

# Electric Vehicle Charging Service Regulation in Turkey



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# ENERGY MARKET REGULATORY AUTHORITY (EMRA)

- Established in 2001
- Financially and administratively autonomous
- Governed by a 7-member board
- Responsible for liberalisation and regulation of the Turkish energy market
- Regulates electricity, natural gas, oil, LPG and EV charging service markets
- Main functions:
  - Issuing secondary legislation
  - Licensing market participants
  - Approving tariffs
  - Monitoring, supervising and auditing markets and market players



# Objectives of EMRA

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To establish

- *Financially viable*
- *Stable*
- *Transparent*
- *Non-discriminatory*
- *Competitive*

**energy markets**

... in order to deliver

- *Adequately*
- *Efficiently*
- *Continuously*
- *At high quality*
- *At low cost*
- *Environment friendly*

**energy**



# Türkiye's Electric Vehicle - TOGG

- Türkiye's Automobile Enterprise Group, or simply TOGG is an automobile manufacturer company based in Türkiye. The company will launch the first vehicle in 2023.

Table - Models

| NAME       | TYPE                | EXPECTED DEPARTURE DATE | ENGINE   |
|------------|---------------------|-------------------------|----------|
| TOGG (SUV) | C-segment SUV       | 2023                    | Electric |
| TOGG (SUV) | C-segment Sedan     | 2024                    |          |
| -          | C-segment Hatchback | To 2030                 |          |
| -          | B-segment SUV       |                         |          |
| -          | C-segment MPV       |                         |          |



# Electric Vehicle Charging Service Regulation- Legislation Developments

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## 1- Law Amendment

- ❑ (With the Additional Article 5 added to the Electricity Market Law No. 6446 on 25/12/2021) In line with the goal of creating an electric vehicle ecosystem, an arrangement has been made to establish a free market with adequate and sustainable electric vehicle charging infrastructure.

