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Update on Renewable Energy Projects

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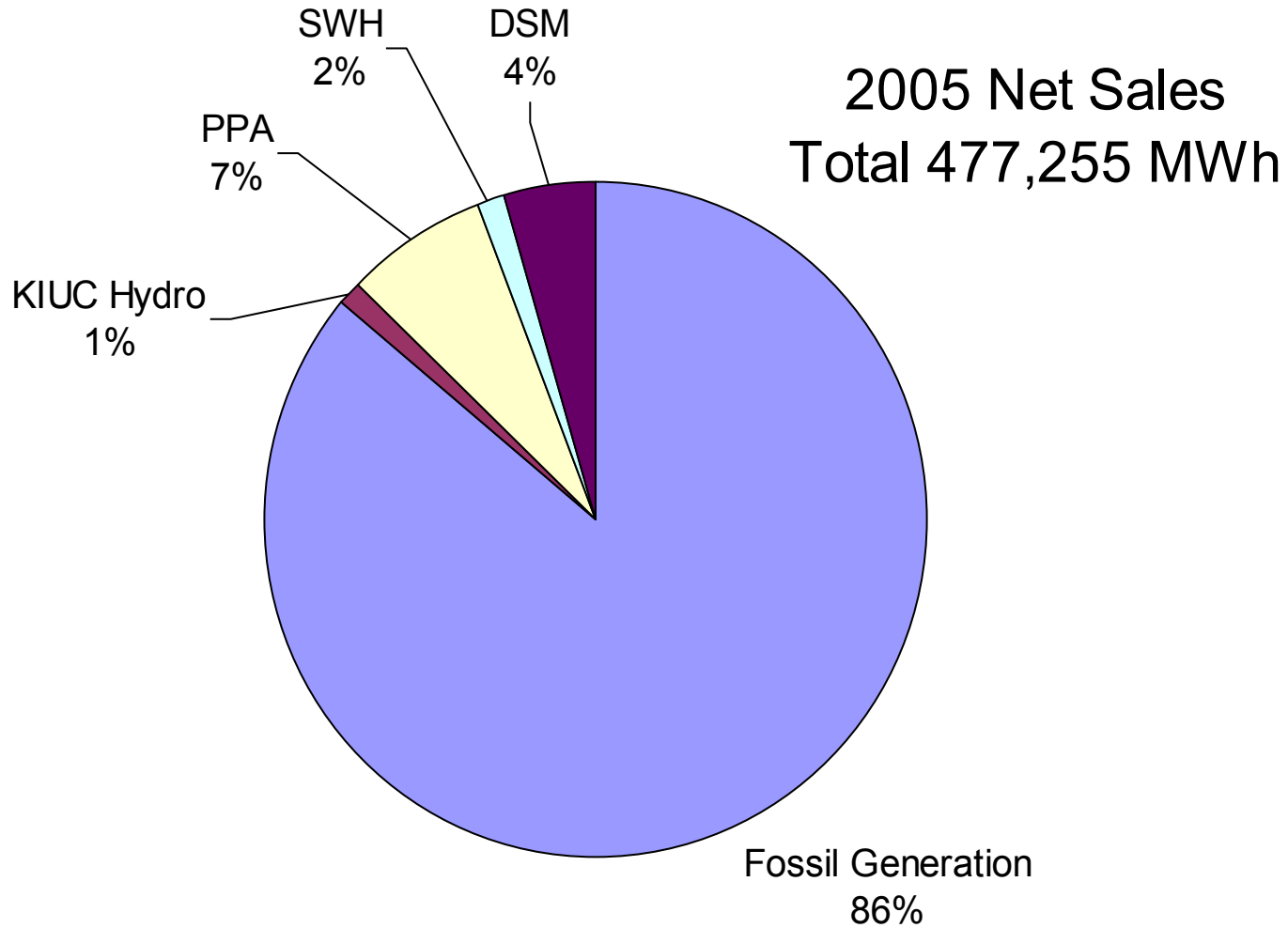
246-8287



KIUC Demand & Supply

- Peak demand of 76 MW
 - 1 MW = 1,000 homes
- Approx. 34,000 meters
- 124 MW of capacity
- Diesel/naphtha fired generation
- Purchase 7% renewable generation

KIUC Today



2006 Integrated Resource Plan (IRP)

- Detailed 20 year plan
- Considers supply and demand
- Required by HPUC
- Includes member input
- Complete mid 2007
- Heavy emphasis on renewable energy

Renewable Energy Request For Proposals

- All renewable energy technologies
- Purchase power
 - Open to alternate forms of ownership
- Energy-only
 - Capacity vs. energy
- Received 20 proposals

Projects Selected

	UPC Wind	Cleaves Biomass	Green Biomass	Barlow WTE
Net Capacity (MW)	10.5 - 14	4.2	8.5	5.3
Fuel	Wind	Walnut shells*	Wood chips	Trash
Annual Generation (%)	9%	6%	12%	7%
Price (¢/kWh)	At or below our avoided cost			
In Service Date	July 2008	June 2007	Dec. 2007	2010

Green Energy Biomass Project

- Size: 8.5 MW
- Pros
 - Site control – Letter of Interest
 - Good fuel plan – existing tree farm
 - Price
 - Locally owned
 - High capacity factor
- Status
 - Site Lease
 - Interconnection study
 - Preliminary engineering & permitting

Cleaves Biomass Project

- Size: 4.2 MW
- Pros
 - Site control – Letter of Interest
 - Price
 - Relocation of an existing plant
 - High capacity factor
- Status
 - Obtained a site license
 - Finalizing technology & fuel supply

UPC Wind Project

- Size: 10.5 - 14 MW
- Pros
 - Site control – Letter of Interest
 - Price
 - Development experience – Maui 30 MW
 - Innovative problem solving
 - Impressive environmental efforts
- Status
 - Selected primary site
 - Bird & wind studies
 - Public outreach
 - Investigation system impact

Barlow Trash-To-Energy

- Size: 5.3 MW
- Pros
 - Development experience
 - Price
 - High capacity factor
- Status
 - Awaiting out come of County' s SWMP
 - Pursuing a site
 - Public outreach

Clean Renewable Energy Bonds

- Financing tool for public power
 - Interest free loans for renewable projects
 - Utility owned projects
 - \$800 million available
- KIUC awarded funds for seven projects
 - 1 x Landfill gas project
 - 2 x Hydro upgrades
 - 4 x Large photovoltaic projects

Biodiesel Pilot Program

- Why biodiesel?
 - Burns cleaner*
 - Integrates easily
 - Approved by engine manufacturer
 - Potential to produce locally
- Pilot Program
 - 7.8 MW Wartsila diesel
 - Test various % blends
 - Monitor engine emissions & performance
 - In-line blending system

Summary

- KIUC is heavily dependent upon fossil fuel
 - Only 8% renewable in 2005
- Aggressively pursuing renewable energy projects
- KIUC is committed to lessening our dependence of fossil fuels