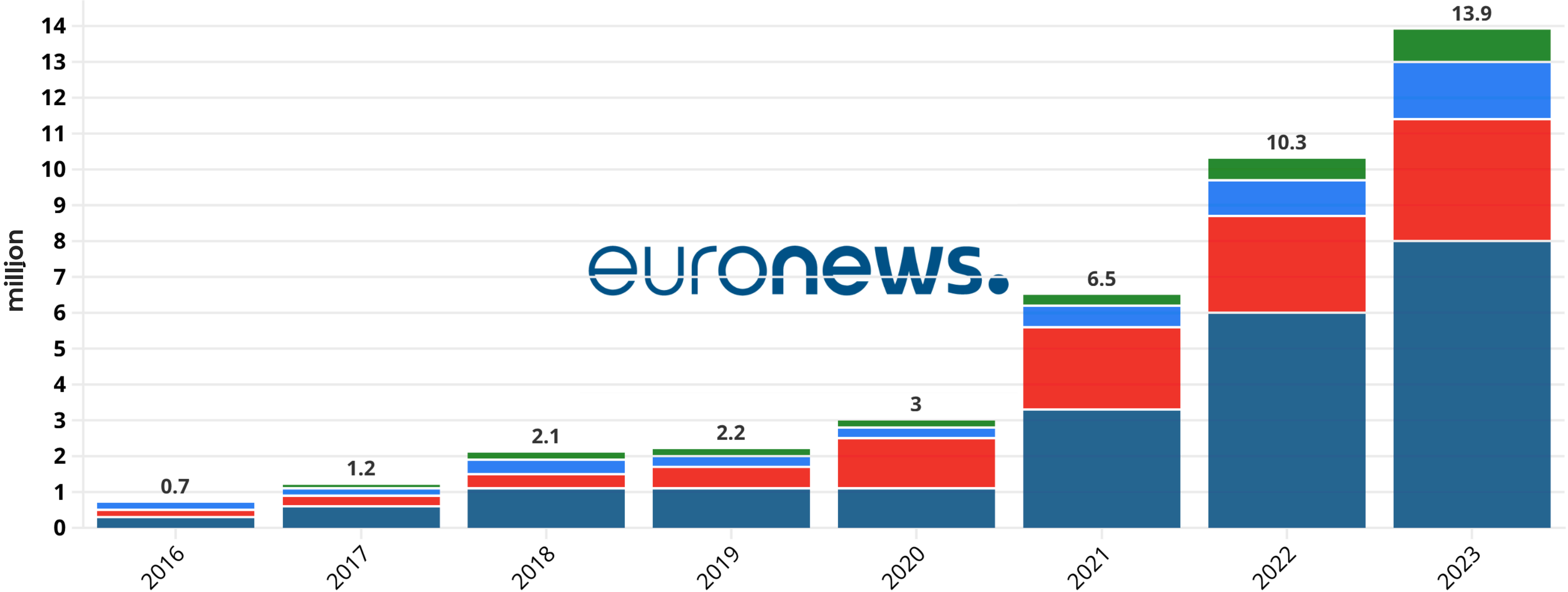
Electric Vehicles and Charging Stations

Market Overview



number of electric car sales

■ Çin ■ Avrupa ■ ABD ■ Diğer

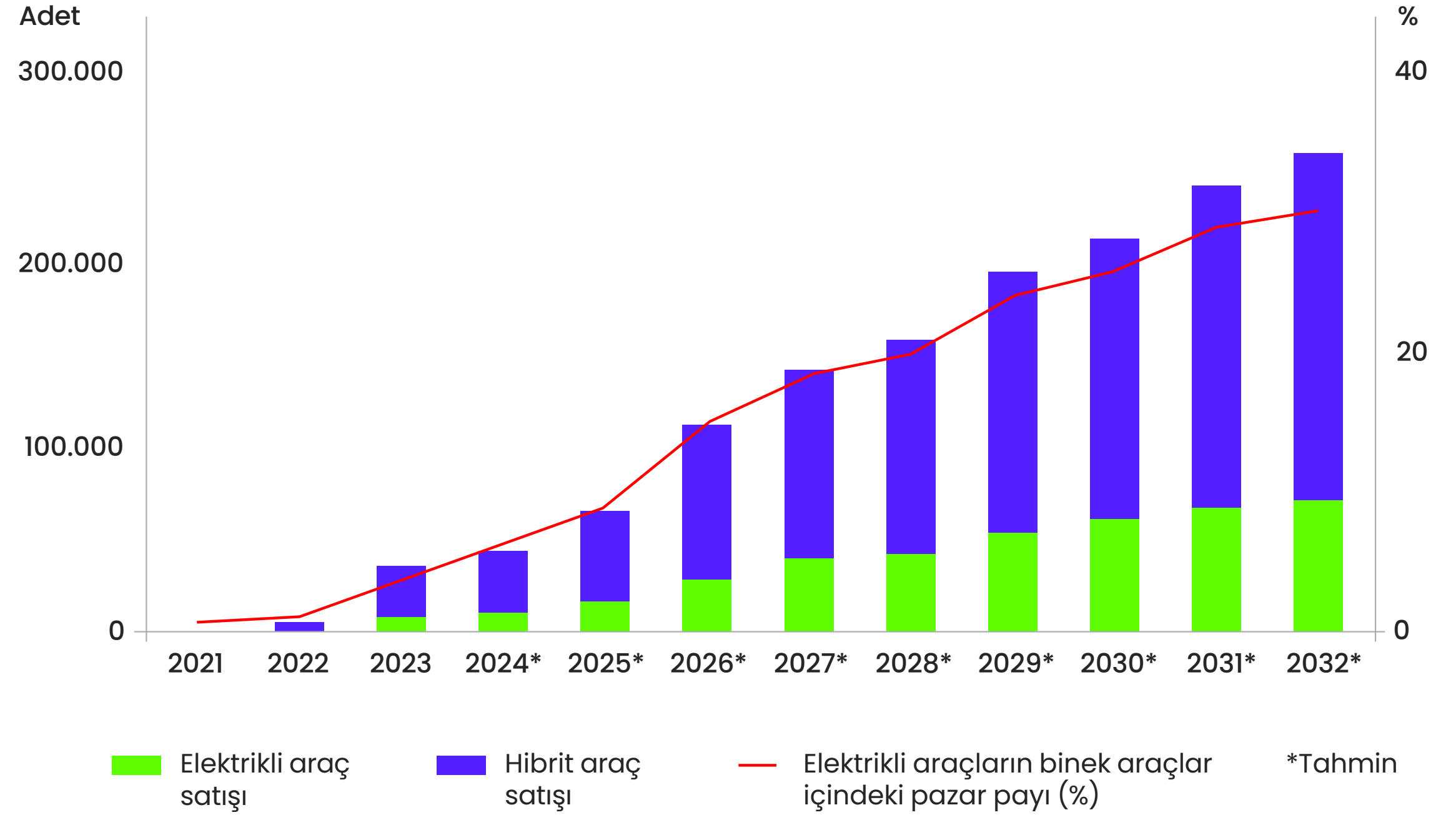


Source: IEA • (*2023, tahmini veri)

Growth Trend

Electric vehicle sales are expected to grow by an average of 60.8 percent annually in Turkey

Electric passenger vehicle sales are expected to grow by an average of 60.8 percent annually until 2032, and the market share of these vehicles in passenger vehicles is expected to reach 30.4 percent in Turkey.



