LDV ZEV Market and Technology Assessment for SB 1275

CVRP Public Workshop

Sacramento, California
December 8, 2015

California Environmental Protection Agency
Air Resources Board

Market Assessment:
Framework

- ZEV and non-ZEV consumer surveys – vehicle satisfaction and preferences
- Consider PEV range improvements expected in new vehicles entering the market
- Sensitivity study on vehicle purchase cost projections without federal purchase incentive

Technology Assessment:
Framework

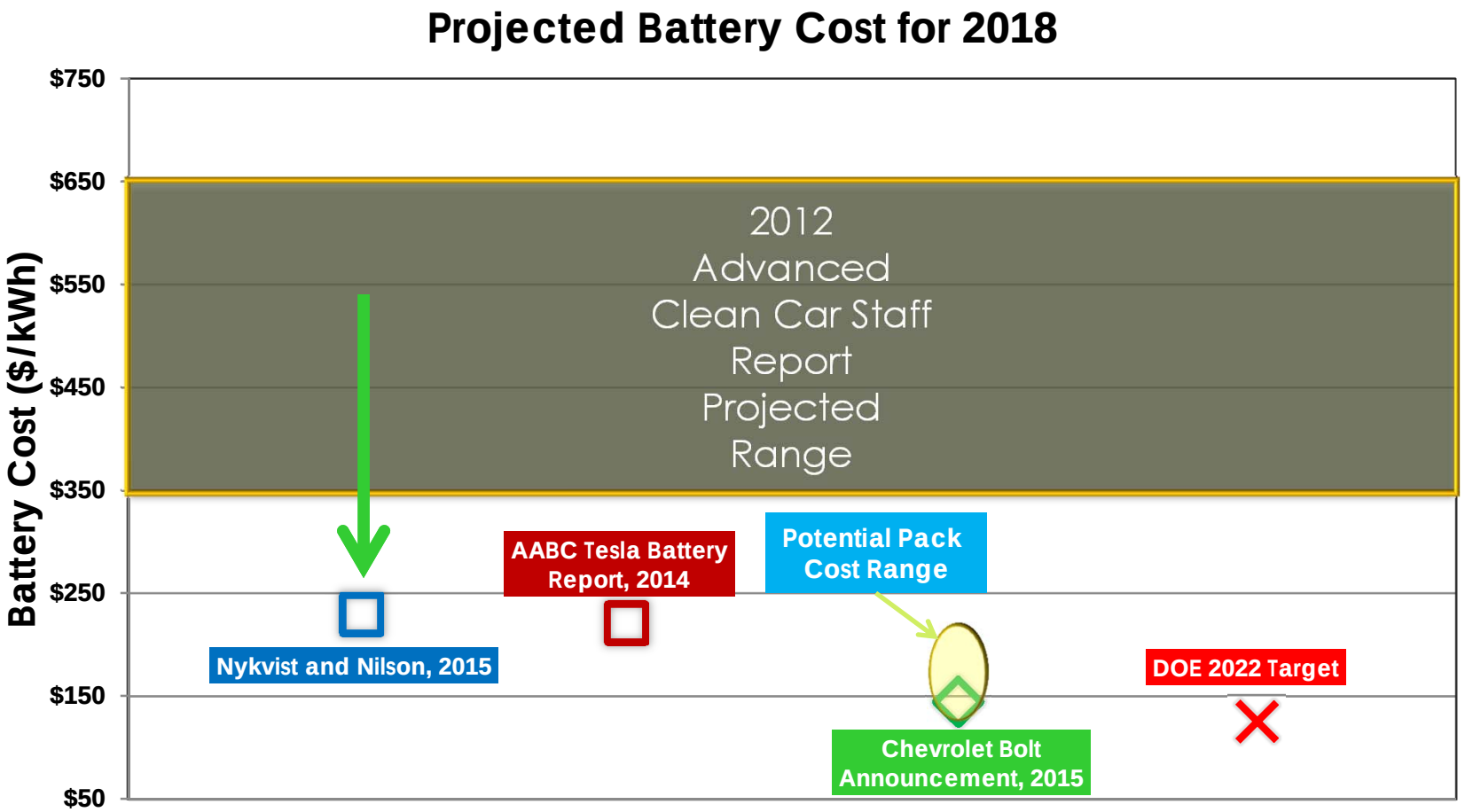
- Vehicle cost projections by technology, including base battery and fuel cell system costs
  - Rely on public studies with long-term projections
- Sensitivity study varying battery and fuel cell costs
- Sensitivity study on increased battery size to account for longer range (consumer preferences)

ARB Mid-Term Review of LDV ZEV Regulation

- ZEV regulation credit analysis
- Detailed vehicle technology assessment with EPA
- Role of PHEVs → OEM Data Analysis
- Consumer awareness and attitudes
- Electric charging and hydrogen infrastructure assessment

