



Global EV Outlook 2018

Leonardo Paoli - International Energy Agency

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Electric Vehicles Initiative (EVI)

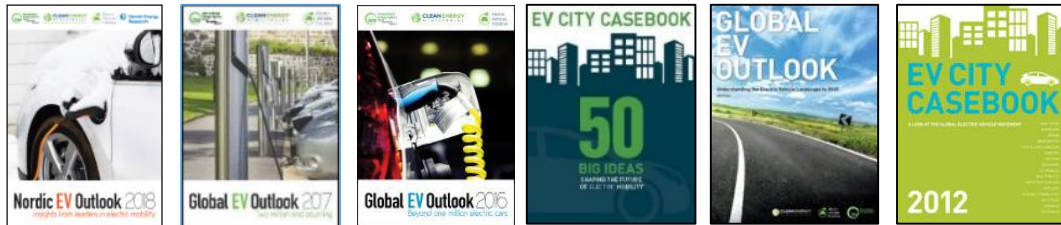


Multi-government policy forum dedicated to conducting collaborative activities that support the design and implementation of domestic electric vehicle (EV) deployment policies and programs

In 2010, EVI was one of several initiatives launched under the CEM

Currently co-chaired by Canada and China, and coordinated by the IEA

Released several analytical publications, demonstrating leadership to strengthen the understanding of the opportunities offered by electric mobility to meet multiple policy goals



Instrumental to mobilize action and commitments ([Paris Declaration on Electro-Mobility and Climate Change](#) at COP21, [Government Fleet Declaration](#) at COP22)

Launched the [EV30@30 Campaign](#) in June 2017

Now launching the **Pilot City Programme**

Also working with the **Global Environment Facility** on the preparation of a project for the support of EV policy-making in developing regions

