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ROAD 2.0

POWERED BY UACA

ACCELERATING UPTAKE OF COMMERCIAL ELECTRIC VEHICLES IN THE UAE

Year 1 | 2024

UACA

UAE Alliance for Climate Action

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Disclaimer:

This report shares the findings and insights from the Road2.0 initiative in its first year, made possible through the contributions of participating Road2.0 Signatories and partners.

The report has been developed by the UAE Alliance for Climate Action, convened by Emirates Nature-WWF, with support from partners. Any interpretations, findings, or recommendations presented are those of the authors and do not necessarily reflect the views of individual Road2.0 Signatories or partners. Data used in the report is published at an aggregate level to ensure the privacy of Road2.0 Signatories.

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We are grateful to HSBC Bank Middle East for its continued support as UACA's founding donor, and the Boston Consulting Group (BCG) for their role as co-developer of Road2.0, launched at COP28 in 2023. UACA would also like to acknowledge talabat and Unilever for sponsoring the Road2.0 initiative.

Finally, we recognize all UACA Members for their climate leadership in the UAE, and all Road2.0 Signatories for their leadership as corporate climate pioneers committed to transforming commercial transport in the UAE. Their leadership and collaboration are instrumental in driving progress towards a net-zero future.

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ABOUT THE UAE ALLIANCE FOR CLIMATE ACTION

The UAE Alliance for Climate Action (UACA) was launched at COP27 by Emirates Nature-WWF to create a **multi-stakeholder coalition to advance climate ambition and action.** Its vision is to build momentum towards near- and long-term net-zero science-based targets (SBT), foster non-state actor collaboration, and create a policy environment that supports entities' decarbonization efforts in alignment with the Paris Agreement and the UAE Net Zero 2050 Strategy.

UACA is **endorsed by the UAE Ministry of Climate Change and Environment** (MOCCAE) as the flagship domestic non-state actor project in the UAE. Globally, UACA is aligned to the Marrakech Partnership for Global Climate Action (led by the High-Level Champions) through its affiliation with the Alliances for Climate Action (ACA), a global network of alliances advancing domestic decarbonization in their respective countries.

UACA is **supported by HSBC Bank Middle East as its founding donor,** providing UACA with the resources to advance its objectives to accelerate climate mitigation in the UAE. UACA currently has 57 Members who have committed to increase their ambition and implementation of decarbonization.

UACA's objectives are to:

- Demonstrate a surge of ambition and action at the sub-national level to give national stakeholders the confidence to ratchet up ambition
- Enhance the policy environment to further increase ambition and support implementation amongst NSAs
- Increase the number of non-state actors (NSAs) setting credible, transparent, and verifiable net-zero near- and long-term targets, and to drive implementation and action
- Build a whole-of-society approach to drive collaboration in activating policy and solutions to achieve net-zero for the UAE by 2050

HSBC

With the support of HSBC Bank Middle East, UACA has pursued engagements across two pillars:

CLIMATE ACTION:

Accelerate non-state actor readiness to set science-based targets and implement decarbonization measures

COLLABORATIVE ACTION:

Convene stakeholders to enhance the policy environment for decarbonization through one unified voice

ROAD 2.0

POWERED BY UACA

EXECUTIVE SUMMARY

Road2.0, a first-of-its kind initiative powered by the UAE Alliance for Climate Action (UACA), was created to **kick-start and accelerate commercial electric vehicle (EV) uptake in the UAE private sector,** in support of the UAE's Net Zero 2050 Strategy. The initiative builds on the regulatory and market momentum driving up the use of EVs in the UAE, supported by ambitious government targets and plans on climate mitigation and sustainable energy use.

In recent years, the UAE has seen steep growth in private EV uptake, but – much in line with global trends – the scale and speed of the transition is not the same in the case of *commercial* vehicles. Commercial vehicles account for approximately half of transportation emissions in the UAE and as much **as 10% of overall UAE greenhouse gas emissions.**[1] Uptake of commercial EVs has been relatively slow in most countries compared to private vehicles, even with increasing availability of commercial EVs across multiple manufacturers and a decline in prices, reflecting the unique barriers to – and opportunities for – scaling commercial EVs.

Commercial vehicles account for approximately half of transportation emissions in the UAE and as much as 10% of overall UAE greenhouse gas emissions.

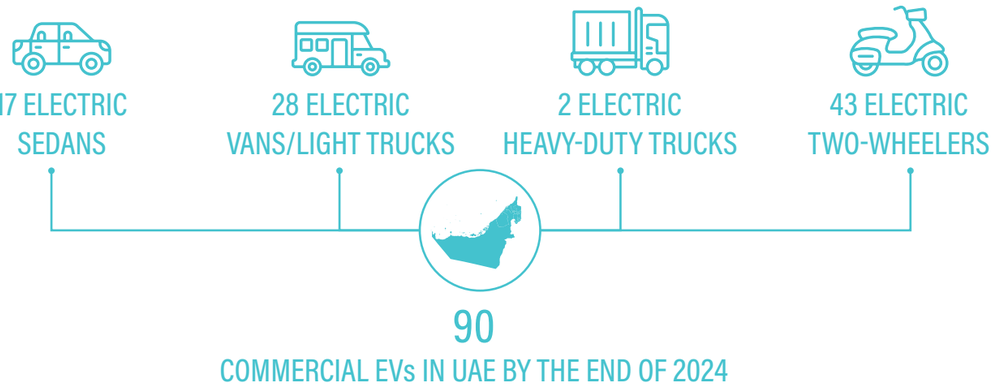
17 companies, who collectively operate more than 20,000 commercial vehicles in the UAE, pledged to advance commercial road transport decarbonization by pursuing ambitious electrification targets.

Against this backdrop, Road2.0 was launched at the United Nations Climate Change Conference COP28 in 2023, where 17 companies, who collectively operate more than 20,000 commercial vehicles[i] in the UAE, **pledged to advance commercial road transport decarbonization by pursuing ambitious electrification targets across three timeframes (full targets listed in Appendix B):**

1. During 1st year of joining Road2.0, complete and implement a pilot of EVs
2. By 2030, achieve 30% electric fleets
3. By 2040, achieve 100% zero-emissions fleets

By the end of 2024, less than a year into the launch of Road2.0, **Signatories had already deployed 90 electric commercial vehicles on UAE roads as part of their EV pilots**, starting from a close to zero baseline. The piloted vehicles include electric vans, heavy-duty trucks, e-bikes and sedans used for commercial purposes, thereby demonstrating the technical and operational feasibility of commercial EVs.

Figure 1: EVs piloted by Road2.0 Signatories as of December 2024



Road2.0 Signatories have not only initiated a critical process of transition for their owned and leased vehicles, but have also committed to share their experience and pilot data with fellow-Signatories and other interested companies, as well as the wider UAE transport ecosystem to answer the key question: **what are the levers to unlock EV uptake at scale in the UAE commercial sector?**

These levers fall into **three categories:**

1. GROWING THE COMMERCIAL EV MARKET IN THE UAE
2. DEVELOPING FIT-FOR-SCALE EV CHARGING INFRASTRUCTURE
3. MAXIMIZING OPERATIONAL EFFICIENCY

i Including owned, leased and provided by third-party logistics companies (3PLs)

1. GROWING THE COMMERCIAL EV MARKET

Road2.0 Signatories have laid the foundation for a domestic commercial EV market with the publication of a demand declaration, signalling intent to procure commercial EV fleets and the need for increased supply of commercial EVs. Signatories have also initiated pilot deployments, with over 70% of Signatories having piloted EVs by end of 2024. The 90 EVs introduced in Year 1 not only kick-started market activity but also served as proof points, **demonstrating performance, reliability, and suitability across diverse use cases.** To support organizations in making informed decisions about their pilots, knowledge-sharing and supplier engagement sessions were also facilitated, expanding Signatories' access to the latest technologies, cost structures, and operational solutions.

These activities also brought into focus barriers to scale, particularly the Total Cost of Ownership (TCO) gap: high upfront vehicle costs and extended cost-recovery timelines, uncertainty over resale value, and a lack of confidence in secondary market demand. Addressing these issues will be crucial to unlock broader adoption. Road2.0's first-year insights underline the **need for innovative financing models, more favourable leasing terms, and mechanisms to stimulate a functioning secondary market** – all essential to narrow the TCO gap, make EVs cost-competitive with internal combustion engine (ICE) vehicles, and accelerate market growth. More action is required to increase the supply of Commercial EVs to meet the demands of all UAE-based vehicle operators.

1A

BOOSTING DEMAND AND INCREASING SUPPLY FOR COMMERCIAL EVs

- Stronger demand signalling and more exchange of data among EV ecosystem members to match demand & supply
- Policy support to grow commercial EV demand and supply

ACTION IN YEAR 1

- Commercial EV pilot as an initial demand signal for distributors (90 vehicles in less than 1 year)
- Demand declaration by 17 Signatories, signalling readiness and willingness to adopt and scale EVs
- Hosted 7 vendor demos to shed light on EV options for Road2.0 pilot phase & beyond

1B

CLOSING THE ACTUAL/PERCEIVED TOTAL COST OF OWNERSHIP (TCO) GAP WITH ICEs

- UAE-specific analysis of where TCO gaps exist, which is specific to vehicle type, operating mode, etc.
- Improving commercial EV financing, including more favourable leasing terms and a reliable secondary market
- Regulatory action to create a level-playing field for EVs vs ICEs (e.g. purchase grants, tax benefits etc.,)

ACTION IN YEAR 1

- Initial analysis shows moderate TCO gap in the UAE on average (further analysis required)
- Initial discussions with government (including workshop with MOEI) on need to close TCO gap

2. DEVELOPING FIT-FOR-SCALE CHARGING INFRASTRUCTURE

Signatories have identified an **urgent need to scale both public and private fast-charging infrastructure tailored for commercial EVs.** Initial actions included mapping the public charging requirements of Signatories and identifying hurdles to private infrastructure deployment.

For example, Road2.0 identified Dubai South, Dubai Investments Park, and Jebel Ali as **three priority hotspots where many Signatories operate significant routes** and where expanded charging infrastructure would have a high potential impact. Detailed assessments helped determine the number, size, and capacity of chargers needed, with a clear benchmark: enabling full charging for commercial EVs within 60–90 minutes to support efficient operations.

These insights highlight the need for a coordinated approach, **with public-private partnership essential to conduct a UAE-wide public infrastructure assessment and introduce more flexible business models for private infrastructure to meet commercial needs and achieve scale.**

2A — 2B

EXPANDING AND TAILORING PUBLIC FAST-CHARGING INFRASTRUCTURE

- Close collaboration between public and private sector that ensures commercial vehicle charging requirements are suitable for vans, bikes, buses, trucks etc. and include identifying hubs based on route data
- Standardized, market-wide battery swapping infrastructure for two-wheelers

ACTION IN YEAR 1

- Initial assessment of Road2.0 EV infrastructure requirements (i.e. Signatory demand) across three key areas in Dubai, including charger sizes & capacities, shared with decision makers (e.g., at MOEI workshop)

EXPANDING PRIVATE SECTOR ON-SITE CHARGING INFRASTRUCTURE

- On-site charging is likely to cover the bulk of charging needs for large companies. Regulatory action to allow flexible business models for private charging infrastructure
- Collaboration amongst ecosystem players to help private sector plan, develop and upgrade on-site infrastructure

ACTION IN YEAR 1

- Developed potential solutions to overcome economic challenges of on-site charging (e.g. sharing infrastructure, private charger fees)

3. MAXIMIZING OPERATIONAL EFFICIENCY

While charging infrastructure is critical, Road2.0 Signatories actively procuring and operating EVs have gathered valuable insights on the operational challenges and actionable enablers required to help scale decarbonized transport. For example, charging delays can impact delivery capacity and driver earnings. Drivers face logistical obstacles due to limited residential charging access. Regulatory weight classifications impact EVs with added battery weight, and fleet operators are navigating new safety protocols that come from EV adoption.

While not exhaustive, these priority areas – validated by industry stakeholders – offer a roadmap for regulators, businesses and partners, to enable and drive progress. **The message from UAE fleet operators is clear—commercial EVs are becoming viable, but unlocking their full potential requires targeted operational reform and ecosystem-wide coordination.**

3A

OPTIMIZING CHARGING SCHEDULES

- Minimization of additional operational cost from charging during work hours by optimizing charging schedules
- Provision of training to fleet managers and drivers

3B

MANAGING EV DRIVER LOGISTICS

- Charging for electric vehicles in residential areas, allowing drivers to take vehicles home
- Alternative transport options for EV drivers to and from their residences

3C

ADJUSTING WEIGHT CLASSIFICATIONS

- Regulatory updates to ensure EVs, which are heavier than ICEs, do not face additional licensing, training, and routing hurdles due to being classified as “heavy-duty”

3D

SAFETY & STANDARDIZATION

- Continued enhancement of EV testing and safety standards, especially in hot UAE climate
- Framework to standardize plug types, voltage ranges, charging protocols and payment platforms for 2-wheelers

ACTION IN YEAR 1

- Road2.0 has established a platform to build Signatory capacity on operational, financial and technical challenges and solutions through collaboration and knowledge sharing
- Signatories are also ready to share insights and information with the wider ecosystem (including the public sector)

This report details Road2.0's first-year impact, shares practical insights from pilots and working groups, and sets out a clear call to action:

Road2.0 calls on UAE non-state actors with commercial fleets and wider mobility players to join forces, accelerate transport decarbonization and work with public and private partners to drive transformative change for climate and economy.

