



INTERNATIONAL
ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



Evaluating the top electric vehicle markets in the world

Dale Hall

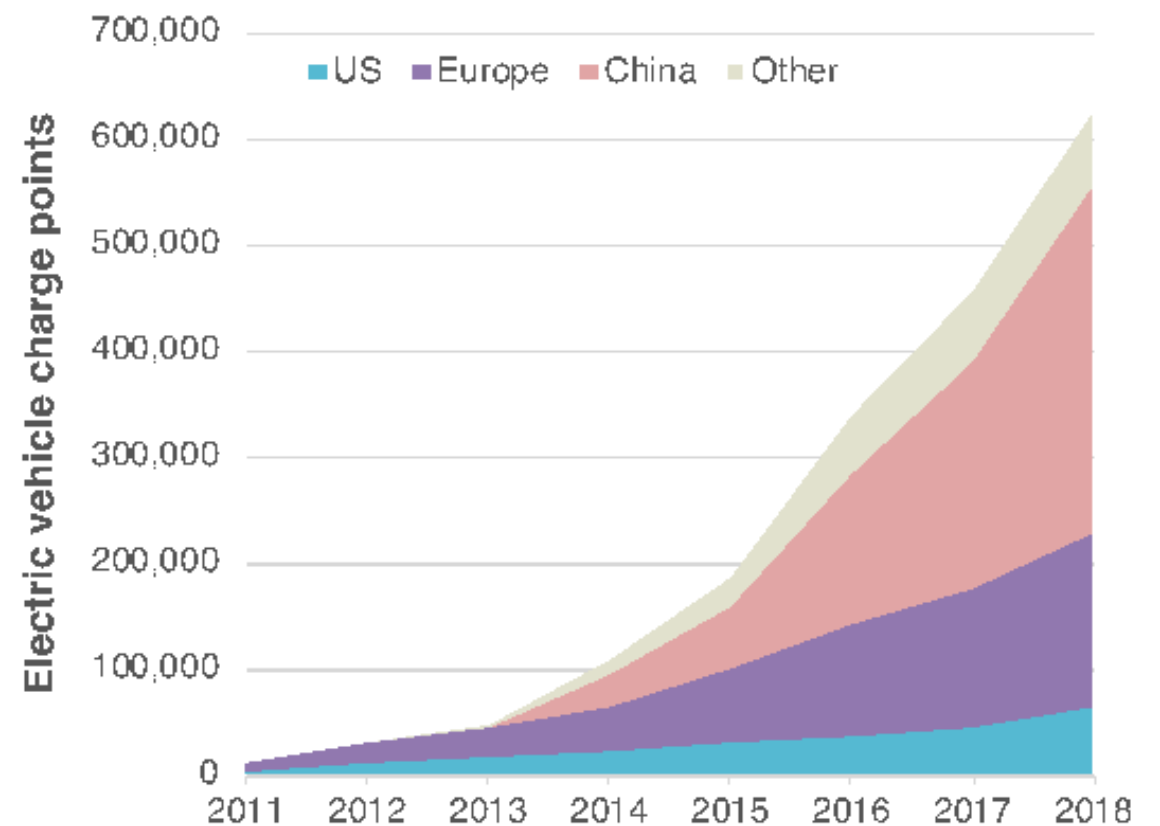
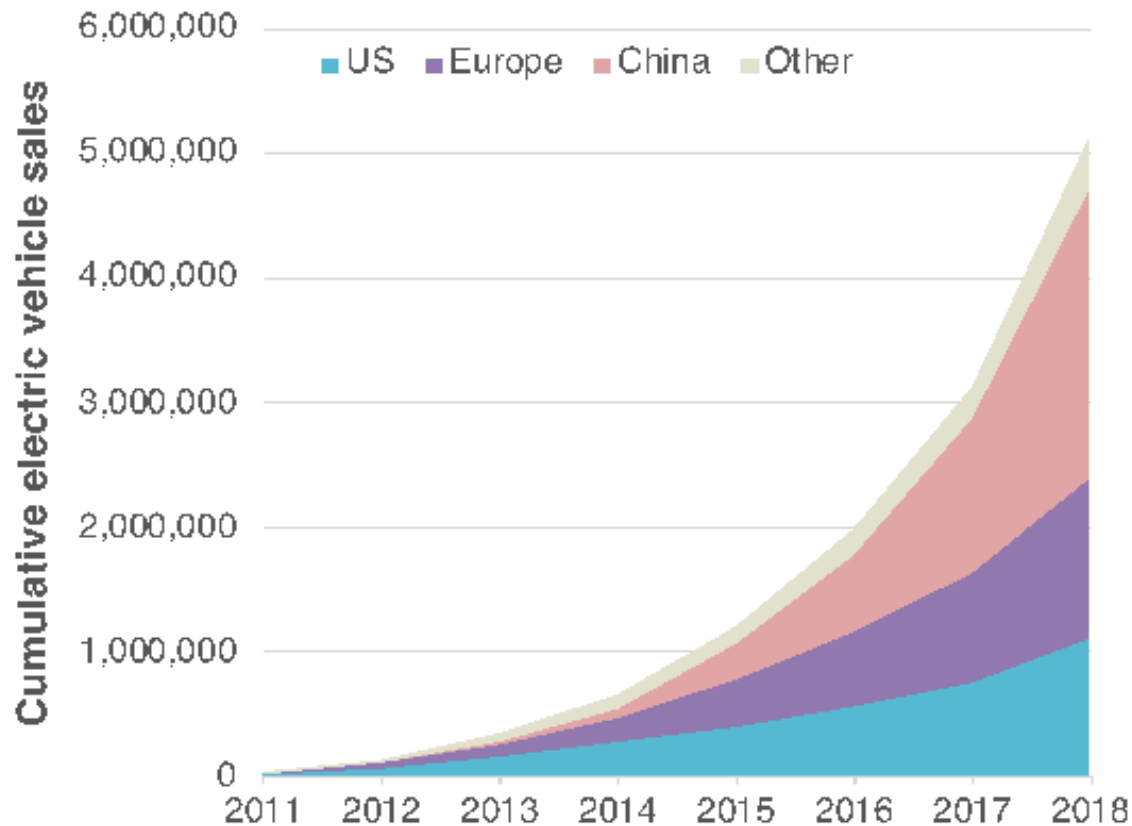
Researcher, International Council on Clean Transportation