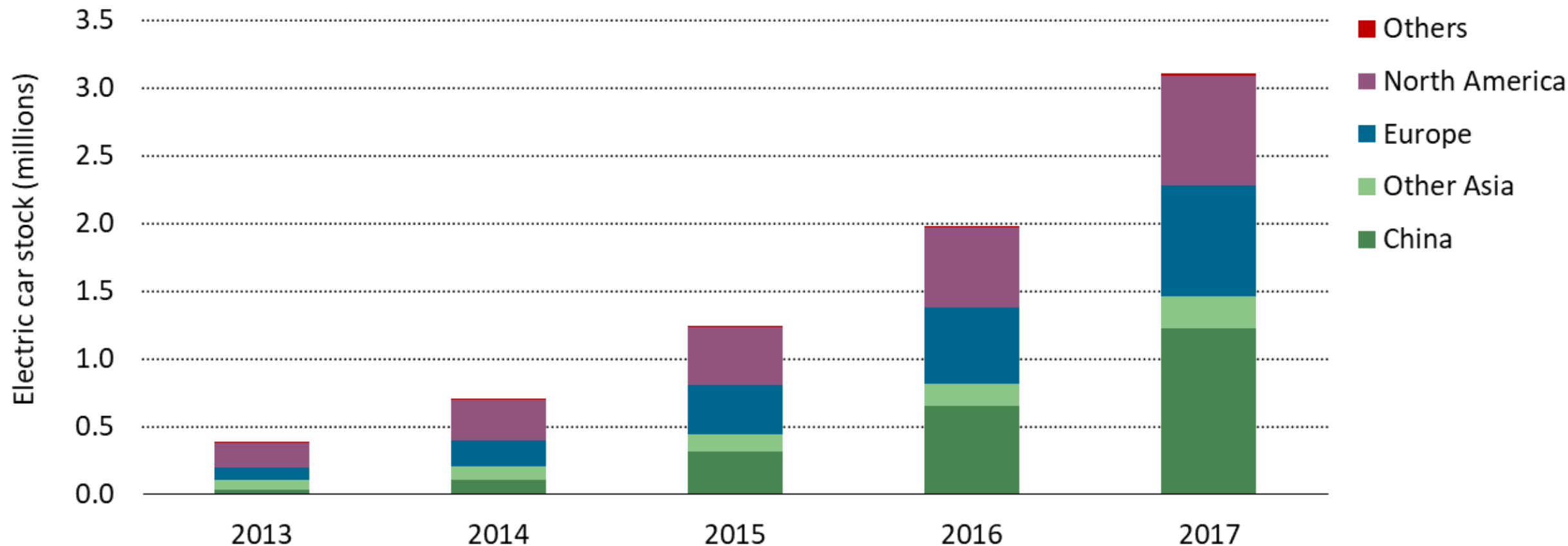
Members



in 2018

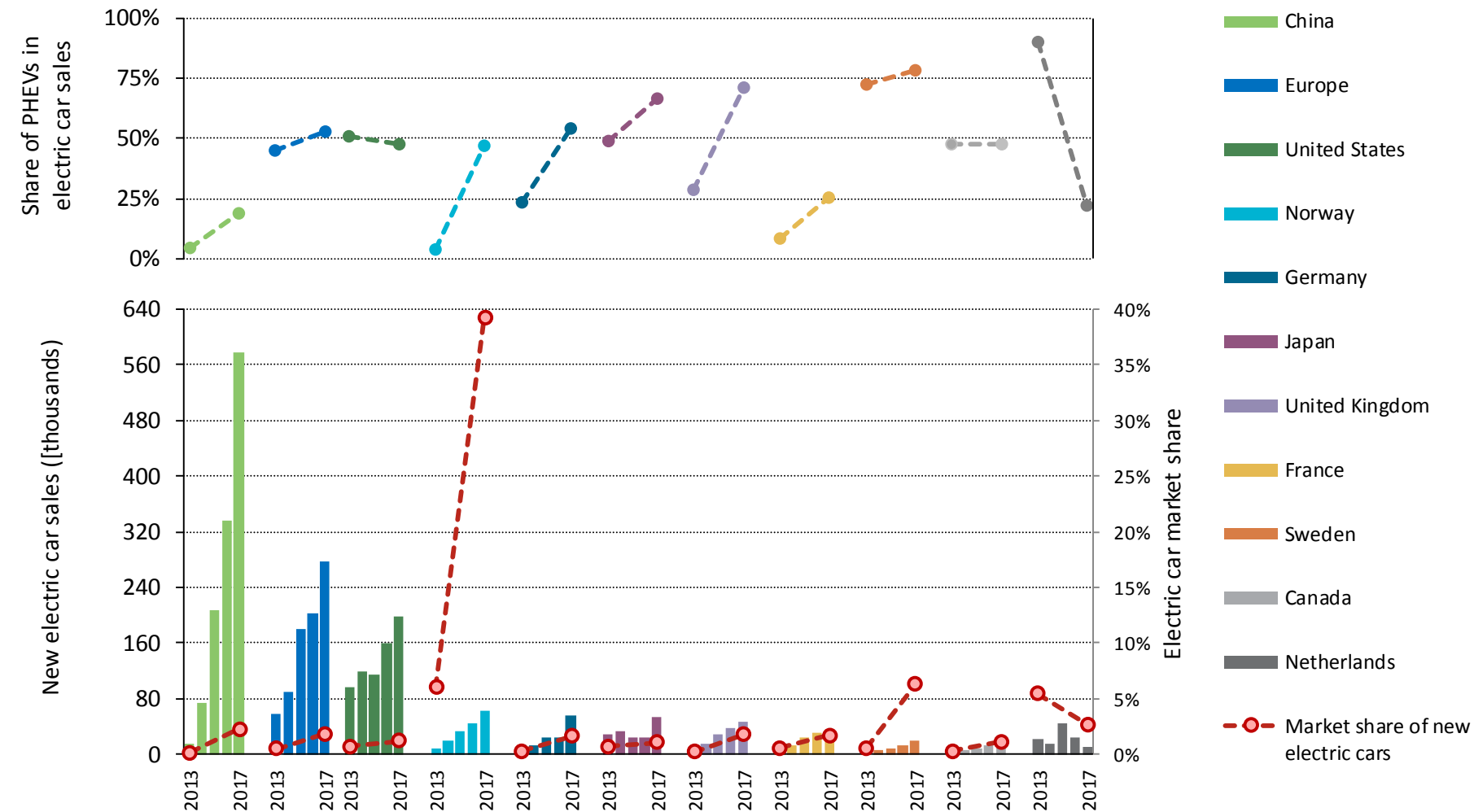


The number of electric cars on the road continues to grow



The electric car stock exceeded 3 million in 2017
However, electric cars still only represent 0.3% of the global car fleet

