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Strengthening e-mobility prospects in Greece: an EV market and recharging infrastructure perspective

EV registrations in Europe [2010-Nov 2023] 2500000 country as of Oct 2023. Since 2019, there is a noteworthy Across Europe, the share of 2000000 uptake of EVs across Europe. Number of registrations EVs in new registrations varies greatly, ranging from 3% to almost 90%, as of October 1500000 2023, depending on the rate of 56% 39% governmental policy support. 58% 1000000 Nordic countries are at the forefront of the EV market, with Norway reaching almost 90% EV share 500000 of new registrations, as of 8% 5% 32% 250 26% EV market trends in Greece are guite 3% positive mainly thanks to policy 22% 9% 200 Number of models 1200 1200 100 21% measures subsiding vehicle purchasing Car 12% price and EV charging infrastructure 7% 9% Early adopters of EVs and car leasing companies are driving the positive 50 Significantly more effort is required to develop a critical mass of EV owners in

Share of BEV and PHEV in new registrations of vehicles per

1.4.1

especially

October 2023.

deployment.

trends.

Greece

However, market stimulus in 2023 does not follow equal trend, as there was a slowdown in the growth grate of BEV and PHEV 7.3x sales in various EU markets. Especially, Norway experienced a reduction in registration compared to 2022 both in BEV (-24.4%) and PHEV (-36.9%)

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

Available BEV models in Europe [2011-2023]

manufacturers 9.3x have committed to electromobility bv putting forward plenty new BEV models in the market.

2017

2018

2019

2011 Hellenic Association for Energy Economics

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2014

2015

2016

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2020 2021 2022 2023 Source: EAFO, EEA, ACEA, HAEE analysis

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Source: EV Database, ΣΕΑΑ, PlugShare, YME, EV-Database, EAFO, HAEE analysis

2023

Green Taxi

Fortizo Pantou

79.8 mil. €

39.9 mil. €

2024

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Гостивар Северна Edirne Кичево Македонија Tiranë Пелагониски Shqipëria Tekirdağ Lushnië Berat 161 Καστο 47 makkal 19 Balikesir 51 30 Manisa Χαλκίδα 708 22 33 20 $(\mathbf{0})$ 2236 Locations 5226 Charging **Points**

Distribution of publicly available chargers in Greece as of 2023

YoY change in charging infrastructure in Greece [2020-2023] 300% 250% Significant growth in charging points, especially in DC 200% chargers in the past year. 150% Percent YoY change 100% 50% 0% 03 Q2 03 Q1 Q2 02 03 04 Q1 -50% 2021 2022 2023 AC DC

Despite government incentives designed to make EVs more affordable, the persisting **high charging times**, and the **lack of widespread availability** of charging infrastructure remain **critical barriers**.

Charging **infrastructure develops rapidly**; yet an **expansion** of fast DC charging coverage not only in highway locations but also in **urban agglomerations** is needed.

Charging operators face large uncertainty in utilization of their assets, resulting into **financial losses** until a more critical mass of EVs penetrates the market. The **current market state does not enable full recuperation of initial CAPEX**, in many instances. Location represents the critical factor to sustain profit making business.

Technological constraints on the vehicle side (e.g., for PHEVs) do **not allow full exploitation of charging power** provided by fast DC points; thus, preventing higher utilization and profitability of the charger. Current trends indicate that fast and ultra-fast DC charging points unit costs are rapidly reducing (almost a halving over the last 3-4 years).

Funding support to the purchasing of fast DC charging infrastructure is a prerequisite in the shortterm to ensure financial viability of charging providers, such that the critical EV mass develops over the next years.

Source: EV Database, ΣΕΑΑ, PlugShare, YME, EV-Database, IDRO, EAFO, Deloitte, HAEE analysis

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