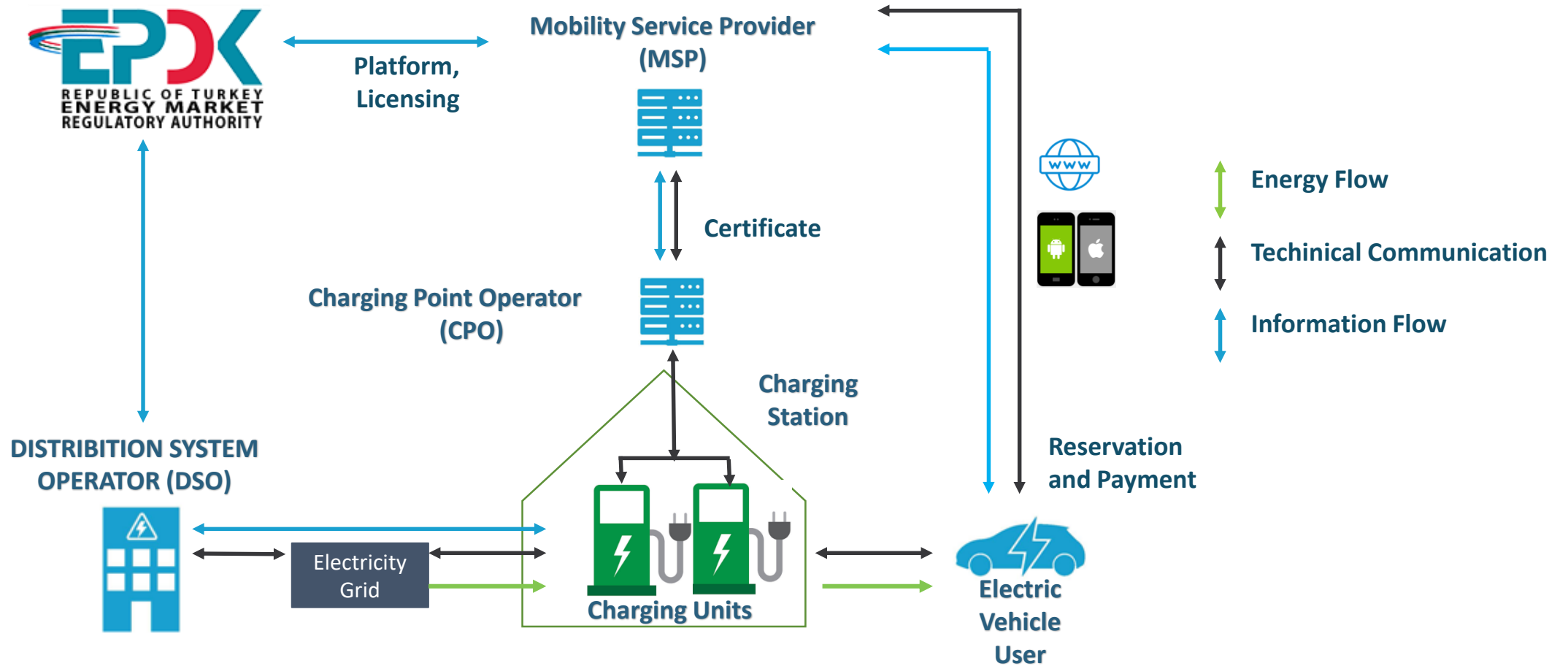
## 2- Charging Service Regulation

- ❑ Charging Service Regulation was prepared within the scope of establishment and operation of charging units and charging stations, establishment of charging network, licensing of charging network operators and regulation of their activities, rights and obligations of charging network operators and charging station operators and users, establishment and operation of Free Access Platform.

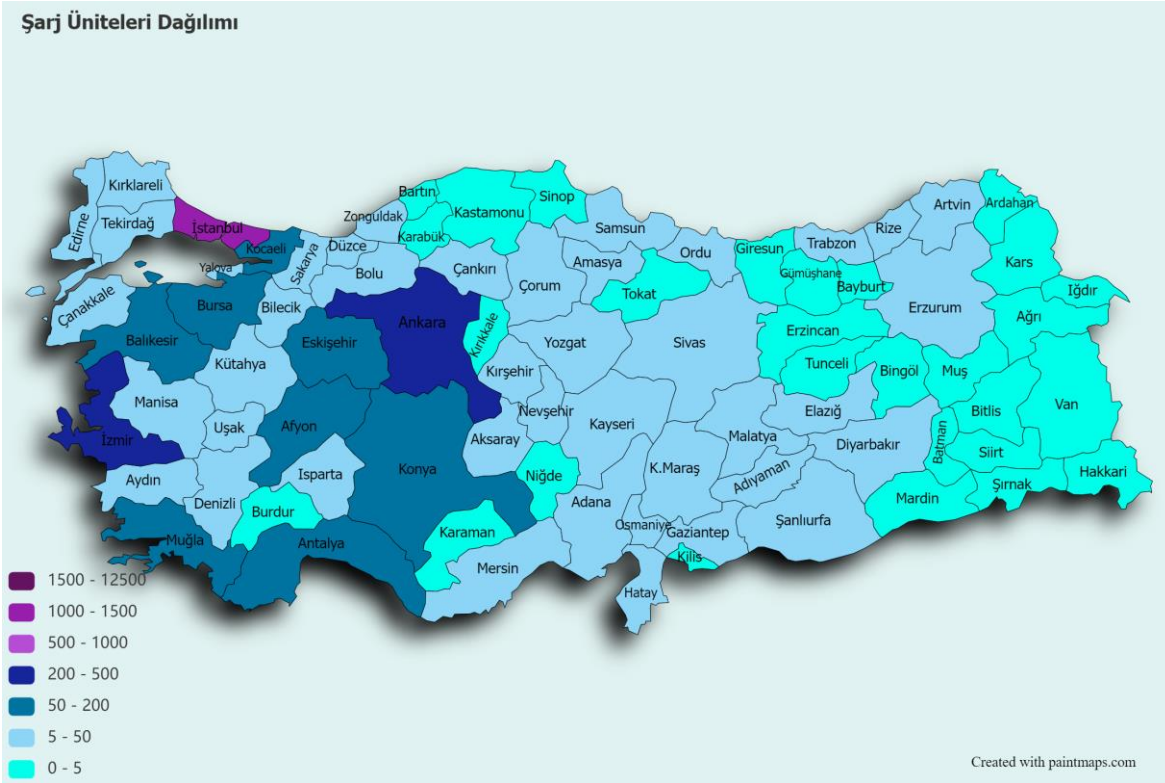
## 3- Licence Application Procedures and Principles

- ❑ The information and documents required in license applications, license fees, license format, license conditions have been prepared.

# Electric Vehicle Charging Service System



# Türkiye Charging Network Infrastructure



- ✓ Charge Sockets Per Vehicle = 0.25 (2.469/9.500), a sufficient ratio. However, DC charging points need to become widespread.
- ✓ We expect EV manufacturer (such as TOGG, Tesla), the electricity sector (currently E-Charge belongs to the Enerjisa group, ZES belongs to the Zorlu group), the oil sector (such as Petrol Ofisi, Shell, etc.) and start-up (entrepreneur) companies to take part in the market.
- ✓ As of 25.10.2022, the number of companies for which we have licensed charging network operators is 52.

|              | Number of Total AC Sockets | Number of Total DC Sockets | Total AC Power (kW) | Total DC Power (kW) |
|--------------|----------------------------|----------------------------|---------------------|---------------------|
| <b>TOTAL</b> | <b>2.226</b>               | <b>243</b>                 | <b>49.863</b>       | <b>15.040</b>       |

# DC Charging Need

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## 1- Regulation

- At least five percent of all charging units,
- At least fifty percent of the charging units located on highways and state roads, must be a DC 50 kW or more power.