Electric car sales



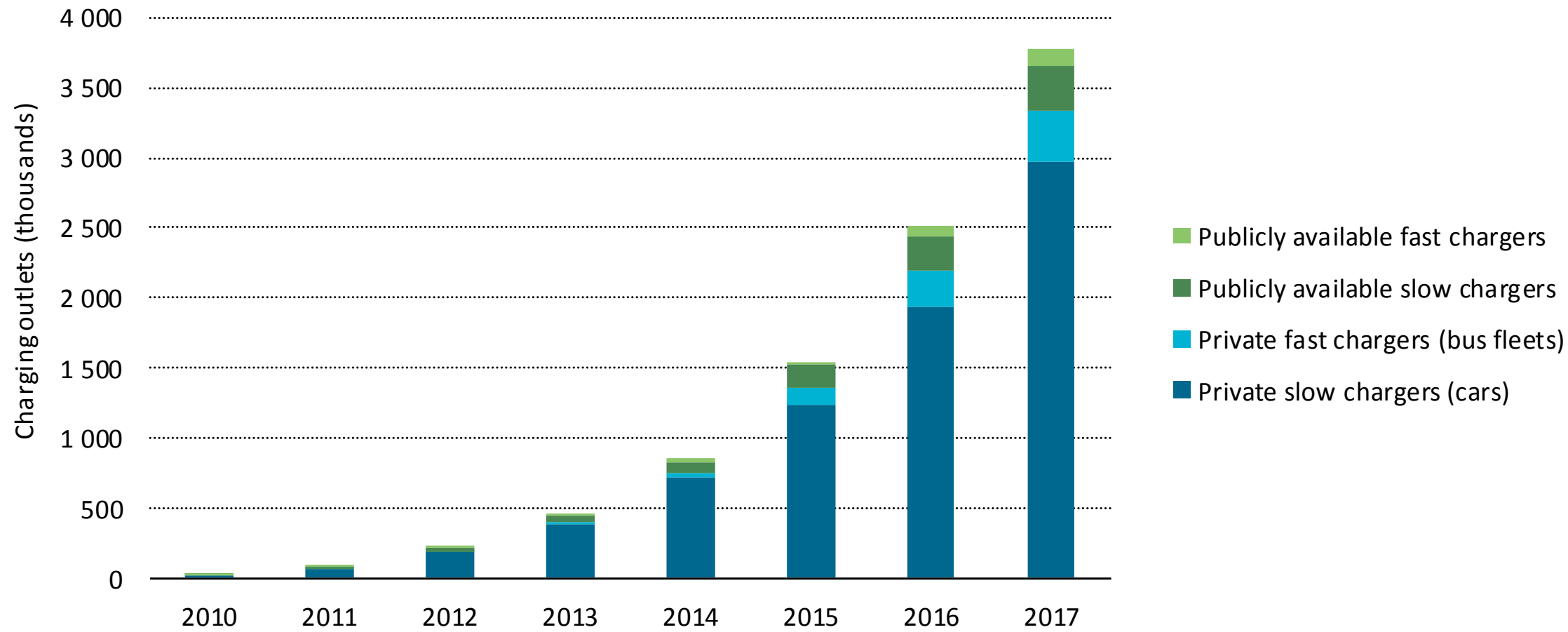
China is the largest electric car market globally, followed by Europe and the US.
Norway is the global leader in terms of market share

Electric mobility is not limited to cars



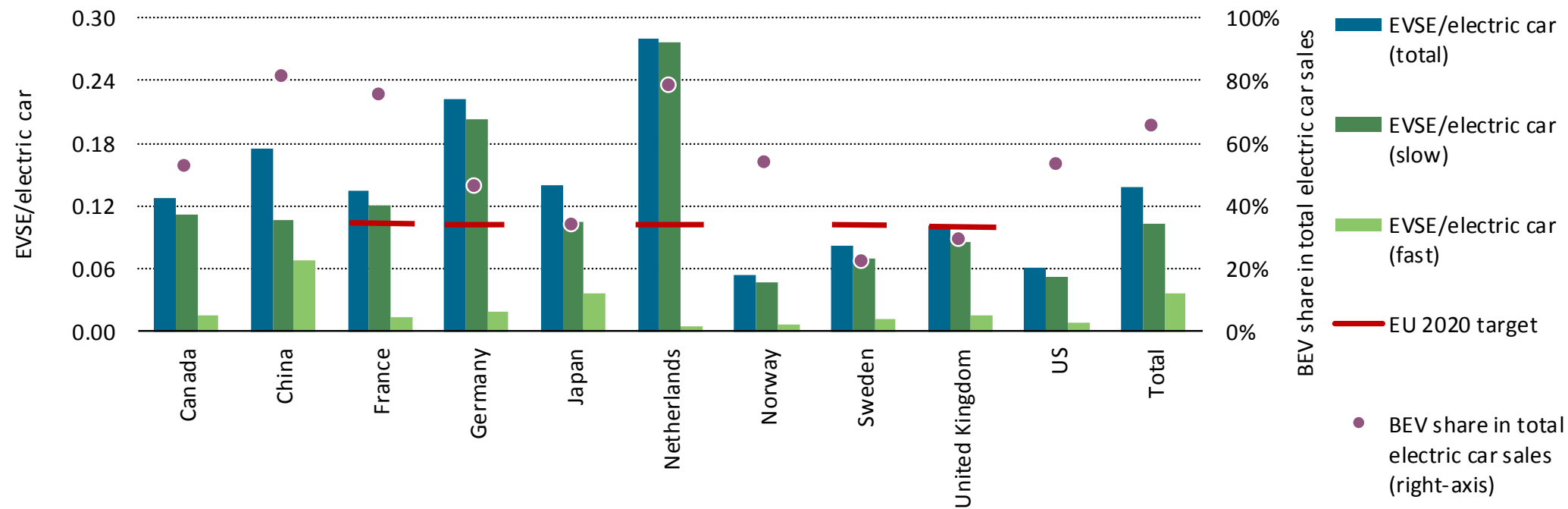
Electric 2-wheelers: major phenomenon in China, where there are 250 million in the rolling stock and 30 million sales per year