Battery Costs Lower than Projections:

Motivation for battery price sensitivity study

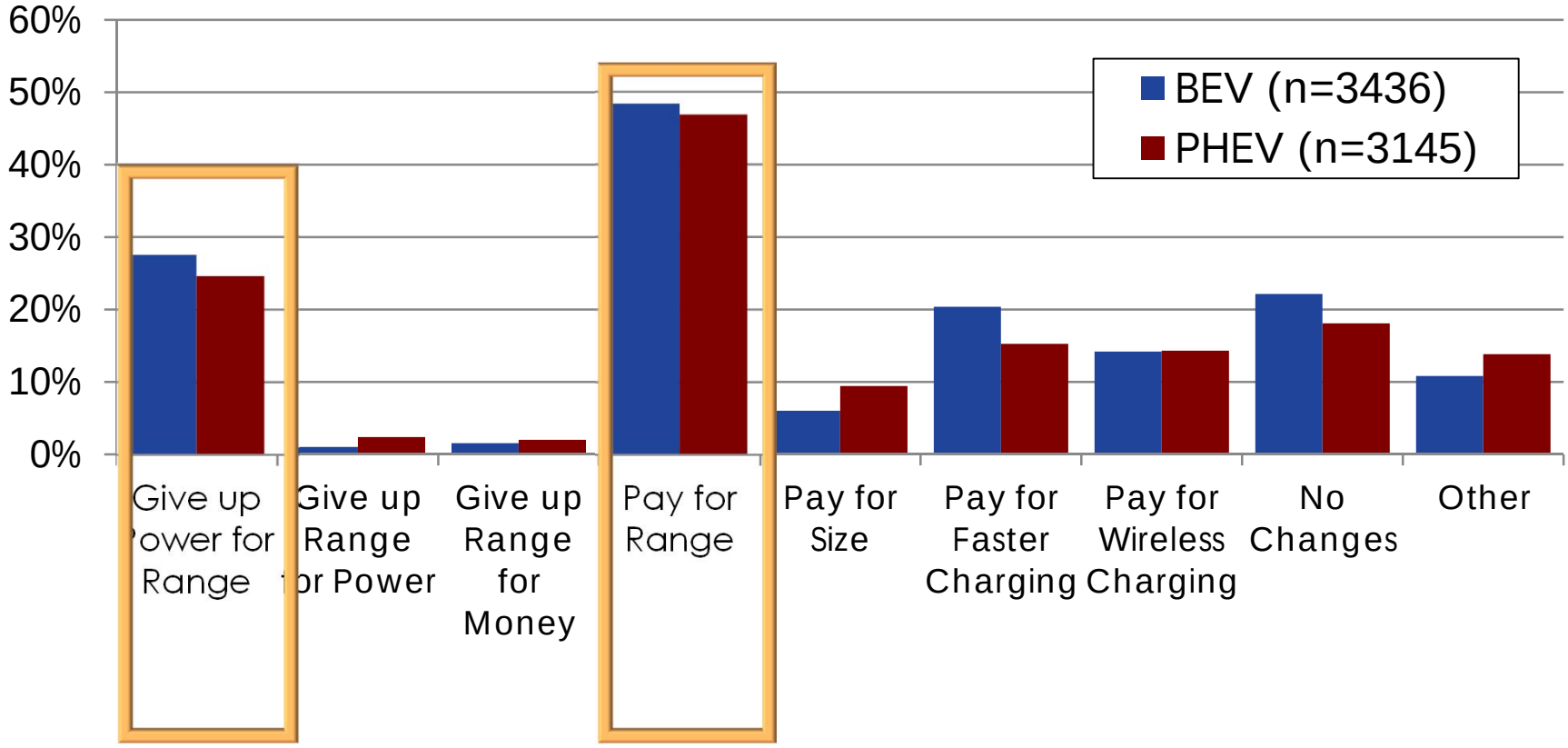


Nykvist and Nilson, Rapidly falling costs of battery packs for electric vehicles, March 23, 2015, http://www.nature.com/nclimate/journal/v5/n4/full/nclimate2564.html
Anderman, The Tesla Battery Report, November 12, 2014, https://www.advancedautobat.com/industry-reports/2014-Tesla-report/Extract-from-the-Tesla-battery-report.pdf
Chevrolet Bolt Announcement, October 2, 2015, http://www.hybridcars.com/gm-ev-battery-cells-down-to-145kwh-and-still-falling/
DOE 2022 Target, January 31, 2013, http://energy.gov/sites/prod/files/2014/02/f8/eveverywhere_blueprint.pdf

BEV & PHEV Drivers Want More e-Range:

Motivation for battery size sensitivity

"If you could, how would you change your PEV?"



Source: Ownership Experience Survey of CVRP Recipients, April-May 2015.

Respondents able to choose more than one. Totals will sum to more than 100%.