Number of Electric Vehicles and Charging Stations

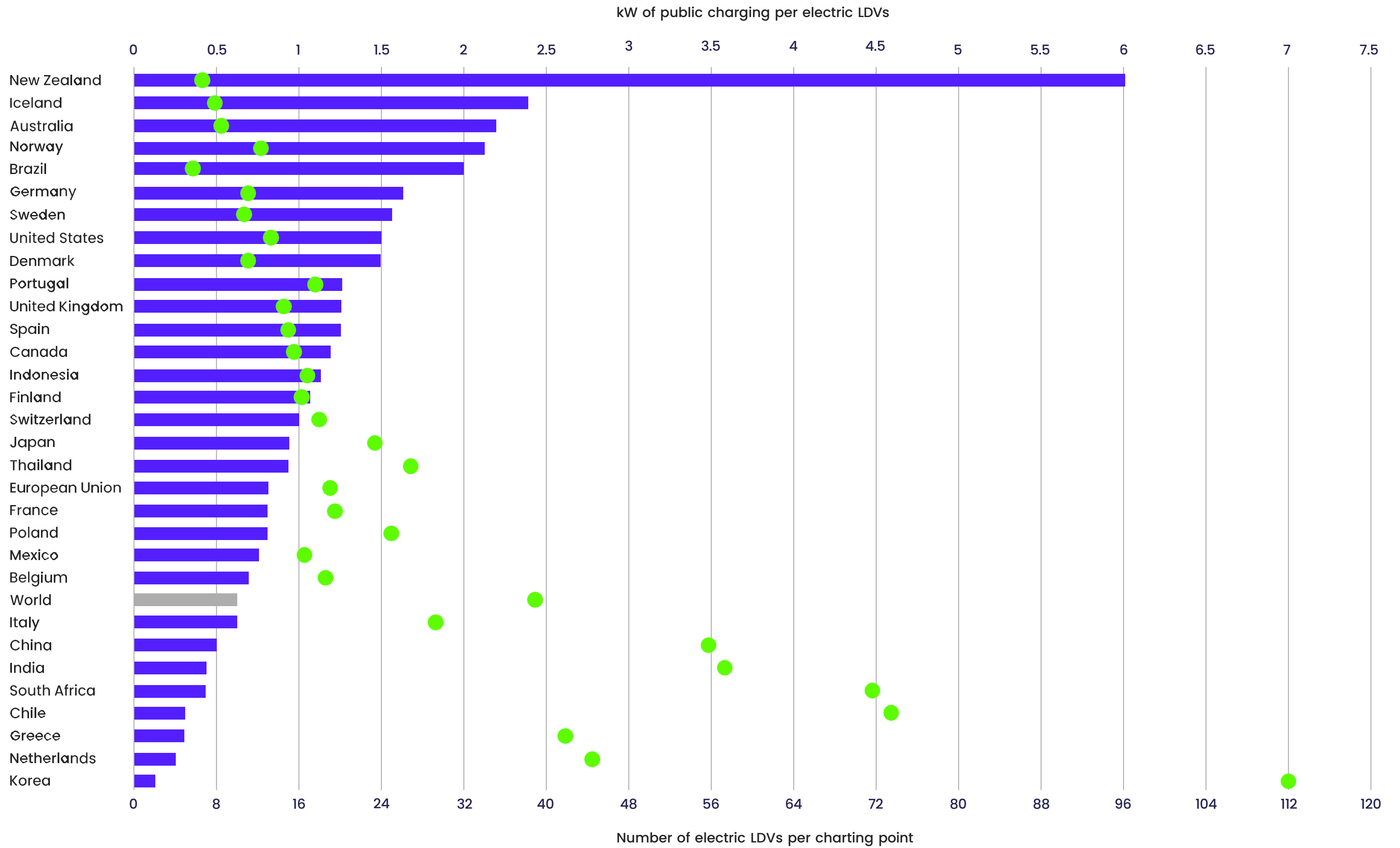
ELECTRIC VEHICLE SALES IN TURKEY

Year / Sales Number	2015	2016	2017	2018	2019	2020	2021	2022		2023	
Electric vehicle	110	44	77	155	222	844	2.846	7.733	Market share 1,50%	48.883	Market share: 6,50%
Hybrid vehicle	974	1.038	4.505	3.899	11.974	22.272	49.493	64.387	Market share 10,90%	78.387	Market share: 10,50%
Total								592.660	749.501		

- Number of Operators with EPDK Charging Network Operating License - 157
- Number of Operators with EPDK Charging Network Operating License - 4.221 units
- Number of Electric Vehicle Charging Points (sockets) - 8,861 units (AC - 6,633 units, DC - 2,228 units)
- As of October 2023 - Approximate number of electric vehicles in use - 60,000
- Approximately 1 DC charging point per 27 vehicles / 1 charging point per 7 vehicles

*** World Average is approximately 1 charging point for 10 vehicles

Global Perspective






* IEA (Internation Energy Agency) Mor - EV / EVSE Yeşil - kW / EV

Costs

Electric, Gasoline and Diesel Vehicle Comparative Travel Costs

Average Consumption/100 km

Travel Cost/100 km

	7 lt	262,5 TL
	6 lt	235,2 TL
	18 kWh	Charging at Home: 43.0 TL Charging at Workplace-Commercial: 80.1 TL Charging at Workplace-Industry: 79.9 TL Charging at Commercial Charging Station-AC: 124.0 TL Charging at Commercial Charging Station-DC: 148.3 TL

Residential, commercial, and industrial low-voltage single-term tariff prices have been used as a basis.

Commercial charging station AC (slow charging) average price: 6.89 TL/kWh

Commercial charging station DC (fast charging) average price: 8.24 TL/kWh

Gasoline: 37.5 TL/liter Diesel: 39.2 TL/liter

Prices include VAT.10.10.2023

Electric Vehicle Charging Stations Installation and Management



Electric Vehicle Charging Station Network Licensing and Installation Process

The demand for Electric Vehicle Charging Stations is increasing day by day. Companies operating in this sector are required to comply with the installation conditions set by the Energy Market Regulatory Authority (EPDK).

- Application for EPDK Charging Network Operating License
- Location Determination – Search
- Equipment Procurement – AC / DC
- Software Selection and Customization
 - Mobile and Web-Based
 - Customization – Corporate Identity
 - Third-Party Integrations
- Infrastructure Preparation and Installation
- EPDK Approvals





Electric Vehicle Charging Station Network Operation Process

- **Business and Operations Management**

- Monitoring and Management Reports
- Data Sharing with EPDK / GIB
- Call Center Management
- Fault Detection and Solutions
- Enerji Consumption Analysis
- User Analysis

- **Maintenance Management**

- Periodic Maintenance Planning
- Workforce Planning
- Reporting



Electric Vehicle Charging Management Software

How Do We Succeed?

Field Experience - Continuous Development - Technological Leadership

10+ EXPERIENCE

With over 10 years of high-tech experience, we have undertaken projects with almost zero tolerance values.

60+ EKİP

We work for absolute efficiency with our team of software and electronics engineers.

%100 HARDWARE

Our Electric Vehicle Charging Management Platform is compatible with all charging devices that support OCPP 1.6.

500+ CHARGING POINTS

It has been developed with an architecture capable of serving all charging points, which are increasing day by day in our country.