**Buses: 360 000 in China. Close to 90 000 sales in 2017 . Stimulated by policy support.
Growing interest in C40 cities (better economics: not only pollution and climate-driven phenomenon)**



Global EVSE stocks increase with EV deployment.
Publicly accessible chargers represent about 10% of the total number chargers

Ratio of publicly available chargers per electric car



Ratios of publicly accessible EVSE outlets can differ by a factor of 5 among countries. Most countries are ahead of their targets, but the case of Norway indicates that lower ratios may also be viable when transitioning towards mass market adoption.

2017: key policy updates



Australia



Brazil



Brazil



Brazil



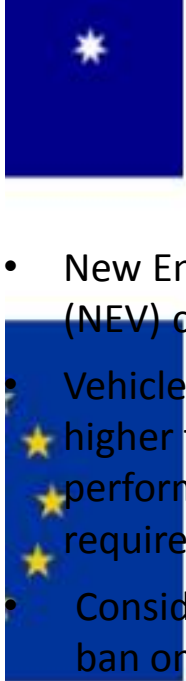
Canada

- New Energy Vehicle (NEV) credits mandate
- Vehicle Subsidy Program: higher technical performance requirements
- Considering a national ban on ICE cars

- In 2017 announcements of ambitious targets
- Renewal of subsidies (FAME) and public procurement
- Launch of plan for charging infrastructure deployment

- Revision of fuel economy standards at a federal level.
- Not all states affected by decision
- California EV targets more ambitious: 5 million by 2030

- Update of the CO₂ emissions standards up to 2030
- Incentive scheme for of zero- and low-emission vehicles
- ICE and Diesel bans by some member states



