

# FIRST IN THE WORLD

## KIUC opens new 52 megawatt-hour solar farm

Jessica Else  
THE GARDEN ISLAND

LIHUE — Kauai is now home to the largest integrated solar and battery facility in the world.

MWH Tesla Powerpack solar farm is the first battery power use holds course, de

Bissell at a blessing held for the solar farm on Wednesday.

KIUC landed on the idea of the solar farm as a way to expand its renewable energy focus according to Jan TenBruggencate, president of the KIUC Board of Directors.

"In 2014 KIUC sought to balance its expanding renewable energy portfolio with dispatchable renewable power generation," TenBruggencate said. "At the time, there were no large scale solar plus systems anywhere in the

The result was a 2015 Solar City and KIUC purchase power agreement for a 13-megawatt solar project, coupled with a 52-megawatt power battery system.

Tesla came on board in February 2016 when Solar City selected the company to supply the 52-megawatt power pack lithium ion battery system.

"The beauty of this project is that it allows KIUC to reduce the amount of oil fired power generation needed to meet our peak de-



It's the first step of many to come in the realm of solar power and battery storage systems, and experts believe the technology will evolve rapidly over the next few years.

"This is new technology and it's very exciting," said JB Straubel, chief technical officer of Tesla.

The concept has the ability to be scaled to fit multiple needs," Straubel said, and could be used in both small and industrial-scale business to have battery storage on site for things like backup power.

"Storage is a challenge for us here in Hawaii," said Gov. David Ige at Wednesday's blessing. "I want to congratulate the community for

about half a mile away in closest power lines.

"It was better to get off and the way we did it, we incrementally," he said. "Every few years we'd buy a few panels."

Initially Harder and his wife only 12-volt lights, a gas stove and solar-heated water.

"We had the necessities of a refrigerator and a stove, but things broke and appliances were replaced," Harder said.

By 1990, Harder had a satellite dish and a TV. And a few years later, he was able to upgrade it to a gas-powered refrigerator, to a foot electric fridge.

"We have everything everyone else does, but it is sort of a battery system."

# Welcome

## 2018 Annual Meeting

### WATER

After more than 100 years, water is being returned to the Waimea River.

On Tuesday the Hawaii Commission on Water Resource Management approved a mediated settlement reached in a complaint that "will immediately restore continuous flows in the Waimea River, as well as provide the opportunity for a renewable energy project, water for Hawaiian homelands, and farming," according to a release from the state Department of Natural Resources.

The decision is in regards to the decision made by Po'ahi Waia, Oahu.

Today's agreement ensures that for the first time in over 100 years, life-giving water will once again flow continuously in Waimea River, from mouna (mountain) to makai (sea), which is vital for the health of the river and our community," said Galen Kaohi, president of Po'ahi Waia, Oahu.

Under the agreement, tens of millions of gallons of water will be restored to the river daily.

The foundation for the project can build the future on the Westside of Kauai, executive vice president of ADC.

The Kauai Island Utility Cooperative Board of Directors set a goal of 70 percent renewable energy by 2030 in a new strategic plan.

### strategic goals

LIHUE — The Kauai Island Utility Cooperative Board of Directors set a goal of 70 percent renewable energy by 2030 in a new strategic plan.



reducing the utility's contribution to greenhouse gas emissions, adapting to the direct and indirect impacts locally and developing mitigation measures to protect the cooperative's assets.

Obtain long-term incentives from federal and state programs that set requirements for conservation of endangered bird species.

Continue investing in technology to effectively manage costs or improve service offerings.

Implement smart-grid technology to continue our transition towards a 100 percent renewable future and lower operating costs.

# Harnessing the power of the sun



## Kauai Island Utility Cooperative

Your Touchstone Energy® Cooperative

### KIUC unveils energy project

THE GARDEN ISLAND

LIHUE — Kauai Island Utility Cooperative and AES Distributed Energy Inc. announced power purchase agreement for a 52-megawatt solar and battery storage project, power would be produced during the day and stored in batteries to be used during KIUC's peak in the evening hours, when there is no sunlight," Bissell

### lar farm set to open this year

to using 10 million gallons of diesel less than we were using in 2008."

