

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

TRANSPORTATION RESEARCH BOARD

June 2018 Executive Committee Policy Session

EVs and AVs Breakout Report

Challenges & opportunities re deployment, workforce, policy, economics

June 14, 2018

Key Themes

- Vision: AVs+EVs+pooling = triple bottom line (sustainability)
- New models for car use and ownership
- EV+AV synergies (opens up design space, in-veh power)... but not necessary now?!
- EVs for ride-hailing (eg, Maven)?
 - Fast charging? Business model?
 - Good marketing strategy for EVs (awareness)
- E-buses: how promising?
- Implications for transportation funding (fuel taxes)
- Equity: accessibility and cost
- Behavior: willingness to share, give up car ownership, buy EVs
 - Elderly?
 - Policy goal is to enhance (good) choices
- National role—safety standards for AVs
- Policy instrumental for 3 revolutions (“kale and spinach”)
- Need for P3, and for automakers to branch into services (and asset mgt)
 - Who owns and manages the assets (vehicles)?
 - Fractional ownership and management

Potential Actions

- Research
 - Evaluate experiments
 - Shared, electric, automated vehicles (eg, financing mobility disadvantaged; automated e-buses,
 - Fast charging for TNCs
 - Electric buses and trucks
 - Under what conditions/prices will customers buy and use EVs, AVs, and **pool rides**; and connect vehicles to grid
 - Effectiveness of incentives, charging/H2 infrastructure
 - Planning multi-decade transition strategies (esp AVs)
 - -Job impacts (passenger and goods)
- Convening
 - PPP for sharing experiments (eg Maven) and for local govts regarding transit/TNC linkage
 - International lessons learned on EVs (best practices)
 - Collaborate with NASEM on labor, other
 - Gov't stakeholders on AVs (DMV, DOT, PUC, insurance)
- Education and outreach
 - Local govts, transit, state DOTs, workforce (drivers), manufacturers, tech companies, insurance