The Future of Mobility: Electrified & Shared

Innovation for Cool Earth Forum
6th Annual Meeting

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Launch timelines of digital-hailing services

Source: BloombergNEF from company reports. Note: Launch timelines is in reference to the launch of digital-hailing services. For example, JapanTaxi has been in operation since 1977 but launched its taxi-hailing app in 2016. Meituan Dianping was founded in 2010, but its digital-hailing service only began in 2018. Go-Jek was founded in 2010 but only launched their app in 2015.
Global digital-Hailing stats as of 1H 2019

Number of active users of digital hailing services

Number of drivers in digital hailing services

Source: BloombergNEF
Digital-hailing challenges: increased congestion

Transport modes that would have been utilized if ride-hailing were unavailable

- Carpool: 1-18%
- Fewer trips: 5-22%
- Personal car: 6-21%
- Walk or bike: 10-24%
- Taxi: 1-39%
- Public transit: 15-42%

Ride-hailing and transportation mode substitution

- Massachusetts Metropolitan Area Planning Council, survey
- University of California Transportation Center, survey
- UC Davis Institute of Transportation Studies, survey

Source: BloombergNEF based on referenced studies
Electrification of digital-hailing

**DiDi**
- 600,000 EVs currently on network
- Targeting one million EVs on its network by 2020 and 10 million EVs by 2028.

**Uber**
- Completed five million “electric rides” between July 2018 and July 2019.
- Targeting EV-only fleets in London by 2025.

**OLA**
- >200 electric vehicles on Ola’s platform in Nagpur.
- 10,000 e-rickshaws by 2020, one million battery powered vehicles by 2021.

**Gett**
- Carbon neutral taxi rides in the U.K. for 20p premium.
- Electric black cab drivers are charged no fees by Gett for their first 6 months.

**lyft, cabify & Bolt** plan to go carbon neutral using EVs as well as by buying carbon offsets.

*Source: BloombergNEF, company websites, news reports.*
There are now more than 6 million passenger electric vehicles on the road

Source: BloombergNEF. Note: includes battery electric vehicles and plugin hybrid electric vehicles.
Lithium-ion battery prices keep falling

Battery pack price (real 2018 $/kWh)

Source: BloombergNEF
And cheaper batteries will ultimately make EVs affordable

Volume-weighted battery pack prices have fallen by 85% between 2010 to 2018

Source: BloombergNEF. Note: Prices are real 2018 dollars
### EVs reach upfront price parity starting in the mid 2020s

#### Timeline for purchase price parity of EVs with ICE vehicles

<table>
<thead>
<tr>
<th>Category</th>
<th>2022-2023</th>
<th>2024-2025</th>
<th>2026-2030</th>
<th>After 2030</th>
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<tbody>
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<td>Small</td>
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<td>SUV</td>
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Source: BloombergNEF, Encyclopedia Britannica for flags
Note: We assumed the same real world driving range for EVs globally. Small = 200 miles, Medium = 250 miles, Large, SUVs = 300 miles.
Passenger EVs hit 57% of new vehicle sales in 2040

Global long-term passenger vehicle sales by drivetrain

Source: BloombergNEF
Shared mobility electrifies faster than personal cars due to fuel cost savings

Source: BloombergNEF. Shared includes taxis, ride-hailing and fleet-based car-sharing. Private refers to all other passenger vehicles.
Electrified and shared mobility is not just about cars

Autonomous shuttles

Shared electric scooters

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