Siber Güvenlik



Modüler Yapı



Güçlü Mimari



Ölçeklenebilir Sistem

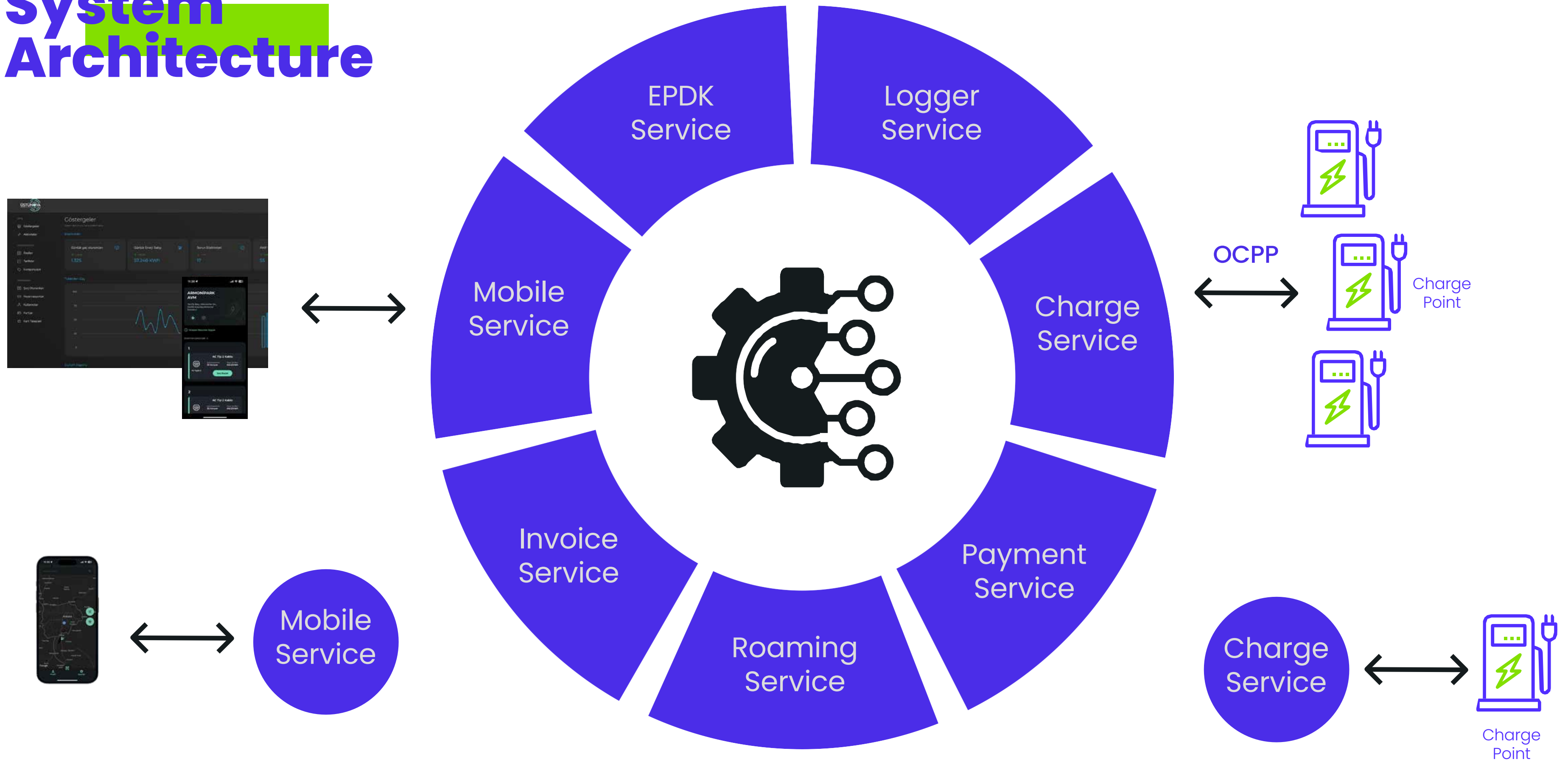


Esnek Arayüz

**Nasıl
Farklılaşıyoruz**

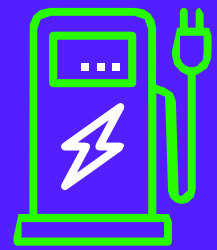


System Architecture

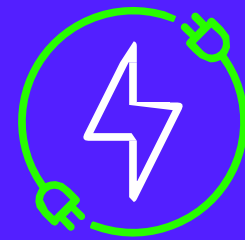


A Snapshot of electr-INN

A summary of electr-INN in one page