BEYOND ROAD2.0: UNLOCKING THE POTENTIAL OF 'ACTION-FIRST' INITIATIVES

With UACA, Road2.0 and its Signatories have successfully demonstrated how initiatives that deliver early, tangible action can scale and catalyze decarbonization.

This bottom-up approach, driven by non-state actors, can unlock progress not only for EVs, but potentially also for other decarbonization levers, such as emerging technologies (e.g. hydrogen as a fuel), transport categories (shipping, aviation) and even other sectors such as real-estate, industry, waste management and agriculture.

With extensive experience in science-based climate action and facilitation of knowledge exchange and collaboration, UACA stands ready to be a thought partner for similar 'action first' initiatives that drive transformative decarbonization across the UAE.

To support this vision, feel free to get in touch with the UACA Team: uaca@enwwf.ae

Road2.0 launch event at COP28 (2023) in Dubai, alongside Road2.0 Signatories and sponsors

1 INTRODUCTION TO ROAD2.0

Road2.0, powered by UACA, drives commercial EV deployment and collaboration across the UAE's EV ecosystem. Convened by Emirates Nature-WWF, **endorsed by the Ministry of Climate Change and Environment (MOCCAE), and supported by HSBC Bank Middle East as its founding donor**, UACA unites over 50 non-state actors to advance science-based decarbonization in the UAE.

UACA launched Road2.0 at the United Nations Climate Change Conference, COP28, in 2023, where companies with operations in the UAE pledged to meet ambitious targets towards electrification of their fleets. **The initiative is endorsed by the UAE Ministry of Energy and Infrastructure (MOEI)** and was developed in partnership with Boston Consulting Group (BCG). **Road2.0 is sponsored by talabat and Unilever.** It focuses on **accelerating the adoption of commercial EVs in the private sector.** In 2024, the initiative positioned its **17 Signatories as climate pioneers** who are driving transformational change and inspiring broader road transport decarbonization across the UAE, in support of the UAE's Net Zero 2050 Strategy and the UAE's Demand Side Management Programme (Green Mobility Strategy).

Figure 2: Road2.0 Signatories and Partners – Year 1

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RATIONALE FOR ROAD2.0

As part of a series of workshops, UACA Members discussed the need for an initiative to help reduce their upstream[ii] and downstream[iii] emissions. The UACA Team, with the support of BCG, worked on conceptualizing an initiative that was relevant, inclusive, feasible and impactful. Following more than 60 consultations with UACA Members and partners, Road2.0 was created to support reduction in entities' transport-related emissions. The ambition of the project appealed to Road2.0 Signatories that represent diverse economic sectors in the UAE spanning logistics, retail, food and beverage, groceries, fast moving consumer goods, and sustainability.

During the design of Road2.0, **different technology levers and modes of transport in the commercial transport sector were reviewed** based on economic viability and impact. Multiple modes were considered, including a mode shift from road to rail, hydrogen/e-fuels and bio-fuels powered vehicles, as well as sustainable fuels for shipping and aviation. **EVs were considered to have the highest economic viability** due to a maturing industry, cost competitiveness across certain vehicle types, and operational viability. EVs were also found to achieve the highest emissions reduction impact across Signatories' operations due to the high road transport volume. As a result, Road2.0's initial focus is on EVs, but going forward, the project remains 'technology agnostic' as other Zero Emission Vehicle (ZEV) technologies become commercially and operationally viable in future years.

The focus on EVs, especially in the short to medium term was to create tangible impact using the most **mature and scalable technology** at the present moment. The overall vision is to see how this approach can be replicated across fuels and modes of transport in the future, potentially extending to shipping and aviation in the medium to long term.

ii Upstream emissions are greenhouse gases (GHGs) generated during the extraction, production, processing, and transportation of raw material, purchased goods and other essential inputs such as, fuels or energy before they are used to create final products or services e.g., emissions transporting goods or raw materials in a supply chain.

iii Downstream emissions are GHGs released during the use, consumption, or disposal of products and services by end-users e.g, tailpipe emissions from vehicles.

OBJECTIVES OF ROAD2.0

The UAE commercial transport sector faces a classic "chicken-and-egg" challenge: **limited demand for commercial EVs from companies has meant limited supply from Original Equipment Manufacturers (OEMs), distributors, and leasing companies.** Road2.0 initiative was created to break this cycle by taking a bold, multi-pronged approach designed to:

CONDUCT A PILOT AND SHARE LEARNINGS TO SUPPORT SCALE:

Conducting a pilot allows Road2.0 Signatories to take a bottom-up, action-oriented approach, enabling knowledge- and insight-sharing among Signatories ahead of full-scale implementation.

MOBILIZE MARKET TRANSFORMATION ACROSS THE WIDER UAE ECOSYSTEM:

Through the EV pilots, Signatories are gaining a competitive advantage by overcoming operational uncertainty and embedding commercial EVs in their logistics while also developing advantageous relationships with partners and decision-makers to move faster together. The unified voice of the Signatories on key challenges and solutions also supports policy dialogue in the UAE.

POOL ELECTRIC VEHICLE DEMAND FOR HIGHER IMPACT:

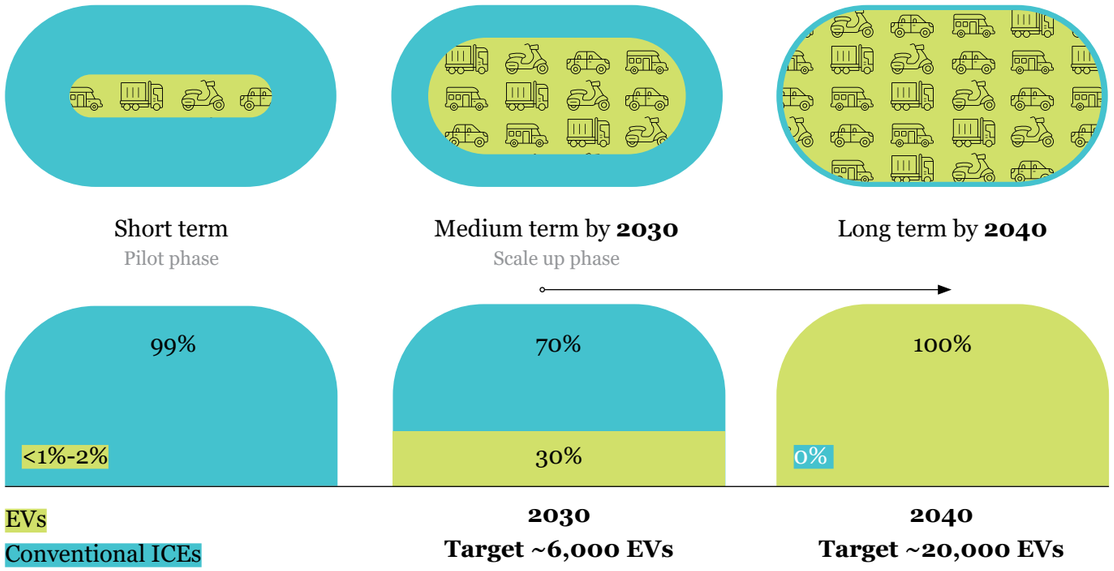
By pooling demand for EVs and related infrastructure, Road2.0 contributes to both market and policy momentum. Bringing together Signatories from diverse economic sectors provides a unique demand-side perspective that lends predictability to market dynamics and pushes for supply-side initiative.

SIGNATORIES' COMMITMENTS

Road2.0 aims to increase the uptake of commercial EVs in the UAE through early and tangible actions. Signatories signed the **Road2.0 pledge** which included a set of commitments for each Signatory to fulfil:

Short term	Medium term (by 2030)	Long term (by 2040)
Introduce owned/ leased EVs in operations and start a pilot with a minimum number of EVs based on fleet size; if a Signatory uses third-party transport and logistics providers to deliver its operations, put in place procurement standards and agreements required to meet the medium-term target.	Increase the share of owned/leased EVs to at least 30% of its UAE-based commercial fleet, excluding heavy-duty vehicles (HDVs). For third-party transport and logistics providers, ensure at least 30% of contracted road transport volume allocated is fulfilled by EV services by 2030, excluding heavy-duty vehicles.	Achieve 100% owned/ leased/third-party logistics (3PLs) EVs in its UAE-based commercial fleet.

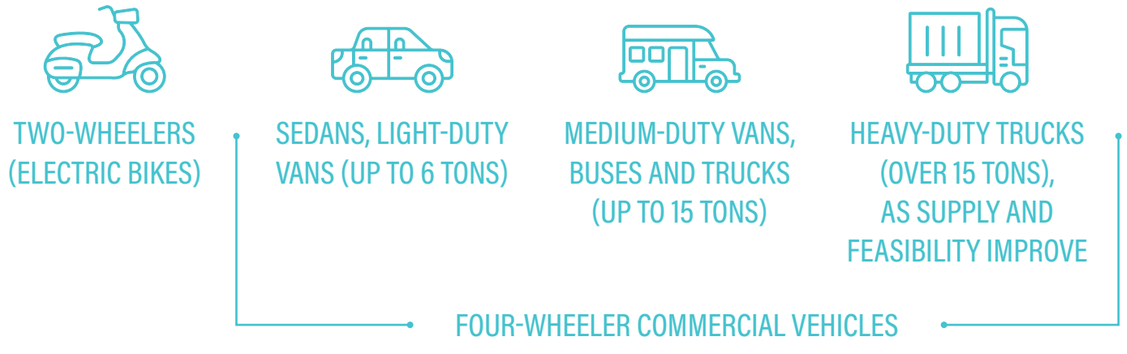
Road2.0 Signatories take action in short, medium, and long term



POTENTIALLY OVER 100,000 $MtCO_2e$ FUEL EMISSIONS SAVED BY 2040

Figure 3: Road2.0 pledge for short, medium, and long-term ambition on commercial fleet decarbonization

Road2.0 focuses on deploying a multitude of vehicle types including:



ROAD2.0 WORKING GROUPS

After its launch at COP28, Road2.0 held its first workshop to align on the key priorities and objectives for the year, which are detailed in this report. Signatories acknowledged the initial challenges they were facing to launch their pilots and transition their fleets to EVs. As a result of this first engagement, **working groups were set up to support the implementation of Signatory pilots.** The working groups were instrumental in supporting Signatories to implement pilots and support other key enablers that would support the EV transition in the private sector:

WORKING GROUP 1: EV ECOSYSTEM ACTIVATION

Goal: Support Signatories to implement their pilots by sending signals to EV market and engaging with EV Suppliers to fast-track the transition to EVs. Share insights with public sector entities and inform regulatory updates where relevant.

WORKING GROUP 2: OTHER DECARBONIZATION TECHNOLOGIES AND ENABLERS

Goal: Focus on supporting Signatories to develop strategies to reduce emissions from existing fleets, while gathering insights on the enabling conditions needed to accelerate the EV transition

2 DECARBONIZING COMMERCIAL ROAD TRANSPORT: CONTEXT

GLOBAL CONTEXT

The transport sector accounted for **24% of global CO_2 emissions** in 2023,[2] making it the second largest emitting sector after energy. Road vehicles dominated this share, responsible for 75% of transport emissions.[3] Improvements in technology efficiency, vehicle electrification, and use of low-carbon fuels, are contributing to decarbonization of the transport sector. However, more action is needed to reduce transport emissions, which must decline by 20% by 2030 and 60% by 2040 to **align with the 1.5°C pathway.**[4]

Electrifying transport, especially when paired with renewable energy, is a key pathway to cutting emissions and maximizing climate impact. By 2030, EVs are expected to displace over 5 million barrels of oil per day, reinforcing both decarbonization and energy security.[5]

Replacing internal combustion engine (ICE) vehicles with EVs[iv] is projected to deliver about 2.1 Gt CO_2 equivalent emission reductions globally in 2035, even after accounting for electricity generation impacts.[6] Globally, **EV sales** reached 20% of new vehicles in 2024,[7] with projections of 40% penetration by 2030.[8] EV sales have already increased 35% in Q1 of 2025 compared with Q1 2024.[9]

In 2024, most EVs sold globally were two- and three-wheelers or passenger cars, with 10 million and 17 million units sold respectively. In contrast, electric buses (70,000 units) and medium- and heavy-duty trucks (more than 90,000 units) remained a small share of the EV market.

iv Alongside continued improvements to ICE fuel economy

The global shift towards EVs has been facilitated by several factors:

TECHNOLOGY ADVANCEMENTS

Lithium-ion battery energy density has risen 8% annually since 2018, extending the **range of EVs** by 400km+ for 95% of new models[10] – eliminating 'range anxiety' for buyers.

LOWER EV COSTS

EV battery packs, typically account for 30-40%[11] of production costs – significantly more than ICE vehicles' equivalent systems. EV **battery costs** have fallen 90% since 2010, enabling near price parity with ICEs in key segments – reducing costs by 40% since 2018[12] and making EVs competitive even before subsidies.

