

KIUC Quarterly Update

May 19, 2010



The power of human connections®

Financials & Rate Case Update

David Bissell

Vice President & CFO

Rate Case

- Settlement reached with interveners
- PUC interim order issued
 - Interim rate should be in place by June
- Final Order after June

Rate Case

- 2% Overall revenue increase \$ 3.1m
- ERAC Margin to base rate \$10.5m
 - Stabilizes financials
- 4.3% Residential rate increase
 - Approximately \$8 / month
 - Impact will be less if fuel cost are higher

Rate Case

- Patronage Retirement
 - 100% of margin if TIER is over 2.0
 - Previously 25% of any margin
- ERAC – Fuel Incentive
 - Remains but will have much less impact on rates

Economics of Efficiency

- Does efficiency result in lower bills?
- Yes, if you reduce your usage at, or greater than average
 - Base cost still must be recovered
 - Fixed until next rate case however
 - Fuel savings will more than offset

Efficiency Example

- Assume a 10% sales reduction
 - Original Sales 444 GWh
 - With efficiency Sales 400 GWh
 - Cost to be recovered without efficiency
 - Non-fuel ($\$80\text{m} \div 444 \text{ GWh}$) 18¢ / KWh
 - Fuel 18¢ / KWh
 - With efficiency related sales decrease
 - Non-fuel ($\$80\text{m} \div 400 \text{ GWh}$) 20¢ / kWh
 - Fuel 18¢ / kWh
- Typical Residential Consumer
 - Original 500 kWh / month
 - Non-fuel $18\text{¢} \times 500 = \90
 - Fuel $18\text{¢} \times 500 = \underline{\$90}$
 - \$ 180
 - Usage reduced 10% to 450 kWh / month
 - Non-fuel $20\text{¢} \times 450 = \90
 - Fuel $18\text{¢} \times 500 = \underline{\$81}$
 - \$ 171

Unaudited Financial Results

	Q1 - 2010	Q1 - 2009	
GWh Sales	104.6	103.4	+1.2%
Average Rate	35¢	27¢	+30%
Commodities Cost (<i>millions</i>)	\$16.9	\$10.4	+63%
System Heat Rate (<i>BTUs/kWh</i>)	9,293	9,370	-.8%
Expenses –excluding commodities & taxes (<i>millions</i>)	\$14.7	\$15.2	-3.3%
Net Margin (<i>millions</i>)	\$2.1	-\$0.17	nm
TIER	1.92	.96	nm
Equity Ratio	19.4%	16.2%	+3.2%

Seabird Update

Carey Koide, P.E.

Support Services Manager

Save Our Shearwater 2009

	Total	Released	Died	% Survived	% Died
Newall's Shearwater	265	231	34	87%	13%
Hawaiian Petrel	15	10	5	67%	33%
Band Rumped Storm Petrel	2	1	1	50%	50%

Habitat Conservation Plan

- Since 2002, KIUC has been working diligently and cooperatively with the U.S. Fish and Wildlife Service and the Hawaii Department of Land and Natural Resources
 - In October 2007, KIUC submitted its proposed HCP, and applications for incidental take permits, to both the USFWS and DOFAW
 - In December 2008, both USFWS and DOFAW concluded that they were unable to approve any long-term HCP and incidental take permits/license for these species
 - Agencies jointly recommended modification of the HCP for only 5 years
 - In April 2009, KIUC submitted Short Term HCP

HCP Approval Process

- DOFAW initiated public review process in December 2009
- DOFAW continues to fail to prepare responses to public comments or make promised submittals to ESRC
- USFWS continues to fail to initiate federal public review process, saying only that “it will happen when it happens”

KIUC Commitment

- KIUC has expended over \$4.0 Million of our members' money for
 - Voluntary mitigation
 - Development of HCP
 - Defending against the threatened criminal and civil enforcement actions
- KIUC seeks approval of HCP and issuance of incidental take permit and license
- Ready to commit to over \$3.6 Million over 5 years for mitigation and additional studies of the species

- Kauai Seabird HCP
- Earth Justice Suit
- Department of Justice

KIUC AMI Project

Mike Yamane, P.E.