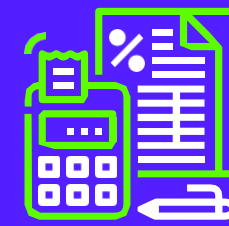
Charge
Point
Management



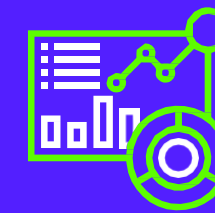
Energy
Management



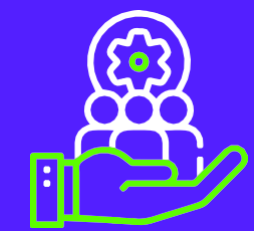
Membership
Management



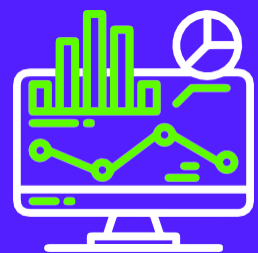
Campaign
Management



Reporting and
Analysis



Stakeholder
and Dealer
Management



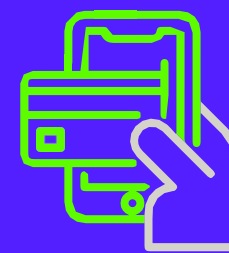
Roaming /
OCPI



Push
Notifications



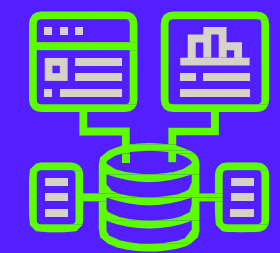
Interactive
Map



Payment
System



Reservation

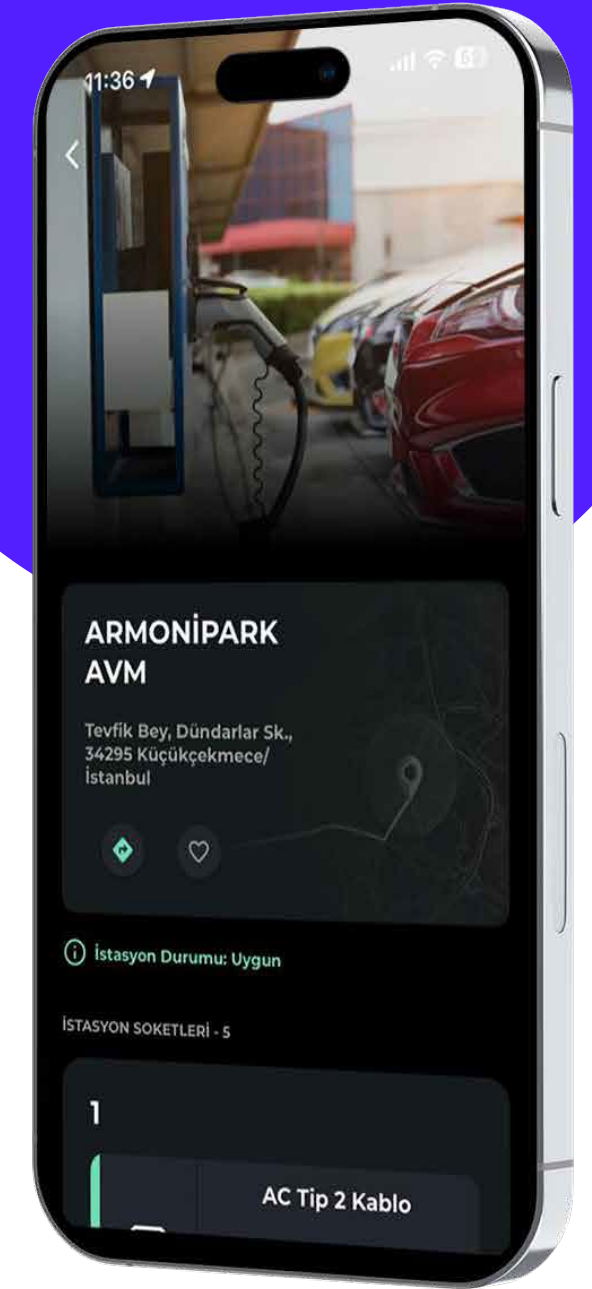
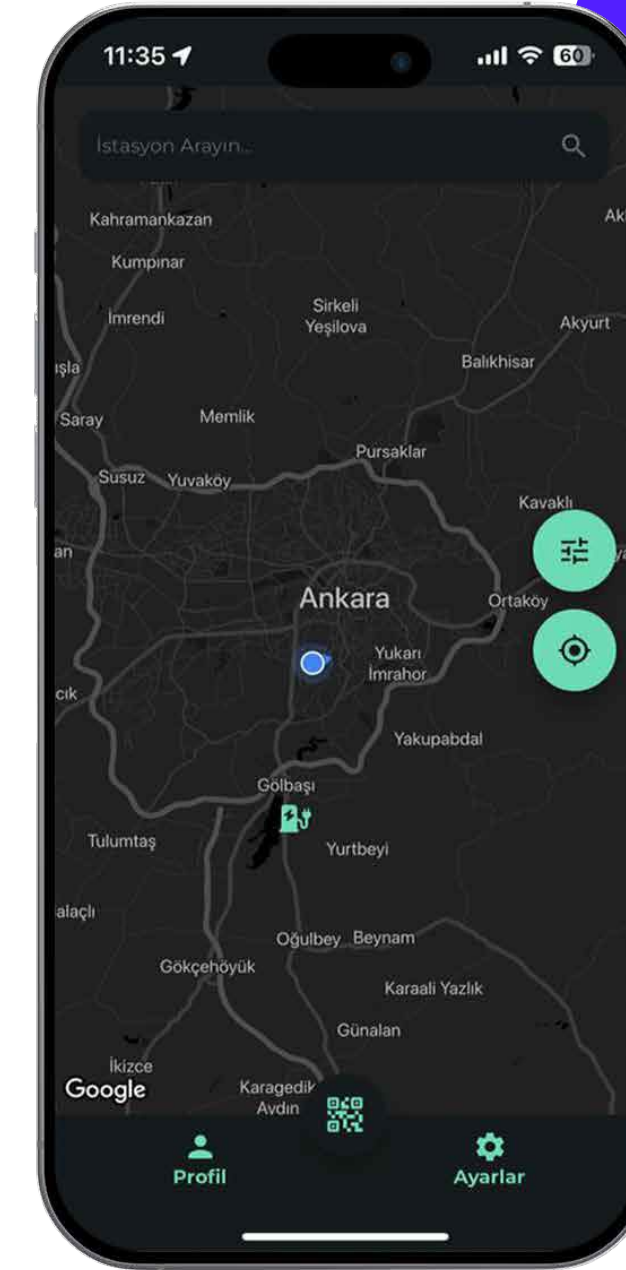
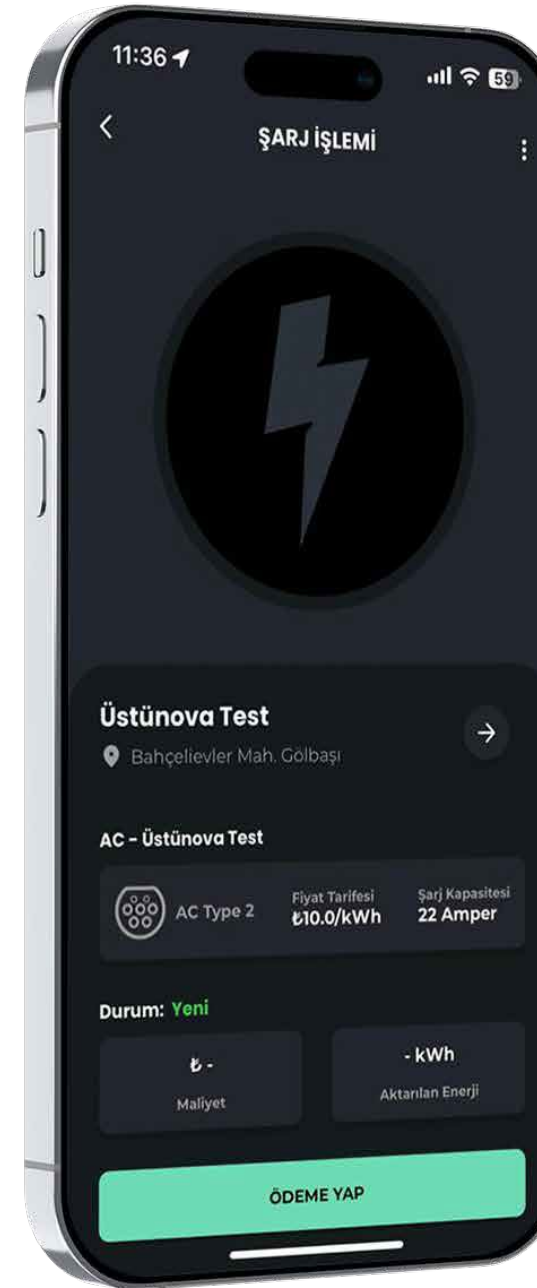