CHARGING INFRASTRUCTURE DEVELOPMENT

Public charging points grew by 40% year-on-year in 2023, with 1 charger for every 11 EVs globally, unlocking mass adoption and investor momentum.[13]

Even as EV adoption accelerates globally, several challenges remain that require targeted solutions to ensure an **equitable and sustainable transition:**

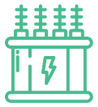
CHARGING INFRASTRUCTURE GAPS ACROSS PUBLIC AND PRIVATE NETWORKS:

Since 2022, public chargers have doubled to reach 5 million+ globally.[14] EV expansion is outpacing the growth of charging infrastructure. Despite this, infrastructure investment without strategy risks the creation of 'charging deserts,' particularly for commercial fleets, where less than 5% of global chargers currently support heavy-duty vehicles (HDVs).[15]

PRIVATE NETWORKS:

Home/workplace charging meets ~70% of light-duty EV needs at one-third the cost of public fast chargers.[16] In urban areas, **access to private charging** leads to 3x higher EV adoption compared to areas relying mainly on public chargers.

Depot charging or on-site private charging enables commercial fleets to recharge overnight, aligning with low electricity demand periods and reducing strain on the grid.



PUBLIC NETWORKS:

High-powered charging (350kW+) for heavy-duty vehicles requires grid upgrades 2-3 years ahead of deployment to avoid bottlenecks.[17] Deploying ≥1 HDV charger every 50 km along major freight routes[18] and building highway corridors could support long-haul electric trucks with **reliable and accessible fast-charging networks.**

Urban hubs with public chargers in high-density areas (e.g., curbside, retail car parks) are needed to support drivers without home charging access.

POLICY NEEDS:

The transition to commercial electric vehicles faces challenges that could delay decarbonization of the transport sector. Globally, most zero-emission vehicle mandates remain focused on light-duty passenger vehicles, **while supportive regulatory requirements for commercial vehicles require further focus and enhancement.**[19] The delay in uptake of commercial electric vehicles could risk prolonging dependence on conventional fleets.

Current **subsidies** continue to favour passenger EVs despite their smaller climate impact. As of 2021, 75% of global EV incentives were directed toward light-duty vehicles (LDVs), while commercial heavy-duty fleets – which offer 3-5 times greater emissions reduction potential per vehicle – received only marginal support.[20]

Grid resilience will require additional investments to keep pace with the high-power demands (350kW+) of heavy-duty EV charging.[21] Proactive grid upgrades can help prevent potential deployment bottlenecks as EV adoption scales, ensuring effective use of infrastructure and supporting the realization of emissions reductions.

The commercial EV shift is constrained by limited **cross-border corridor planning,** which presents hurdles for regional freight electrification, adding costs and complexity.

ENVIRONMENTAL AND SOCIAL CONSIDERATIONS:

While EVs offer major emissions reductions, battery mineral extraction and the absence of large-scale circular models raise ongoing **environmental and social challenges.**

Supportive EV policies that address related challenges are being designed and implemented by many governments. Corporate climate leadership and good governance, through voluntary commitments, can accelerate responsible adoption and create a market pull.

Critical mineral extraction for EV batteries is already contributing to the degradation and direct loss of critical and fragile ecosystems, both terrestrial and marine habitats – alongside water and air pollution in mining regions. Building a sustainable EV supply chain demands responsible sourcing and coordinated action from EV stakeholders across the value chain.[22]

Recycling challenges are emerging as over 11 million tons of spent lithium-ion batteries are forecast to be discarded by 2030; limited systems are in place to enable reuse and recycling and contribute to establishing a circular economy for batteries.[23]

As with any new tech, safety is paramount. Emerging models like battery swapping – especially for electric two-wheelers – must follow strict manufacturer guidelines to protect users and ensure safe operation.

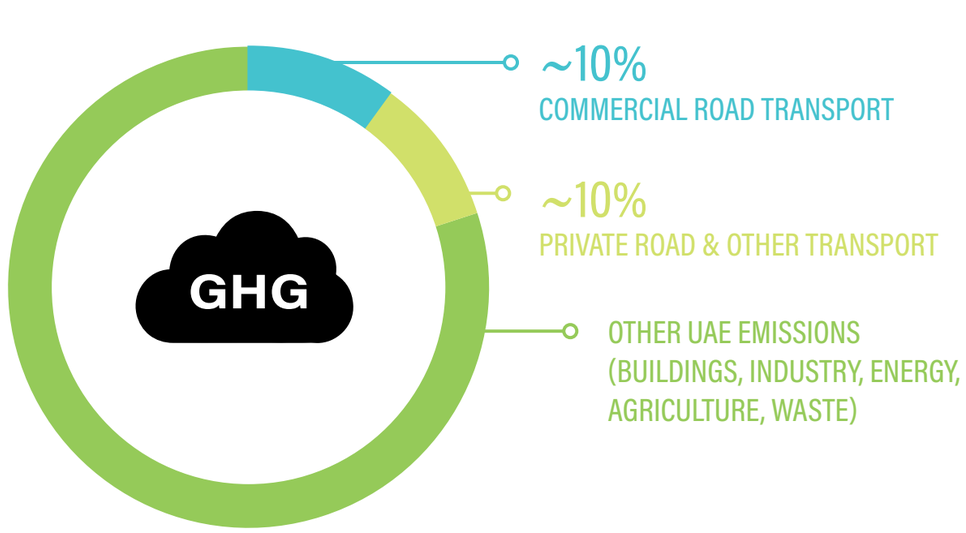
Supportive EV policies are being designed and implemented by many governments. The choices being made by private sector fleets demonstrate that corporate climate leadership in voluntary commitments can accelerate adoption, creating a market-pull through ground-level action.

UAE READINESS

The UAE is advancing its position as a regional leader in green mobility. EV adoption in the UAE has accelerated rapidly, rising from 0.7% of total car sales in 2021 to 3.2% in 2022, and reaching 13% in 2023[24]. **This progress has been enabled by the coordinated efforts of key stakeholders, including the MOEI, local governments, and energy and power authorities across emirates,** who are scaling up the infrastructure needed to support widespread EV deployment. Additionally, forthcoming policies are expected to accelerate the rollout of charging infrastructure, supporting more rapid EV adoption. Under the National Electric Vehicles Policy, developed by MOEI, the UAE aims for EVs to comprise 50% of all vehicles on its roads by 2050 . If the policy targets are achieved, demand for public charging infrastructure is projected to reach approximately 45,000 charging points by 2035.[25]

Although private EV uptake has increased significantly, the scale and speed of the transition is not the same in the case of *commercial* vehicles. This reflects global technology-uptake trends, as commercial EV adoption remains relatively slow despite wider availability and falling prices. **Notably, in the UAE, commercial road transport accounts for approximately half of transportation emissions, and as much as 10% of overall UAE greenhouse gas emissions.[26]**

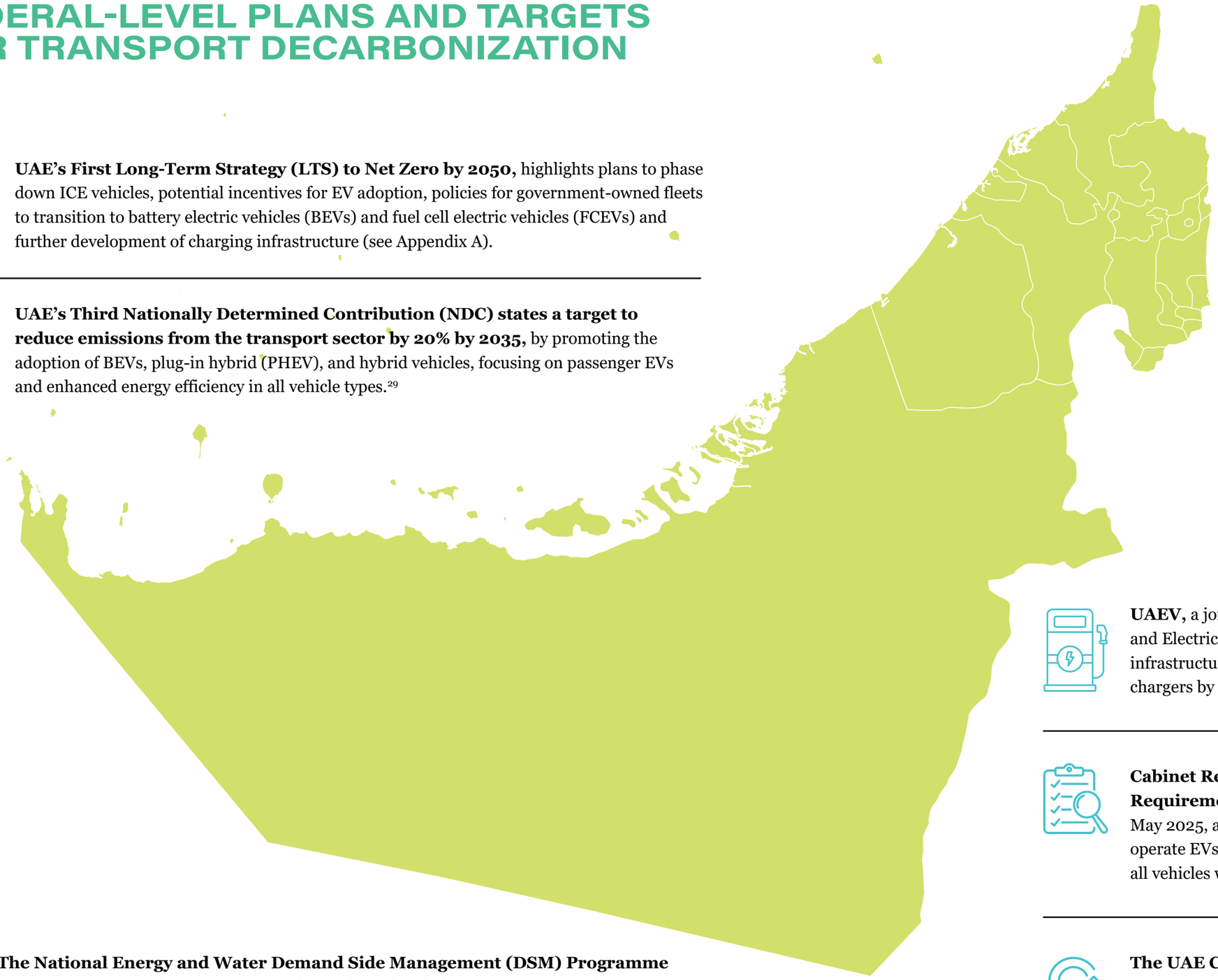
Figure 4: Share of road transport in total UAE emissions[27]



Commercial road transport makes up at least 10% of the UAE's carbon footprint, and is therefore a key emission reduction lever on the way towards a Net-Zero UAE

The UAE's ambitious journey to decarbonize transport is driven by a series of federal and emirate-level strategies, aligned with the Net Zero 2050 Strategy (led by MOCCAE) and the Demand Side Management Strategy (led by MOEI). Demand for EVs in UAE has increased considerably over recent years, with over 20,000 EVs registered in 2022, a four-fold increase from 2021.[28]

FEDERAL-LEVEL PLANS AND TARGETS FOR TRANSPORT DECARBONIZATION



UAE's First Long-Term Strategy (LTS) to Net Zero by 2050, highlights plans to phase down ICE vehicles, potential incentives for EV adoption, policies for government-owned fleets to transition to battery electric vehicles (BEVs) and fuel cell electric vehicles (FCEVs) and further development of charging infrastructure (see Appendix A).