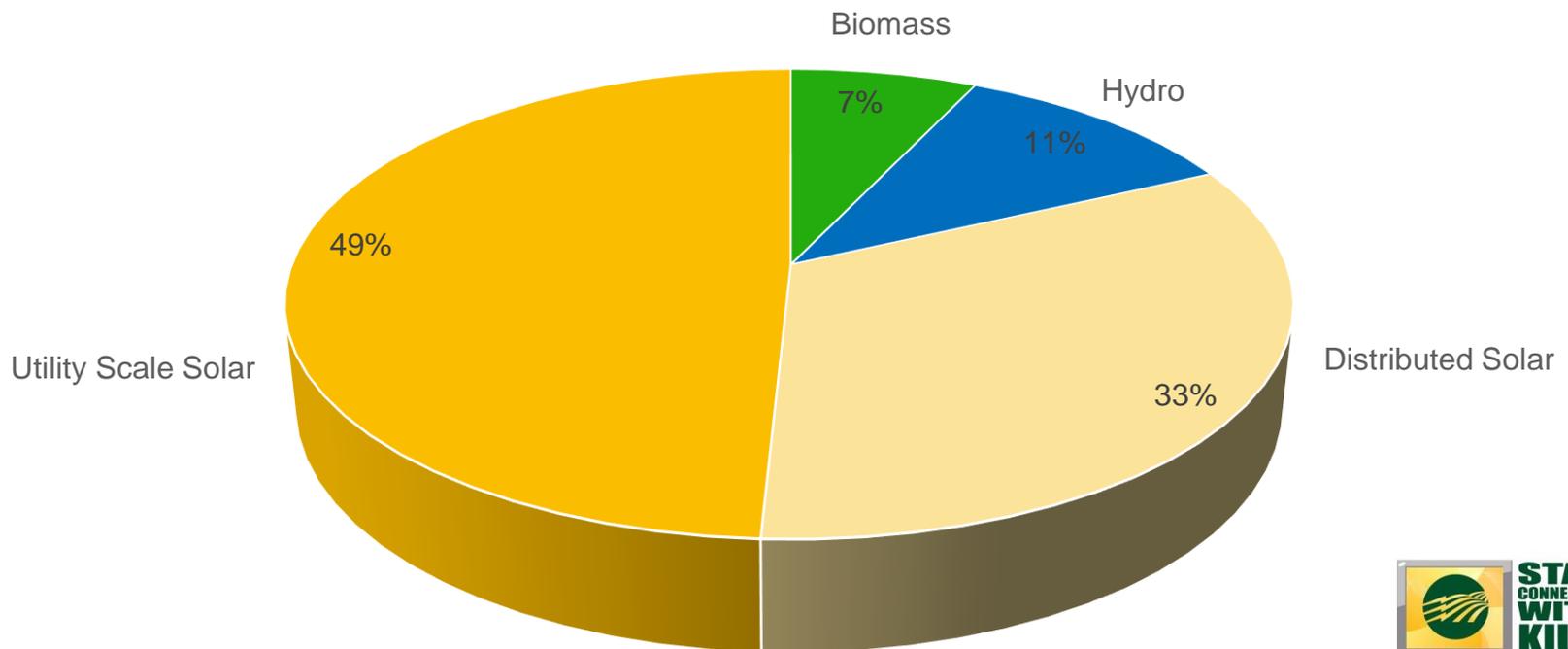
The SolarCity solar farm,

# 2017: Putting Kaua'i on the Map



# Renewable Energy on Kauaʻi

44.4% of Kauaʻi's power was produced from renewable sources in 2017



# Renewable Progress: 2017-2018

- TESLA Dispatchable PV Project
  - Operational March 2017
- AES Dispatchable PV
  - Lāwaʻi: 20 MW x 5 hours storage
    - (December 2018)
  - PMRF: 14 MW x 5 hours storage
    - (December 2019)



When complete: 65% of evening peak power  
will come from Solar



# TESLA 13 MW PV 52 MWh Storage



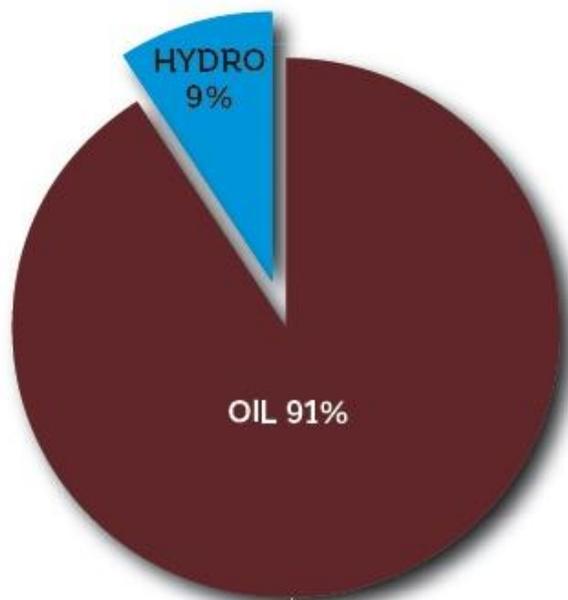
# Renewable Future: Energy Storage

 UTILITY ENERGY STORAGE RANKINGS <b>ANNUAL WATTS-PER-CUSTOMER</b>		
1	Kauai Island Utility Cooperative 	415.3 W/C
2	Tucson Electric Power	50.0 W/C
3	Maui Electric	36.5 W/C
4	San Diego Gas & Electric	31.7 W/C
5	Glendale Water & Power	22.9 W/C
6	American Samoa Power Authority	20.4 W/C
7	Hawaii Electric Light Company	16.4 W/C
8	Southern California Edison	11.1 W/C
9	Green Mountain Power	10.6 W/C
10	City Utilities of Springfield, MO	8.8 W/C

