



Hawaiian Electric
Company, Inc.

Biofuels Transition Strategy

Friday, October 27, 2006





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Biodiesel/Ethanol Comparison

- Biodiesel yields 220% more energy than is used in its production
- Differences between how much energy is created when producing ethanol and biodiesel

<u>Fuel</u>	<u>Energy In</u>	<u>Energy Out</u>
Biodiesel	1	3.2
Ethanol	1	1.3

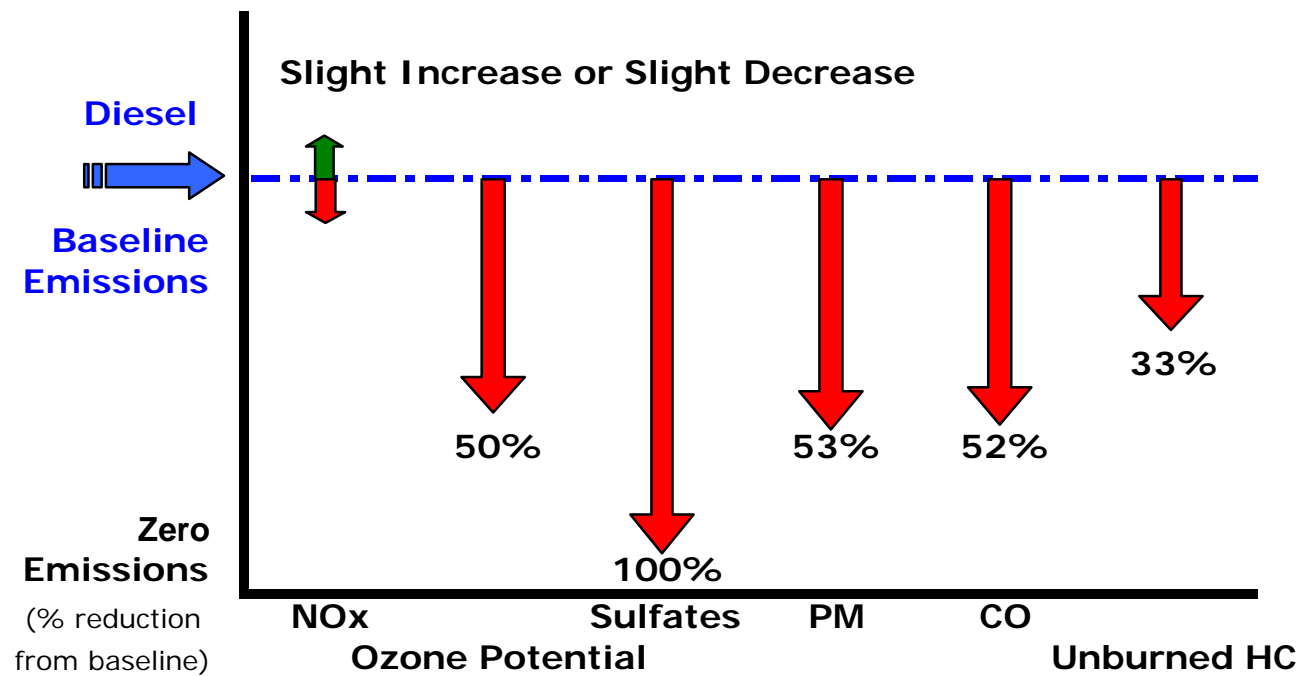




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Emissions Comparison

% Emission Decline: B100 vs Petroleum Diesel





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Biodiesel Currently in Use

- MECO currently uses biodiesel produced from recycled foodservice oils as a start-up fuel and shutdown at Maalaea generating units 12 and 13
- HECO/MECO currently uses biodiesel (B20) from the same supplier in transportation and service vehicles





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Biodiesel Decision

- Biodiesel, unlike ethanol, can be used with little or no change to existing oil power plants
- Initial studies show that no changes in existing power plant licenses will be required to burn biodiesel
- Experience at MECO with biodiesel has been very positive



