

OVERALL WORK PROGRAM

Fiscal Year 2009

Revision #1

**Revision #1 approved by the OahuMPO Policy Committee on
November 21, 2008**

FTA Section 5303 Metropolitan Planning Program
HI-80-X017
FHWA Project PL-052(31)



Prepared by

OAHU METROPOLITAN PLANNING ORGANIZATION

In Cooperation with
Its Participating Agencies

State of Hawaii Department of Transportation
State of Hawaii Department of Business, Economic Development, and Tourism
City and County of Honolulu Department of Transportation Services
City and County of Honolulu Department of Planning and Permitting



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Overall Work Program Revision #1

WORK ELEMENT 201.67-09

Energy Efficiency in Transportation Strategies

Objective

To conduct research that will assist in identifying policy incentives and disincentives for Hawaii that reduce fuel consumption and increase energy efficiency in the transportation sector by encouraging the use of energy-efficient modes of transportation, the purchase of more fuel-efficient motor vehicles, and adjustments in lifestyle and travel behavior.

Products

1. A two-part survey to understand behaviors and attitudes of Oahu residents and gauge preferences for and sensitivities to various energy efficiency strategies in transportation.
2. A report documenting results of the survey and recommending transportation-energy policy incentives and disincentives for consideration by State and City policy makers.

Status of Past Work, Challenges, and Opportunities

Energy efficiency in transportation is a priority of the Federal Highway Administration, especially as it relates to climate change and planning.¹ The update of the Oahu Regional Transportation Plan, which will commence in early 2009, will require an assessment of the current and future uses of energy across the transportation sector. This work element is intended to provide qualitative information to support that plan.

An Energy Efficiency in Transportation Strategies Working Group (“working group”)² – comprised of representatives from the University of Hawaii at Manoa (UHM), the Hawaii Department of Transportation (HDOT), the Department of Business, Economic Development, and Tourism (DBEDT), each county’s transportation division, labor organizations, transportation planning organizations, petroleum refineries, and automobile dealers and manufacturers industries – met during the past year and adopted a vision of *“an energy-efficient transportation system that integrates effective community input and planning (demand), and offers people of all ages and walks of life flexible options (supply) including mass transit, private and public vehicles, and self-powered conveyance in alternative combinations that provide mobility at acceptable cost.”*

The working group identified the need for a survey to determine consumer preferences and behavior in order to meet the following three goals:

1. More choices in modes of travel will allow consumers to decide what mode of travel makes the most sense for any given trip;
2. More choices in alternative fuels will give consumers more options for vehicle and fuel purchase and use³; and

¹ See discussion at <http://www.fhwa.dot.gov/hep/climatechange/index.htm>.

² The working group was formed in response to Act 254 (2007) directing the Hawaii Energy Policy Forum, University of Hawaii at Manoa, to study energy efficiency in transportation strategies.

³ DBEDT will focus on alternative fuels in its *Hawaii Clean Energy Initiative* and the *Hawaii Bioenergy Master Plan*.



3. Increasing the fuel efficiency of Hawaii’s vehicle population by incentivizing consumers’ choices as they make vehicle purchase decisions and decide which vehicle to use for any given trip.

The charter of and objectives identified by the working group provide a timely and robust approach for meeting both the needs of policy makers and transportation planners.

Identification of Need

A major consideration in the metropolitan transportation planning process is energy conservation. In the recent past, this issue has been on the forefront of the public’s minds. With the continuing volatility of gasoline prices (an increase of almost 25% Statewide since January 1, 2008⁴), Hawaii’s substantial reliance on imported fossil fuel for both internal combustion and electrical power makes the State highly vulnerable to market forces outside of its control. Given that some energy analysts recognize that demand for oil is exceeding supply – especially from developing nations such as China and India – gas prices could reach \$7 a gallon by 2012⁵, the issue of energy conservation and alternatives to fossil fuel becomes more critical.

Results of this study will be helpful to the various transportation agencies as the survey will provide insights into the following questions:

1. To what extent will changes in fuel prices and/or fuel availability in the City and County of Honolulu affect travel behavior?
2. Will these changes spur: (a) purchase of smaller and/or fuel-efficient vehicles; (b) greater use of alternative modes of motorized (e.g., fixed guideway, city buses, motor bikes, carpools and vanpools) and non-motorized (e.g., bicycles, walking) travel; and (c) adjustments in lifestyle and daily travel behavior (e.g., four-day work week, telecommuting)?⁶
3. What public policies and/or programs will motivate motorists to: (a) purchase and use more fuel-efficient motor vehicles for personal travel; (b) use more fuel-efficient modes of transportation; and (c) make adjustments to lifestyle and daily travel?

Impact of Work Element

The study would serve as a foundation for:

1. Understanding the attitudinal and behavioral issues of users of transportation for work, school, and recreational purposes who are dealing with the economic impacts of fuel cost increases.
2. Developing energy-efficient strategies in the transportation sector.

Tasks

1. HDOT to provide oversight and administrative support for study effort.
2. UHM to contract, develop, and/or conduct the energy/transportation survey.

⁴ Pang, Gordon Y. K. “Hawaii gas price sets record at \$4.17,” *The Honolulu Advertiser*. June 7, 2008, pages A1, A5.

⁵ Samuelson, Robert J. “Learning from the oil shock,” *Newsweek*, June 23, 2008, page 39.

⁶ Vorsiono, Mary. “Drivers near ‘tipping point’ as Hawaii gas prices climb: Dramatic shift seen in budget-friendly ways to commute,” *The Honolulu Advertiser*. May 9, 2008, pages A1, A2. Vorsiono suggests that there may be “tipping points” in terms of higher fuel prices for these behaviors that will presumably vary from one motorist to another.



3. UHM to present, analyze, and document survey results and make them available for use by both HDOT and the OahuMPO.
4. UHM to provide necessary support to HDOT, the OahuMPO, and the working group in their reviews of the survey methodology, instruments, and results.
5. UHM to draft and finalize report concerning transportation-energy policy incentives and disincentives for consideration by State and City policy makers.

Estimated Completion Date

June 2010

Estimated DBE Opportunity

None

Estimated Cost By Funding Source

Total	FTA	FHWA	STP	Local M	Local S ⁷
156,000		108,000		27,000	21,000

Estimated Staff/Other Costs

Agency	Staff	Person Months	Cost
DOT	Planners	3.0	21,000
	Other		
UHM	Cooperative Agreement		135,000
		Total	156,000

⁷ Federal reimbursement will not be sought for HDOT personnel costs.



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