

## **Creating the Right Environment for Electric Vehicles**

“If you build it, they will come.” That would definitely appear to be the rationale for Dubai’s development of its electric vehicle infrastructure, with the government keen to achieve its target of 10% of all vehicles on Dubai roads being electric or hybrid by 2030. Last year, the Dubai Electricity and Water Authority (DEWA) announced the successful completion of the second phase of its Electronic Vehicle (EV) Green Charger initiative, bringing the total number of stations it has installed to charge electric vehicles to 200.

DEWA began the EV charging infrastructure initiative in 2015 to make it easier for people to switch from ICE (Internal Combustion Engine) vehicles to electric, in turn helping Dubai achieve its carbon reduction target of 16% by 2021. Charging stations have been placed in all sorts of locations, such as government offices, airports, petrol stations, malls and residential complexes, and are free to use (at least until the end of this year).

Dubai can now boast of having a charging station-to-EV ratio that compares favorably with anywhere in the world but the reason for that is simple: there still aren’t that many EVs on the road. A report last year estimated there were just 4,000 hybrid and electric vehicles on the road in Dubai, with less than 1,000 being fully electric.

Of course, Dubai is hardly alone in being slow to adopt EVs – globally, electric cars accounted for just 2.1% of passenger car sales last year. Still, that figure is up from 1.3% in 2017, and less than 0.9% the year before that. Norway – which requires all new cars to be zero-emission by 2025 – made up almost half of all EV vehicle sales last year, and this March, EV sales actually outstripped ICE vehicles.

Norway has achieved its leadership in the EV market by offering a range of incentives and subsidies, including waiving sales tax on EV purchases, exempting EV users from road tolls, and providing free parking and free charging. In short, it’s simply cheaper to own an EV than an ICE vehicle in Norway.

For drivers in Dubai, used to comparatively cheap petrol costs, incentives to switch are less clear-cut. While the Roads and Transport Authority (RTA) offers benefits such as free assigned parking, and exemption from vehicle registration and renewal fees, EV purchases still tend to be seen as a luxury. The Tesla Model 3 – touted as an “affordable” option and the best-selling EV ever – still comes in at a cost above many annual salaries.

Another issue is that while providing wider access to charging points is definitely important to increasing EV uptake, charging a plug-in car takes a lot longer than filling up a petrol tank – 30-45 minutes or even longer. Many motorists prefer to charge their vehicles overnight at their homes which is not always a practical solution for high-rise Dubai residents.

Creating the right ‘environment’ to empower EV dominance is complex – and requires

incentivizing users, to the point where the overall lifetime cost of an EV is clearly lower than that of an ICE vehicle. The biggest attraction of electric vehicles is that they offer a greener alternative to the combustion engine, and do not emit combustion gases such as carbon dioxide (CO<sub>2</sub>), carbon monoxide, sulfur dioxide, and nitrogen oxides.

While critics have highlighted that actually manufacturing EVs can create more emissions than making conventional cars does, well-to-wheel emissions have been found to be considerably lower for electric-powered cars than their gas-guzzling counterparts. EV's are clearly the greener option when you consider that their batteries can be recycled or repurposed for non-automotive use once an EV has reached the end of its useful life.

Getting the right infrastructure in place for EVs to displace their combustion counterparts is going to take time and effort, but if it is built right, the users will come - eventually.

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