

Barriers to Battery Electric Vehicles in ridehailing

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\$/mile

Est. avg. revenue generated*	2.00	
Labor cost (@ \$20/hr, 20 mph)	1.00	50%
Fuel cost (@ \$3/gal, 30 mpg)	0.10	5%
maintenance cost	0.10	5%
Depreciation	0.13	7%
Insurance	0.07	3%
Pollution cost**	0.10	5%

* Revenue generated is not the sum of the entries below!

** Assuming GHG damages = \$50/tonne CO₂eq., air pollution damage = GHG damage

For TNC, labor cost looms largest and fuel cost is small. Even if fuel cost is halved or doubled their revenues not impacted. Also they do not own the vehicles

For drivers, fuel cost is a larger as a fraction of their earnings but still only about 10% of their earnings. They also might have incomplete information, credit constraints, uncertainty about driving for a living, etc

Our goal was to understand these barriers might be and how variability in perceptions about those barriers is correlated with drivers' attributes. Limited prior research on EVs and ride-hailing drivers

Survey

- 1. In person survey of lyft and uber drivers in West LA - Hail rides and recruit drivers for a 10-15 minute survey for a cash incentive of \$10**
 - 148 valid responses
- 2. Online survey of control group – non-rideshare drivers who drive more than 60 miles per day.**
 - 396 valid responses

Select findings

- TNC drivers - 6X the VMT of current EV owners and 3X VMT of average car poorer, but tech savvy, environmentally and socially conscious but seem to have less complete information on EV cost, incentives, and fuel costs
- Range anxiety and access to as well as time to charging is high concern across both likely and unlikely adopters (and this is similar to the same sub-groups in the comparison group)
- Little or no familiarity with EV rental programs in LA such as Maven or Blue LA among TNC drivers

Key Policy Implications

- **Mandating Uber, Lyft and other large commercial fleets to incorporate ZEVs is key** – California already has a law SB 1014 but targets and timeline not finalized
- **Currently limited or no targeted policies exist high mileage users** – incentives and charging infrastructure are not targeted at this segment. **Attractive leasing and financing is key**
- **Raising awareness and information provision is key**

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