



Ewan
McGregor
Charley
Boorman

Find your
outlet.

charging network and as Long Way Up illustrates, is a tipping-point which allows EVs to navigate the entire continent.

Mexico leads the region with 243 public charging stations (plus a near thousand Tesla's Supercharges installed in buyers' homes, shopping centres and hotels) followed by 136 in Costa Rica, 117 in Brazil (including two fast-charger corridors between Rio de Janeiro and Campinas and Florianópolis and Iguazu Falls), 58 in Chile, 47 in Colombia and 40 in Uruguay with a further 94 in the rest of the region (Statista Sept 2020).

By comparison there are 53,472 public charging stations in the USA and Canada with an average of 2.75 outlets each as well as Tesla's 1,971 charging stations and 17,467 private Supercharger units.

The most important recent developments in the Latin American

LONG WAY UP

Epic motorcycle journeys into vast, remote lands have long been enduringly popular subjects for film and television.

The most prominent example of the genre must be the 2004 feature film 'The Motorcycle Diaries' which depicted the 20th Century's most iconic revolutionary, Ernesto 'Che' Guevara, as he rode a 1939 Norton 500cc into the furthest reaches of South America; a revelatory journey which ultimately inspired Che's Marxism and rebellious fervour.

On television a standout example is 'Billy Connolly's World Tour of New Zealand' which documented the comedian's 8,500 km road-trip on a humongous, custom-made Yamaha Warrior trike from Stewart Island to Ninety Mile Beach in an acclaimed series which gave insights into New Zealand culture and especially its Māori heritage.

In the latest television incarnation of the genre; Apple TV's series *Long Way Up* features Scottish actor and Hollywood A-lister Ewan McGregor

and his friend Charley Bormann, on a three month motorcycle sojourn from Tierra del Fuego's Ushuaia, the southernmost city in Latin America, to Los Angeles.

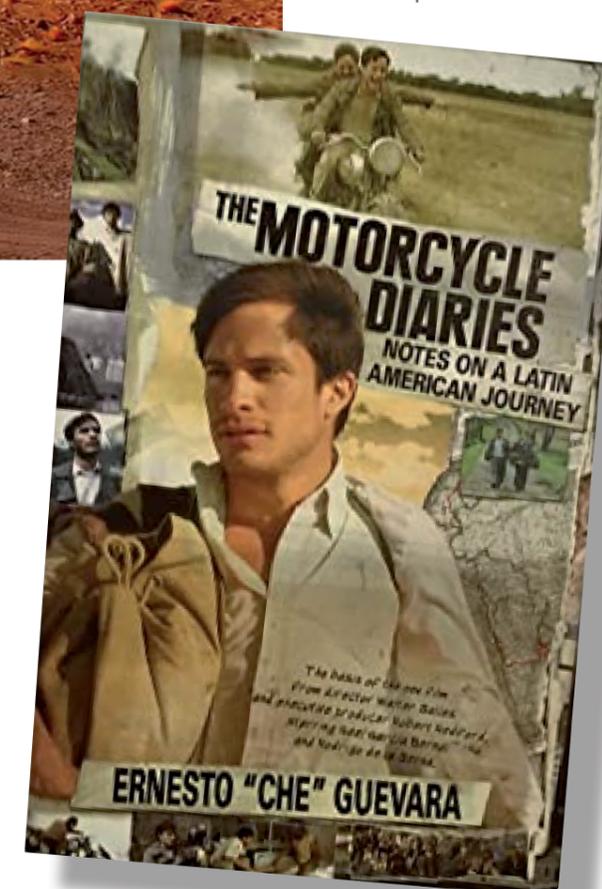
No strangers to epic motorcycle trips McGregor and Bormann have made two other television series featuring odysseys from Scotland to Cape Town (*Long Way Down*) and London to New York via central Europe, Ukraine, Kazakhstan, Mongolia, Russia and Canada (*Long Way Round*).

What makes McGregor's Latin American series refreshingly unique and even prescient is that he and Boorman used electric 'LiveWire' Harley-Davidson motorcycles (and

their film crew, Rivian electric pick-up trucks) to make a journey that would have been impossible even a year ago.

