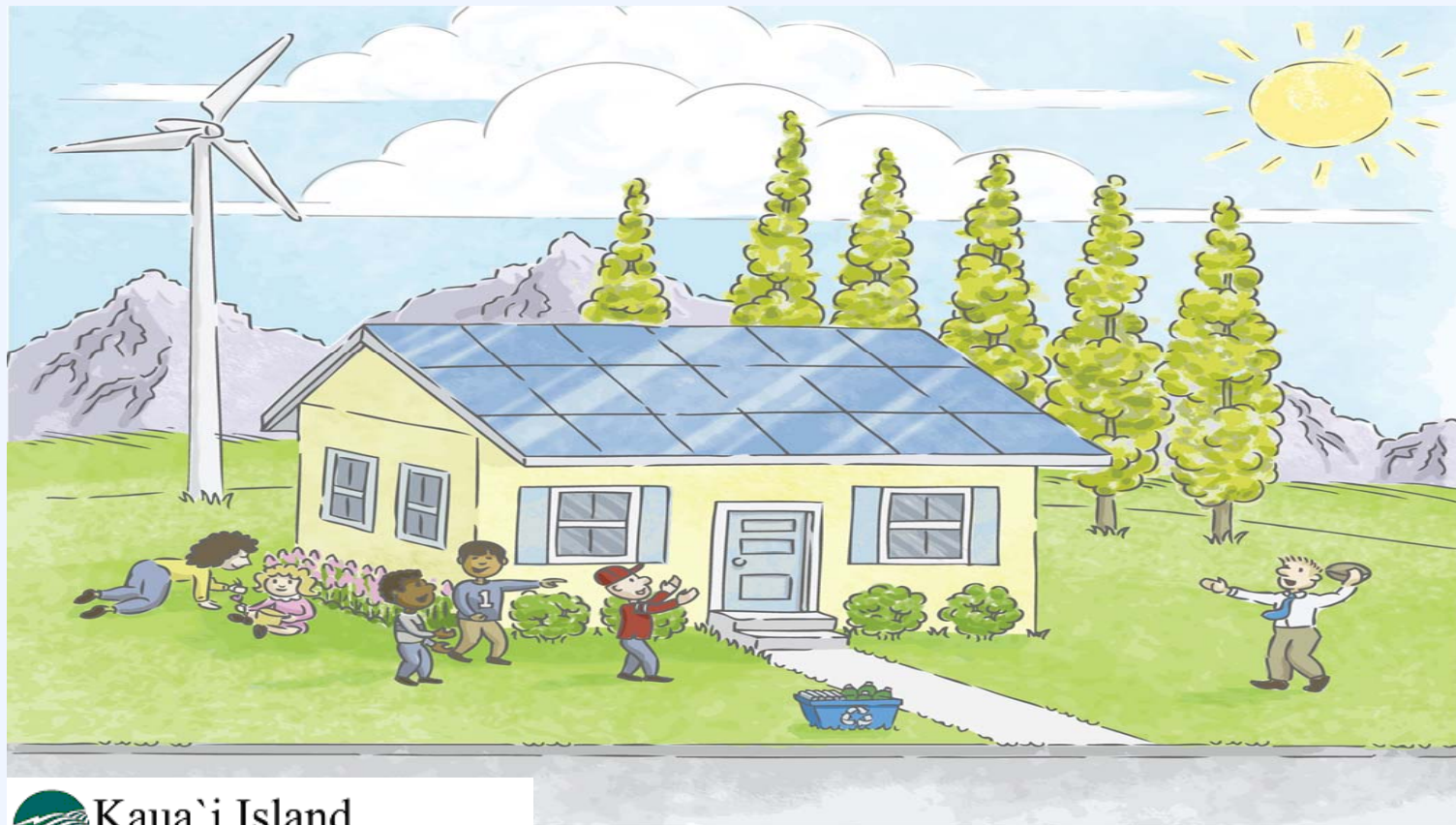


# ***2008 Kaua'i Renewable Energy Conference KIUC Energy Plans***

***September 8, 2008***



# KIUC Key Financial Statistics –2007



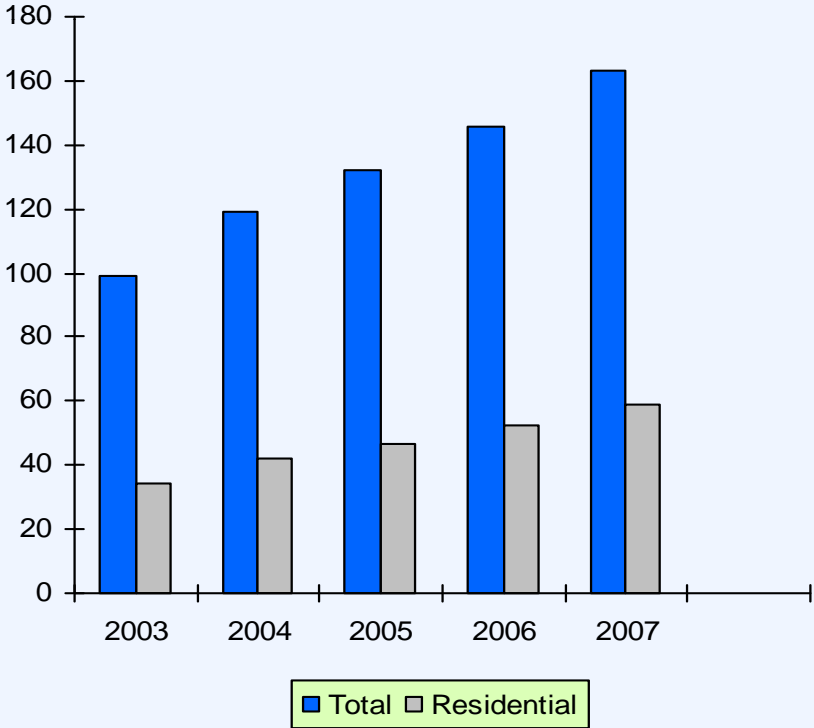
■ Sales	\$163 million
■ Net Margin	\$11.9 million
■ TIER (Times Interest Earned)	2.16
■ Equity	\$41.3 million
■ Equity Ratio	13.8%
■ Utility Plant (net)	\$240 million
■ Debt	\$224 million

