

UCSB Bren School of Environmental Science and Management**Group Project Proposal****Sustainability of Transportation in California –
Strategies Developed Using Future Scenario Planning****PROPOSER**

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STATEMENT

California's economy and lifestyle depends on transportation, but environmental and security developments suggest that current practices are unsustainable. Recent initiatives have targeted reducing dependence on petroleum, especially as transportation fuel. One realization from the global roundtable held at the Bren School in 2004 was that the use of alternative fuels and more efficient technologies will provide little benefit if vehicles are not utilized effectively. Due to the state's growing population and changing demographics, traffic congestion will make it increasingly difficult to use any vehicle very effectively.

Due to uncertainties in various internal and external factors, predicting the future of transportation in California is difficult if not impossible. However, a process known as *future scenario planning* offers a way to identify the boundaries of future possibilities, thereby providing a context to develop a robust strategy to better cope with future developments. It is hoped that this study will provide a way to assess how various issues in California can manifest themselves in the future if they are not managed properly. By addressing scenarios 25 years in the future, the strategies can avoid near-term issues while providing sufficient time to prepare solutions to insure California's sustainability.

OBJECTIVES

The objectives of this study are to make use of the interdisciplinary background and education of the students as well as easily available data to:

- Identify a small set of unrelated factors that will have the greatest impact on California's transportation system
- Formulate 4 extreme scenarios of the future based on these factors
- Analyze the economic, political, and social implications of these 4 scenarios
- Quantify the change in environmental impacts resulting from the 4 scenarios
- Identify early indicators (scientific, societal, etc) that one of the scenarios is coming true
- Formulate and prioritize recommendations
- Communicate findings and recommendations to a general audience

SIGNIFICANCE

State of California is currently working on a long-term vision to guide the state policies and the strategies of entities that do business in the state. The goal is to capitalize on renewable energy and increased efficiency. However, this vision alone is not sufficient in finding the 'stepping stones' needed to encourage innovation and provide a roadmap to reduce risks and costs.

BACKGROUND

Transportation has been shown to be one key ingredient in economic growth and human progress observed in the 20th Century.

In 2004, World Business Council for Sustainable Development (WBCSD) released its report on Sustainable Mobility 2030 to safeguard the future and promote progress in the developing nations. However, this report proved too general for guiding regional policies or building consensus on what actions should be taken.

Also in 2004, California policymakers made an effort to bring together members of the energy and automobile industries to formulate a common understanding of California's future but the

effort was undermined by differences in corporate philosophies. Late in 2005, CALSTART announced California Secure Transportation Energy Partnership (CalSTEP) as an initiative to identify best ways to reduce transportation petroleum use 15% below 2003 levels by 2020.

STAKEHOLDERS

- Automotive and Transportation Industries
- State of California
 - Environmental Protection Agency
 - Department of Resources
 - CalTrans
- Local Planning Commissions
- Investors
- Energy Industry
- Building Industry
- Private citizens

APPROACH AND AVAILABLE DATA

Scenario planning process is well documented and case studies of its application to other problems should provide adequate preparations for implementing the process. Initial steps of the process to the point where 4 scenarios are identified should not require anything more than careful literature review combined with thought and intuition. Information needed to build and analyze the 4 scenarios, such as climate conditions or monetary exchange rates, should be based on extrapolation of existing data within scientific and economic limits. Quantification of the change in environmental impacts will be based on consequential analysis, a recent development in industrial ecology.

It is recommended that the work focus on following issues that impede consensus on action:

Costs	Strategic, public and private; effect of delay or incrementalism
Impact	Time frames for new innovation to be visible at a macro-level
Plans & policy	Initial steps toward hoped for future or vision

DELIVERABLES

Final report and presentation will provide forward-looking yet rigorous insight on what the future might hold so policymakers will take interest in the recommendations. To better communicate the scenarios with visual images, a collaboration with students from Art Center College of Design is being considered.

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