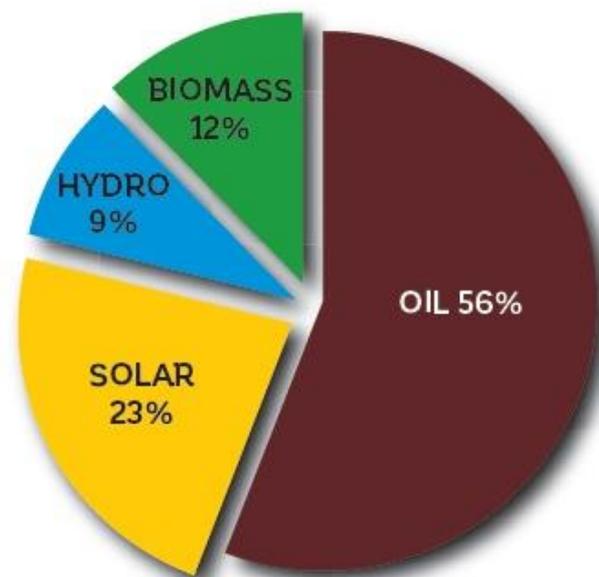


# Renewable Energy Mix

## Fuel Mix 2010



## Fuel Mix 2017



# Pumped Storage Hydro

- Engineering and environmental studies on-going
- Integrated irrigation delivery, hydro electric, and energy storage project
- 25 MW size, 15% of Kauaʻi's energy
- Infrastructure improvements help DHHL, KAA, DLNR

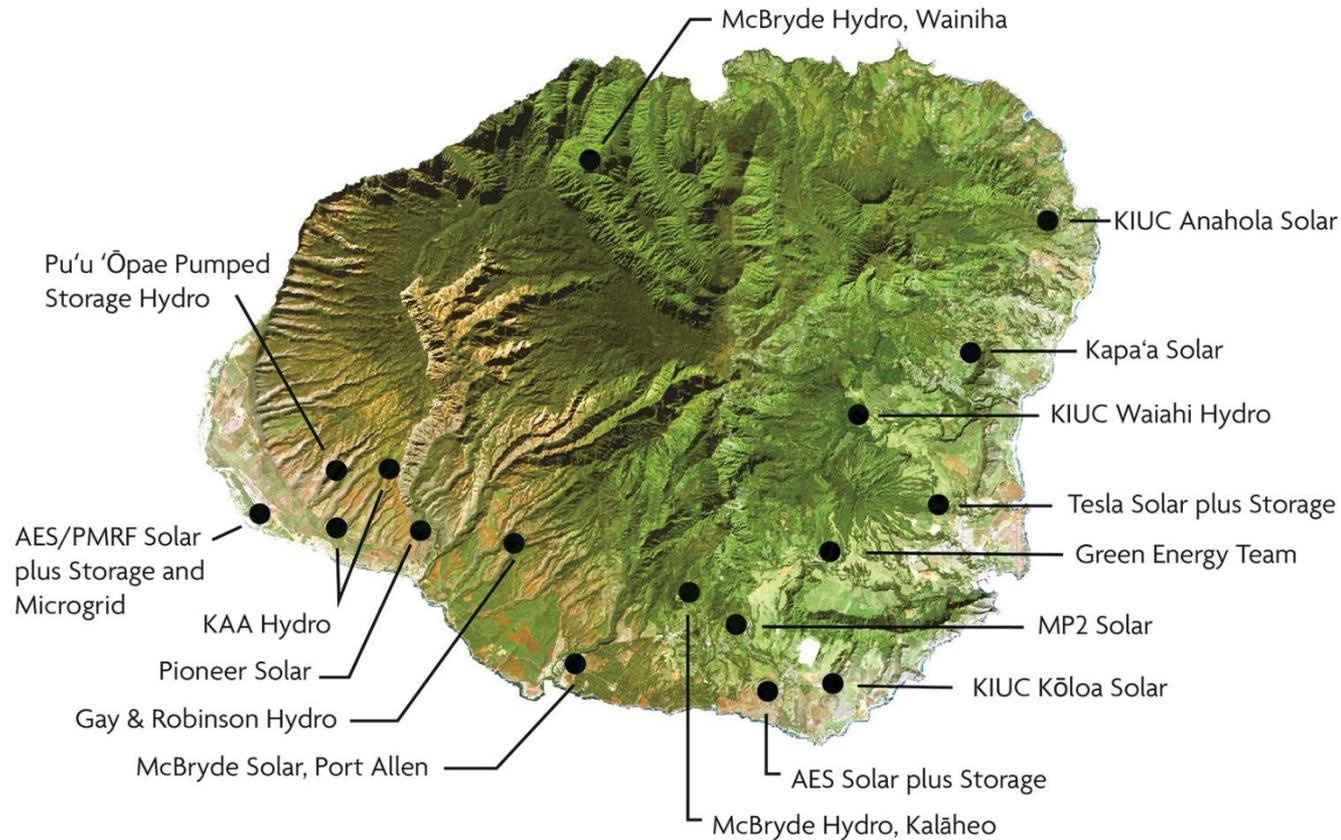


# Community Based Renewable Energy

- Up to 3 megawatts total
- Designed for customers unable to access rooftop solar
  - Renters, apartments, roof condition/placement, etc.
- RFP to be issued in July
  - Award(s) by end of 2018
- Subscription process pending details of award(s)