UAE's Third Nationally Determined Contribution (NDC) states a target to reduce emissions from the transport sector by 20% by 2035, by promoting the adoption of BEVs, plug-in hybrid (PHEV), and hybrid vehicles, focusing on passenger EVs and enhanced energy efficiency in all vehicle types.[29]

The National Energy and Water Demand Side Management (DSM) Programme 2050, targets a 40% decrease in energy demand[30] and includes initiatives on public transport, freight transport, green mobility and higher EV adoption. The programme aims to establish national fuel efficiency standards by developing a vehicle fuel consumption rating system, setting class-based efficiency targets for manufacturers, and defining fuel efficiency benchmarks for government fleets.[31]

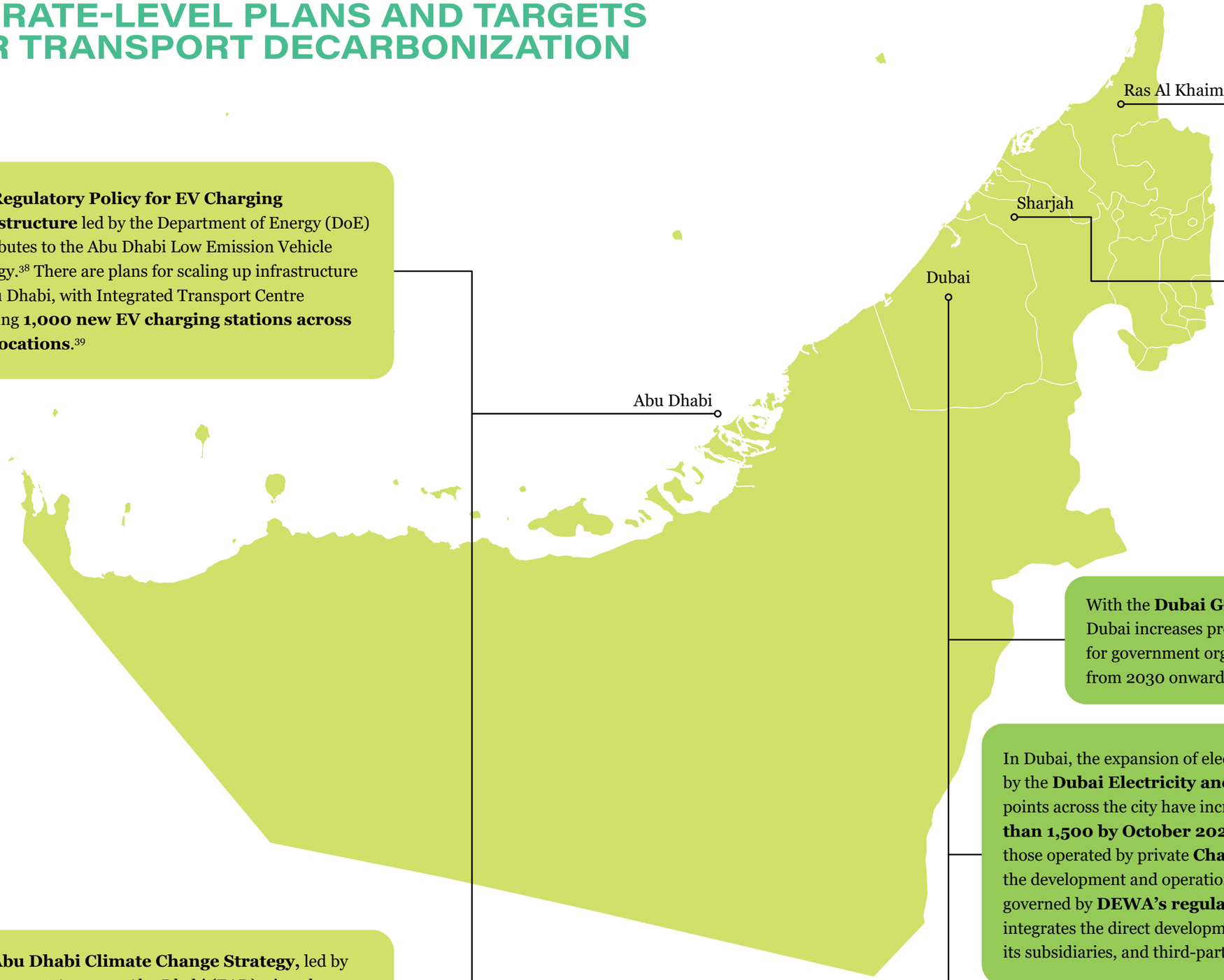
The National Electric Vehicles Policy of the UAE, promotes collaboration among stakeholders to establish a national network of EV chargers.[32] The policy aims to reduce energy consumption in the transport sector by 20% by 2050 and to build a centralized database of electric vehicle charging stations.[33] **Global EV Market,** launched by MOEI, aims to support the shift to green mobility and increase the share of EVs to 50% of total vehicles on the UAE's roads by 2050.[34]

UAEV, a joint venture between MOEI and Etihad Water and Electricity, was established to increase EV charging infrastructure across the UAE targeting the installation of 1,000 chargers by 2030.[35]

Cabinet Resolution No. (50) of 2024: Technical Requirements of Electric Cars in the UAE in effect from May 2025, aims to prepare the regulatory framework to safely operate EVs through clearly defined technical requirements for all vehicles with a speed >25 km/hour.[36]

The UAE Circular Economy Policy 2021-2031 includes targets to increase adoption of low carbon vehicles, promotes the development of integrated transport systems offering diverse transportation, and encourages advancement in charging infrastructure, and legal and regulatory frameworks supporting EVs and low carbon fuel.[37]

EMIRATE-LEVEL PLANS AND TARGETS FOR TRANSPORT DECARBONIZATION



The Ras Al Khaimah Energy Efficiency & Renewables Strategy 2040 promotes the adoption of EVs and hybrids, starting with government fleets as part of its Efficient Vehicles Program.[40]

Sharjah's taxi fleet includes 83% hybrid and eco-friendly taxis, targeting 100% by 2027.[41]

With the **Dubai Green Mobility Strategy 2030,** the Emirate of Dubai increases procurement targets of electric and hybrid vehicles for government organizations to 20% starting from 2025, and 30% from 2030 onwards.[42]

In Dubai, the expansion of electric vehicle (EV) charging stations has been led by the **Dubai Electricity and Water Authority (DEWA).** Public charging points across the city have increased from **around 700 in 2023 to more than 1,500 by October 2025,** including both DEWA-owned chargers and those operated by private **Charge Point Operators (CPOs).** Furthermore, the development and operation of EV charging infrastructure in Dubai are governed by **DEWA's regulatory and licensing framework,** which integrates the direct development of public charging infrastructure by DEWA, its subsidiaries, and third-party CPOs.[43]

Dubai's Roads & Transport Authority Roadmap aims to transform all public transport means to be carbon-free by 2050,[44] with taxis targeted to become 100% eco-friendly (hybrid, electric, and hydrogen-powered) by 2027.[45]

The Regulatory Policy for EV Charging Infrastructure led by the Department of Energy (DoE) contributes to the Abu Dhabi Low Emission Vehicle Strategy.[38] There are plans for scaling up infrastructure in Abu Dhabi, with Integrated Transport Centre planning **1,000 new EV charging stations across 400 locations**.[39]

The Abu Dhabi Climate Change Strategy, led by Environment Agency – Abu Dhabi (EAD), cites the promotion of low-carbon transport options – such as adopting low-emission vehicles – as a key target to cut greenhouse gas emissions from the emirate's land transport sector.

3 ROAD2.0: PRIORITY LEVERS FOR ACCELERATING COMMERCIAL EV ADOPTION IDENTIFIED IN YEAR 1

In Year 1 of the initiative, Road2.0 Signatories have begun transitioning their owned and leased fleets and committed to sharing their experiences and pilot data with peers and the broader UAE transport ecosystem – to help answer a central question: **what are the levers to unlock EV uptake at scale for the UAE commercial sector?**

The levers identified in Year 1 fall into **three categories:**

PRIORITY LEVER 1:
GROWING THE COMMERCIAL EV MARKET IN THE UAE

PRIORITY LEVER 2:
DEVELOPING FIT-FOR-SCALE EV CHARGING INFRASTRUCTURE

PRIORITY LEVER 3:
MAXIMIZING OPERATIONAL EFFICIENCY

This list of levers is not exhaustive. However, given the practical focus of Road2.0, it reflects the reality on the ground as experienced by Signatories in the process of conducting their pilots in the UAE. Moreover, the levers identified are closely linked (e.g., infrastructure availability will impact Total Cost of Ownership (TCO) and therefore demand for EVs) and should be understood as necessary conditions for enabling commercial EV adoption at scale.

In the following sections, the report will detail each of the three categories of levers. This will be followed by a section that addresses the specific challenges and requirements of the two-wheeler EV ecosystem.

PRIORITY LEVER 1:

GROWING THE COMMERCIAL EV MARKET IN THE UAE

As in many countries around the world, the market for commercial EVs in the UAE is nascent. Private EV adoption – primarily sedans – is growing rapidly, with more than 30,000 EVs registered in Dubai alone by April 2024 and supported by an expanding charging network.[46] However, as of the second half of 2023, when Road2.0 was created, there was a close to zero baseline of commercial EVs on UAE roads.

To close this gap and kick-start commercial EV adoption in the UAE, a well-functioning market is required and the actual – and sometimes perceived – gaps in the TCO relative to ICE vehicles will need to be closed. The emergence of such a market and the TCO challenge are closely linked: narrowing the TCO gap will drive demand and make EVs more **cost-competitive,** which in turn will encourage more supply. At the same time, a larger and more efficient market will further reduce TCO gaps for companies adopting EVs instead of ICE vehicles.

1A

BOOSTING DEMAND AND INCREASING SUPPLY FOR COMMERCIAL EVs IN THE UAE

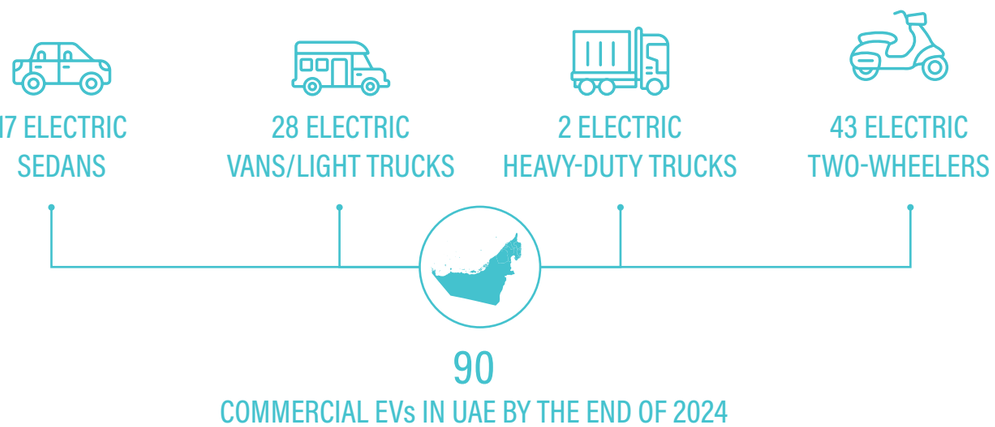
Establishing a thriving EV market will require addressing the 'chicken-and-egg' challenge of supply and demand. In the workshops hosted by UACA for Road2.0 in early 2024, it became evident that Signatories are keen to initiate EV adoption but struggle to find the right vehicles and contractual terms in the market, or do not know how to realize EV adoption through their third-party logistics providers (3PLs). At the same time, when UACA and Road2.0 started engaging with current and potential EV suppliers, it became clear that many suppliers are not currently offering many EV options given the lack of demand.

Road2.0, in its first year, started to signal demand for commercial EVs to suppliers, as Signatories conducted pilots of EVs in their operations. By the end of 2024, less than a year into the launch of Road2.0, Signatories have deployed 90 commercial vehicles on UAE roads as part of their EV pilots, including electric vans, heavy-duty trucks, bikes and sedans used for commercial purposes, thereby kick-starting transport decarbonization and proving the technical and operational viability of commercial EVs. These early achievements highlight the power of a bottom-up, action-first approach to driving real progress on the ground.

Implementation of pilots and sustainable transport stewardship

Road2.0 Signatories deployed 90 commercial EVs on UAE roads in less than one year.

Over 70% of Signatories completed their pilot phase to launch EVs in Year 1.



Later in this report, a **series of case studies** illustrate EV pilot programmes and the key lessons companies have drawn from their efforts.

To accelerate pilot implementation, Road2.0 and its Signatories led targeted workstreams on capacity building and climate leadership – supporting fleet electrification while sharing insights with key public and private stakeholders.

Road2.0's 1st workshop held at talabat's HQ (2024)

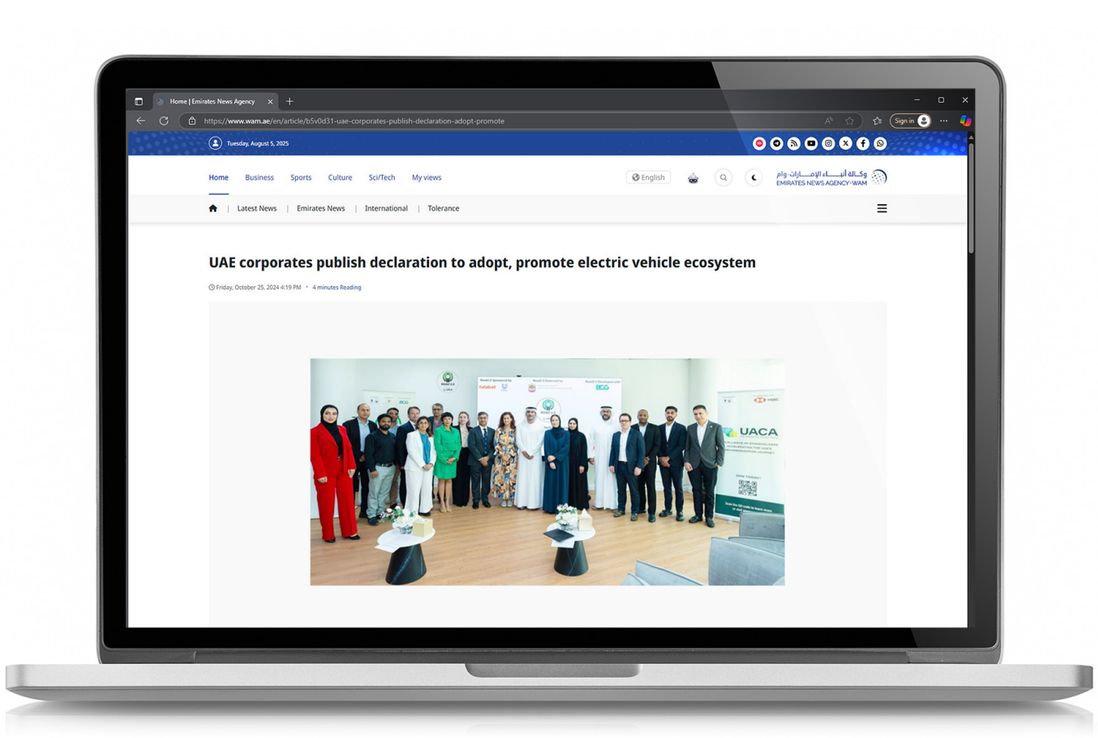
KNOWLEDGE BUILDING:

Road2.0 offered workshops, webinars and member-led knowledge-sharing sessions to **exchange insights and experiences** amongst Signatories to support pilot implementation. Thematic Working Groups were developed to allow Members to share more specific information and help deliver on the activities and exercises conducted as a part of Road2.0.