## 2- Incentive Program of the Ministry of Industry and Technology

- The Ministry of Industry and Technology has issued an incentive program (tender for machinery and equipment support) for 1572 fast charging units (DC 90 kW and above).

## 3- TOGG

- TOGG plans to install approximately 1000 high-speed charging units (DC 180 kW and DC 300 kW) throughout the country, especially on intercity road routes, by the end of the year.



# Projections

|                         | 2023   | 2025  | 2030   |
|-------------------------|--|---|--|
| <b>Electric Vehicle</b> | <ul style="list-style-type: none"><li>● <b>3% market share</b> in electric vehicle sales, especially light commercial vehicles</li><li>● Electric vehicle stock to reach approximately <b>45 thousand vehicles</b></li></ul> | <ul style="list-style-type: none"><li>● Electric vehicle sales market share is <b>6%</b></li><li>● Electric vehicle stock to reach approximately <b>160 thousand vehicles</b></li></ul> | <ul style="list-style-type: none"><li>● Electric vehicle sales have a <b>25% market share</b></li><li>● Electric vehicle stock to reach approximately 1.6 million vehicles</li></ul> |
| <b>Infrastructure</b>   | <ul style="list-style-type: none"><li>● Having a total of <b>12.5 thousand public charging sockets</b> (30% DC) installed</li></ul>  | <ul style="list-style-type: none"><li>● Having a total of <b>30 thousand public charging sockets</b> (30% DC) installed</li></ul>   | <ul style="list-style-type: none"><li>● Having a total of <b>160 thousand public charging sockets</b> (35% DC) installed</li></ul>   |

# Rights and Responsibilities of License Holder

## Mobility Service Provider

- To provide continuous and quality charging service,
- To provide charging service to everyone without discrimination,
- To determine, announce and apply the charging service price in accordance with the legislation,
- Not to ask an extra fee within the scope of the charging service,
- To establish and keep the necessary management, audit and registration system in operation,
- To set up and operate the charging station in accordance with technical requirements,

### RESPONSIBILITIES

- To establish and operate a charging station connected to its own charging network throughout the country,
- To permit a certificated CPO to establish or operate a charging station connected to MSP's charging network ,
- To offer loyalty agreements to electric vehicle users

### RIGHTS

# Pricing

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- Prices shall be presented and announced in a simple, clear and easily comparable way.
- Standard unit energy price (TL/kWh) shall be used as a pricing format. CPO can not ask an extra fee within the scope of the charging service.
- Different prices may be applied according to the types and power of charging units.
- It is mandatory to provide service to all EVs, and the licensee can apply price discounts up to 20% to the users with whom they have signed a loyalty agreement.
- At least one of the mobile payment system options has to be provided for all EV users.

## Prices may vary according to:

|              |   |
|--------------|---|
| <b>Type</b>  | <b>Pricing depending on whether the charging unit is AC or DC type<br/>eg; 2.5 TL/kWh for AC, 3.0 TL/kWh for DC</b> |
| <b>Power</b> | Pricing according to the power of the charging unit<br>eg; 2.5 TL/kWh for 22 kW, 3.0 TL/kWh for 50 kW               |

# Charging Network Criteria

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1

A charging network consisting of at least **50 charging units** shall be established within **6 months** from the effective date of the license.



2

At least **5% of the charging units** in the charging network and at least **50% of the charging units** on the highways and state roads shall be **DC 50 kW** charging units. At least one of the AC charging units with a **Type-2** charging socket; At least one of the DC charging units must be equipped with the **combined charging system** (Combo-2).



3

For the addition of a charging station to the charging network, a **Workplace Opening and Operations Permit**, and a **permission of the DSO** regarding the connection of the charging station to the grid are required.

# Free Access Platform

➤ For Public Charging Stations;