EPDK

electr-INN MOBILE APP

iOS and Android

- Instant Display on Map
- Status of Charging Points
- Charging start with RFID Card and Mobile App
- Ön Ödeme / Anında Ödeme / Sonradan Ödeme
- Credit Card Storage
- Reservation
- Past Charging Transactions
- Access to Invoices
- Suggestion & Problem Reporting
- White-Label



VISA



PAYTR

iyzico
a PayU company

electr-INN CHARGING MANAGEMENT SYSTEM



- Management of Charging Points (Remote & Web Based)
- **Monitoring, recording and reporting of all Charging Process**
- Energy Consumption – Flexible Calculation
- **Payment and e-invoice Management**
- User and Membership Management
- **Flexible Authorization**
- Campaign & Discount Management
- **Automatic Problem Detection**
- Integrations – EPDK / GiB / Payment / E-Invoice / SMS
- **Reporting and Analysis (Daily, Monthly, Annually)**
- **Detailed Movement (Log) Records**
- Roaming API – OCPI
- **Call Module Integration**

electr-INN Charging Management System Modules



01
electr-INN
BACKOFFICE

02
electr-INN
STATUS

03
electr-INN
MONITOR



electr-INN BACKOFFICE

Stakeholder Management
Charging Station Management
Socket Records
Tariff Management
Payment Management
Invoice Management
Notifications

Admin platform open to administrators, providing full control over stations.

