Program Manager's Outlook

The United States' energy security relies heavily on the fuel efficiency of and choices made in the transportation sector. Highway vehicles alone use more petroleum products than are currently produced by our country; and as transportation continues to grow, the situation will only worsen. With domestic oil production steadily declining for the last two decades, oil imports are expected to make up 70 percent of all oil consumed by 2025.

The FreedomCAR and Vehicle Technologies (FCVT) Program aims to satisfy the critical national need of reducing our dependence on imported oil. Government and industry are partnering to develop advanced vehicle technologies to reduce, and/or remove, transportation use of petroleum products for fuel. This partnering is critical for success in assuring viability and application of the developed technologies. The government is not involved in commercialization of the technologies and does not conduct research on the nearest-term applications which are the purview of industry. The government R&D is concentrated on the highest-risk and longer-term technology developments pre-competitive to market application. Industry has the key, and often more expensive, role to move the petroleum saving technology into products and into the marketplace.

This Multi-Year Program Plan (MYPP) provides a five-year window into the government effort, including descriptions of the management processes, mission, goals, strategies, technical efforts and outputs within the FCVT's responsibility and the desired outcomes and vision beyond its accountability. Goals have been established and barriers, both market and technical, have been identified. Technical targets consistent with goals have been developed and strategies have been formulated to overcome barriers. Processes use established techniques to increase the probability of success in managing and conducting research and technology development.

The Plan is based on an overall strategy for the transition of vehicle technologies. This strategy includes developing technologies to save petroleum in the current combustion engine vehicles and in new combustion engine technologies, ensuring widespread applicability of efficient hybrid vehicles, and establishing a transition to hybrid fuel cell vehicles and other possible alternatives. The transition technologies will apply to fuel cell vehicles when they become viable for the transportation industry in addition to aiding the achievement of that viability.

Great R&D fruition and technology advancement is planned during the period covered by this Plan with a good probability of success. Although research of this nature involves risk, steps have been incorporated into the Program to mitigate these risks. R&D Performance Goals are planned to be reached during the years 2006 through 2011, the period covered by this Plan. Year 2006 is a base year and 2007-2011 are the five years for which detailed tasks, milestones, and outputs are delineated. Performance Goals are based on technology advancement to make energy saving technology, including hybrid propulsion, viable in all vehicle platforms in highway vehicles in the United States. Highlights of these advancements include reduction of aerodynamic and other parasitic losses for trucks, development of new battery technology which is key for hybrid propulsion, and development of advanced technologies for reducing vehicle weight for passenger and commercial vehicles. Significant advances in combustion engine technology and in new combustion techniques should also be achieved over the next five years.

Heightened awareness of the need for energy efficient technologies has come from the recent increased fuel prices in the U.S. An increase in hybrid vehicles in the marketplace has already been one outcome. Successful development of such technologies will add to the public excitement about new energy savings and petroleum reduction technologies necessary for our nation's future security. And as a result, a strong base of engineers and scientists will be established to support further development and commercialization of these technologies. The pursuit of cleaner, more-efficient vehicles today and emissions-free, petroleum-free vehicles tomorrow is a national goal set by President Bush. FCVT will continually evaluate new and alternative technology pathways that may lead to the realization of that goal. As an example, in 2006, FCVT will evaluate the potential benefits of plug-in hybrid vehicles and the barriers to their commercialization. Pursuit of the President's goal is important to the nation's energy, environmental, and economic future. The basis for this vision of the future has been defined in the research agenda defined in this Plan.

It is my pleasure to present this MYPP for FCVT that defines the next five years of work. This period covers achievement of Performance Goals with potential impactual technology advance significant for the future our nation.

Ed Wall
Program Manager