European Commission



Finland



Finland



European Commission



Finland



France



Italy

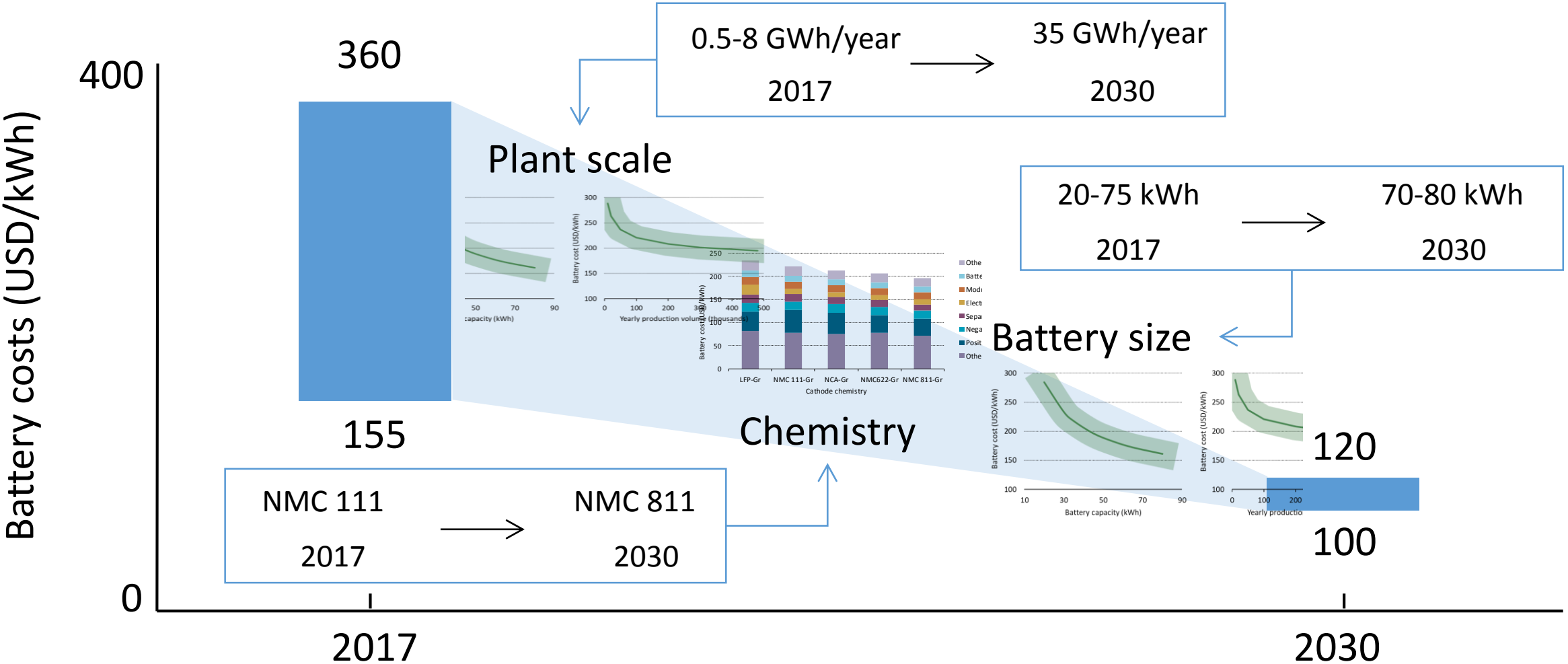


Japan



Korea

Lithium-ion costs reduction prospects (BEV batteries)

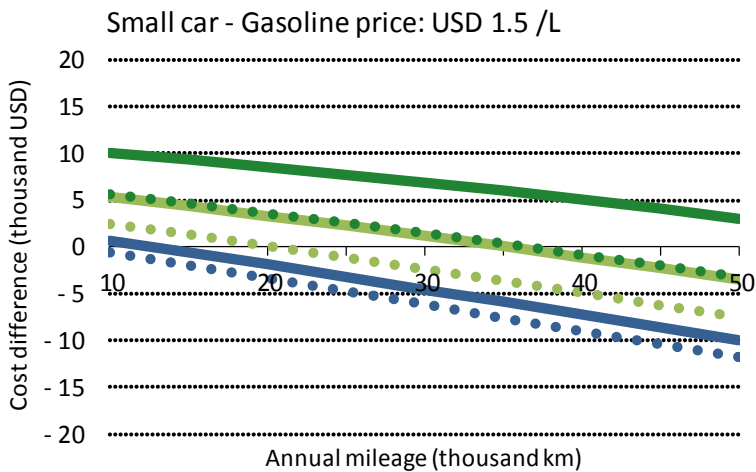


The combined effect of manufacturing scale up, improved chemistry and increased battery size explain how battery cost can decline significantly in the next 10 to 15 years

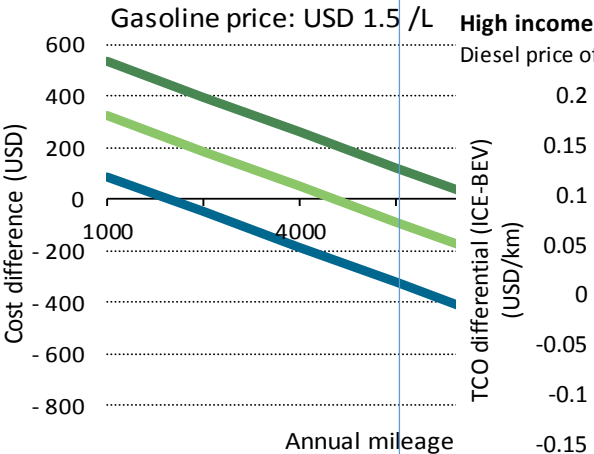
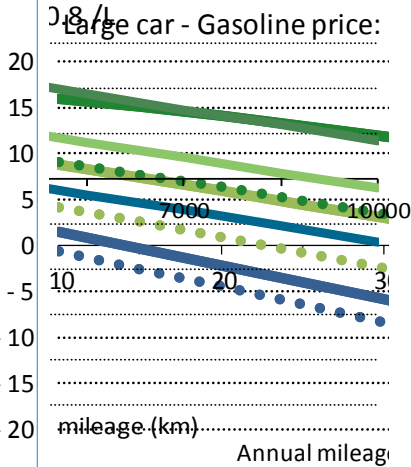
Total Cost of Ownership