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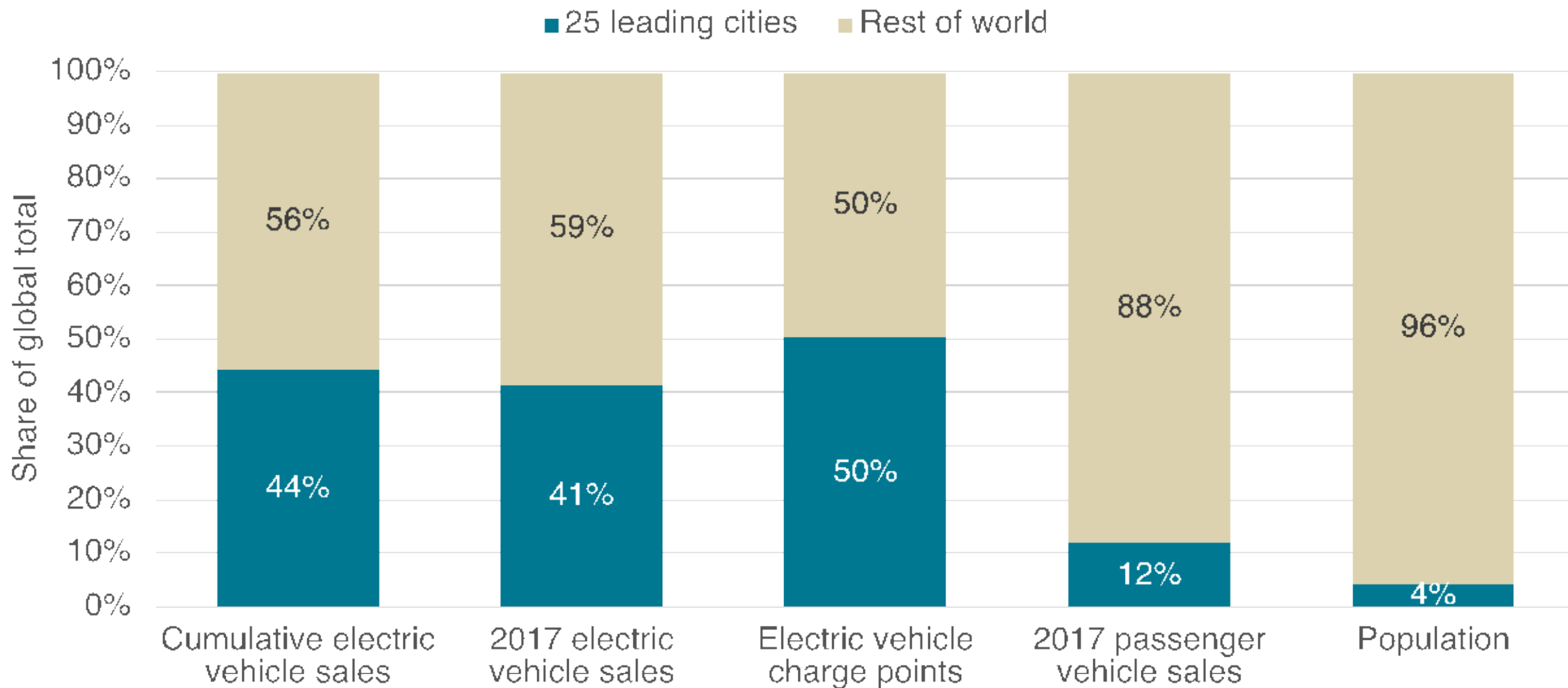
May 22, 2019