DEMAND SIGNALS – ROAD2.0 EV DEMAND DECLARATION:

Road2.0 Signatories recognized the urgent need to signal rising demand to the EV ecosystem – calling for **increased EV supply** and better leasing terms for EVs. Predictable demand is essential for effective business and policy planning. To drive this, the Road2.0 EV Demand Declaration was launched, sending a clear message: commercial EV demand in the UAE is accelerating and must be met with stronger supply-side action. The declaration consolidates Signatories' current and projected EV requirements, providing a unified, data-driven view of near-term demand. It also sets the stage for deeper, long-term collaboration between Signatories, EV manufacturers, distributors, and charging infrastructure providers.

The declaration was signed by Road2.0 Signatories, committing them to the deployment of a total of 6,000 EVs by 2030 between them, and 20,000 EVs by 2040. This shift would result in potential emissions savings of over 100,000 tons of CO_2e.[v] The declaration was formally launched in collaboration with the MOEI and MOCCAE, and shared with the media to reach the wider EV market ecosystem.



Road2.0 EV Demand Declaration – English Coverage

The Declaration serves as a call to action for the EV ecosystem, inviting stakeholders to join forces to mobilize the swift uptake of EVs across commercial fleets. It states the need to:

- Expand the **supply of EVs** in the UAE for two wheelers, light, medium, and heavy-duty vans, trucks, and buses to drive scale and market competition.
- Engage with Road2.0 Signatories to better understand and consider their specific **operational needs** together with market suitability across types and specifications of vehicles.
- Offer a **greater variety of EVs in leased fleets**, with leasing terms appropriate for the technology and associated costs, to support the EV transition.
- Engage with Road2.0 Signatories to identify **financing opportunities** with interested off-takers and like-minded institutions.
- Ensure stakeholders move with **scale and speed,** especially in the initial growth phase of the local UAE industry.

Road2.0 EV Demand Declaration launched by Road2.0 Signatories, MOEI, and MOCCAE

v UACA Road2.0 Analysis

EV SUPPLY-SIDE ENGAGEMENT — DEMO DAYS:

Road2.0 Working Group 1, 'EV Ecosystem Activation,' facilitated seven **vendor demonstration sessions and interactions** to increase access to information that supports EV pilot implementation. Sessions provided Signatories with first-hand insights into available technologies and models while providing direct engagement with suppliers, developing deeper partnerships as fleets transition. 50% of Signatories who attended the sessions successfully procured commercial EVs from these suppliers, accelerating their pilot launches.

Note: Road2.0 did not receive any benefits and acted as an independent conduit and platform to help facilitate these sessions, whilst being technology and vendor agnostic. Signatories engaged with EV vendors in separate follow-up sessions, through their own procurement channels.

REDUCING EMISSIONS FROM EXISTING FLEETS:

Signatories emphasized that reducing emissions from existing conventional fleets *while transitioning to EVs* was key to continuing their efforts to decarbonize. Road2.0 Working Group 2, 'Other Decarbonization Technologies and Enablers,' **developed a toolkit to support organizations** (with a focus on procurement and finance) in making more informed decisions regarding their existing leased and owned fleet. The toolkit aims to provide over-arching recommendations to enhance company policies and initiatives in support of the transition. These recommendations are designed to help Signatories develop a strong business case for strategies that aim to reduce emissions from existing fleets. Specifically, the toolkit aims to:

Equip Signatories with **effective fleet management metrics and strategies** that highlight emissions linked to vehicles.

Promote **enhanced driver behaviour** for emissions reduction.

Support **setting minimum efficiency standards** for fleet upgrades and advocate for the adoption of Euro 5+ standards through procurement guidelines.

To scale the adoption of commercial EVs in the UAE, the demand signalling initiated by Road2.0 Signatories will need to be brought to the national level, supported by policy. In the process of doing so, more data and requirements will need to be exchanged between private sector companies and vehicle suppliers, so that offerings can be tailored to local and company-specific needs. In response, vehicle distributors will be able to provide a broader and more tailored offering, drawing from the growing availability of EV models and specifications available from global OEMs.

The second workshop at Nestle's HQ provided an opportunity for Signatories to update on their pilot progress and deep-dive on key challenges they faced (2024)

1B

CLOSING THE ACTUAL/PERCEIVED TOTAL COST OF OWNERSHIP (TCO) GAP

Commercial ICE vehicles remain the more cost-effective option in the UAE in most use cases. Based on non-UAE data, commercial EVs typically have a 10-20% higher TCO, a measure that combines initial cost for the vehicle/asset and lifetime costs for maintenance or operation, than comparable ICE models.[vi] While commercial EVs are approaching lifetime cost parity with ICE vehicles, and in some use cases have already reached parity, UAE-specific data is limited, and the region's unique climate and operational conditions could significantly impact vehicle performance, battery life, and overall costs. **TCO is a major factor in EV uptake decisions for companies and depends on factors ranging from purchase price and charging costs to maintenance and insurance costs.**

The transition from ICE to EV fleets in the UAE faces several financial hurdles, a major one being misaligned leasing models, as most companies lease vehicles. Traditional leasing terms cannot reasonably accommodate EVs' higher upfront costs, despite their lower operating expenses (OPEX). Additionally, leasing companies hesitate to invest in EVs due to uncertainties around resale value and future market demand.

Road2.0 Signatories developed the following insights and considerations in Year 1:

HIGHER UPFRONT COSTS AND COST RECOVERY TIMELINES:

EV batteries increase upfront purchase prices; the lack of longer-term leasing contracts makes current short-term leases (2–3 years, designed for ICE vehicles) financially burdensome for businesses.

Considerations: Longer leasing terms (5–7 years) would better align with EV economics by spreading costs and reflecting lower OPEX. Yet, leasing firms prefer shorter terms to recover upfront investments, creating misalignment with fleet needs. Collaboration among lessors, buyers, and financiers, is key to enabling effective EV financing solutions.

RESALE UNCERTAINTY:

Battery degradation, especially in the region's hot and arid climate, and rapid EV advancements, bring lack of certainty in residual value, discouraging leased vehicle providers from expanding EV portfolios.

Considerations: Partnerships between manufacturers, leasing firms and insurers could stabilize resale expectations through battery warranties or buy-back programmes. Further evidence needs to be gathered on implications of high temperature environments on battery performance and life.

UNCERTAINTY OF SECONDARY MARKET DEMAND:

Without adequate confidence in secondary market demand, leasing companies limit capital expenditure (CAPEX) – the upfront investments required for vehicles and infrastructure – which in turn slows fleet electrification.

Considerations: Trilateral agreements between leasing companies, lessors and OEMs, could de-risk investments to secure future secondary market demand.

Further work needs to be done to understand these challenges. Case studies from mature EV markets can help inform UAE-specific leasing innovations, creating solutions to help companies manage operational certainty that ensures competitive and scalable solutions.

At a broader level, overcoming the TCO barrier begins with understanding the UAE's TCO gaps across different EV use cases and identifying the levers to improve competitiveness and scale adoption nationwide.

Road2.0 aims to conduct a TCO analysis using real world, UAE-specific data from Signatories to validate the TCO gap between ICEs and EVs, leveraging a standardized model developed by the UACA Team and BCG in Year 1.

UACA stands ready to partner with private and public sector entities to deliver these important insights and discuss regulatory options to close remaining gaps, thereby creating a level playing field for EVs.

vi BCG Analysis

PRIORITY LEVER 2:

DEVELOPING FIT-FOR-SCALE COMMERCIAL EV CHARGING INFRASTRUCTURE

Developing charging infrastructure in the UAE remains a priority area of intervention to support EV adoption and expansion. Fit-for-scale infrastructure is a necessary condition for the adoption of commercial EVs in the UAE, and without it, an efficient market for commercial EVs is unlikely to emerge. Both private and public charging have an important role to play in scaling the use of private and commercial EVs.

2A

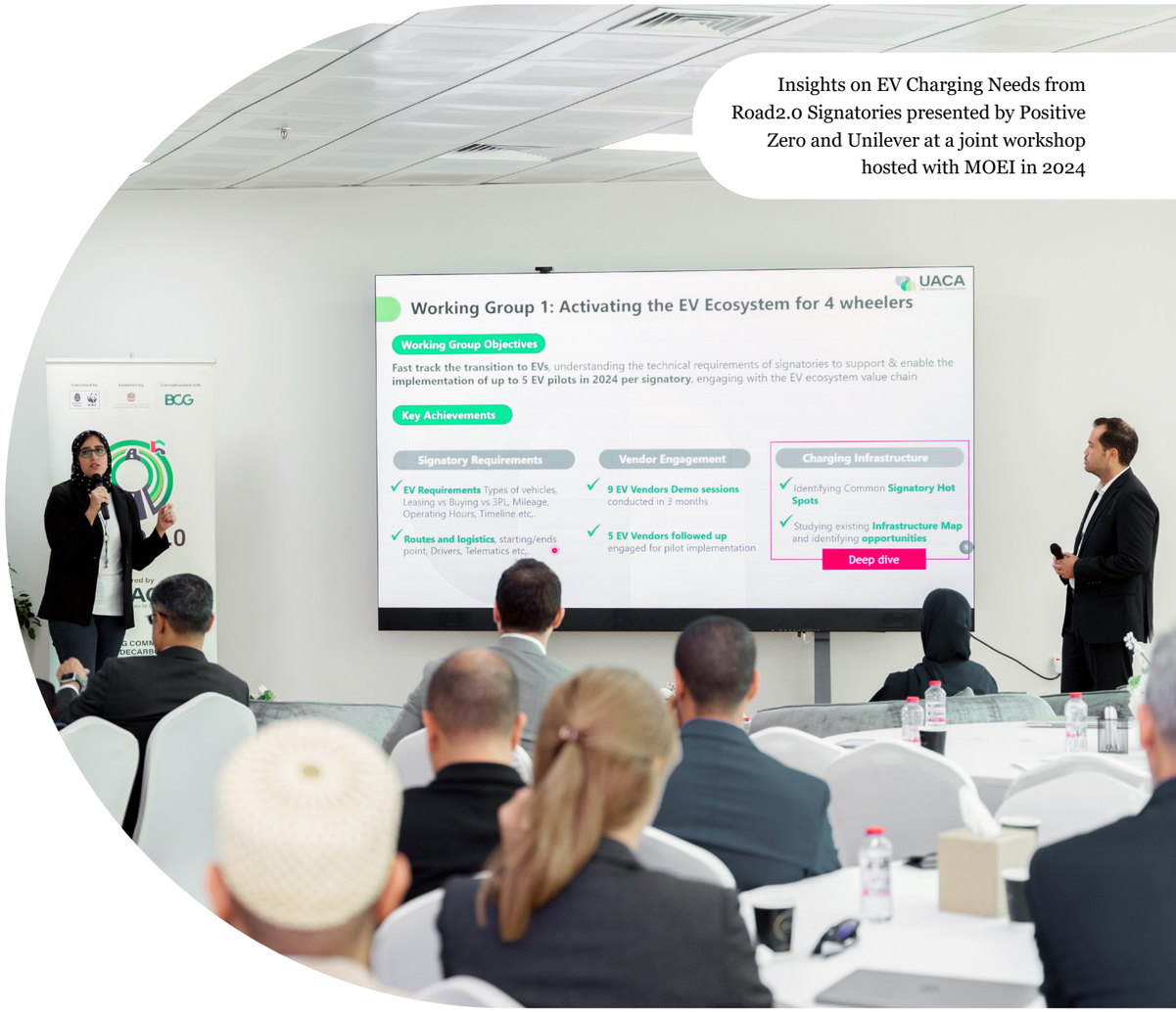
EXPANDING AND TAILORING PUBLIC FAST-CHARGING INFRASTRUCTURE

Public charging, especially for commercial vehicles, is a key factor for operational certainty as it provides an opportunity to top up when needed while vehicles are on duty. While public charging infrastructure has increased significantly, Road2.0 Signatories have highlighted considerations related to location, size and speed of chargers, grid capacity and availability of stations.

To advance infrastructure planning, Road2.0 Signatories have undertaken an initial assessment of their infrastructure requirements. They jointly **assessed their charging needs** – frequency, capacity, and location – to identify priority sites for public chargers, especially in Dubai, that meet Road2.0 Signatories' top-up requirements and can ensure reliable operations.

Dubai South, Dubai Investment Park and Jebel Ali emerged as three hotspot locations in terms of charging infrastructure needs, where most Signatories had significant routes to/from.