# Renewable Resources

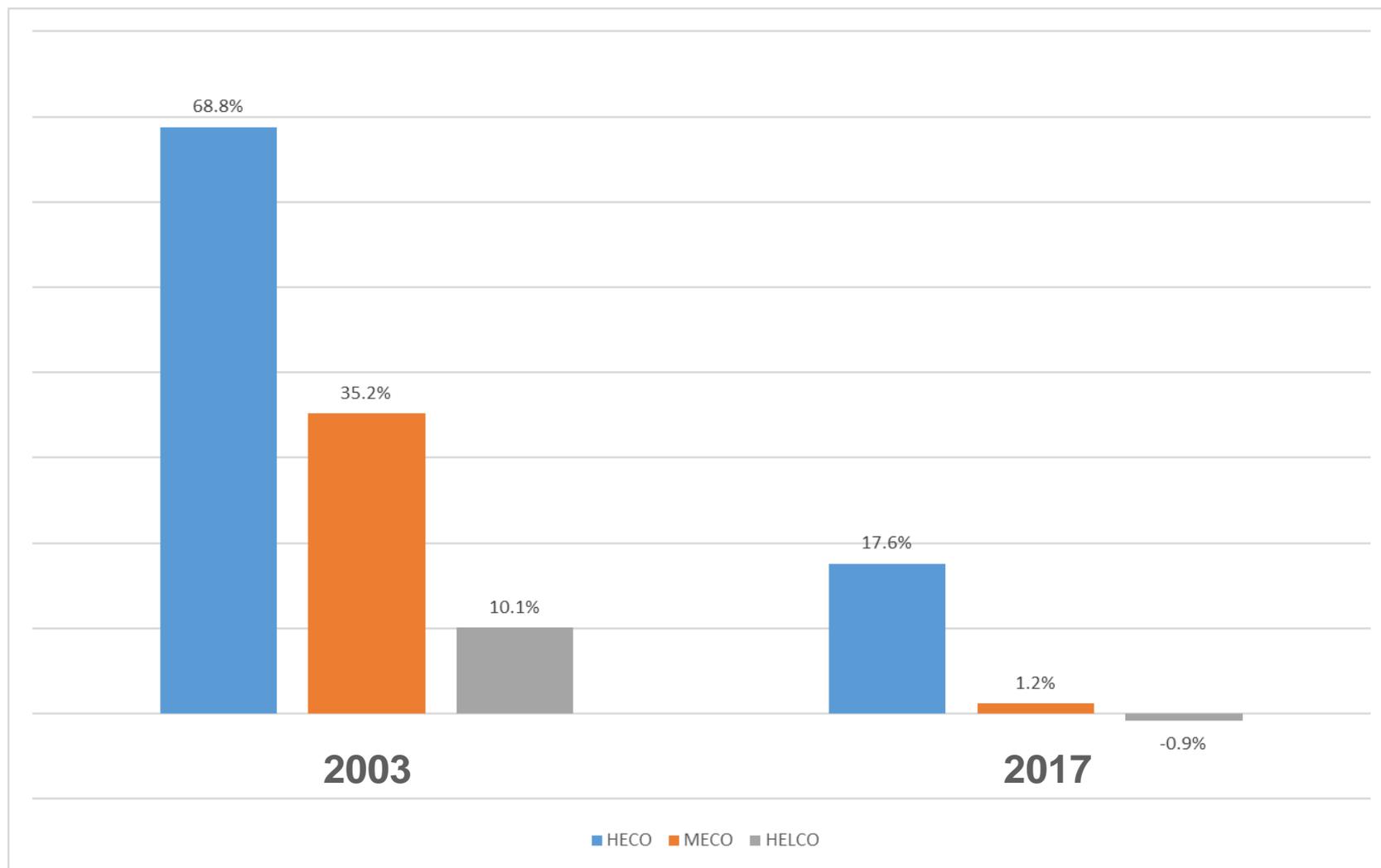


# Rates

- KIUC has not had a general rate increase since 2009
- 2019 rates are expected to be about the same as 2018
- Likely 2030 rates will also be around the same as today
  - Inflation increases offset by generation savings



# Rate Differential Comparison



# Patronage Capital

- KIUC will retire \$3.2 million in patronage capital related to 2017 financial results.
- Since formation KIUC has returned over \$37 million to our members.