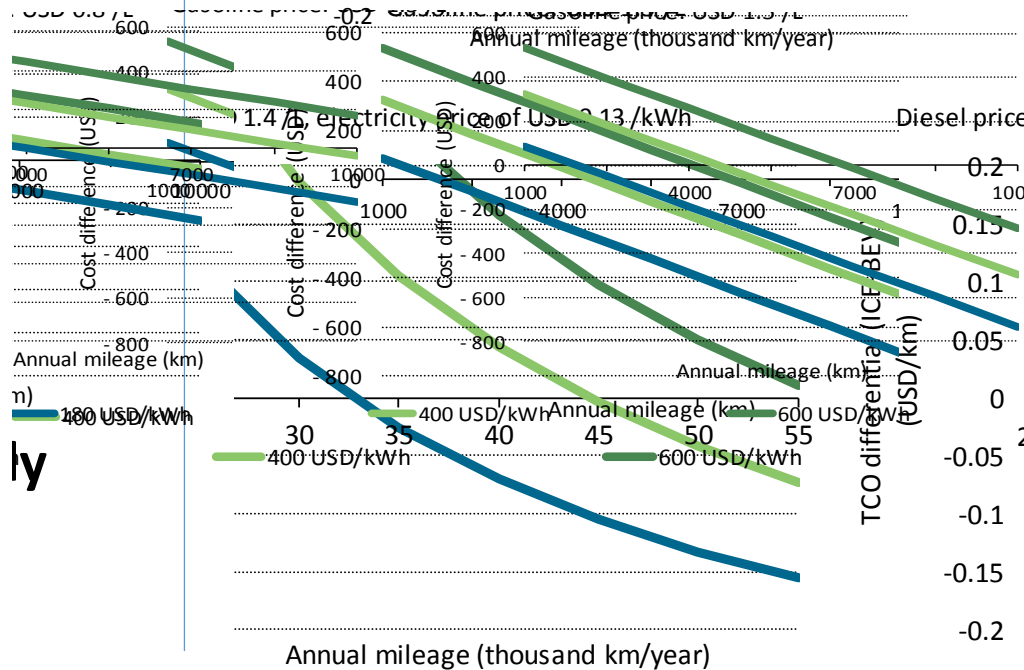
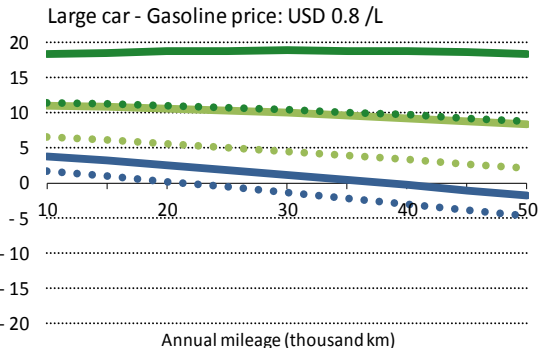
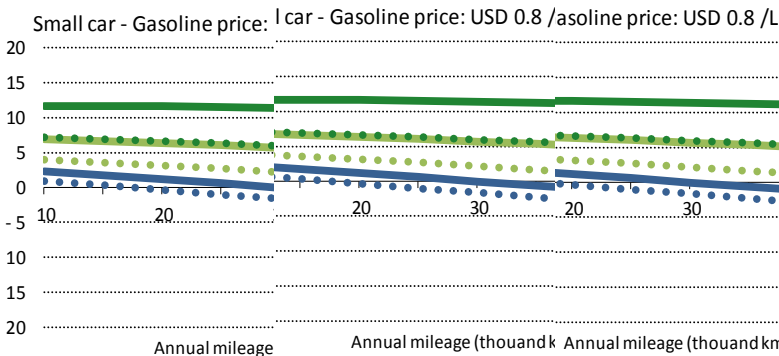
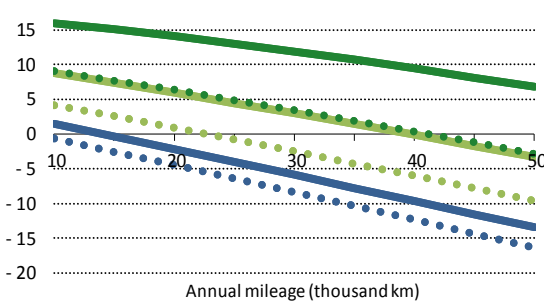
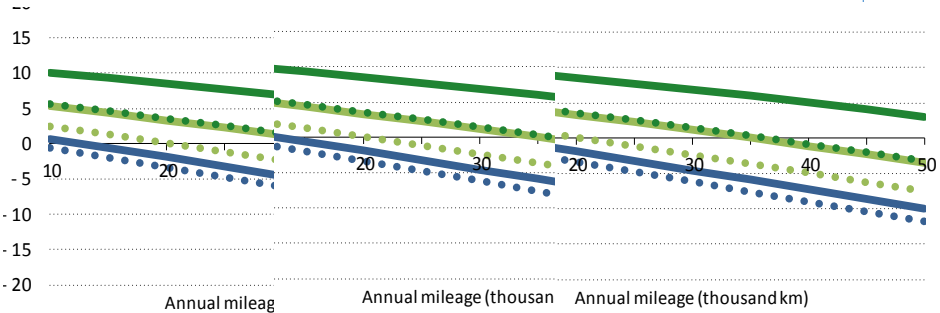
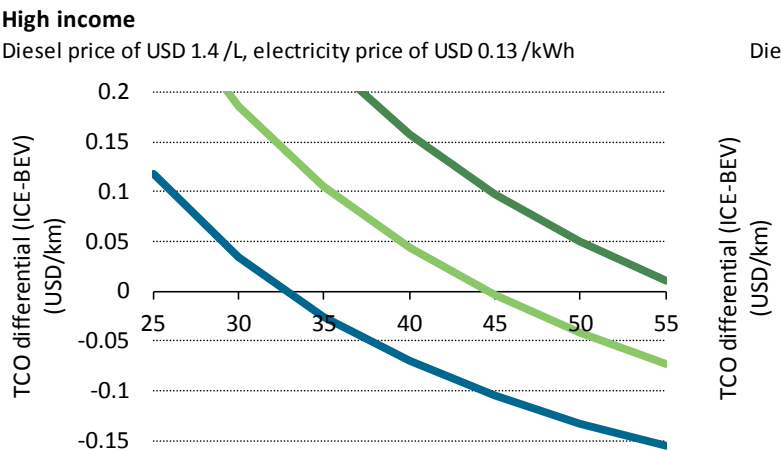
LDVs - BEV