Figure 5: Road2.0 Mapping of Charging Infrastructure Requirements based on utilization and location of Signatories' needs



Insights on EV Charging Needs from Road2.0 Signatories presented by Positive Zero and Unilever at a joint workshop hosted with MOEI in 2024

Signatories part of Working Group 1, 'EV Ecosystem Activation,' mapped current charger availability and identified where public infrastructure could best support commercial EVs, factoring in capacity and usage patterns. The purpose of this assessment was to arrive at an initial forecast of charging infrastructure needs and associated location hot-spots. This led to the identification of **three priority areas for expansion of infrastructure:** Dubai South, Dubai Investment Park, and Jebel Ali (Figure 5). These zones were prioritized due to their high economic activity, with added infrastructure expected to benefit a diverse set of industries. **Aggregated demand and utilization forecasts** were also developed to help charge point operators (CPOs) and utilities assess potential charger usage.

Two **scenarios for immediate electricity demand and charger capacity** were developed across the three zones, focusing on the most utilized areas and locations with charging gaps:[vii]

MEDIUM UTILIZATION SCENARIO:

Installation of 13 DC chargers[viii] with 750 kW total capacity[ix] was proposed to support faster charging.

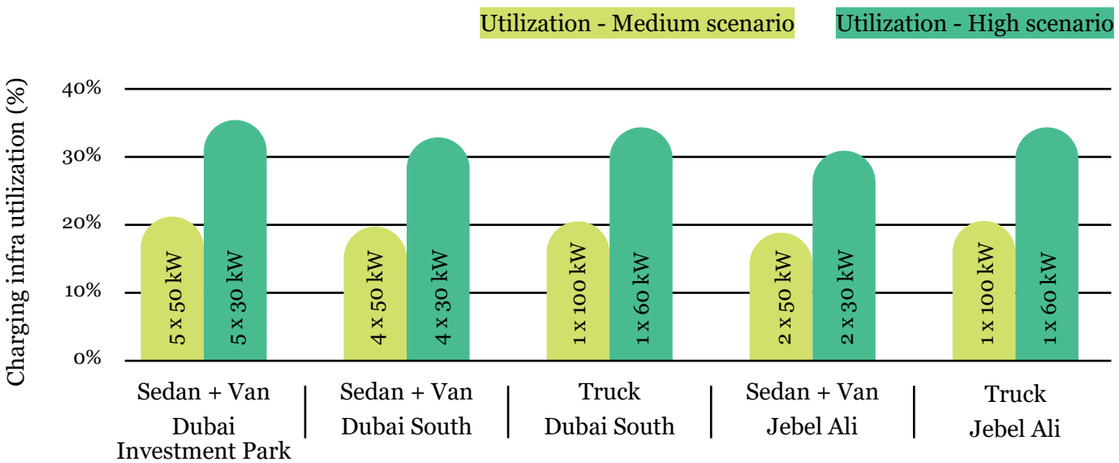
HIGH UTILIZATION SCENARIO:

Installation of 13 DC chargers with 450 kW total capacity[x] was proposed to support lower tariffs.

The **numbers and capacity of the proposed chargers** were determined to achieve the following objectives:

- Complete each charging session under 1 hour (medium utilization and high tariff) and under 1.5 hour (high utilization and lower tariff)
- Maintain charger utilization between 19-22% (medium utilization) and 31-36% (high utilization)[xi]

Figure 6: Number of chargers required per zone in Dubai identified by Road2.0 based on medium and high charging infrastructure utilization scenarios



vii UACA Road2.0 Analysis

viii A DC charger for EVs provides a high-powered charging current that directly supplies electricity to an EV's battery, often by-passing the vehicle's converter, enabling much faster charging compared to AC chargers.

ix 11 units of 50 kW chargers and 2 units of 100 kW chargers

x 11 units of 30 kW chargers and 2 units of 60 kW chargers

xi At expected yearly growth rate (~10% per annum)

As shown in Figure 6, high utilization could unlock more competitive tariffs, helping EVs reach TCO parity with ICE vehicles.

Three key take-aways emerge for charging service providers:

EV chargers would need to be of sufficient size and capacity to complete charging within 1 and 1.5 hours,[xii] operating at moderate and high utilization to reduce the cost of charging for Road2.0 Signatories.

A proposal could be developed for **booking, charging and paying via a mobile app to streamline the use of chargers** in order to address issues of charging access (emanating from public chargers being open to both passenger and commercial customers, and charging points at times being non-operational or undergoing maintenance).

The **extent and location of charging infrastructure has implications for charging tariffs as well as management of peak-hour charging requirements.** There is potential to deploy **private EV chargers** for the Signatories in proposed locations for them to obtain better tariffs.

Signatories from Working Group 1 presented these insights at a joint workshop with MOEI, attended by representatives from MOCCAE and other members of the Demand Side Management Working Group. It was noted that this was an initial exercise based on Road2.0 Signatory pilots to date; larger-scale assessments would be needed with federal and emirate-level stakeholders on the requirements to scale at the national level.

xii Assumed that 60% of the battery capacity is charged in an average session

Going forward, Road2.0 will aim to map Signatories' future outlook for public charging infrastructure demand, identifying key locations and capacity requirements to support scaling efforts, and share these findings with decision-makers, charging infrastructure providers and investors to tap into demand-driven opportunities.

UACA is looking to share Signatories' insights with private and public sector entities to support similar exercises in other emirates to develop a UAE-wide assessment of charging infrastructure requirements for commercial EVs, and to contribute to the achievement of UAE's sectoral and national climate targets.

Jointly organized with the MOEI, the Road2.0 collaborative workshop brought together Signatories to launch the EV Demand Declaration alongside MOCCAE and MOEI. The session also featured Road2.0's initial insights on commercial EV charging infrastructure needs and the key factors influencing Total Cost of Ownership.

2B

EXPANDING PRIVATE ON-SITE CHARGING INFRASTRUCTURE

It is expected that a large share of charging needs for commercial fleets will need to be met from on-site charging infrastructure, as many fleets operate between hubs, and therefore require charging infrastructure either at the hubs or on-site facilities. **Understanding the required relative extent of public versus on-site private charging infrastructure will be key to enabling EV adoption at scale.** This calls for sustained dialogue amongst government entities, commercial vehicle users and private charging point providers and operators in order to identify and implement locally relevant policy solutions and business models.

During Year 1 of Road2.0, it was noted by the Signatories that **scaling on-site charging infrastructure** at company locations remains a challenge. Signatories mentioned that the size of the capacity load required to transition their entire fleet would require substantial investment and upgrades to the grid for their plot.

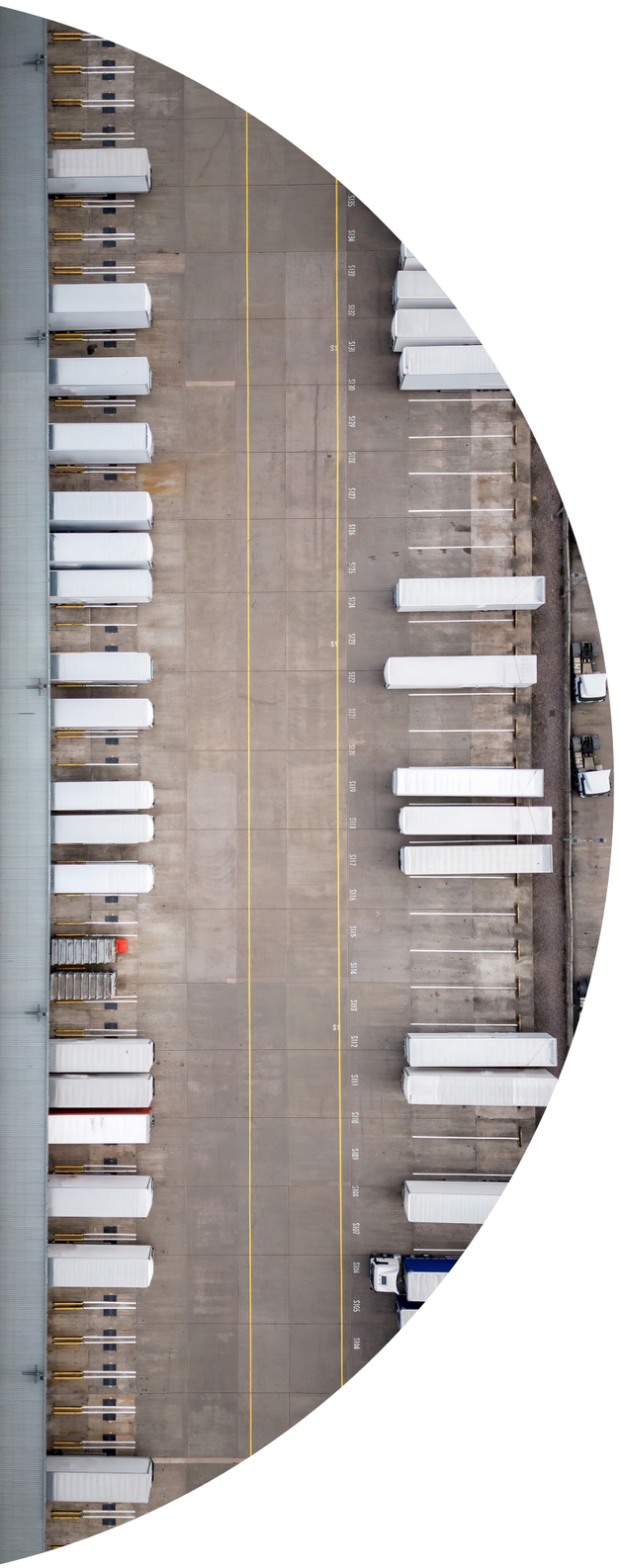
Additionally, the size of the plot(s) may not offer sufficient space for charging infrastructure to meet complete on-site demand. For example, one company mentioned that the current parking area of one of its facilities can only accommodate 20 chargers, far fewer than the quantity needed for its 100-vehicle fleet at that facility.

Given the substantial investment needs, **favourable financing terms and flexible business models** for private charging infrastructure (e.g., consortia-owned private charging stations) will be critical. This would require an enabling regulatory framework, together with collaboration among ecosystem players (i.e. policymakers, infrastructure providers, and fleet owners and operators) to help the private sector plan, develop, and upgrade on-site charging facilities. A **regulatory sandbox that allows innovative solutions to be tested and implemented in a controlled environment** with adequate policy oversight, could provide a framework to draw actionable insights. With effective long-term planning, private charging infrastructure can effectively complement public infrastructure, harnessing the power of partnership.

PRIORITY LEVER 3:

MAXIMIZING OPERATIONAL EFFICIENCY BEYOND INFRASTRUCTURE

Road2.0 has identified key enablers to accelerate commercial EV adoption in the UAE, based on insights from Signatories actively procuring and operating EVs. **This section distils key challenges and actionable enablers gathered from dialogues and Signatory engagements from the initiative's first year – focusing on what will help scale decarbonized transport. While not exhaustive, these priority areas – validated by industry stakeholders – offer a roadmap for regulators, businesses, and partners to enable and drive progress.** In addition to the areas of intervention mentioned below, as EVs scale, ensuring a circular economy model for electric batteries and vehicles would be critical to realize the full environmental benefits of the EV transition.



3A

OPTIMIZING CHARGING SCHEDULES

Charging time for commercial EVs can impact **business operations and efficiencies,** particularly for third-party logistics providers (3PLs), delivery services, and service providers being paid hourly/daily rates during working hours. Charging time could take up to 2 hours per day (20% productivity), reducing daily delivery capacity, leading to delays and reducing driver earnings (for per-transaction pay). Field technicians billing for charging time further inflates operational costs.

Considerations: Case studies and solutions from similar markets could help UAE businesses adopt best practices without sacrificing operational or financial efficiency. Additionally, optimized charging strategies such as off-peak overnight charging and faster-charging hubs for businesses could help maximize efficiency.

3B

MANAGING EV DRIVER LOGISTICS

Many drivers in the UAE typically take company vehicles home after working hours. However, EVs are often required to **charge on-site overnight.** Signatories report that during the pilots, in some cases, charging infrastructure was provided in the buildings of those employees who drove cars, but additional barriers emerge depending on the type of residence of the employee and the availability of charging stations in parking lots, suggesting the need for alternative solutions for driver commutes, especially for those living outside Dubai. Approximately 40% of Dubai's urban residents lack **dedicated parking spaces with charging access.**[47]

Considerations: New solutions will be required to ensure efficient transport of drivers between their place of residence and charging hubs, through expansion of charging infrastructure in residential areas (including apartment buildings) or alternative logistics solutions. Public-private partnerships could pilot solutions tailored to UAE workforce needs and welfare.

3C

ADJUSTING WEIGHT CLASSIFICATIONS

In the UAE, vehicles are classified based on their curb weight, i.e., the weight of the vehicle without passengers or goods. A medium-duty ICE van (2.3 tons) may shift to the heavy-duty category (2.5+ tons)[48] when electrified due to battery weight (e.g., +500 kg), triggering **additional licensing, training, and route restrictions** – increasing costs and reducing operational efficiency.

Considerations: There is potential to consider a revision of classification thresholds as deemed fit for the local context or to create EV-specific categories. This would help ensure smoother fleet transitions.

4D

ENSURING SAFETY AND STANDARDIZATION

The transition to EVs introduces new safety considerations that require proactive management to ensure driver safety and confidence, and operational reliability. As EV adoption represents a technological shift for most fleet operators, Road2.0 has identified two critical safety priorities emerging from its first-year engagements.