Engineering Manager

AMI: Definition & Functionality

Advanced Metering Infrastructure (AMI) - “Smart Metering”

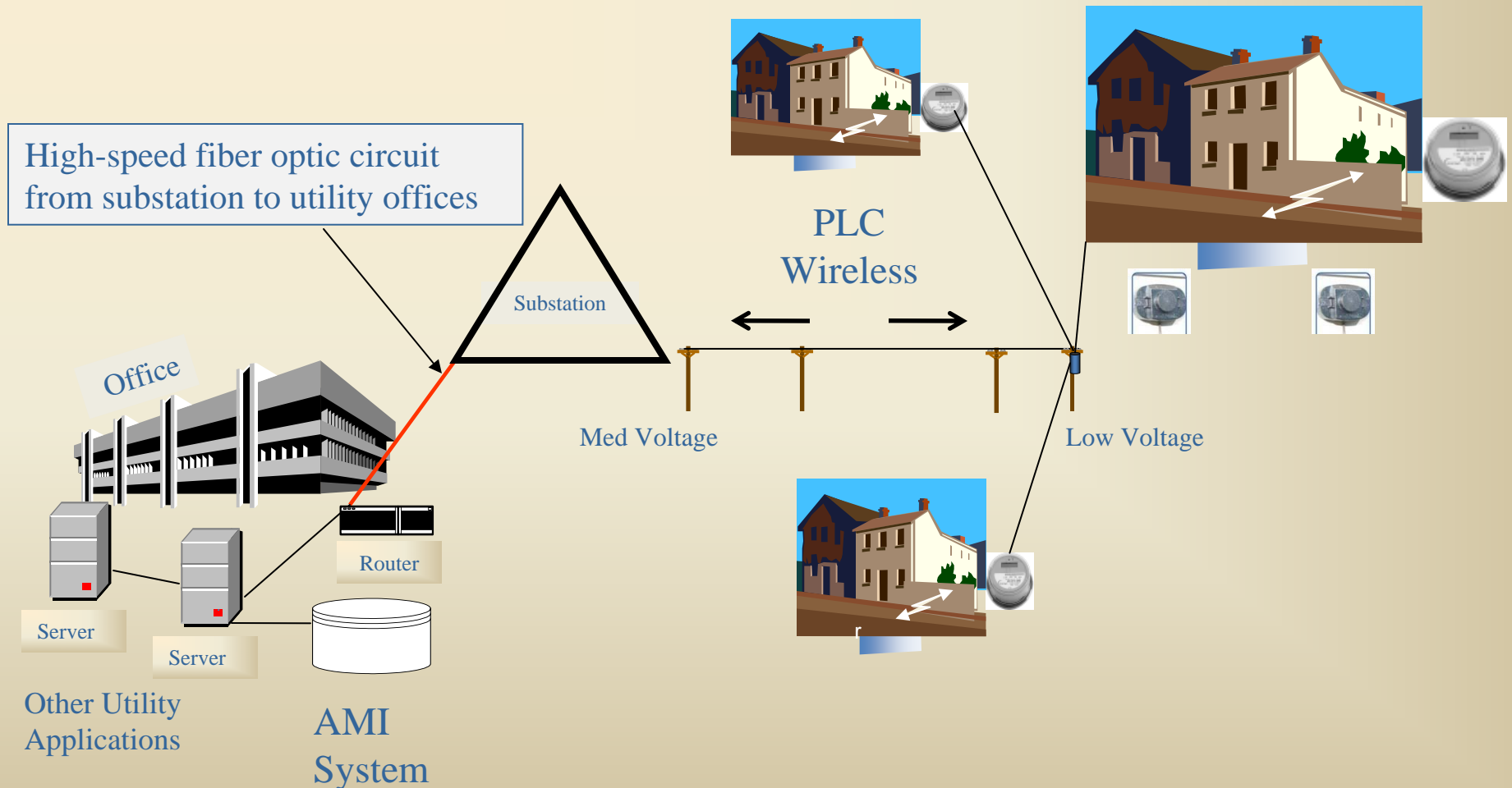
The communications hardware, software, associated system, and data management software that creates a two-way network between advanced meters, meter modules, and utility business systems.

