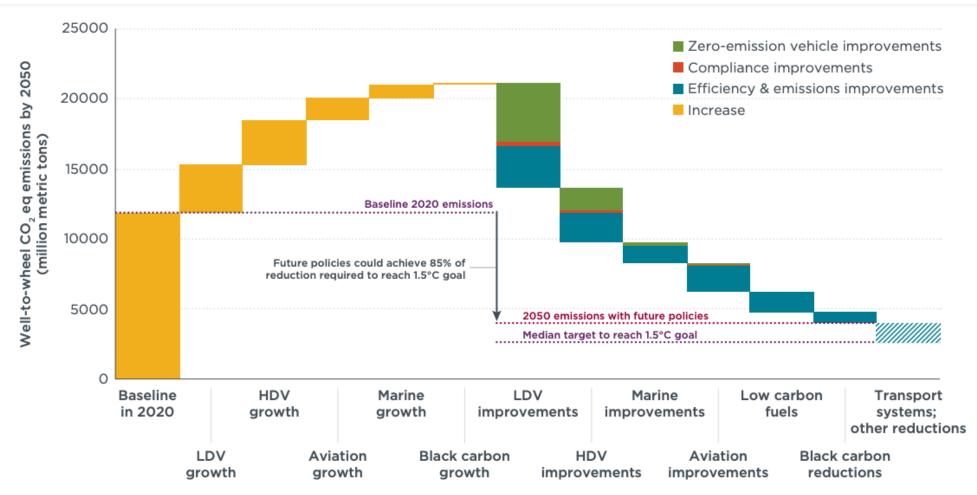
#### **Overview of global fuel efficiency and CO<sub>2</sub> emission standards**

Zifei Yang

2022 International Symposium on Energy Efficiency VIRTUAL April 6, 2022

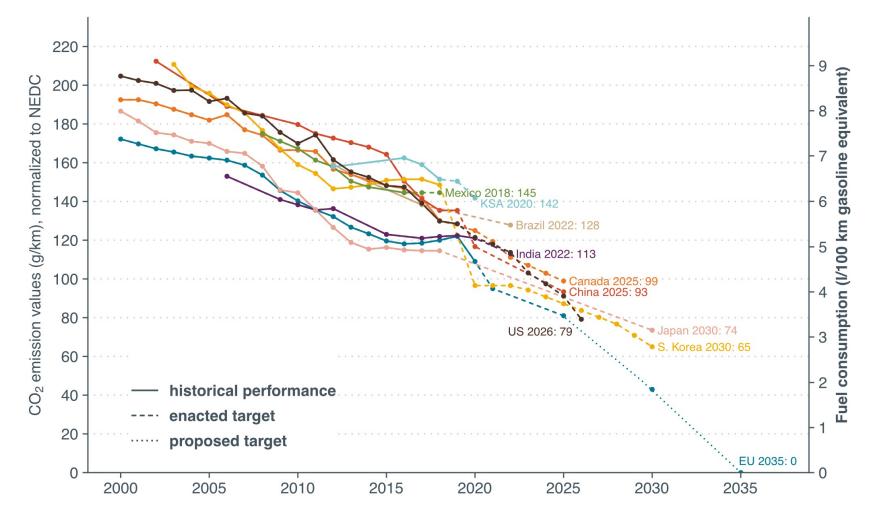


## Emissions reductions are dominated by efficiency and electrification in light and heavy-duty vehicles



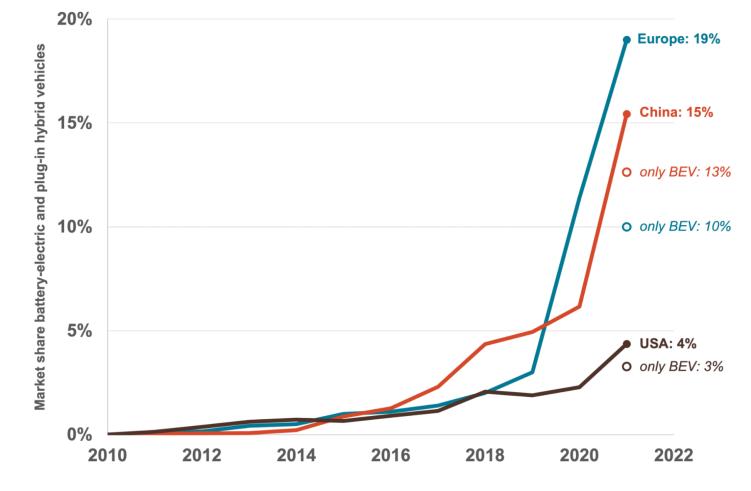
Source: Vision 2050: a strategy to decarbonize the global transport sector by mid-century <a href="https://theicct.org/publication/vision-2050-a-strategy-to-decarbonize-the-global-transport-sector-by-mid-century/">https://theicct.org/publication/vision-2050-a-strategy-to-decarbonize-the-global-transport-sector-by-mid-century/</a>