First, **driver readiness** remains a top concern, particularly for two-wheelers (see upcoming Case Study on two-wheelers) but equally for larger commercial vehicles. Unlike traditional ICE vehicles, EVs are equipped with newer technological features including regenerative braking as well as wider maintenance requirements and considerations such as maintaining battery health – all of which require updated training protocols. Several Road2.0 Signatories reported that drivers initially unfamiliar with EVs required hands-on experience to adapt to these differences, particularly in high-temperature conditions where battery performance and vehicle handling can vary.

Second, **load security and range assurance** have emerged as areas of concern, especially for temperature-sensitive goods. Companies operating EVs with refrigeration functions e.g., for cosmetic or perishable products, have raised concerns about maintaining consistent cooling during long routes in peak summer months, where additional needs such as refrigeration units can limit battery performance.

Considerations: Training drivers on EVs is key – and companies would benefit from support from suppliers and logistics providers to help establish a wider framework to support EV operations. This includes not only vehicle handling but also emergency protocols specific to high-voltage batteries and charging equipment. Standardization of driver training could help ensure safe operations across the UAE. Additionally, further piloting and testing of real-world performance can provide data-driven insights into EV performance under local conditions, to help companies and drivers gain confidence on ranges and ensure loads are safe.

To unlock the potential of commercial EVs in the UAE, all three categories of levers (EV market growth, charging infrastructure and operational hurdles) will be required. The following case studies of talabat, Unilever and Chalhoub Group's pilots in the first year of Road2.0 illustrate that commercial EVs are operationally feasible in the UAE today, and showcase the levers required to overcome current obstacles.

INSIGHTS FROM THE TWO-WHEELER ECOSYSTEM

As last-mile delivery and urban mobility solutions rapidly expand in the UAE, electric two-wheelers present a major challenge as well as an opportunity for reducing emissions and operational costs in commercial transport. Recognizing the unique characteristics of this segment, Road2.0 Signatory and sponsor talabat, along with its Two-Wheeler Consortium have brought to the Road2.0 cohort key insights from their experience, which include:

- **Fragmented market:** A growing number of EV players offer diverse technologies and business models, increasing product availability but requiring businesses to individually test technologies for safety and suitability in the UAE.
- **Diverse roles:** The rapid growth of two-wheeler EVs presents unique challenges for businesses operating in this space. Many companies find themselves stretched across multiple roles, struggling to excel in any single domain – serving as vehicle manufacturers, infrastructure providers, and third-party logistics companies (3PLs). This diversification, whilst innovative, creates significant operational strain that ultimately slows market maturation and efficiency.
- **Battery related issues:** Diverse battery types and non-standardized swapping stations create uncertainty for long-term investment; fleet operators may hesitate to invest without universal battery access whilst manufacturers resist standardization to protect proprietary systems.

Further work is needed to advance the two-wheeler EV ecosystem:

- **Standardization proposal:** Propose a framework to standardize plug types and voltage ranges while fostering healthy competition.
- **Interoperability standards:** Promote and raise awareness on the need for standardized charging protocols and payment platforms to ensure seamless access to two-wheelers.
- **Safety requirements:** Define climate-specific safety requirements to ensure vehicles meet UAE's temperature sensitive operational demands.
- **Incentives to drive adoption:** Recommend, and support on, financial and operational incentives to speed up the transition from ICE vehicles to EVs.
- **Battery swapping service model:** Establish standardized, market-wide battery swapping infrastructure, ensuring compatibility across brands and regulatory compliance to enable fleet-wide adoption with built-in circularity principles to support end-to-end battery stewardship i.e. first-life use in vehicles to second-life applications.

CASE STUDY 1

talabat

talabat: Scaling Two-Wheeler EVs for last-mile logistics in the UAE

talabat, a leading online food delivery and quick-commerce platform in the region, is contributing to parent company Delivery Hero's global commitment to achieve net zero by 2040. In the UAE, talabat has **launched a pilot project to evaluate the operational viability of electric motorcycles as direct replacements for internal combustion engine bikes under UAE conditions,** with the intention to accelerate the decarbonization of last-mile delivery.

As a sponsor of UACA's Road2.0, talabat strongly welcomes the 'action-first' approach, which aligns with its EV Roadmap to scale EVs UAE-wide. talabat leveraged the Road2.0 initiative to facilitate deeper engagement amongst the two-wheeler ecosystem – from manufacturers, third-party logistics providers (3PLs) and infrastructure providers – by organizing knowledge-sharing discussions on practical solutions.

OBJECTIVES AND PILOT DESIGN

The pilot was designed to generate real-world insights to support broader industry adoption, focusing on vehicle performance, rider experience, and suitability for third-party logistics partners (3PLs).

talabat carried out a **two-week controlled** test in Dubai Silicon Oasis, aimed at determining whether electric motorcycles could operate under typical delivery conditions compared to ICE motorcycles – factoring in performance, reliability, and operational efficiency.

Pilot testing conditions and parameters

8 EV MOTORCYCLES WERE COMPARED TO 2 ICE MOTORCYCLES

ESTIMATED ORDERS FULFILLED: ~1,600

BATTERY CONFIGURATION: 2 BATTERIES PER BIKE

WEIGHT PER BATTERY: 14 KG

RANGE PER BATTERY: 40 KM

TOTAL RANGE PER BIKE: APPROXIMATELY 80–100 KM[xiii]

CHARGING MODEL: MAKESHIFT BATTERY-SWAPPING SETUP; BATTERY TRUCK FIXED AT ONE LOCATION

SWAPPING FREQUENCY: 2–3 TIMES PER VEHICLE PER DAY

xiii Battery configuration: Two batteries per bike

RESULTS AND LEARNINGS

talabat held a structured, in-person focus group with all participating EV riders to capture **qualitative feedback across safety, speed and acceleration, comfort, reliability and rider confidence, manoeuvrability and weight** and general comparison to ICE motorcycles. Overall, riders preferred the EVs over ICE motorcycles primarily due to comfort and quietness.

RIDERS REPORTED:

- Increase in comfort
- Felt more relaxed at the end of their shifts compared to riding ICE bikes – due to lack of vibration, engine noise, and engine heat.
- Safety, manoeuvrability and acceleration were seen as comparable to ICE motorcycles.
- Top speed noted as adequate – a few riders preferred faster acceleration when overtaking on highways. This was not seen as limiting operations.

RIDER TESTIMONIALS:

"COMFORTABLE SEATING, NO NOISE"

"NO POLLUTION, FELT LIKE I WAS DRIVING A CAR"

"BATTERY SWAPS WERE QUICKER THAN I EXPECTED, SO I CAN STAY ON SCHEDULE"

The pilot confirmed that electric motorcycles can serve as a viable and effective alternative to ICE bikes for last-mile delivery in UAE conditions. EVs performed equally across all key performance metrics relevant to logistics operations. As a result of the consultations and pilot programme, talabat tripled its EV fleet by the end of the same year.

PILOT ASSUMPTIONS AND ONGOING CHALLENGES	PILOT CONCLUSIONS
Adapting to UAE climate conditions	EVs performed well under UAE climate conditions during pilot phase; further reviews of EV performance needed over time
Operating across mixed-use routes, including highways	EVs are well-suited for mixed urban and highway routes in Dubai
Limited battery-swapping infrastructure	Adequate and appropriately located battery-swapping stations can maintain rider uptime with minimal delay
Lack of familiarity with operation of EVs, among riders	Rider training was essential and improved operational confidence. Better comfort and lower vibration during delivery shifts reported
Understanding Total Cost of Ownership under local conditions	TCO at the time of the pilot estimated to be approximately 20% higher overall than ICE – driven by low local EV supply in the market; more competitive options would help reduce TCO
ICE motorcycles emit more harmful gases (carbon monoxide, hydrocarbons, nitrogen oxides etc) and tend to be loud	Noise pollution and air pollutants from two-wheelers significantly reduced
ICE motorcycles require regular maintenance	EV motorcycles offered significantly lower maintenance costs

FUTURE OUTLOOK

1

TOTAL COST OF OWNERSHIP:

TCO remains a barrier to scale due to limited local supply and a maturing ecosystem. talabat, via Road2.0, aims to share TCO data points to help identify key factors affecting the TCO.

2

INFRASTRUCTURE INTEROPERABILITY

With multiple EV brands emerging, there is a clear need for **standardization of charging plugs and battery specifications.** More work is needed with industry stakeholders to support the development of open-access infrastructure that can serve diverse fleets efficiently.

talabat remains committed to advancing solutions that benefit the entire UAE logistics ecosystem. Achieving scale will require continued work beyond pilot programmes and vehicle trials. This pilot demonstrates that electric motorcycles are not just a future solution, but an actionable and scalable alternative available today.

CASE STUDY 2

Unilever Arabia: Electrification of FMCG Logistics

Unilever Arabia, a key player in the fast-moving consumer goods (FMCG) sector, is contributing to Unilever's global commitment to achieve net zero across its value chain by 2039, with an interim target of reducing emissions by 42% by 2030.

Logistics – particularly road transportation – accounts for around 90% of Unilever's UAE emissions from transportation and distribution. To address this, Unilever launched **electric vehicle pilot initiatives** to advance decarbonization of its FMCG logistics network. These pilots deliver dual value: they are both emissions-reducing measures and operational testbeds to generate insights for scale.

KEY INITIATIVES AND OUTCOMES

In the UAE, Unilever **introduced a heavy-duty electric truck and a light-duty electric van** into its daily shuttle operations as part of a monthly lease model. Unilever joined UACA's Road2.0 initiative and led Working Group 1: EV Ecosystem Activation to demonstrate their commitment and leadership to transport decarbonization, sharing learnings with other Signatories.

HEAVY-DUTY ELECTRIC TRUCK:

Action:
In 2023, Unilever introduced the region's first 40-ton electric truck into service, positioning itself at the forefront of commercial EV deployment in the UAE

Result:
The truck currently operates between the Central Distribution Centre in Dubai South and Unilever's Dubai Personal Care Factory in Dubai Investment Park, completing five trips per day on a full charge and recharging overnight. The operation achieves an average daily distance between 250-300km, **saving about 70 tons of CO_2 annually.**

LIGHT-DUTY ELECTRIC VAN:

Action:
In May 2023, Unilever Arabia added their first electric delivery van (1-tonne battery-powered) in the UAE, deployed for deliveries for multi-drop secondary distribution, servicing Unilever's top key accounts, including the Carrefour store in Mall of the Emirates, Dubai.

Result:
The electric van can travel up to 300 km per charge and carries a 1,400 kg payload. It reduces CO_2 emissions by around 250 kg per day compared to a diesel van **(saving approximately 66 tons of CO_2 annually),** contributing to decarbonization efforts for both Unilever and its key account customers.

CHALLENGES AND MITIGATION STRATEGIES

The EV pilots provided meaningful learnings with ongoing strategies to overcome challenges:

CHALLENGES	MITIGATION STRATEGIES
Charging capacity: The use of an AC charger reflects current site infrastructure, while adoption of faster DC charging requires significant upgrades beyond the scope of the pilot.	Efforts are ongoing to evaluate fast-charging upgrades and requirements, and opportunities to scale.
Infrastructure critical for scale: Charging infrastructure, specifically for larger commercial vehicles, requires high-capacity fast charging to scale the electric fleet.	Exploring coordination with public and private partners to develop charging hubs in logistics hotspots; further exploration of funding or co-investment options for infrastructure development and commercial opportunities.
Leasing contract duration: Leasing companies seek shorter contracts for flexibility, while suppliers prefer longer terms to justify infrastructure costs. In practice, leasing the heavy-duty truck at a premium rate has highlighted cost-efficiency challenges when compared with diesel alternatives. This emphasises the importance of carefully assessing return on investment and the overall comparability of Total Cost of Ownership between EVs and conventional vehicles under current market conditions.	Exploring innovative leasing models and volume-based procurement to reduce the Total Cost of Ownership.
Extended charging times for heavy-duty truck: The truck requires 7-8 hours of overnight charging using an AC charger. This long charging window limits the vehicle's availability and results in the loss of one operational shift, affecting overall logistics productivity.	Looking into better scheduling and shift alignment to maximize vehicle utilization within existing charging parameters.

FUTURE OUTLOOK

Looking ahead, Unilever Arabia plans to scale its low-carbon logistics journey with the following priorities:

1

BROADER ELECTRIFICATION OF FLEET:

Building on lessons from the heavy-duty truck and light-duty van pilots, Unilever will seek to **expand its fleet electrification in stages,** prioritizing vehicle types and routes where EVs are already proving viable, while working with partners to address infrastructure, charging time, and cost-efficiency challenges before scaling heavier vehicles.

2

ECOSYSTEM EXPANSION VIA ROAD2.0:

Unilever, via Road2.0, will continue to **collaborate with peers, OEMs, charging providers, and decision makers** to strengthen EV infrastructure and market mechanisms across the UAE.

3

OPERATIONAL OPTIMIZATION:

Improved scheduling, predictive maintenance, and utilization analytics will be leveraged to maximize productivity of EV assets while minimizing downtime and TCO.

4

PUBLIC-PRIVATE PARTNERSHIPS:

Unilever is ready to explore **co-investment models** to scale infrastructure for sustainable logistics.