Long Way Up's electric vehicles (EVs) were able to rely on Italian energy multinational Enel's newly-inaugurated 'Pan-American Charging Corridor' which is a 13,000 kilometre network of 220 Level 3 fast-charging stations connecting 11 nations (Argentina, Chile, Bolivia, Peru, Colombia, Panama, Costa Rica, Nicaragua, Honduras, Guatemala and Mexico).

The Enel Charging Corridor is an important expansion of Latin America's still thinly spread EV





EV market have been the push by governments to utilise EVs in public transport to combat pollution as well as their commitment to build comprehensive public charging networks.

Chile now has more electric buses than any nation besides China, after 100 electric buses recently joined Santiago's mass transit system in the first-stage rollout of Chile's National Electrification Strategy. The strategy is designed to reduce smog through electrification and aims to electrify the country's entire public transit infrastructure and 40 per cent of private vehicles by 2050.

Mexico City plans to add 500 electric buses to its fleet in the near future as well as expand its electric scooter and bike program under a P4G 'Zero Emission Bus Rapid-deployment Acceleration' (ZEBRA) public-private partnership.

P4G (Partnering for Green Growth and the Global Goals 2030) seeks to deliver on the UN's Sustainable Development Goals and the Paris Climate Agreement by bringing together business, government, and civil society organisations in public-private partnerships in key areas among which energy and public transportation are front and centre.

ZEBRA partnerships are brokered by P4G between EV manufacturers and city governments to arrange the financing, policies and pilot projects needed to support electric bus deployment, as is already the case in São Paulo, Brazil and Medellín, Colombia as well as in Mexico City.

While there is growing momentum in Latin America's public EV adoption this is contrasted by the slow growth of private EV ownership, which is inhibited by high prices.



Geotab, a leading global automotive information and communication technology provider, cites Brazil as an example of price barriers where the average annual income is around Real 35,000, well below the Real 179,000 price of a Nissan Leaf (the cheapest electric car in the market) and points to similar EV price/income discrepancies throughout Latin America.

Measures to address price barriers are being taken in Argentina, Brazil and Colombia who are lowering or eliminating import taxes on EVs while Ecuador, Uruguay and Costa Rica have eliminated them entirely and Chile and Mexico have reduced tariffs on electricity used for EV charging.

The paucity of EV charging stations in the region has been a range-anxiety drag on private uptake, but sales of private EVs are expected to

rise commensurately as charging infrastructure expands.

Another issue which needs to be resolved (Enel's Charging Corridor excepted) is that the predominant semi-rapid Level 2 technology in Latin America is outmoded having been superseded by the latest generation Level 3 fast-charging stations common in the U.S. and Europe, which take only 40 minutes for an 80 per cent charge and an hour for 100 per cent compared to several hours for Level 2 charging.

Speaking to Jimmy Fallon recently on The Tonight Show, McGregor spoke of the challenges of charging their Harleys during *Long Way Up*, which he described as "tricky" even allowing for Enel's Charging Corridor.

While McGregor and Boorman could sometimes, in the absence of an Enel charging station, charge their Harleys at hotels and restaurants during lunch stops, there were times they had to rely on the generosity of locals, knocking on doors and asking to use an outlet.

"There's no real infrastructure for charging in the wilds of Patagonia, for instance," McGregor said and he went on to describe camping in people's backyards and plugging in overnight, occasionally blowing their hosts' fuses while charging the Harleys' greedy 15.5kWh Lithium-ion batteries, which can take over 12 hours to fully energize using 120 V household current.

Long Way Up will no doubt provide fascinating and educative entertainment as McGregor and his mate wend their way through Latin America's geographic marvels and commune with its diverse cultures, but importantly the series also offers a tantalising glimpse into the future of transportation.

Besides its entertainment value, the series is a harbinger of an inexorable and inevitable shift to clean, zero carbon transportation in Latin America albeit it will indeed be a 'long way up' to universal electric transportation as the region is facing profound pandemic-related economic challenges which will constrain EV market development well into the medium term.

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