AMI Functionality

- Two-way communications
- Meter reads
- Connect/disconnects
- Capacitor switching
- Load management
- Critical peak pricing
- Demand response
- Outage detection
- Real-time voltage readings
- Distribution automation
- Tamper/theft detection
- Rate and service
- Pre-pay
- On-demand reads
- Phase change tracking

AMI Technology - Power Line Carrier

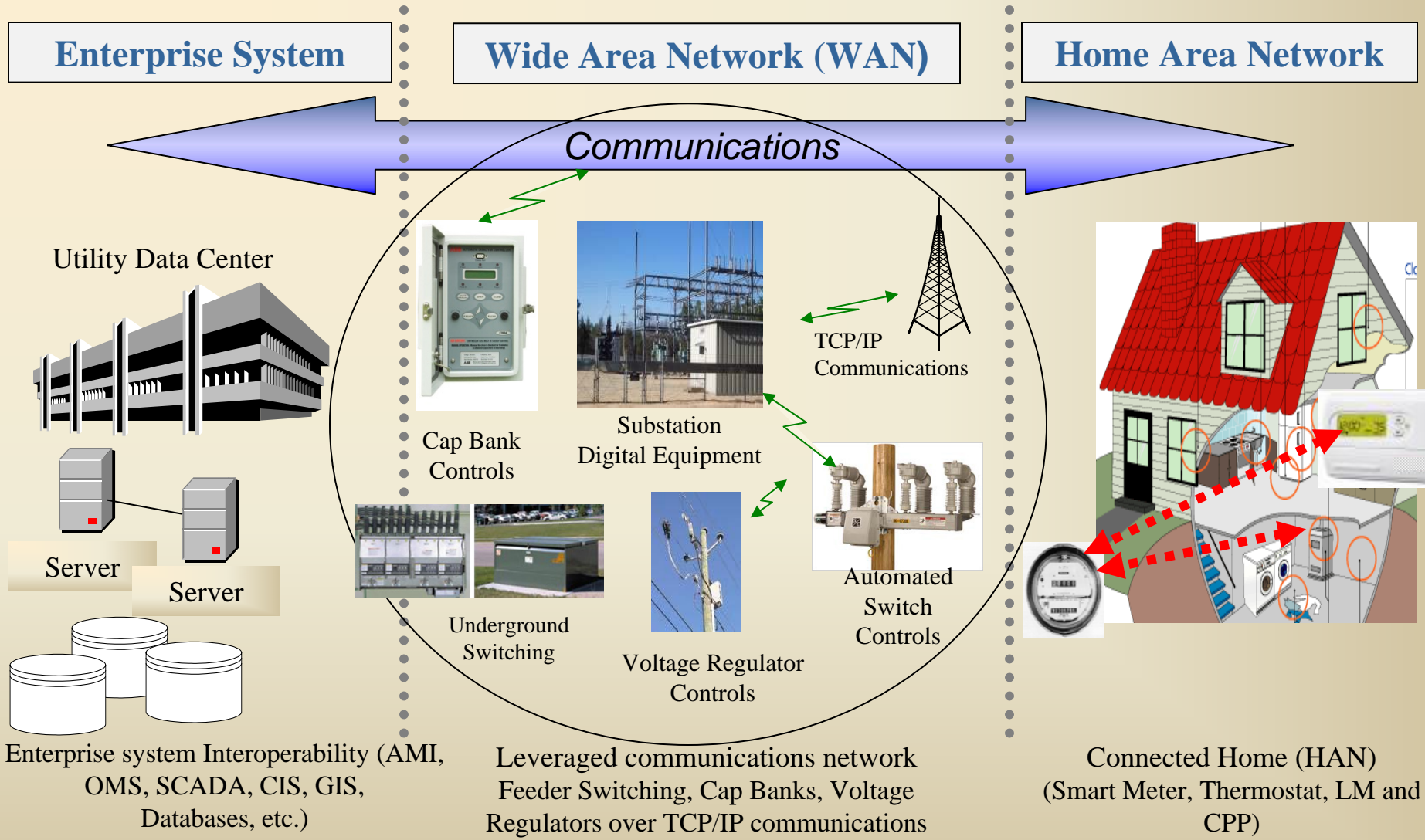
Power Line Carrier (PLC) uses both low and medium voltage electric distribution facilities to transport meter data between the customer premises and the utility office.