Electric vehicles are growing worldwide, but are concentrated in 3 markets

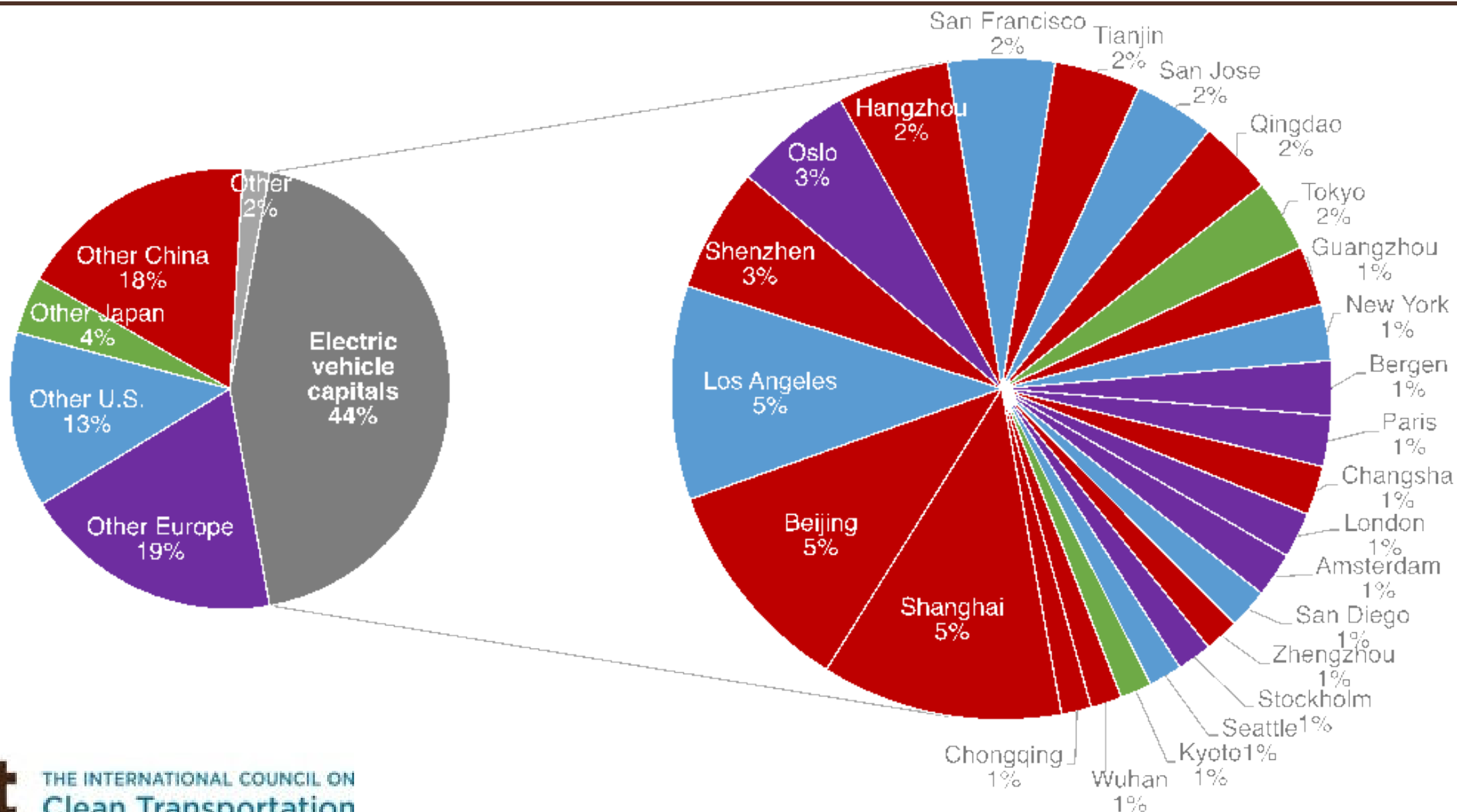
- At end of 2018: About 5 million electric cars and 600,000 public charge points



