

PRENSENTATION

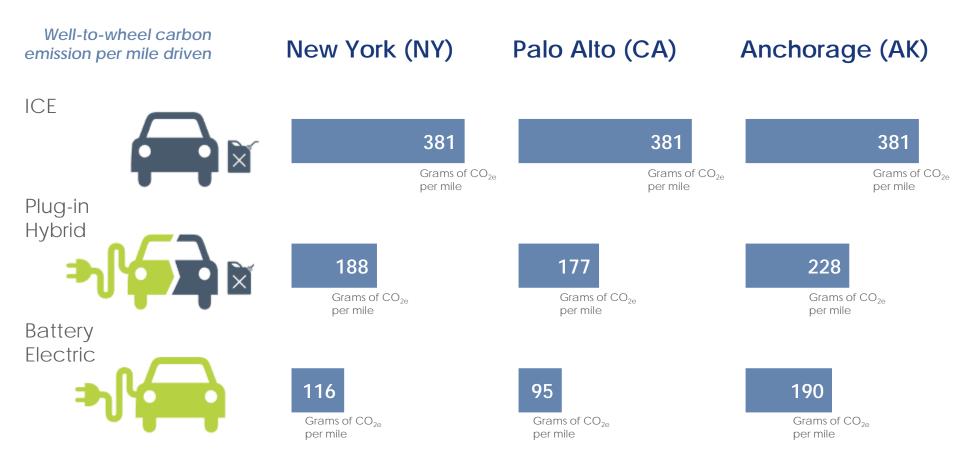
May 2019

Braemar Energy Ventures

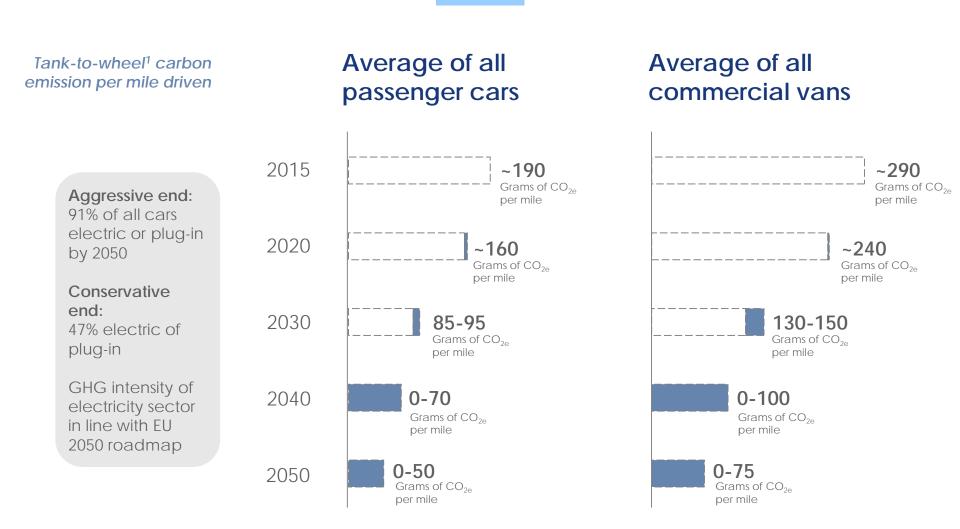
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SAME ELECTRIC VEHICLE, DIFFERENT GHG FOOTPRINT



THE PATH TOWARDS ZERO EMISSION: **A EUROPEAN PERSPECTIVE**





Source: Concawe, Impact Analysis of Mass EV Adoption and Low Carbon Intensity Fuel Scenarios, Sep 2018 BRAEMAR 1: Tank-to-wheel typically account for 70-80% of the well-to-wheel lifecycle for petroleum-based fuel pathways (applicable to both gasoline as well as petroleum-based sources of electricity)

HOW DOES TRANSPORT FIT INTO A BROADER **PICTURE?**

One proposal to 2-degree pathway

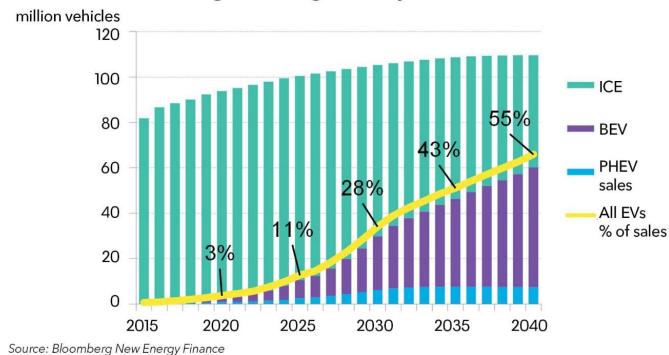
GtCO ₂ e/yr						
Baseline 2050				87-55 ¹	Levers	
Land use (net)				2-9	 Reforestation Land management Sustainable farming 	
Electricity				13-26	RenewablesLow-carbon generation	
Transport			6-7		 EV & low emissions Fuel efficiency 12-15% of the work towards 2-degree 	-
Buildings		1-3	3		Energy efficiencyRetrofits	
Industry		11-	12		 Energy efficiency Process efficiency Sustainable sourcing 	
Non-CO ₂	5-7				 Low-emissions technology Waste management Renewables 	
2-degrees scenario	8-32					



BRAEMAR Source: Mercatur Research Institute, Technische Universitaet Berlin, presentation to European Commission, 2015 **1:** Assumes no carbon capture or sequestration, estimations vary widely depending on specific underlying methodologies

FORECASTS POINTING TO RAPID GROWTH

Annual global light duty vehicle sales



BNEF:

559 million EVs on the road by 2040 (33% of global fleet)

55% EV share of new vehicle sales in 2040

WHAT ARE OUR LEVERS?

X

GHG reduction per vehicle-mile (~300g)

- Distance driven X (~10-20k miles/yr)
- EV & low-emissions
- Fuel efficiency
- Efficient driving and platooning

Efficient traffic flow

per vehicle

- Efficiency in lastmile transport
- Reduction of traffic congestion

of vehicles on the road (~2 billion)

6-7 GtCO₂e/yr

=

- Shared rides and occupancy utilization
- Fit for purpose and powertrain rightsizing



BRAEMAR PORTFOLIO: EV CHARGING NETWORK

-chargepoin-

Unrivaled U.S. network



Home / Multi-Family Ports

Commercial Ports

Expanding globally, having closed most recent \$240m funding





DC Ports



BRAEMAR PORTFOLIO: SHARED MOBILITY





- Two-sided marketplace platforms connecting purpose-built cars to trip needs
- Significantly improving vehicle utilization, combating wasted vehicle hours, congested city streets, and smog pollutions
- A managed fleet opening up efficient routes as electrification and autonomy increases to realize V2B and V2G





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