



2015 HCEI TRANSPORTATION ENERGY ANALYSIS REPORT

HCEI's Commitment to Clean Transportation

The Hawaii Clean Energy Initiative is a stakeholder coalition and a body of laws and regulations dedicated to transform Hawaii's economy through energy efficiency and indigenous renewable energy. In the electricity sector, HCEI established the nation's first 100 percent renewable energy portfolio standard, with interim targets in 2020, 2030 and 2040 working towards the 100% renewable energy objective by 2045. Hawaii's Energy Efficiency Portfolio Standard drives the State's efforts to reduce 4,300 gigawatt hours of annual electricity use by 2030. HCEI's updated 2015 energy for transportation plan is intended to guide stakeholders in high impact strategies and tactics to reduce petroleum use in the transportation sector, which accounts for about two-thirds of the state's energy consumption.

In 2014, the Hawaii State Energy Office contracted the International Council on Clean Transportation (ICCT) to provide assessments, analysis, recommendations and facilitate stakeholder engagement to support the development of a revised clean transportation roadmap to reduce the consumption of petroleum products in Hawaii's transportation sector.

ICCT's Transportation Energy Analysis Report includes an assessment of what can realistically be achieved in terms of gasoline and diesel reductions by 2030. Considerations included social acceptability, costs, funding availability, and likelihood of implementation, a master list of tactics developed through ICCT's expertise and interviews, and a recommendation of tactics based on qualitative and quantitative assessment.

Primary Targets from ICCT's Transportation Energy Analysis



Vehicle Efficiency

- Procure EVs and efficient vehicles for public fleets
- Vehicle fuel economy standards
- Green freight
- Vehicle retirement incentives for low-income groups
- High efficiency taxis
- Rental car efficiency program



Vehicle-miles traveled

- Transit-oriented development
- Expand infrastructure for alternative transportation modes including bicycling, walking and public transit
- Gasoline and diesel taxation
- Car sharing for public fleets
- Dedicated parking for car sharing
- Commuter benefits legislation
- Support TDM by large employers
- Telecommuting by public employees
- Flexible scheduling for work and classes



Electric-drive vehicles

- State rebates for electric-drive vehicles
- EV rental prioritization for state & county employees
- Extend time-of-use and EV charging rates to all EV customers



Aviation

- Financial support for winglet retrofits
- Airport infrastructure support



Marine

- Slow steaming
- Propeller polishing and hull cleaning

Impact of Recommended Tactics on Hawaii's On-Road Petroleum Demand

STUDY SCENARIO TARGET	FUELS	ACTUAL MGY IN 2011	PROJECTED MGY IN 2030	PERCENT CHANGE 2011-2030
HCEI Roadmap 2011 Edition				
Baseline without energy-savings measures	Petroleum	511*	550	8%
70% clean energy target for transportation (385 MGY)	Petroleum		- 385	
Targeted petroleum demand for on-road vehicles	Petroleum	511	165	- 68%
Transportation Industry Analysis (ICCT, 2015)				
Baseline with adopted energy-saving policies • Adopted federal fuel economy standards • EV sales reach 10% of total sales by 2030 • VMT grows with population	Petroleum Biofuels <u>Electricity & Hydrogen</u> Total	511 35 <1 546	366 34 4 404	- 28%
Impact of planned Honolulu light rail**	Petroleum		- 19	
Impact of recommended tactics for on-road vehicles	Petroleum		- 77	
Potential petroleum demand for on-road vehicles	Petroleum	511	270	- 47%
Remaining petroleum reduction to meet 70% target***	Petroleum		- 105	

* Includes 466 MGY gasoline and 46 MGY diesel. Source: DBEDT Monthly Energy Trends.

** ICCT estimate. See Appendix 3 in full report for underlying assumptions.

*** Several tactics evaluated in this study are recommended for additional research, which could lead to realizing all or part of the additional petroleum reduction needed to meet the 70% target. Indicates on-road petroleum use (MGY) for a given scenario.

Comparison of HCEI Road Map Target with Transportation Energy Analysis