# Fuel efficiency/CO<sub>2</sub> emission standards have evolved in the past five years



Source: https://theicct.org/pv-fuel-economy/

#### There is a global race toward electrification

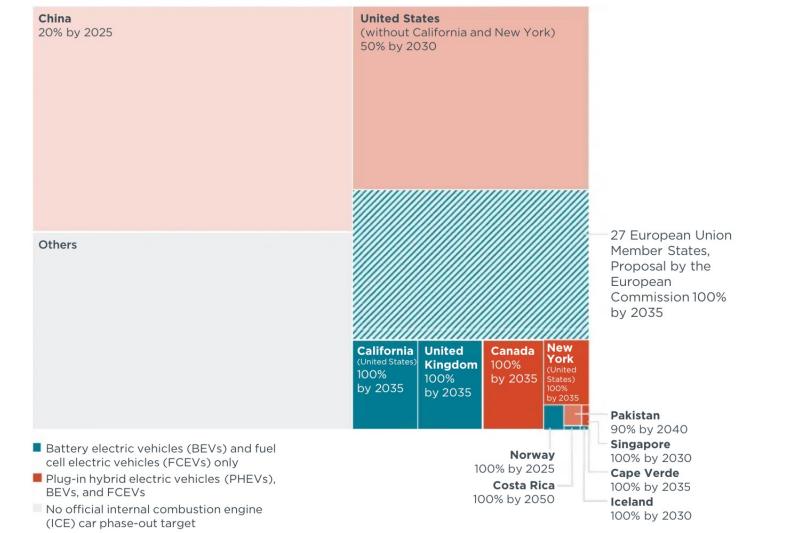


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Source: 2021: Another chapter in the global race toward electrification https://theicct.org/2021-global-race-evs-mar22/

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## More and more countries show strong electrification commitment



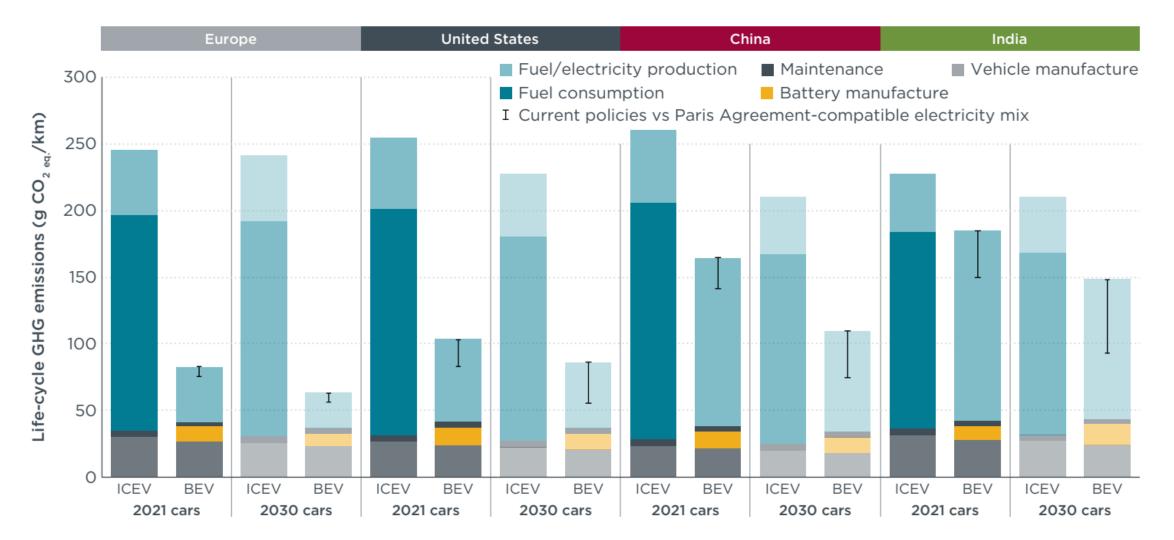
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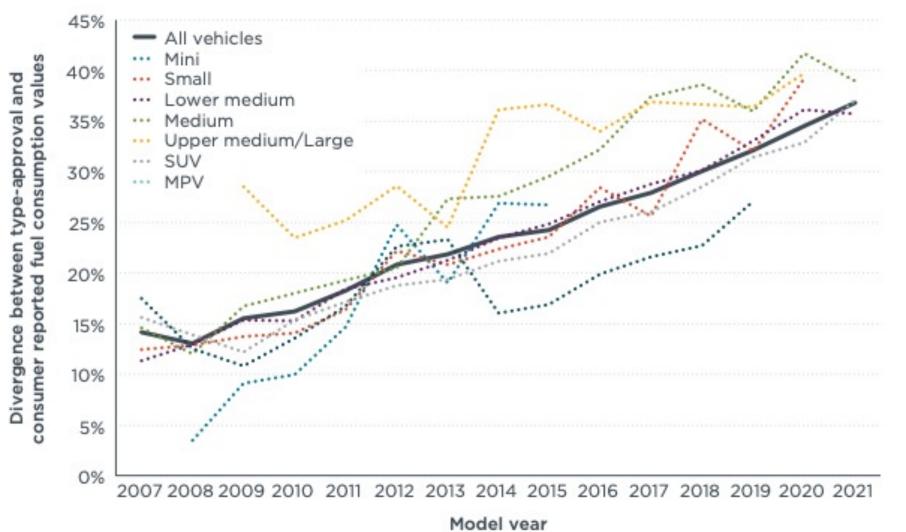
Source: Global passenger car marketshare of countries planning tophase out new sales of internalcombustion engine vehicles https://theicct.org/public ation/global-passengercar-market-share-ofcountries-planning-tophase-out-new-sales-ofinternal-combustionengine-vehicles/

### Transitioning to zero tailpipe emission vehicle technology is the only effective approach to decarbonization of the on-road transport sector



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#### There is a need to close the real-world and laboratory gap



Divergence between realworld and type approval fuel consumption of new passenger car fleet by year in China

> Source: Evaluation of real-world fuel consumption of lightduty vehicles in China: A 2021 update https://theicct.org/wpcontent/uploads/2021/12 /fuel-consumption-lvschina-update-sept21.pdf

### Thank you! zifei.yang@theicct.org