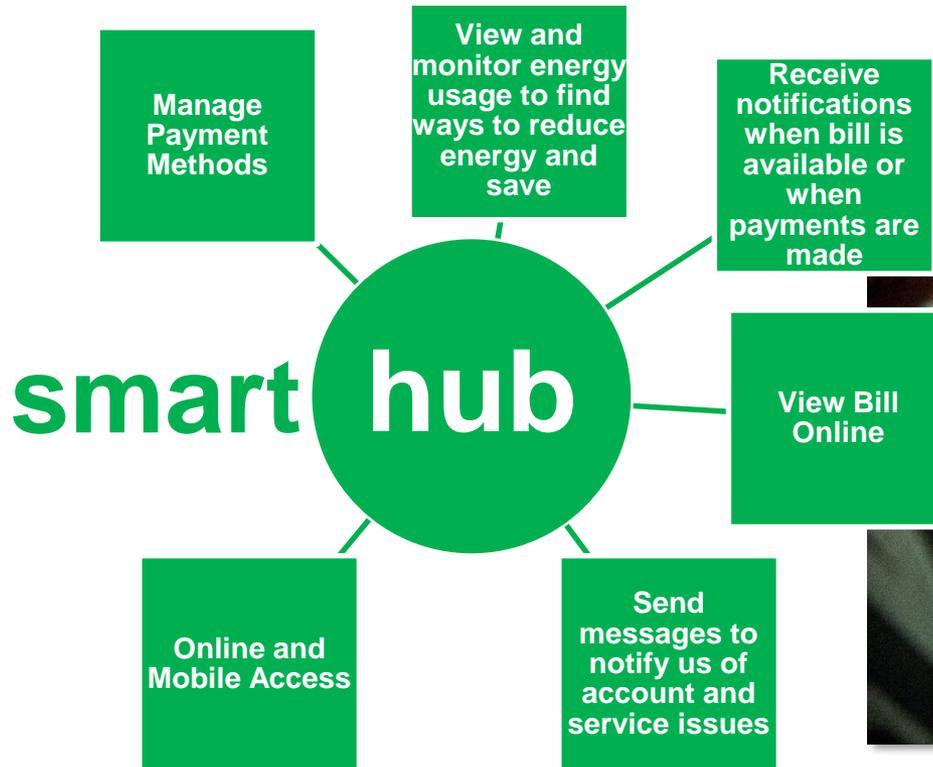


# Resiliency

- Kauaʻi's efforts post Iniki (1992) and Iwa (1982) include:
  - 80% of transmission circuits are steel poles
  - 20% remaining circuits have storm guys on wood poles
  - Increased size standards for all wood poles
  - Hardened Līhuʻe circuit
  - Hurricane resistance headquarters
  - Satellite phones
  - AMI and outage management system
- Power plants not exposed to storm surge and have black start capabilities



# Member Services - SmartHub



# Member Services – Energy Wise

## Energy Efficiency:

- Home visits
- Lighting Program
- New efficient appliance replacement rebate program
- Qualifying member appliance replacement program (QMARP)
- Appliance meter tester program
- Commercial retrofit program



## Water Heating:

- Heat pump water heater rebate program
- Solar water loan program
- Solar water heater rebate program



# Co-op Connections



[www.connections.coop](http://www.connections.coop)



# Co-op Connections

**Healthy Savings Discounts**

Touchstone Energy® Cooperatives Co-op Connections® Program helps you save more and live healthier every day! Our highly successful prescription discount program is now joined by discounts on vision, hearing, lab work & imaging, chiropractor visits. Best of all these great benefits!

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Kauai Island Utility Cooperative  
Your Touchstone Energy® Cooperative

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- Things to Do
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# ANNUAL MEETING FINANCIAL REPORT

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Fiscal Year Ended December 2017

July 25, 2018



# Financial Results - 2017

- Solid year financially
- Clean audit report
- Met loan covenants
- Increased equity

## KIUC to return \$3.2M to co-op members

Kauai Island Utility Cooperative will begin issuing \$3.2 million in 2017 patronage capital retirement checks to cooperative members next week.

Patronage capital is money that the cooperative has left over after paying all of its expenses and meeting its lenders' expectations for financial stability. At the end of the year, money is credited to each member's patronage capital account according to the amount the member paid for electricity. This is the member's equity in KIUC.

"We had excellent financial results in 2017, which allows us to exercise one of the fundamental benefits of being a not-for-profit cooperative that is owned by the members it serves," KIUC Chairman Allan Smith said. "A rural electric cooperative exists solely to provide its members with electricity. In a co-op, margins don't belong to the company; they belong to the individual members who paid money on their monthly bills."