# Sales growth primarily from high input cost

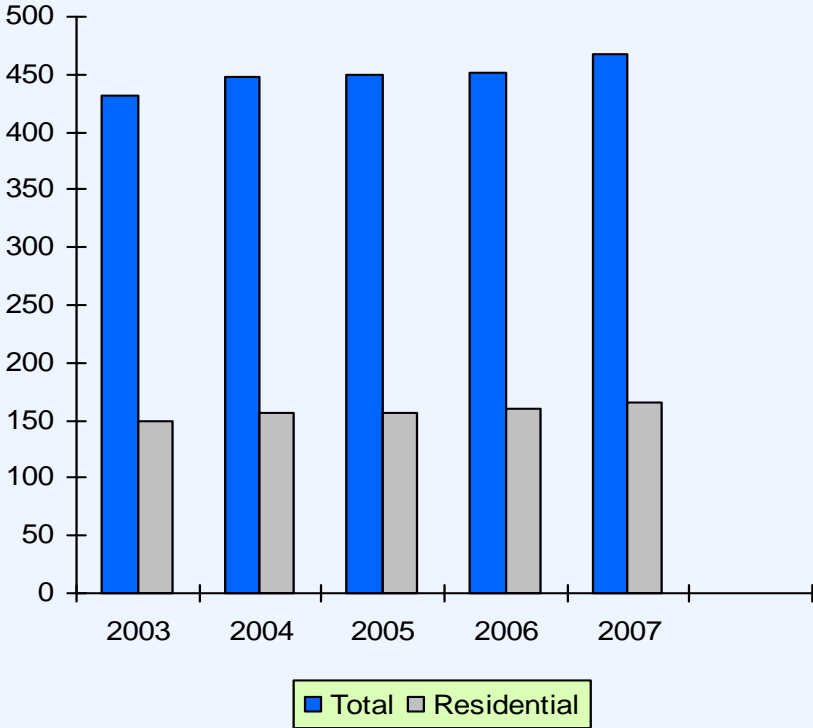


- Average sales growth in dollars 16%
- Average GWh Sales Growth 2%