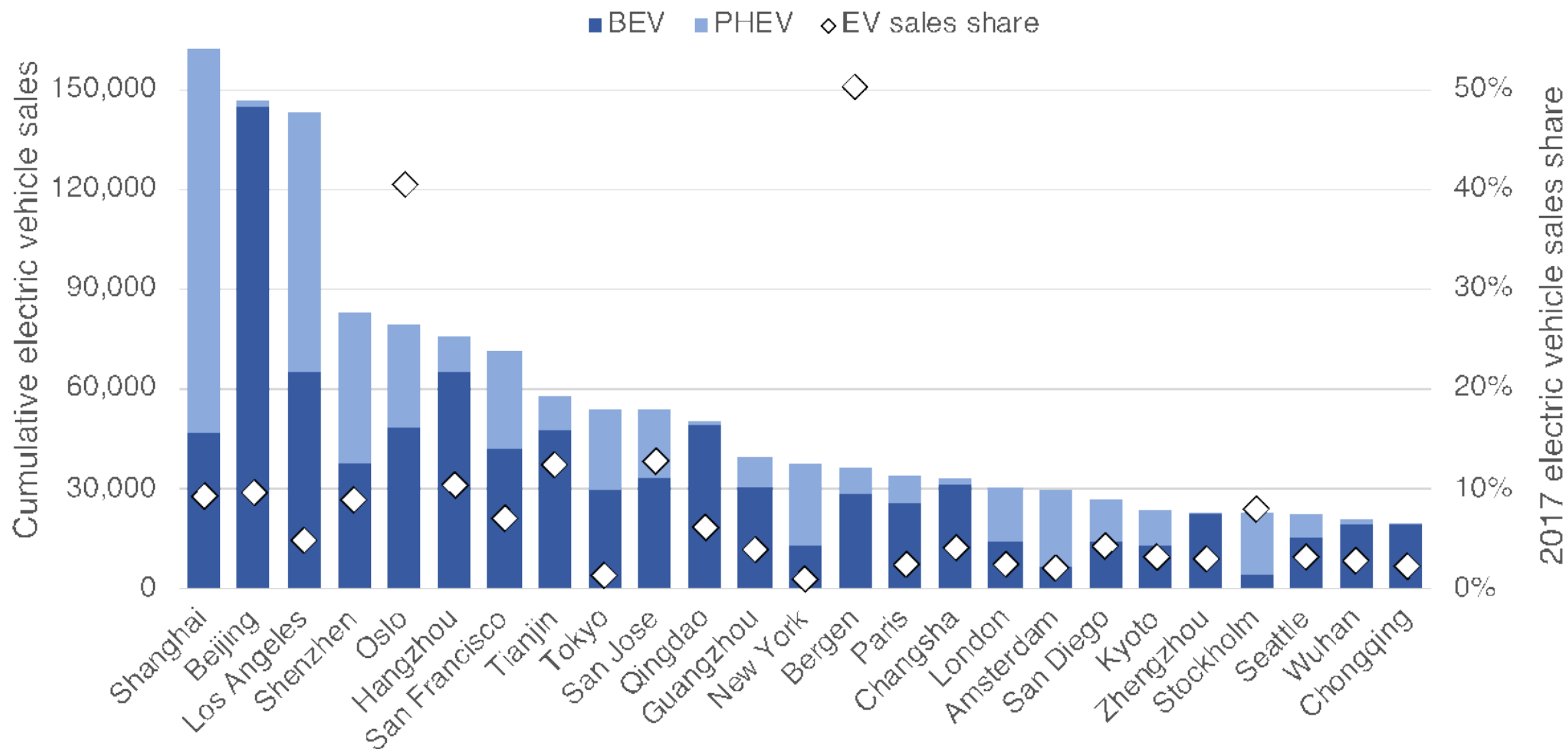
25 metropolitan areas contain 44% of the world's electric vehicles