"Unilever has been a proud and active supporter of Road2.0 since its inception. We believe in its power to catalyse meaningful action and see it as a vital reflection of how collaboration can drive real impact. While the journey has begun with promising steps, scaling up is essential to truly deliver on our shared ambitions. That means bringing more viable commercial EVs into the UAE — and doing so together. Unilever remains committed to supporting this transition and contributing to the dialogue that will move this agenda forward in alignment with the UAE's sustainability goals"

Ahmed Kadous
Customer Operations Head, Unilever Pakistan, Turkey, GCC and Bangladesh

CASE STUDY 3

Chalhoub Group: Sustainable Logistics Transformation in Luxury Retail Sector

Chalhoub Group, a leading luxury retailer and distributor in the Middle East, has committed to achieving net-zero emissions by 2040, and has set itself a science-based target of reducing Scope 1 emissions by 50.4% by 2032. Tackling Scope 1 emissions from owned and controlled sources is a strategic priority for Chalhoub Group. Central to these efforts is the transformation of their logistics operations, starting with the decarbonization of their distribution fleet given that the **Group's distribution fleet contributes 23% of operational emissions (Scopes 1 and 2).**

In 2024, fleet electrification and operational efficiency delivered a 12% reduction in Scope 1 emissions compared to 2021.

A key catalyst in this transformation has been Chalhoub Group's engagement with the UAE Alliance for Climate Action. At COP28, Chalhoub signed **UACA's Road2.0 pledge**, signalling its commitment to reducing transport emissions and promoting electric mobility ecosystem coordination; not only benefitting from the shared learning and visibility but also contributing to the UAE's climate mitigation efforts.

KEY INITIATIVES AND OUTCOMES

In 2024, Chalhoub Group launched an electric vehicle fleet in the GCC retail sector to test the feasibility of integrating EVs into business operations. With the operation of six electric vehicles in the UAE, with each vehicle completing 60+ luxury deliveries every day, 11% of the Group's B2C deliveries are now powered by electricity. Two EVs are being used for administrative purposes given the assessed long-term savings and impact.

Four new EV charging stations have been installed at core UAE logistics sites with a **total of eight chargers** now supporting employees' and partners' use of EVs. Further, to boost cost-efficiency and flexibility, **all B2C and future B2B EVs are now being leased** to convert capital expenses into predictable operational expenditure. Chalhoub expects the leasing model to reduce operational burden and costs and allow for streamlined maintenance.

In addition to procuring and leasing EVs, the Chalhoub Group has also **prioritized fleet efficiency and optimization**. Even with delivery demand up 20–25%, delivery routes were reduced from 18 to 13, resulting in 5% reduction in **fuel consumption** across mixed fleets.

FLEET TRANSFORMATION

Action: → **6 EVs** operate in UAE, covering **60,000 km annually**. Each EV completes **60+ daily luxury deliveries**

Result: **11% of B2C deliveries** are now free of tailpipe emissions

TAILORING INFRASTRUCTURE

Action: → **4 new EV charging stations** installed at core UAE logistics sites

Result: **8 chargers in total** now support employee and partner EV use, encouraging uptake of electric vehicles.

PROCURING EVs TO BALANCE COST-EFFICIENCY AND FLEXIBILITY

Action: → conducted a feasibility study assessing most cost-effective option for the current EV transition

Result: All **B2C and future B2B EVs now follow a leasing model** to reduce operational burden and costs, including **streamlined maintenance**

2 EVs for administrative use were purchased following a feasibility study on long-term savings and impact

Operational barriers were addressed with tailored actions to help the transition to EVs:

CHALLENGE	ACTION	OUTCOME
Range anxiety, lack of public chargers	Optimizing the efficiency of route planning to fit within a single charge	Deliveries made on time without delays
Limited driver familiarity with EVs	Providing training sessions and orientation	Higher driver confidence, more comfortable using EVs and overall better user experience
Charging logistics	EVs returning to warehouse to warehouse to charge overnight after shifts	Smoother integration with existing operations
Coordination of charging schedules	Organizing charging times and improving driver carpooling in shared areas	Less overlap, better vehicle use and rotation

FUTURE OUTLOOK

Chalhoub Group is preparing to scale its electric mobility strategy with a plan to introduce **11 new EVs** (5 B2C, 5 B2B, 1 for administrative use). There will be continued installation of charging infrastructure in new facilities to match EV demand.

There is ongoing engagement with suppliers and policymakers to address gaps in **public EV infrastructure**, especially outside Dubai. **Chalhoub Group's ambition is to shift 40-50% of the organization's vehicles to electric in UAE and KSA by 2027.** Chalhoub Group's EV transition is a cornerstone of its **Impact 2025 sustainability strategy**, showcasing how luxury retail can lead in environmental performance while enhancing service excellence. Integrating sustainability into logistics, operations, and strategic partnerships will continue to support in building a future-ready business that is low-carbon, agile, and aligned with national net-zero objectives.

"Sustainability is steadily being embedded into every aspect of our operations at Chalhoub Group. By signing the Road 2.0 pledge with UACA at COP28, we have further accelerated our sustainability efforts and are proud to continue meeting the targets set by the pledge."

Florence Bulte
Chief Sustainability Officer, Chalhoub Group

4 ROAD2.0: LOOKING AHEAD

FOR COMMERCIAL EVs TO SCALE IN THE UAE, COORDINATED MULTI-STAKEHOLDER EFFORT IS NEEDED

In its first year, Road2.0 has laid the foundation for transformative change in commercial road transport, by demonstrating real corporate demand for EVs and identifying key enablers needed for scale. Based on the insights and learnings from commercial EV pilots and workshops, Road2.0 has been able to identify key levers required to scale commercial EVs in the UAE, i.e., growing the commercial EV market, developing a fit-for purpose scale infrastructure, and overcoming operational hurdles.

To ensure commercial EVs indeed become mainstream, greater alignment is needed across the ecosystem. Road2.0 will continue its focus on delivering value by **driving collaboration in support of federal and emirate-level strategies** and **enabling businesses to make long-term fleet transition decisions with confidence.** To achieve this, Road2.0 aims to focus on two key areas in the near future: Total Cost of Ownership (TCO) and Infrastructure.

TOTAL COST OF OWNERSHIP:

Road2.0 will prioritize its contribution to a better understanding of the **TCO gap between EVs and ICEs in the UAE,** for different corporate use cases. For this, UACA, with the support of BCG, has already developed a standardized TCO calculation model. In the coming year, UACA will seek inputs from Signatories and the wider ecosystem that reflect the operational reality on the ground, to provide a better understanding of remaining TCO gaps and what policy levers might help close the gaps. UACA will also seek continued, close engagement with the public sector on this topic.

INFRASTRUCTURE:

Given the key role of charging infrastructure, Road2.0 Signatories will continue to contribute towards **enhancing the understanding of commercial EV charging needs** across the UAE. Road2.0 will aim to map Signatories' outlook for charging infrastructure demand, and share these findings with decision-makers, charging infrastructure providers and investors to tap into demand-driven opportunities.

UACA is looking to expand its membership and establish additional partnerships, which may allow an even deeper and broader engagement on the key action levers identified.

5 CALL TO ACTION

Road2.0 is advancing the transition to zero-emission transport in the UAE by convening key mobility stakeholders and highlighting the climate leadership of committed Signatories. Grounded in robust, evidence-based analysis, the initiative is accelerating progress on road transport electrification – recognizing the **significant opportunity to scale commercial ZEVs in support of the UAE's Net Zero targets.**

Building on the ambition and efforts of UAE public and private transport stakeholders, Road2.0 calls on UAE non-state actors with commercial fleets and wider mobility players to join forces, accelerate decarbonization and work with both public and private partners to drive transformative change for climate and economy.

The Road2.0 initiative aims to:

EXPAND THE ROAD2.0 NETWORK AND STRENGTHEN COLLABORATION:

Unite Signatories, suppliers, and partners to accelerate EV deployment, amplify demand signals, and shape enabling policies. Facilitate direct dialogue between industry leaders and decision-makers to unlock key enablers and drive coordinated action.

ENABLE PRIVATE SECTOR STEWARDSHIP:

Elevate Signatories as visible champions of the EV transition– leading by example, signalling ambition, and driving momentum across markets and supply chains.

SUPPORT PUBLIC SECTOR DECARBONIZATION GOALS:

Advance national climate targets by cutting transport emissions and maximizing the impact of the UAE's growing clean energy mix– making every electric mile cleaner over time.

This **bottom-up and collaborative effort** can help scale the UAE's commercial EV transition from early pilots to full ecosystem adoption, unlocking new economic opportunities, reducing emissions, and securing the country's leadership in sustainable mobility.

Road2.0 represents a **transformative approach to accelerating cleantech adoption**– one that puts action first and mobilizes entire ecosystems for collective impact. With its genesis in the UAE, Road2.0 demonstrates a scalable model with the potential to be replicated across technologies, industries, and geographies worldwide.

To support this vision, feel free to get in touch with the UACA Team: uaca@enwwf.ae

APPENDICES

APPENDIX A: EVs IN UAE'S LONG-TERM LOW EMISSIONS DEVELOPMENT STRATEGY (LTS)

The UAE plans to phase down ICE vehicles through the ***management of new ICE vehicles post 2035/2040*** enacted after charging infrastructure is widely available and OEMs offer electric versions of most vehicle classes.[49]

- Potential incentives for EV adoption include ambitions to increasing annual registration fees for vehicles based on their CO_2 intensity, decreasing registration fees for BEVs, increasing tolls for ICE vehicles[50] and BEVs, providing CAPEX grants for BEVs and giving ***road privileges to BEVs*** such as priority lanes, dedicated parking in busy areas, and removed road circulation restrictions for low-carbon trucks.[51]
- Introduce a policy for ***Procurement of BEVs and FCEVs as Government-Owned Vehicles.*** The UAE expects to install 10,000 destination chargers by 2030, increasing to 30,000 destination chargers installed by 2050.[52]
- The LTS highlights the following areas to support further **development of charging infrastructure:**

Policy for private players, such as utility companies and national oil companies, to build charging infrastructure network, "potentially supported by incentives to install BEV charging stations in economically unattractive locations."

"Policy for real estate developers to accommodate BEV infrastructure in parking lots (at locations like shopping malls, office buildings, and residential buildings)."

Establishment of a national network of EV chargers throughout the UAE *guided by* the National Electric Vehicles Policy.[53]

The LTS, in this sense, follows a holistic approach to enable widespread adoption of BEVs and FCEVs in the UAE; it introduces several initiatives to create the infrastructure required as well as incentives to boost user adoption rates.

APPENDIX B: ROAD2.0 COMMITMENT DOCUMENT

PURPOSE AND SCOPE

Road2.0 focuses on accelerating the adoption of commercial EVs in the short term. In 2024, the initiative positioned its 17 Signatories as climate pioneers, driving transformational change and inspiring broader EV and decarbonization implementation across the UAE.

COMMITMENTS OF ROAD2.0 SIGNATORIES

Signatories signed the Road2.0 pledge which included the following commitments:

SHORT TERM

Introduce owned/leased EVs in operations and start a pilot with a minimum number of EVs based on fleet size, excluding heavy duty vehicles from the fleet count:

At least **1 EV** for fleets up to **50 vehicles**	At least **2 EVs** for fleets of **51-100 vehicles**	At least **3 EVs** for fleets of **101-200 vehicles**	At least **5 EVs** for fleets of **201 or more vehicles**

Put in place the required procurement standards and agreements with transport and logistics (T&L) service providers to meet 2030 target and ensure that at least 5%[xiv] of their contracted road transport volume[xv] allocated to T&L service providers in the UAE will be fulfilled by ZEV services.

MEDIUM TERM (BY 2030)

- Increase the share of owned/leased ZEVs to at least 30% of their UAE-based commercial fleet, excluding heavy-duty vehicles.
- Ensure that at least 30% of their contracted road transport volume allocated to T&L service providers in the UAE will be fulfilled by ZEV services by 2030, excluding heavy duty vehicles.

LONG TERM (BY 2040)

- Achieve 100% owned/leased ZEVs in their UAE-based commercial fleet.
- Ensure 100% contracted road transport volume allocated to T&L service providers in the UAE will be fulfilled by ZEV services by 2040.

The initial phase focuses on deploying light duty vehicles which include: Two-wheelers (electric bikes), four-wheeler passenger and commercial vehicles (sedans, light-duty vans (<6 tons)), and medium-duty vans and trucks (up to 15 tons), with plans to incorporate and scale heavy-duty trucks (over 15 tons) as supply and feasibility improve.

xiv Can be adjusted to 1% where fleet size exceeds 5k vehicles.

xv Measured in km or fleet size, depending on Signatory context. Can be applied to different types of vehicles.

LIST OF ABBREVIATIONS

Abbreviation	Definition
BEV	Battery Electric Vehicle
CPO	Charge Point Operators
DEWA	Dubai Electricity and Water Authority
DIP	Dubai Investment Park
DSM	Demand Side Management
EV	Electric Vehicle
FCEV	Fuel Cell Electric Vehicle
GDP	Gross Domestic Product
ICE	Internal Combustion Engine
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
ITC	Integrated Transport Centre
LTS	Long-Term Strategy
MENA	Middle East and North Africa
NDC	Nationally Determined Contribution
OEM	Original Equipment Manufacturer
PHEV	Plug-In Hybrid Vehicle
RTA	Dubai Roads and Transport Authority
TCO	Total Cost of Ownership
UACA	UAE Alliance for Climate Action
ZEV	Zero Emission Vehicle
3PLs	Third Party Logistics

ENDNOTES

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