### Sales in \$'s



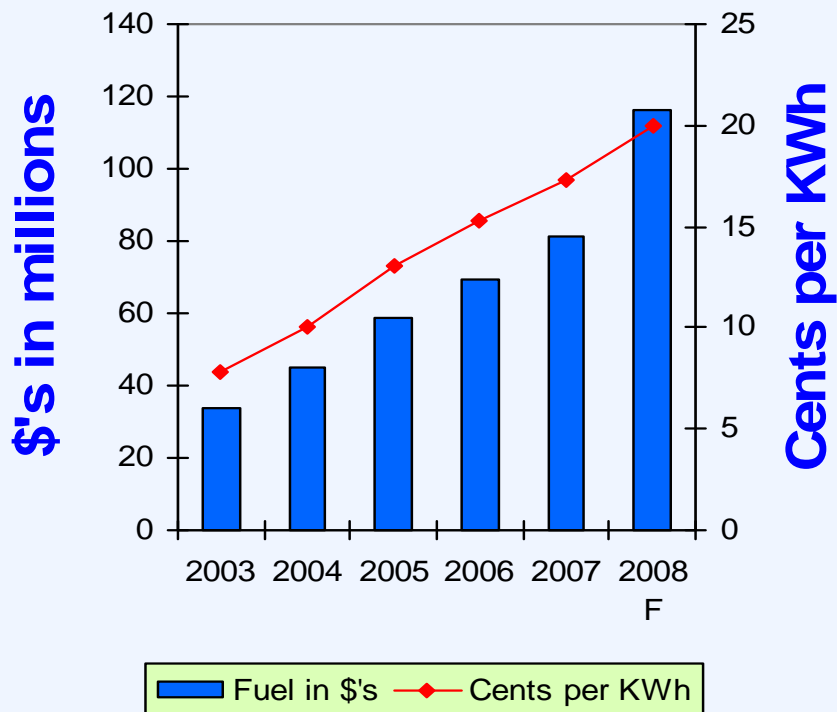
### Sales in GWh



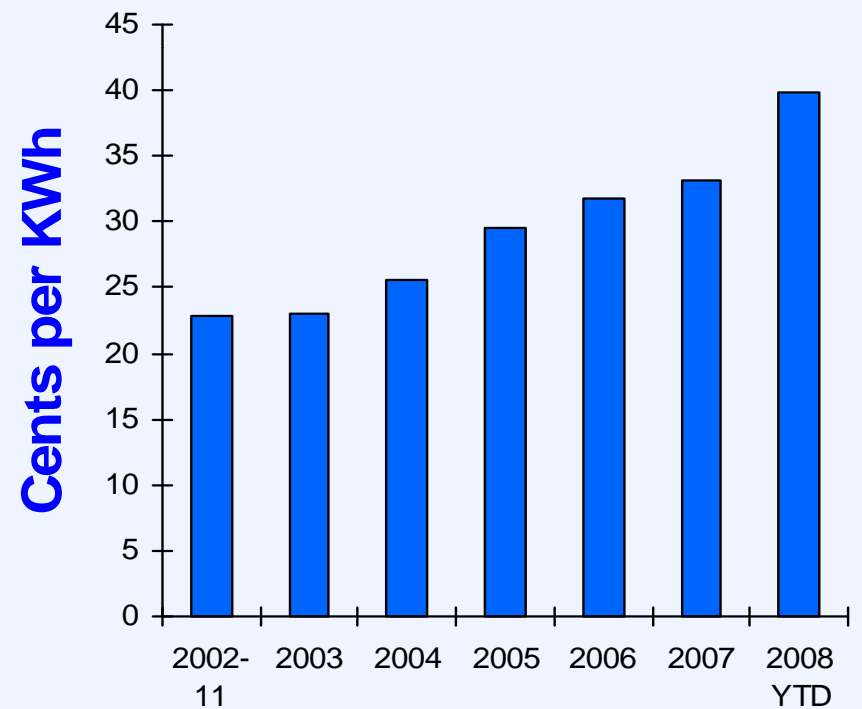
# KIUC Fuel Cost and rising rates