Electric vehicle “capitals” span three continents, concentrated in China



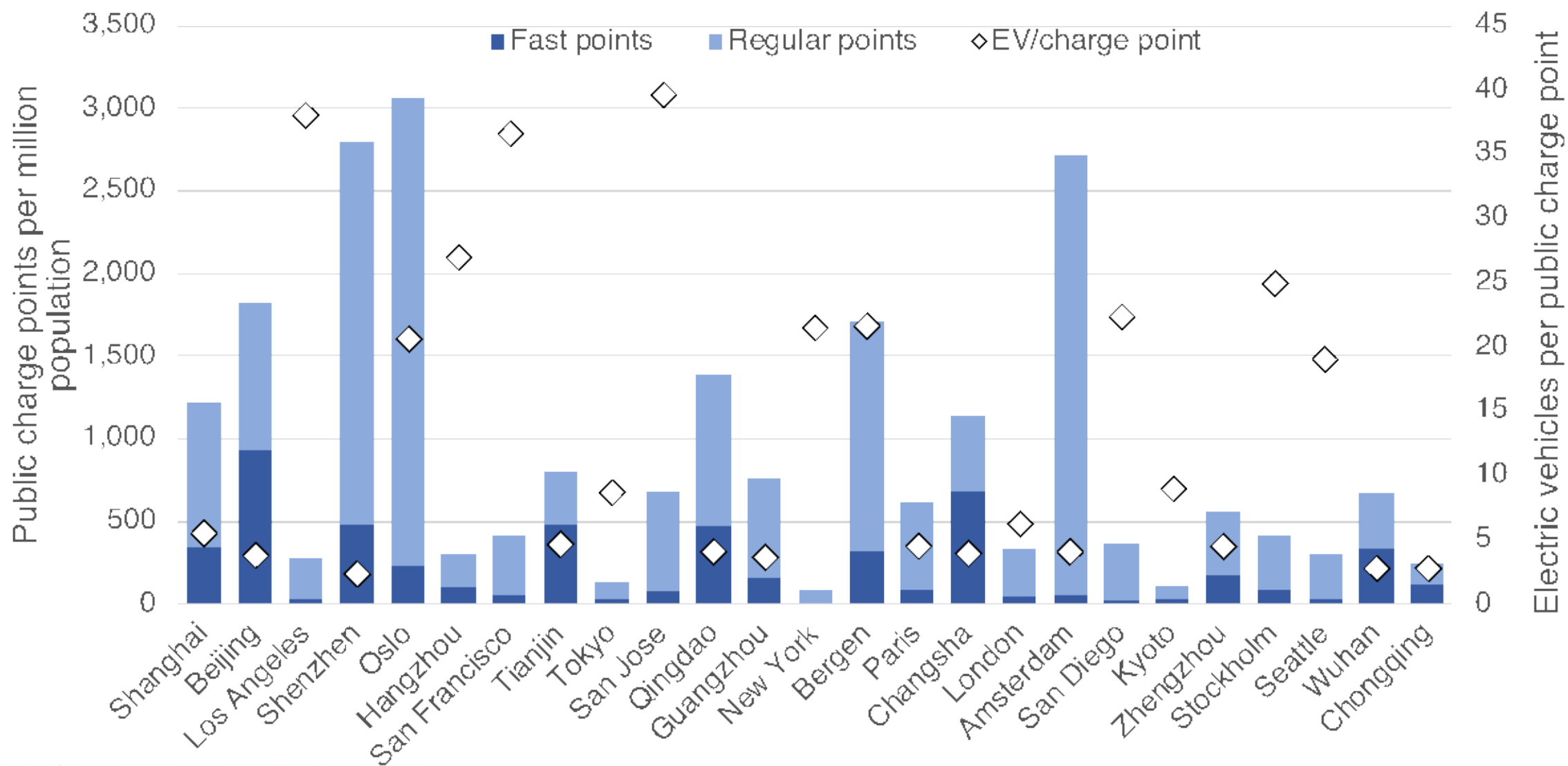
Cities lead in electric vehicle volume, sales share