electr-INN STATUS

electr-INN Login

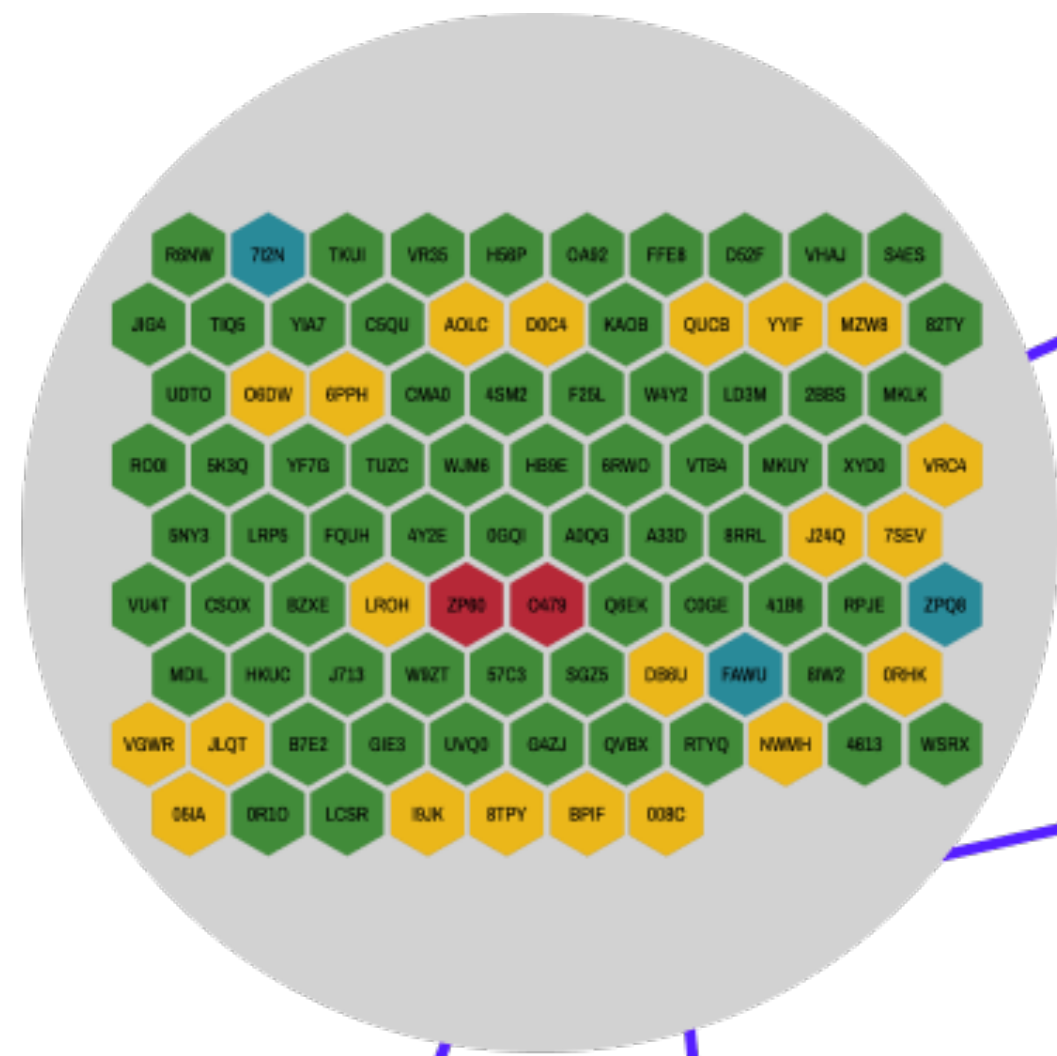
Şarj İstasyonları (Çevrimiçi: 50, Çevrimdışı: 2, Son Güncelleme: 19:00:35)

rele

İstasyon No	Son Durum	Kısa Açıklama	Marka - Model - S.N.	Tanımlı CPID	IP Adresi	Son HB Zamanı	Kontrolcü
1		AK*****1]	Autel - MaxiChargerAC - N/A	AE*****1D	15*****93	30 Oca 2024 19:00	Görüntüle
2		AK*****2]	Autel - MaxiChargerAC - N/A	AE*****2G	5*****84	30 Oca 2024 18:59	Görüntüle
3		AK*****3]	Autel - MaxiChargerAC - N/A	AE*****7J	15*****77	30 Oca 2024 18:59	Görüntüle
4		AS*****1]	Autel - MaxiChargerAC - N/A	AE*****7P	5*****88	30 Oca 2024 18:59	Görüntüle
5		AS*****2]	Autel - MaxiChargerAC - N/A	AE*****SN	5*****1	30 Oca 2024 19:00	Görüntüle
6		AS*****3]	Autel - MaxiChargerAC - N/A	AE*****2D	15*****12	30 Oca 2024 19:00	Görüntüle
7		AV*****5]	EN+ - 145 - SN*****66	SN*****66	18*****11	30 Oca 2024 19:00	Görüntüle
8		AV*****7]	EN+ - 145 - SN*****62	SN*****62	18*****11	30 Oca 2024 19:00	Görüntüle
9		AV*****0]	EN+ - 145 - SN*****83	SN*****83	18*****11	30 Oca 2024 18:59	Görüntüle
10		AV*****2]	EN+ - 145 - SN*****77	SN*****77	18*****11	30 Oca 2024 19:00	Görüntüle
11		AV*****3]	EN+ - 145 - SN*****84	SN*****84	18*****11	30 Oca 2024 19:00	Görüntüle
12		AV*****4]	EN+ - 145 - SN*****72	SN*****72	18*****11	30 Oca 2024 18:59	Görüntüle
13		AV*****6]	EN+ - 145 - SN*****44	SN*****44	18*****11	30 Oca 2024 19:00	Görüntüle

Access to and full control of all charging areas and points. Remote monitoring and control.

electr-INN MONITOR



Active Charging Points

De-active Charging Points

Charging Point in Preparation

Problem on Charging Points

Ability to create instant checks and unique reports.