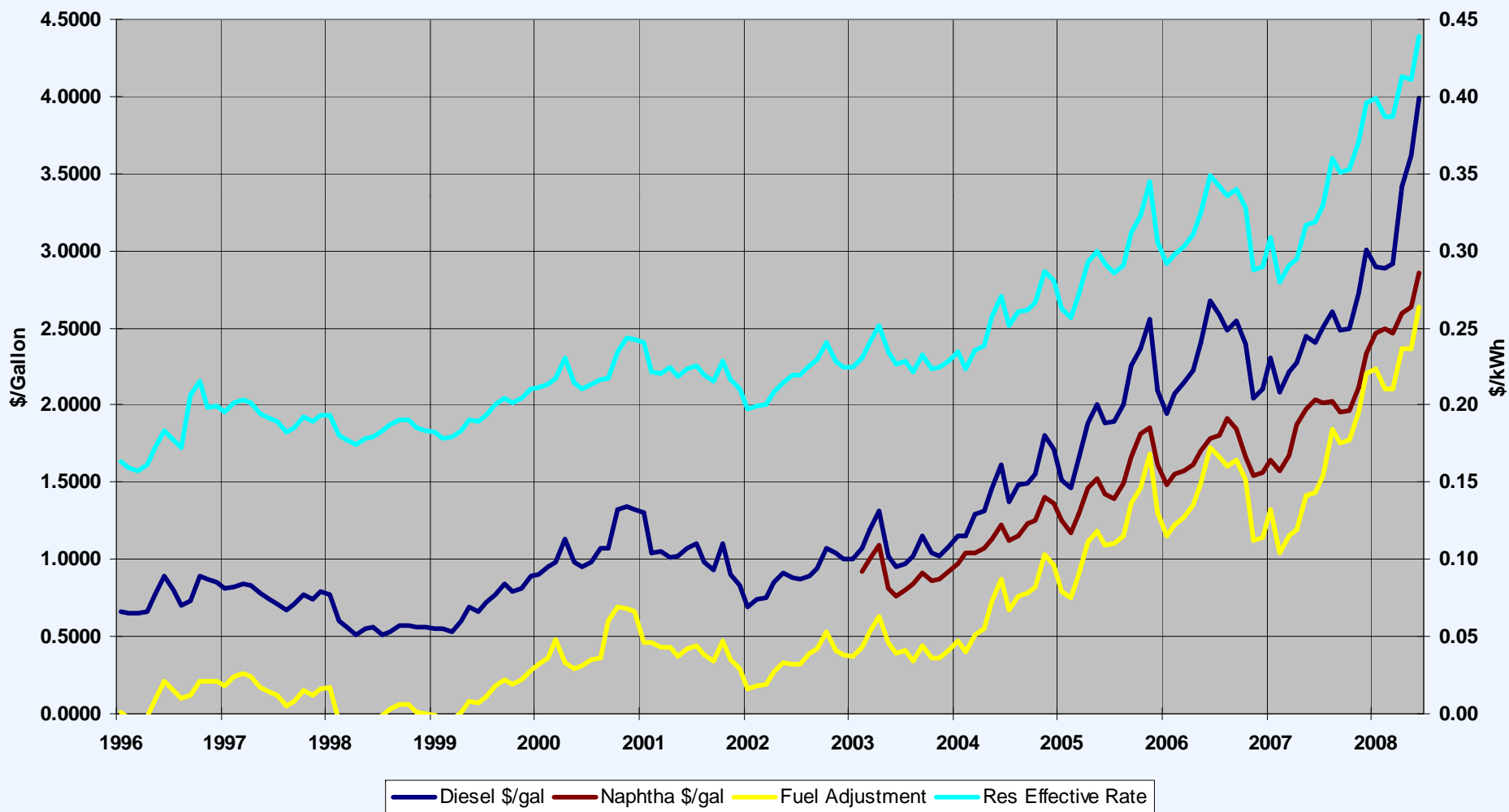
## Fuel and Purchased Power



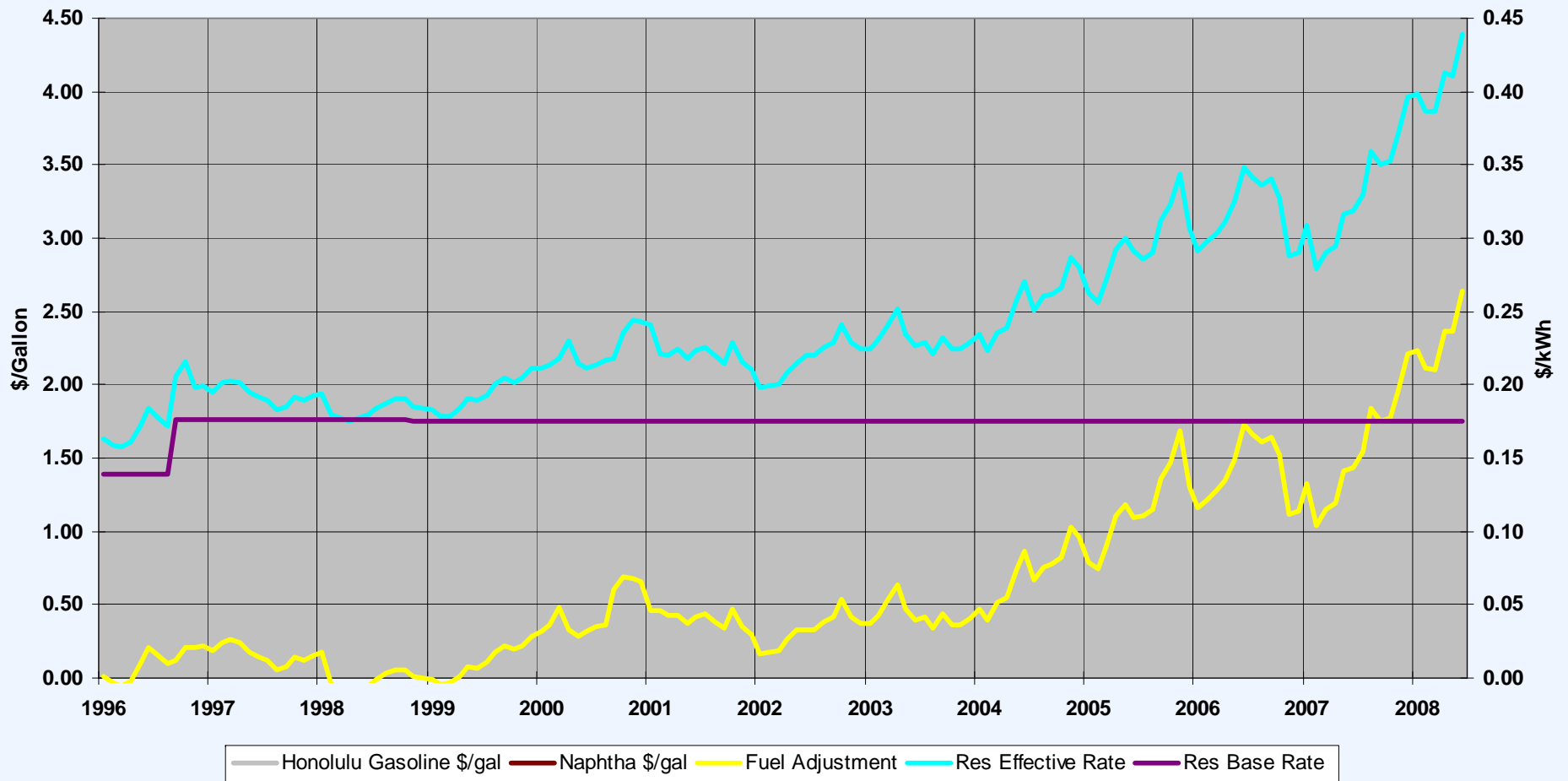
## Avg Energy Cost Per KWh (Residential)