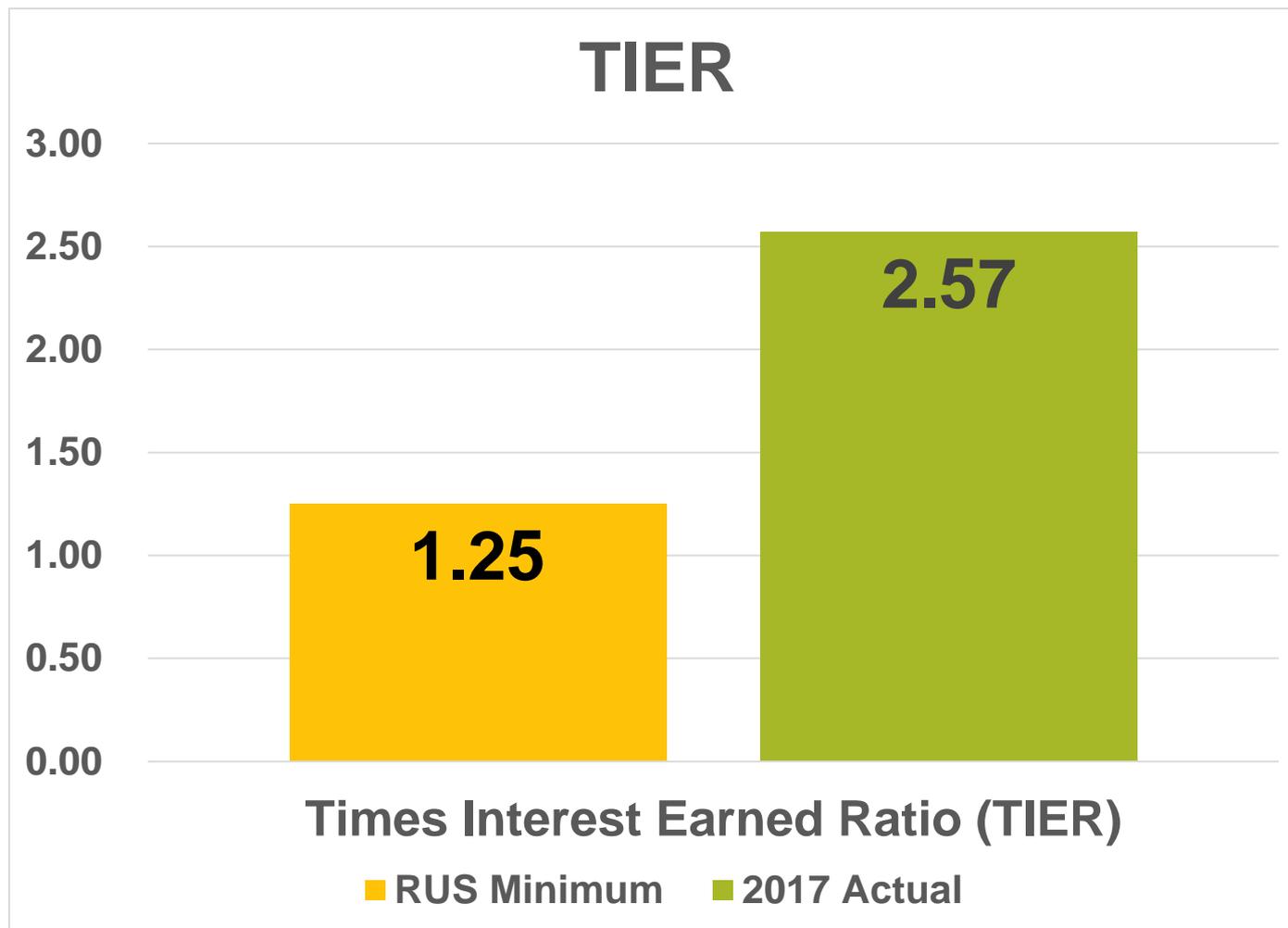
**Balance Sheet**  
December 31, 2017 and 2016