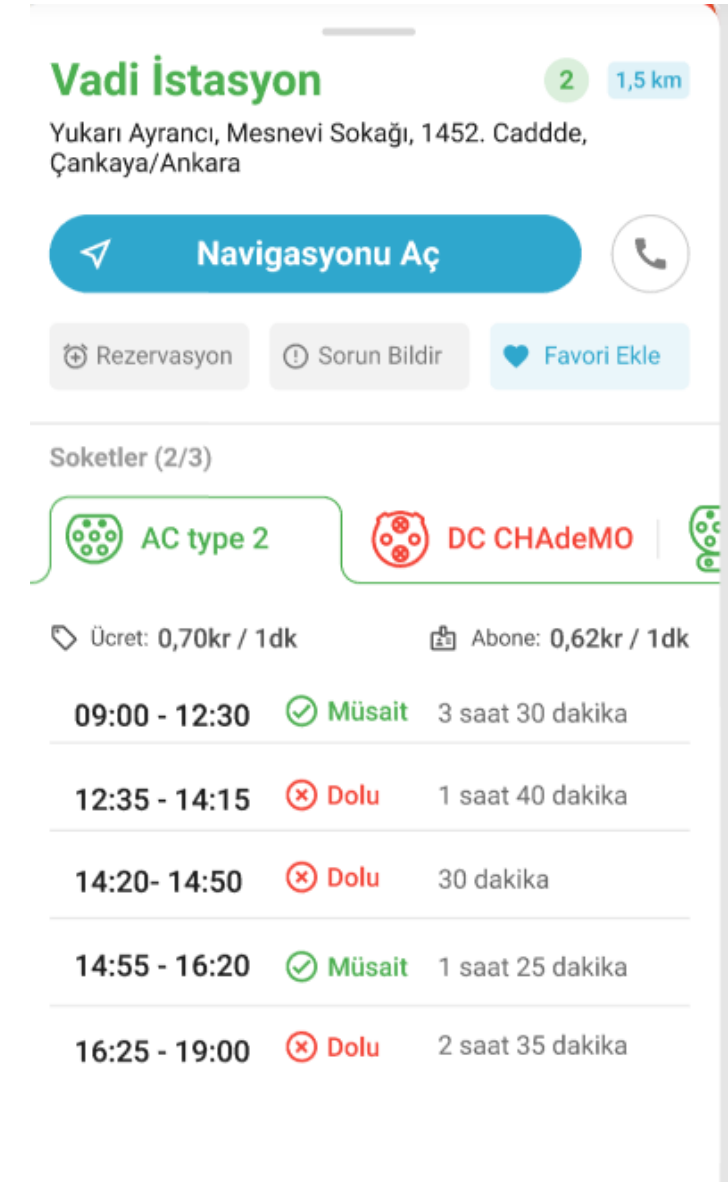
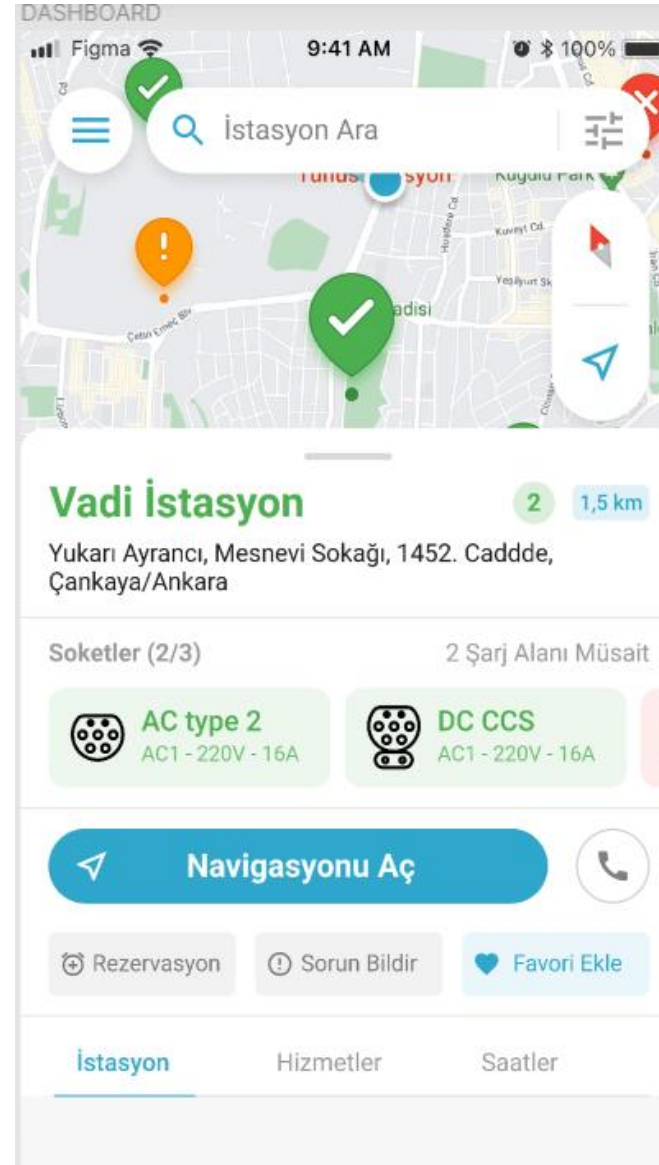
- Static Data

Geographical locations, number of chargers and sockets, types and powers of chargers, payment methods

- Dynamic Data

Availability and charging service prices within a 24-hour period displayed on the platform.

Sample interface:





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