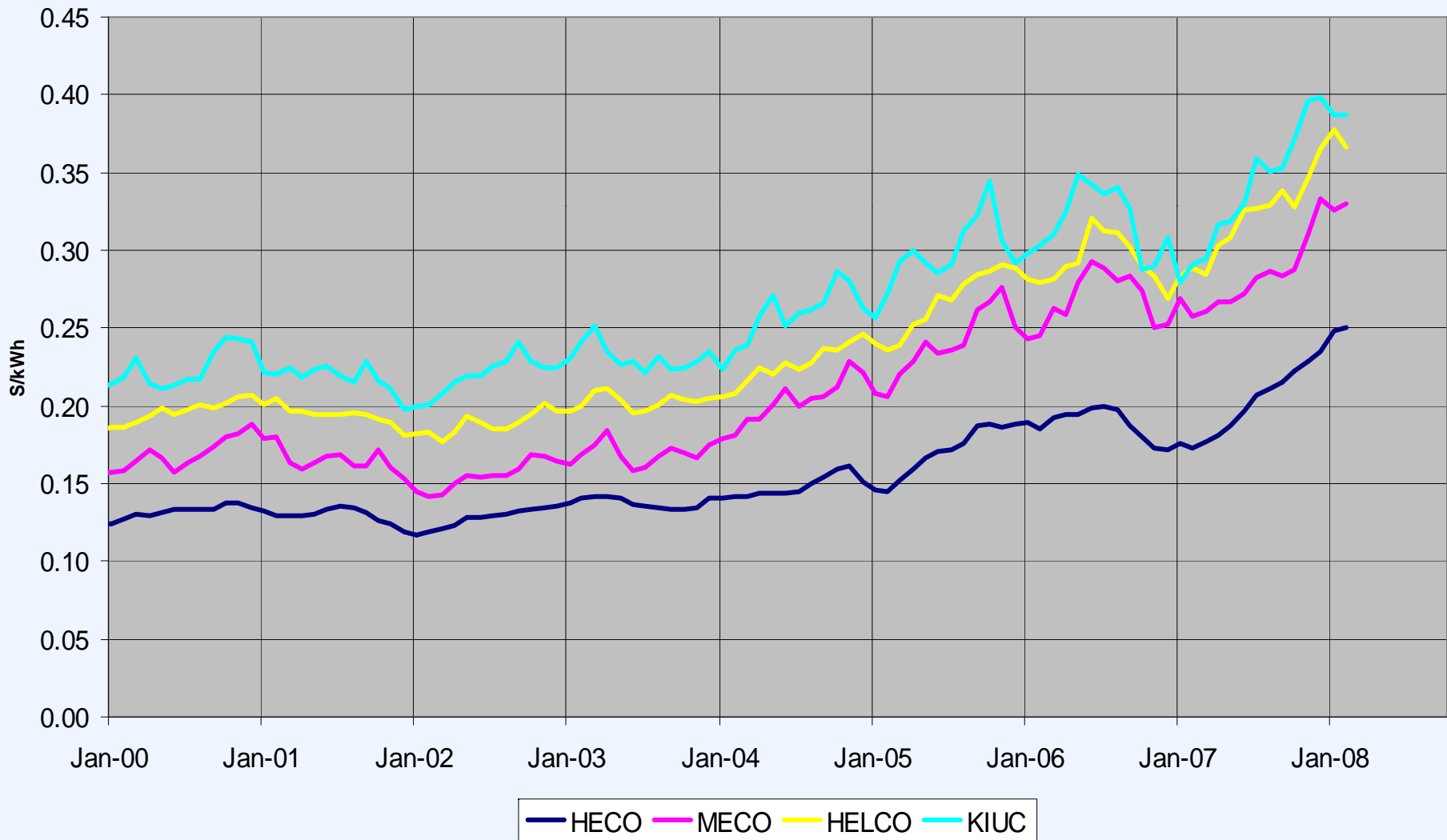
# Rates & Fuel Costs



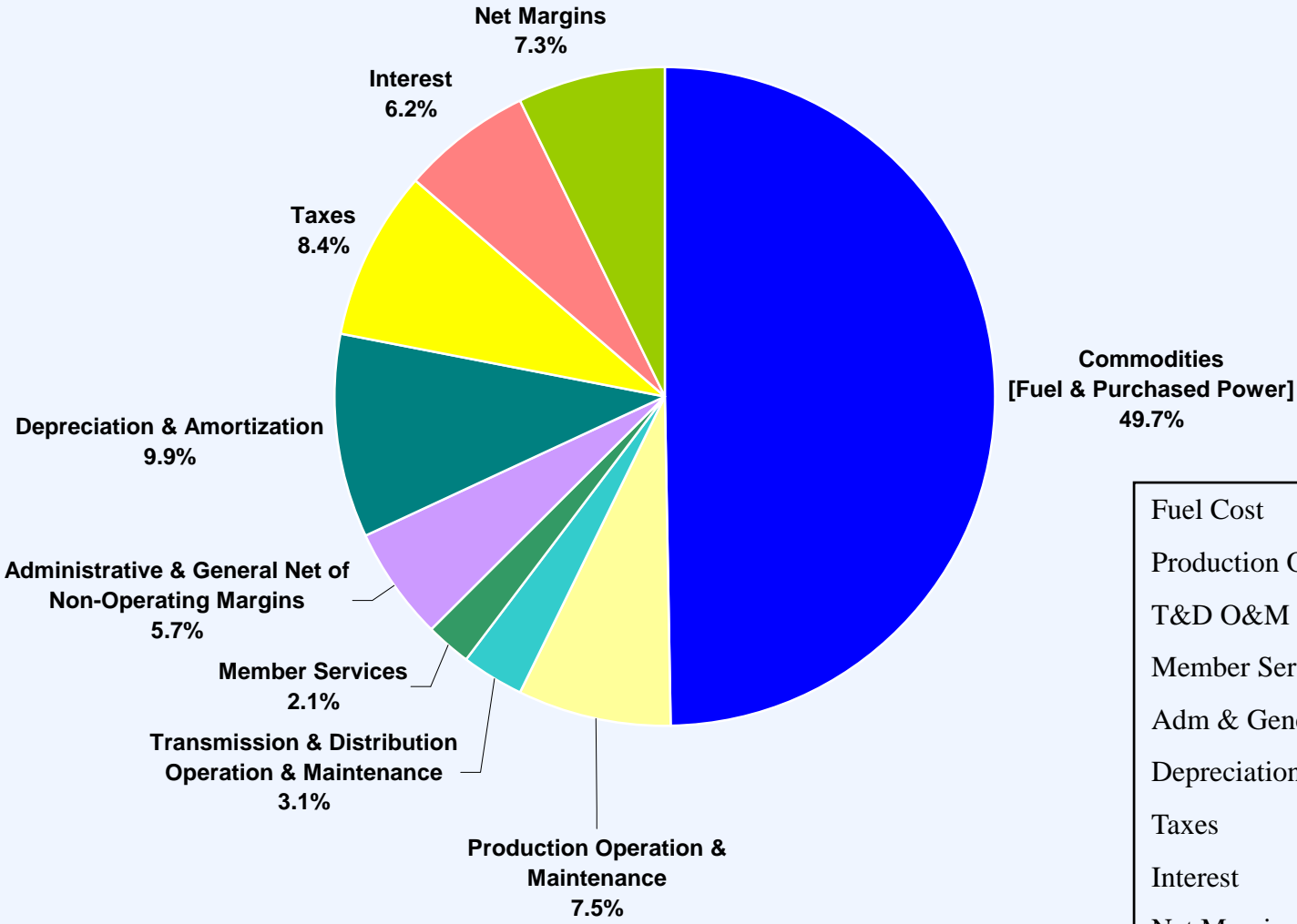
# Base Rate & Energy Adjustment



## Rate Comparison with other Hawaii Utilities



# Where do your utility payments go?



Fuel Cost	\$81.0M
Production O&M	12.0
T&D O&M	4.8
Member Services	3.4
Adm & General	9.8
Depreciation and Amort	16.2
Taxes	13.8
Interest	10.2
Net Margins	11.8