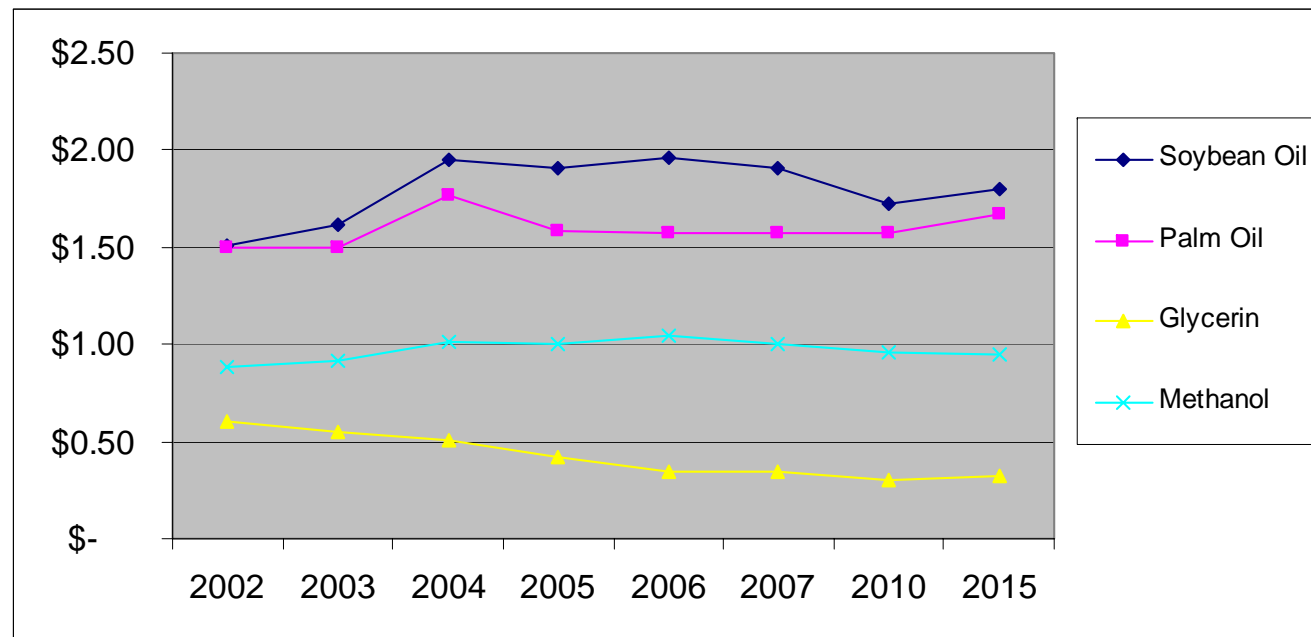


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Security of Supply

Global Feedstock Forward Price Curves

Global feedstock producers are adequately responding to the growing feedstock demands from biodiesel producers... and at such a rate as to overcome demand price pressures.



Per World Bank Pink Sheets, CBOT Historic, ICIS and World Bank forward projections. Palm Oil is a Duty Free import to the U.S. Palm Oil transportation costs (bulk from Malaysia to Hawaii) are included in the table.

- Palm and Soybean Oil are stated in \$/gallon.
- Glycerin (Pharmaceutical Grade) is stated in \$/lb.
- Methanol is stated in \$/gallon



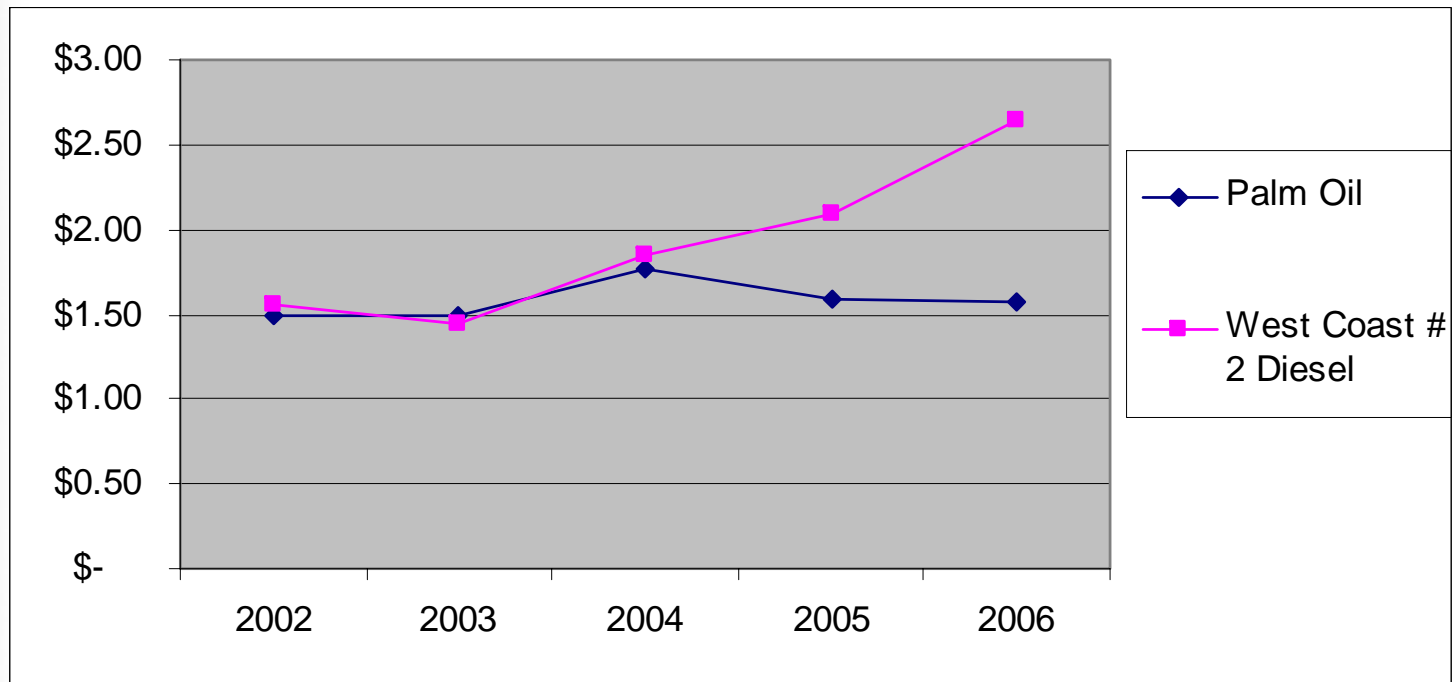


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Security of Supply

Palm Oil Price Independence

No discernable price relationship exists between the
Historic Palm Oil Price and the #2 Diesel Price



Source: EIA Petroleum Prices and
World Bank Pink Sheets





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Utility Biodiesel Market

2005 Diesel Consumption

MECO	1,170,000 Bbls
HECO	122,000 Bbls
HELCO	410,000 Bbls

2005 Fuel Oil

MECO	519,000 Bbls
HECO	8,031,000 Bbls
HELCO	726,000 Bbls
<i>Barbers Point CT 1</i>	<i>285,000 Bbls</i>





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Conclusions

- HECO, MECO, and HELCO could transition existing diesel fired generation units to biodiesel depending on:
 - Price
 - Availability
 - PUC Approval
 - DOH Approval
 - Limitations of existing fuel supply contracts