	2017	2016
<b>ASSETS</b>		
UTILITY PLANT AT COST		
Electric Plant in Service	\$ 541,380,292	\$ 511,571,226
Electric Plant Acquisition Cost	54,832,433	34,892,453
Accumulated Depreciation and Amortization	(290,127,700)	(277,043,950)
Net Electric Plant in Service	306,085,025	309,379,699
Construction Work in Progress	4,779,264	10,497,569
Net Utility Plant	311,024,384	319,874,864
OTHER INVESTMENTS		
Investments in Associated Operations	1,334,331	1,029,816
Real Estate Developments Loans	980,424	1,162,864
Other Investments	2,298,787	2,178,662
<b>CURRENT ASSETS</b>		
Cash & Cash Equivalents	11,374,680	11,609,315
Accounts and Notes Receivable	2,484,517	2,361,181
Accounts and Notes Payable (Less allowance for doubtful accounts of \$23,000 in 2017 and \$221,000 in 2016)	9,848,528	11,609,315
Accrued Utilities Revenue	7,914,977	2,361,181
Inventories	14,379,687	10,964,400
Other Current Assets	1,364,864	7,960,990
Total Current Assets	47,352,051	43,786,978
POSTRETIREMENT BENEFIT ASSET	11,999,888	1,346,103
Deferred Debits	372,530,999	382,530,999
<b>TOTAL ASSETS</b>	\$ 711,417,251	\$ 711,417,251
<b>EQUITIES AND LIABILITIES</b>		
EQUITIES		
Memberships	644,951	499
Patronage Capital	(15,175,500)	102,596,914
Other Equity	150,249,599	577,525
Postretirement Benefits Obligation (Less Current Maturities of Long-Term Debt)	20,453,787	(194,620)
Controlling Equity Interest	30,453,787	102,990,938
Capital Account - ABB KDC II LLC	130,947,746	21,517,025
Non-Controlling Equity Interest	192,764,483	215,177,203
Total Equities	504,602	388,447,273
LONG-TERM DEBT: Less Current Maturities	519	499
POSTRETIREMENT BENEFITS OBLIGATION	11,999,888	1,346,103
ASSET RETIREMENT OBLIGATIONS	372,530,999	382,530,999
<b>CURRENT LIABILITIES</b>		
Current Maturities of Long-Term Debt	111,417,251	111,417,251
Line of Credit	644,951	499
Accounts Payable	(15,175,500)	102,596,914
Energy Rate Adjustment Clause	150,249,599	577,525
Consumer Deposits	20,453,787	(194,620)
Accrued Employee Compensation	30,453,787	102,990,938
Accrued Taxes	130,947,746	21,517,025
Other Current and Accrued Liabilities	192,764,483	215,177,203
Total Current and Accrued Liabilities	504,602	388,447,273
<b>DEFERRED CREDITS</b>		
Total Liabilities and Equities	2,493,291	2,162,254
	15,174,997	14,802,318
	2,020,000	5,369,600
	5,174,635	5,276,775
	4,588	395,804
	1,481,759	1,674,568
	1,974,468	1,839,326
	4,925,800	6,180,140
	422,477	611,585
	33,982,924	31,062,212
	11,781,297	4,902,317
	372,530,999	388,447,273