# Strategies for Controlling Costs



## ■ Diversify fuel sources

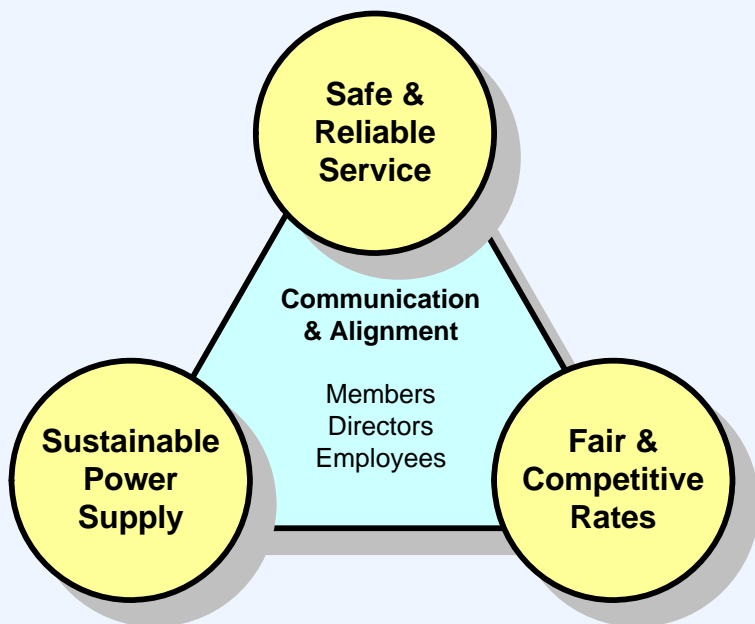
- Increase renewable sources of energy
- High petroleum cost is increasing the financial viability of renewable

## ■ Increase efficiency of liquid fuel generating fleet

- Invest capital to lower fuel use
- Similar to buying more efficient car to mitigate impact of \$4 / gallon gas