Customer Benefits

- Accuracy – fewer read errors
- Fewer estimated bills
- No meter readers on property
- Billing date flexibility
- Monitor energy consumption
- Improved power quality
- Faster outage restoration
- Potential energy efficiency savings for the customer

Smart Grid System Segments



KIUC AMI Project

- Install 33,000 smart meters
- Install Island-wide communications infrastructure
- Install associated hardware/software
- 5 year demonstration project
- 2 year installation + 3 years reporting

KIUC Energy Storage Project

Why Energy Storage ?

- 4 MW aggregate by 2010 customer sited
(Largest single is 500 KW)
- Utility scale looking at 1-3 MW size
- Technical issues
 - PV response (cloud cover)
 - Voltage variation on distribution feeder (flicker)
 - System frequency excursions

PV Response to Cloud Cover

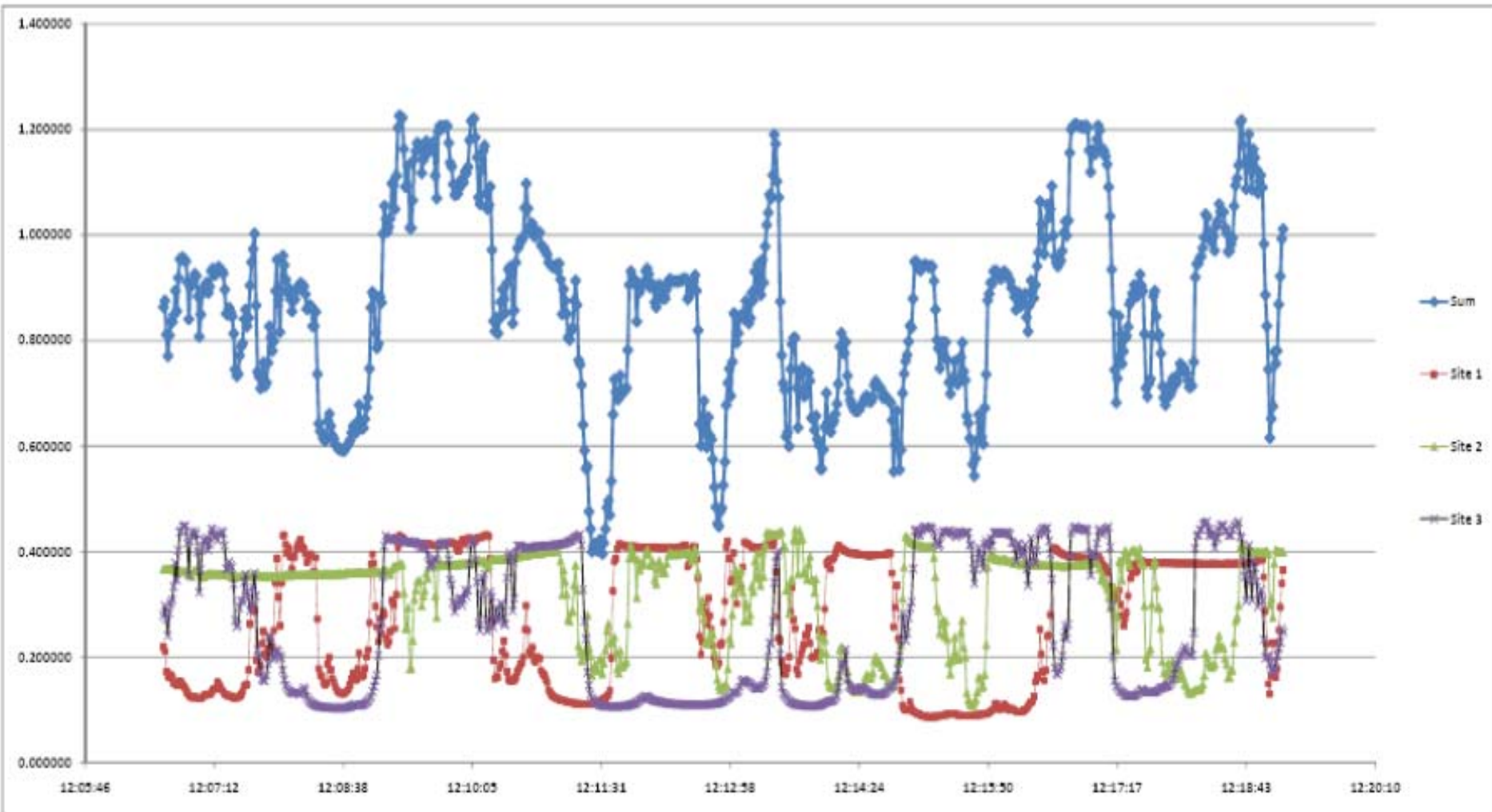


Figure 4 – Irradiance 1-Second Data

PV Response to Cloud Cover (cont.)



Technical Issues to Grid due to PV

- Ramp rates may exceed machine response
- Load shedding may occur
- Voltage variations on individual feeders(flicker)
- Stress on machines
- Instability on system

Energy Storage Solution

- Studying energy storage since 2005.
- Sandia study SAND2009-2679
- EPS transient stability study 2006
- GE stability study
- High-speed data recorder on both plants.
- PSS/E dynamic modeling on KIUC system.
- All point to energy storage to address multiple system issues including intermittent generation sources

Energy Storage Solution(cont.)

- Applied for energy storage demonstration grant with NRECA/CRN
- Continue to work with NRECA/CRN for funding
- Working with HNEI on additional funding.
- KIUC approved capital budget for 5 million dollars in 2010-2011

Legislative Barrel Tax

Mike Yamane, P.E.

Engineering Manager

House Bill 2421

Food & Energy Security Tax

- Act 73 effective July 1, 2010
- Increases tax on one barrel of petroleum products from \$0.05 to \$1.05
- \$0.05 allocated for Environmental Response
- \$0.15 allocated to State Energy Security Special Fund