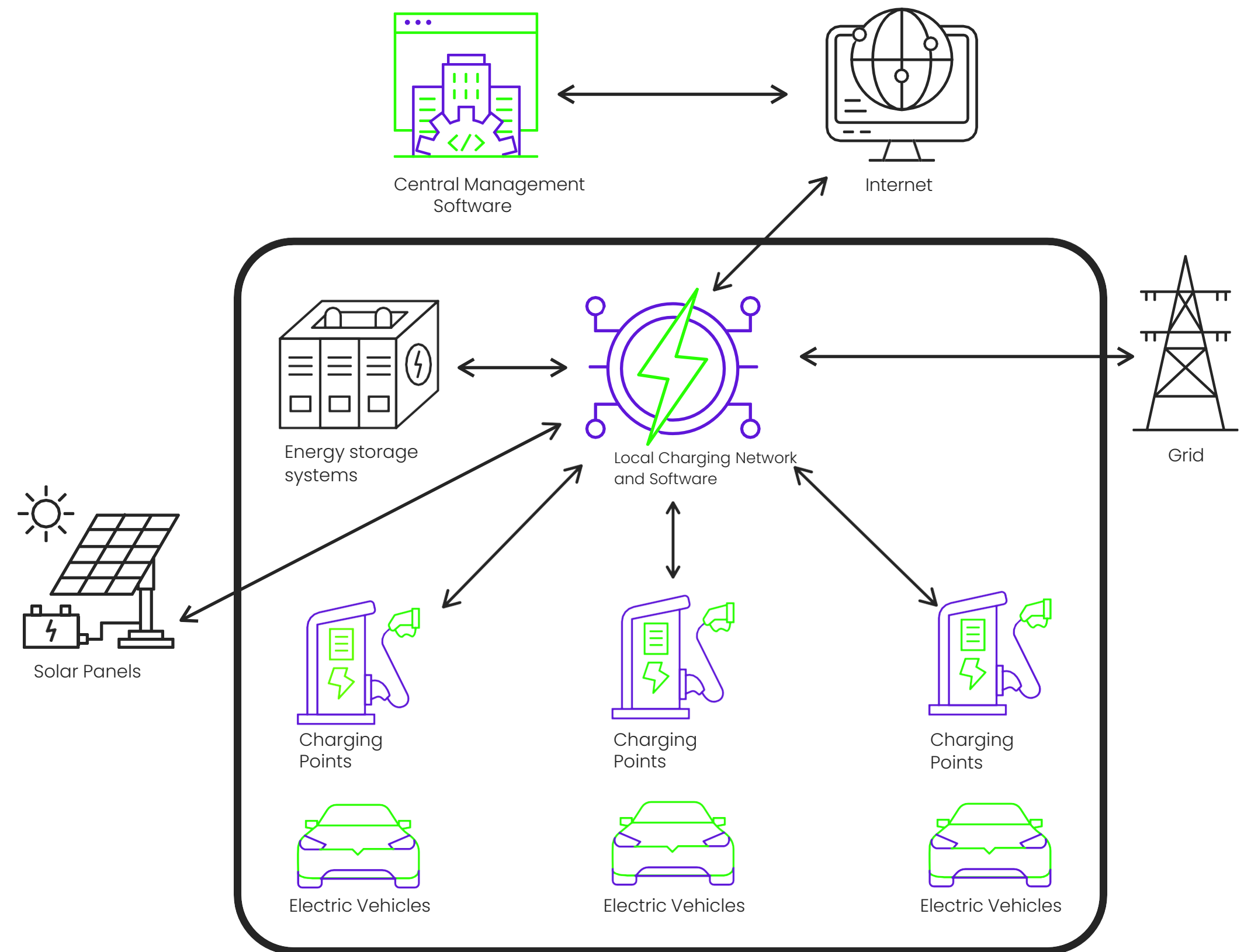


Smart Energy Management (V2)

It is believed that increasing investment in smart grids will be part of public-private partnerships on the path to achieving the global target of halving emissions by 2030.

(IDC – International Data Cooperation)

Smart Energy Management is a Cloud-based smart charging software that uses real-time data obtained from the communication between electric vehicles, charging stations and devices, renewable energy sources, and the grid. It enables efficient and cost-effective charging operations.



Plug&Charge (V2)

It is the simplest and safest way for drivers to charge their vehicles. The driver connects the vehicle to the charging point. Plug&Charge technology offers a charging process that automates the authentication and payment process for electric vehicles.

Defined by OCPP 2.0.1 and ISO 15118.

Looking for Something Different and Unique?

No problem at all! With electr-INN,
every integration is possible, and
there's a solution for every need.



THANK YOU!

electrinn.com

info@electrinn.com

Tel: +90 (312) 911 83 25