## ■ Use financial products to mitigate volatility

# Strategic Plan 2008 - 2023



## ■ Green house gas emissions at 1990 levels

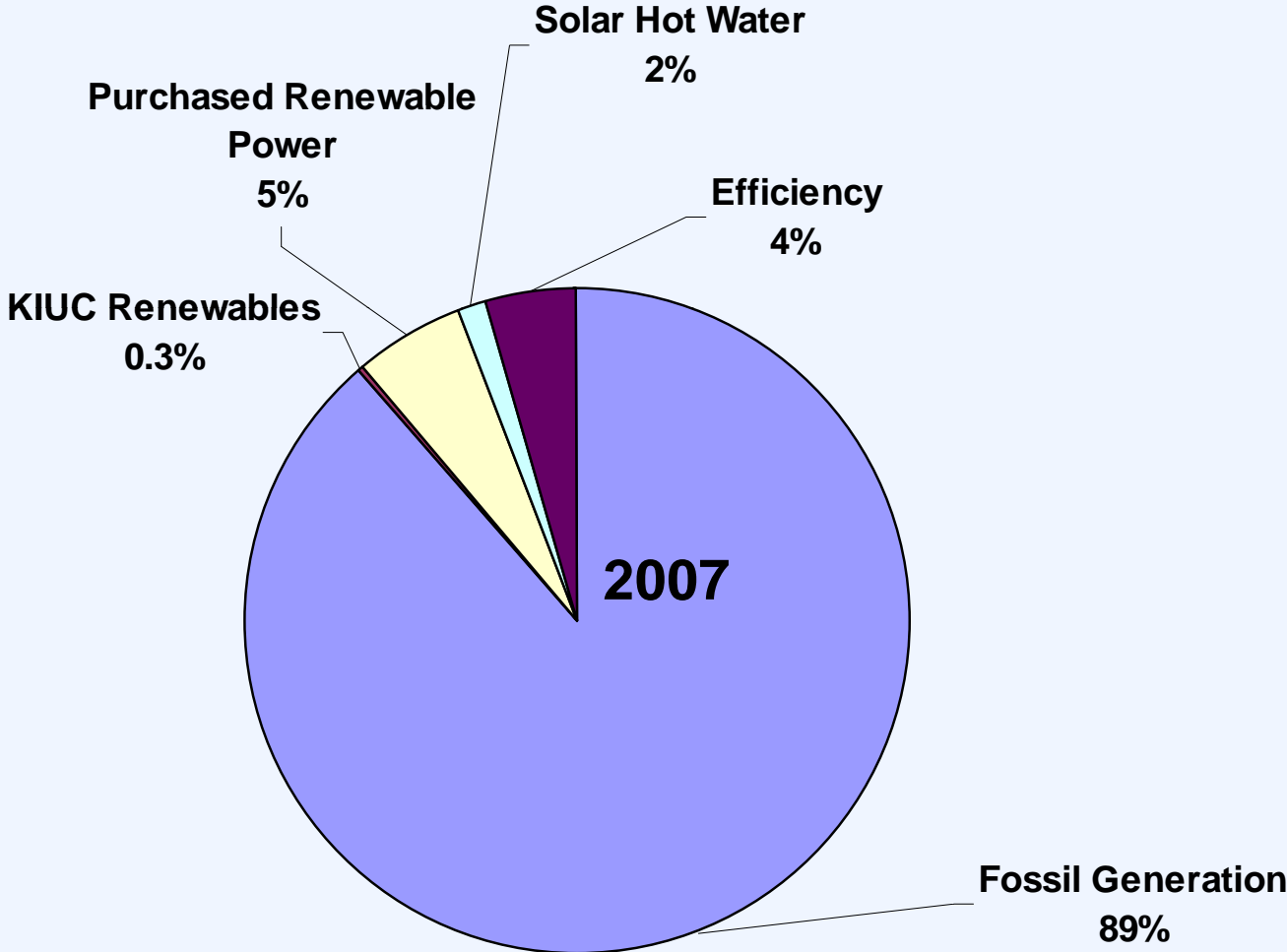
- ACT 234 (2007), HB226

## ■ 50% renewable based energy supply likely needed to achieve

- Hawaii RPS

## ■ Hawaii Clean Energy Initiative

# Energy Supply Today



# Solar Progress Continues



Thursday, July 24, 2008 - 7:31 AM HAST | Modified: Thursday, July 24, 2008 - 8:52 AM

## Hawaii utilities among top solar power users

*Pacific Business News (Honolulu)*

The [Maui Electric Co.](#) and the [Kauai Island Utility Cooperative](#) are among the top power-producing solar electric systems in the country, according to a report released Thursday by the [Solar Electric Power Association](#)

The power association ranked the utilities by the power-producing capacity of solar electric systems in 2007

The Kauai Island Utility Cooperative was No. 6 among the top 10 public power utilities ranked by total solar electric capacity. The utility took the No. 1 spot for public utilities when ranked by total solar electric capacity per customer. Maui Electric Co., a subsidiary of Hawaiian Electric Industries (NYSE: HE), was No. 5 for investor-owned utilities ranked by total solar electric capacity per customer.

California dominated the lists, but utilities in Arizona, Colorado, Hawaii, Illinois, Nevada, New Jersey, New York, Texas, Washington and Wisconsin also made rankings.