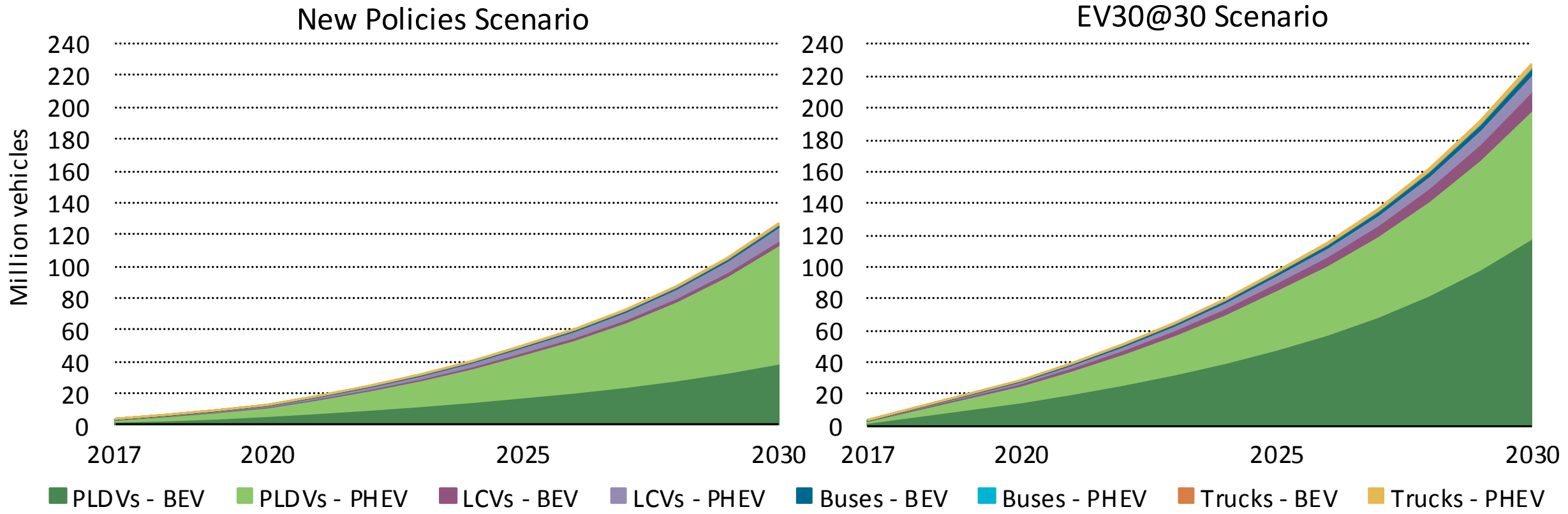
2-wheelers



Buses

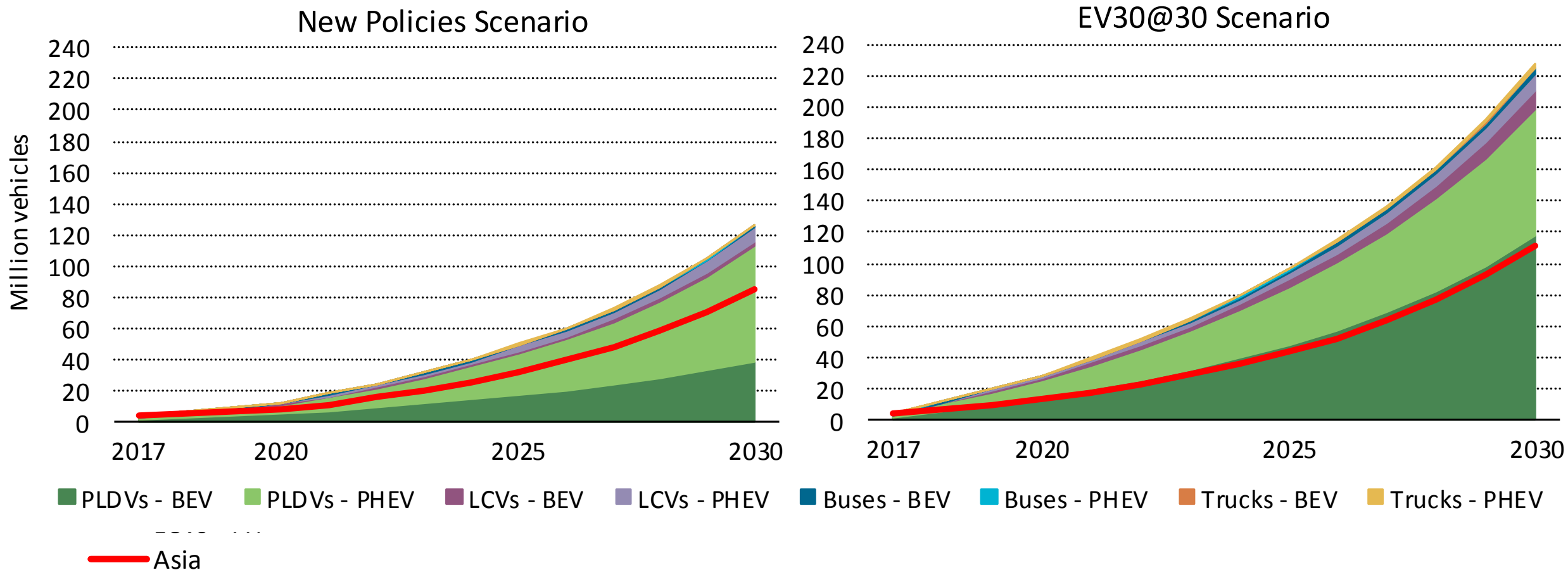


Global EV deployment under the NPS and the EV30@30 scenario



The EV30@30 Scenario sees 228 million EVs (excluding two- and three-wheelers), mostly LDVs, on the road by 2030. This is about 100 million more than in the New Policies Scenario, which is dominated by PHEVs.

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Electricity demand

Oil demand displacement

CO₂ emissions

Power distribution challenges

Total Cost of Ownership

Battery technology development

Battery demand projection

Material demand implications

Download the full report at:

<https://webstore.iea.org/global-ev-outlook-2018>



www.iea.org



