



Unlocking Private Sector Financing for Alternative Fuel Vehicles and Fueling Infrastructure



FINANCIAL BARRIERS WHITEPAPER DRAFT OUTLINE

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I. Introduction

- a. Goal of overall project: expand the use of alternative fuels and vehicles through innovative financial mechanisms
- b. Public problems (externalities) and role of AFVs
 - i. AFVs can address many public problems like air quality, climate change and energy security
- c. State of play: current major market participants for AFVs and fueling infrastructure
 - i. Vehicle purchasers: public and private fleets, individual consumers
 - ii. Infrastructure-related businesses: fleet, public, and home fueling
 - iii. Vehicle manufacturers: light-, medium-, heavy-duty vehicles
 - iv. Fuel providers: natural gas, electricity, propane, biofuels and hydrogen
- d. Project problem statement: Want to increase use of AFVs because they address many public problems, but market deficiencies exist and significant additional public funds are very unlikely. Need to work on how to lower barriers to private finance and investment in AFVs.
- e. Framework for this paper: how these barriers increase the cost of capital, and, thus, reduce likelihood of financing and carrying out AFV-related projects.
- f. Need to understand the barriers before you can try to solve the problems and help lower the cost of capital

II. Framing the Overall Financial Barrier: lack of access to low-cost capital

- a. Explain what cost of capital is and how it affects investment
- b. Discuss research related to alternative energy and the cost of capital; [link](#) to one example to include
- c. Relationship of cost of capital to AFVs

- d. When considering the barriers for an individual consumer and for a large investment bank, the barriers affect them differently and the solutions are different. Still, access to low-cost capital and proper information are the same basic issues important to different groups.

III. Identify and define the barriers—how the lack of access to low-cost capital is broken down. Briefly discuss the different barriers.

- a. Restricted access to local, state and federal incentives
- b. Legal, regulatory & institutional roadblocks
- c. Uncertainty and information issues
- d. Risk
- e. Scale

IV. Conclusion

- a. Understanding the barriers is key to overcoming them. Reducing barriers to financial mechanisms and projects will lower the cost of capital, increasing the likelihood of AFV projects getting funding.
- b. Ideas that overcome barriers to increase AFV adoption must make financial sense and be feasible in current market conditions.
- c. Reducing barriers to finance through new mechanisms and other means can help move the market towards self-sufficiency, reducing the need for public subsidy.

The Center for Climate and Energy Solutions is an independent, nonpartisan, nonprofit 501(c)(3) organization working to advance strong policy and action to address the twin challenges of energy and climate change. Launched in November 2011, C2ES is the successor to the Pew Center on Global Climate Change, long recognized in the United States and abroad as an influential and pragmatic voice on climate issues.