On the web: [www.solarelectricpower.org](http://www.solarelectricpower.org)

## Renewable Project Pipeline - Today

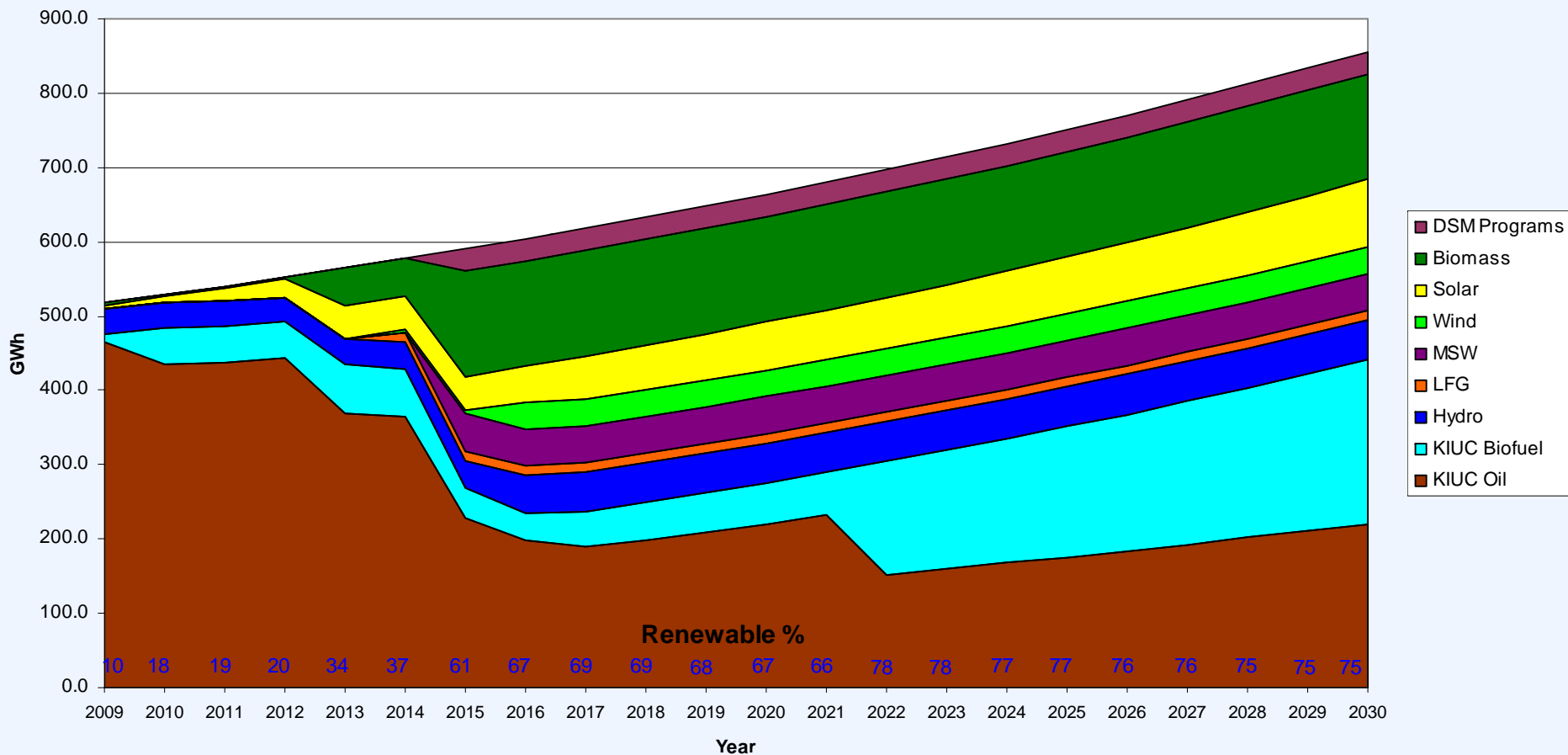


- **Green Energy Biomass – 6.4MW, 45,000 MWh**
- **G&R Biomass- In negotiations up to 90,000 MWh**
- **Solar Thermal- several projects under evaluations totaling over 80,000 MWh, Concentrated Solar & Power Tower technologies**
- **Wind- up to 25,000 MWh**
- **Waste to Energy- 35,000 MWh**
- **Landfill Gas- 12,000 MWh**

# Sustainable Energy Supply-Future



Generation Wedge



# Renewable Challenges



■ Wind- Endangered birds, view plane

■ WTE and LFG- County controls landfill

■ Solar Thermal- Significant land required

■ Rooftop Solar PV & Small wind- Shift from Net Metering to Schedule Q

■ Biomass- Economic viability of agriculture industry

■ Small scale projects

■ Development costs

■ Grid Stability

■ Energy storage

■ Load Growth

■ Hydro- Many potential environmental issues

## Challenge- Load Growth



- 467,000 MWh sales in 2007
- 676,000 MWh sales forecast by 2023
  - 45% increase from 2007
- 209,000 MWh increase would require over 100,000 MWh of additional renewable generation to meet strategic plan target of 50% renewable and significantly greater renewables to meet 1990 greenhouse gas emissions levels

## Increase Efficiency – Liquid Fuel Generation



- **New more efficient, rapid-start generation**
- **Likely sited at Kapaia Power Station location**
- **2-3 year lead time before operational**
- **Bio-fuel capable**
- **Opportunity**
  - Provide firm energy support for intermittent renewables
  - Cost savings from more efficient generation

# Financial Products



- **KIUC assessing opportunity of using financial products (hedges, futures, options) to mitigate exposure to volatility of petroleum based fuel sources**
- **Risk management strategy with sufficient controls essential**
- **KIUC will not enter into speculative transactions**

# Conclusion



## ■ No “magic bullet” solution to KIUC’s energy supply situation

### ■ Best outcome will require

- Implementation of many renewable technologies
- Increased efficiency from liquid fuel fleet
- Demand side control
- Financial products



# Mahalo!

