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ARB Presentation on Proposed ZEV Mandate Regulations

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Proud to be a Californian

- The world needs to adopt a policy to stabilize the environment considering current and future emissions
- *AB 32's goal of 80% reductions by 2050 is such a policy.*
- Presidential candidates back 60 - 80% reductions by 2050
- Need to be realistic - vehicle costs will be higher for advanced technology vehicles, requiring subsidies for a time period
- Fuel costs are likely to be lower (\$/mile) for hydrogen or electricity
- As a society, the long-term cost effectiveness of achieving AB 32 goals is paramount

We Need Balanced Social Policy

- We can regulate and have the “polluters pay”, but the polluters are part of society and not necessarily the manufacturers
- Mandates by themselves do not ensure that industry can sell their vehicles to the public at the significant costs of early new technology vehicles
- What we need is both regulation (the stick) and government cost share (the carrot) working in concert, requiring state and federal cooperation

Let the Marketplace Decide

- To achieve AB 32 goals for 2050, *multiple zero* or very low carbon vehicle solutions are needed
 - H2-FCVs, BEVs, and PHEVs with biofuels
- All low carbon emission vehicle technologies have risks, and the lowest cost option is unknown
- *Policy support is needed to bring all new vehicles to market, so that consumers can select and the cost to society can be minimized*

What is Needed for H2-FCVs

- H2-FCVs can be competitive with relaxed 2010 DOE targets (vs. 2015) when competing against PHEVs and BEVs *
- The ARB ZEV expert panel was conservative when citing an H2-FCV program based on meeting 2015 DOE targets
- A policy that includes both a technology development and an economy of scale strategy is necessary for commercialization
- If a 2009 industry/government review of H2-FCV's progress against revised 2010 targets is positive, then mass production of FCVs can be considered by 2015
- Up to 150,000 H2-FCVs may be needed (ORNL report, 2007 by Greene, et al)
- LA is the prime demographic area for the initial FCV deployment- California H2 station mandate might be useful

* (MIT report, 2007 by Kromer and Heywood) (i.e, storage system costs of \$15/kwh vs. \$2/kwh and fuel cell costs of \$50 to 75/kw vs \$30/kw)

ZEV Reg. Recommendations

- The ZEV Regulation for 2012 - 2014 is well constructed
 - It encourages the deployment of PHEVs and battery technology that have beneficial impacts on H2-FCVs and does not require too many H2-FCVs to be built pre-maturely
- The proposed ZEV volumes at the end of the 2015 - 2017 phase should be a minimum of 75,000 vehicles
 - OEMs need higher volumes to develop mass production vehicles to achieve cost reductions and establish an urban station network
 - In 2009, review FCV progress and final number of FCVs required
- The above recommendations should be coordinated with a federal demonstration program
- The stipulation of Type IV H2-FCVs with 200+ mile range does not capture H2-FCV capability
 - Type IV category should be changed to 300+ mile range
 - Minimum credit of 10 and not 5 should be used