Many policies to accelerate uptake

PROGRAM	LEADING CITY	OTHER EXAMPLES
Purchase incentives	Zhengzhou	Beijing, Shanghai, Shenzhen, Guangzhou, Hangzhou, Tokyo
Preferential registration	Shanghai	Beijing, Tianjin, Shenzhen, Guangzhou, Hangzhou
Parking benefits	San Jose	Amsterdam, Bergen, Paris, Shenzhen, Tianjin, Oslo
Toll exemptions	Oslo	Bergen, New York, San Francisco, Chongqing, Wuhan
Lane access	Bergen	Los Angeles, Oslo, San Francisco, San Jose, San Diego
Consumer awareness	Shanghai	Amsterdam, Beijing, Los Angeles
Planned zero-emission zones	London	Los Angeles, Oslo, Paris, Seattle

Cities show diverging charging infrastructure situations



Cities are supporting infrastructure growth in many ways

PROGRAM	LEADING CITY	OTHER EXAMPLES
City charging strategy	Beijing	New York, Oslo, Shenzhen, Shanghai, Tianjin, Guangzhou, Zhengzhou, Qingdao, Chongqing, Wuhan, Hangzhou, Changsha, London, Seattle, Tokyo
On-demand public charging	Amsterdam	
Charging infrastructure incentives	Tokyo	Oslo, Paris, Beijing, Shanghai, Shenzhen, Guangzhou, Tianjin, Hangzhou, Zhengzhou, Qingdao, Wuhan, Chongqing, Changsha
Building and parking requirements	Beijing	Qingdao, London, Shanghai, Tianjin, Chongqing, Guangzhou, Los Angeles, San Francisco, San Jose, Shenzhen, Zhengzhou, Oslo
Electric utility partnerships	Guangzhou	Amsterdam, Los Angeles, New York, Beijing, Shanghai, Shenzhen, Tianjin, Hangzhou

Electric vehicles are integrated into new mobility strategies

PROGRAM	LEADING CITY	OTHER EXAMPLES
Taxis	Shenzhen	Amsterdam, London, Oslo, Beijing, Tianjin, Guangzhou
Electric ride-hailing	London	San Francisco, San Diego, Seattle, Shenzhen
Electric autonomous testing	San Francisco	Beijing, Shanghai, Chongqing, Tokyo
City fleet	Stockholm	New York, Seattle, Beijing, Shenzhen, Zhengzhou, Shanghai, Tianjin, Oslo
Buses	Shenzhen	Guangzhou, Tianjin, Changsha, Zhengzhou, Amsterdam
Car-sharing fleet	Shanghai	Chongqing, Shenzhen, Beijing, Hangzhou, Guangzhou, Zhengzhou, Oslo, Amsterdam, Los Angeles

Leading cities provide a blueprint for others

- Charging infrastructure patterns provide targets within markets
- Successful policies can be replicated (with fewer mistakes):
 - Amsterdam's charging program → Rotterdam, Utrecht
 - Beijing and Shanghai's license privileges → Tier 1 & 2 cities across China
 - San Francisco's building codes → State of California, dozens of other U.S. cities
- Leadership from cities enables ambition at state and national levels

Thank you for attending.

Full report available at:

www.theicct.org/publications/ev-capitals-of-the-world-2018

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International Council on Clean Transportation: <http://theicct.org>

International ZEV Alliance: <http://zevalliance.org>

Acknowledgements

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