- \$0.10 allocated to State Energy Development Special Fund
- \$0.15 allocated to State Agricultural Development and Food Security Special Fund
- Act repeals on June 30, 2015

House Bill 2421

Food & Energy Security Tax

Impact to KIUC:

- Equates to approximately 2.5 cents/gallon additional tax on fuel
- Impact on margins approximately \$700K
- Impact to typical residential member approximately \$0.77/month

Renewables Update / Q&A

Randy Hee
President & CEO

Technology - Solar

Project	MW	Annual Production MWH	Commercial Operation Date	Land/Rights Owner	Status	Location
Solar Thermal Parabolic Trough thermal storage	10 to 15	26000-40000	4/1/2012	Private	Negotiating PPA	Kekaha/Waimea
Photovoltaic Farms	5.0	8,760	2010-2011	Private/State	Finalizing PPA's	Kapaa/Koloa/Kilauea
Solar Build out Continues			2012-2030	Private/State		

Technology - Biomass

Project	MW	Annual Production MWH	Commercial Operation Date	Land/Rights Owner	Status	Location
Albezia and other tree crops	6.4	48,560	12/31/2012	Green Energy Hawaii	On going with recent positive developments	Knudsen Lands
Biomass Project	20.0	120,000	?	KIUC	On going	?

Technology – Landfill Gas

Project	MW	Annual Production MWH	Commercial Operation Date	Status	Location
PMRF / County Landfill Gas Project	1.6	12,500	?	County working with PMRF	PMRF or landfill

Technology - Hydro

Project	MW	Annual Production MWH	Commercial Operation Date	Land/Rights Owner	Status	Location
Upper Waiahi Upgrade Project – to improve water usage	0.3	1,800	12/31/2012	KIUC	Completing cultural study for long term lease. Evaluating upgrade potential	Upgrade Waiahi
Kekaha / Kokee Ditch System	8.0	42,000	12/31/2015	KAA	Under study	Waimea Mauka
Olokele Ditch Irrigation system	4 to 10	35,000	?	Gay & Robinson	Under study	Olokele Ditch
Upper Wainiha Project	4.0	23,000	?	A&B	Future project	Upper Wainiha
Wailua Falls Project	6.6	16,000	?	Pacific Energy Resource	Future project	Wailua Falls

Questions?

For more information www.kiuc.coop



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