# Times Interest Earned Ratio – YTD December 2017

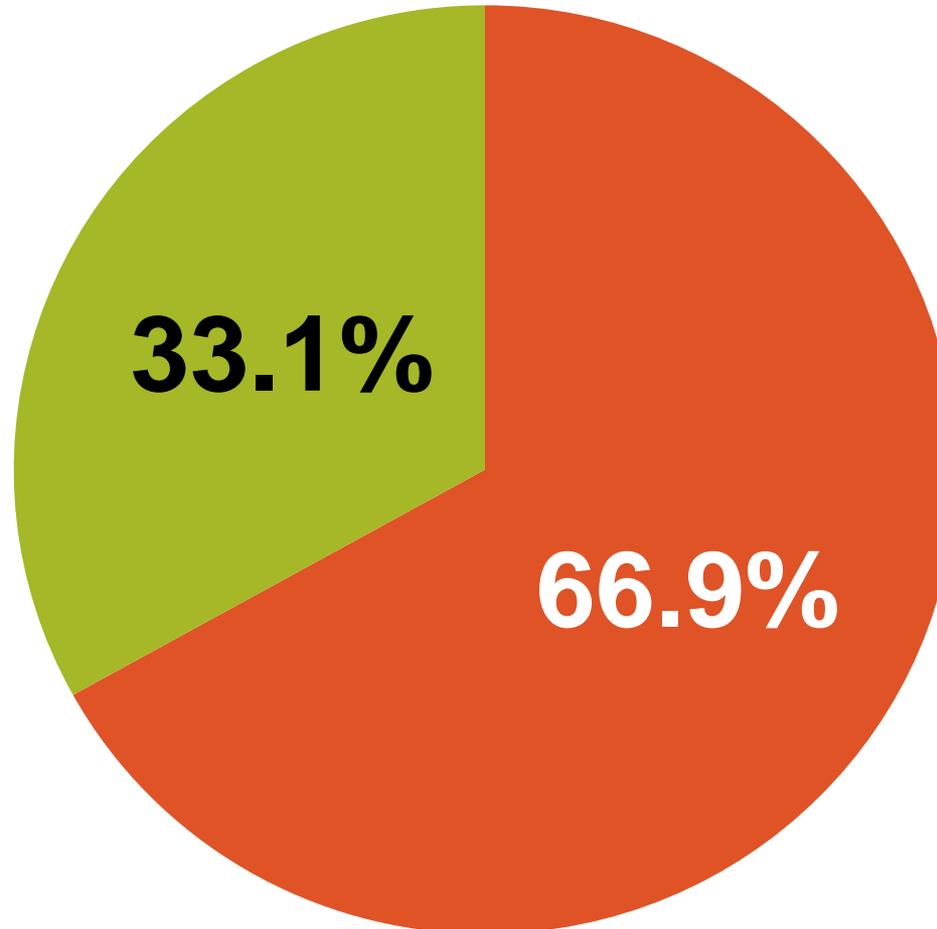
## KIUC stand-alone



# Equity Ratio – December 2017

## KIUC stand-alone

**Equity  
as a % of  
Assets**



**Liabilities  
as a % of  
Assets**



# Balance Sheet Summary – December 2017

## KIUC Consolidated

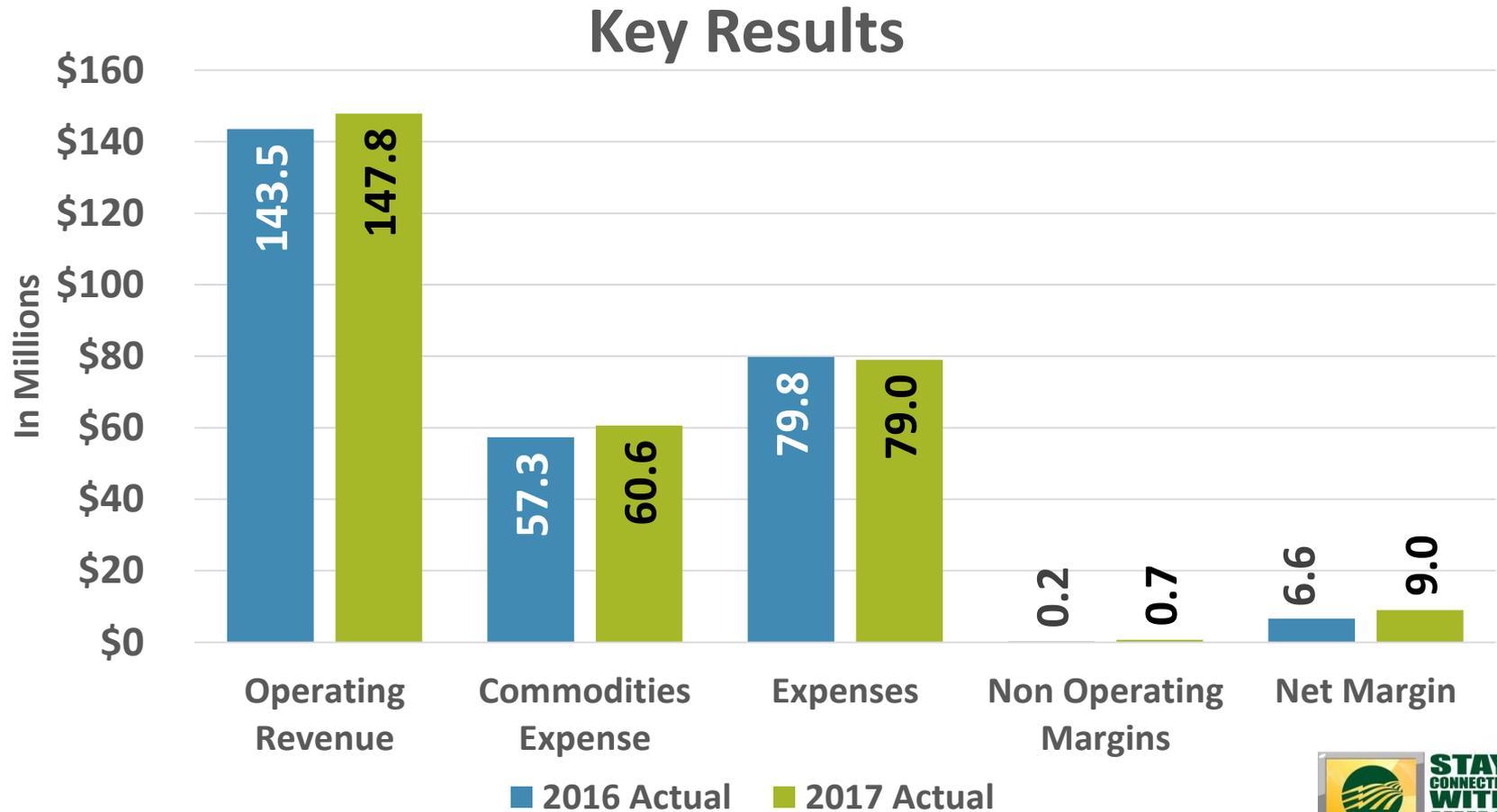
(in Millions)

	<u>12/31/2017</u>	
Net Utility Plant	311.0	83%
Other Investments	2.3	1%
Current Assets	47.4	13%
Deferred Debits	11.8	3%
<b>TOTAL ASSETS</b>	<b><u>372.5</u></b>	<b><u>100%</u></b>
Controlling Equity Interest	110.5	30%
Non-Controlling Equity Interest	20.4	5%
<b>TOTAL EQUITY</b>	<b><u>130.9</u></b>	<b><u>35%</u></b>
Long-term Debt, (less Current Maturities of 15.2)	192.8	52%
Post-Retirement Benefits Obligation	0.6	0%
Asset Retirement Obligation	2.5	1%
Current Liabilities	34.0	9%
Deferred Credits	11.8	3%
<b>TOTAL LIABILITIES</b>	<b><u>241.6</u></b>	<b><u>65%</u></b>
<b>TOTAL EQUITIES AND LIABILITIES</b>	<b><u>372.5</u></b>	<b><u>100%</u></b>



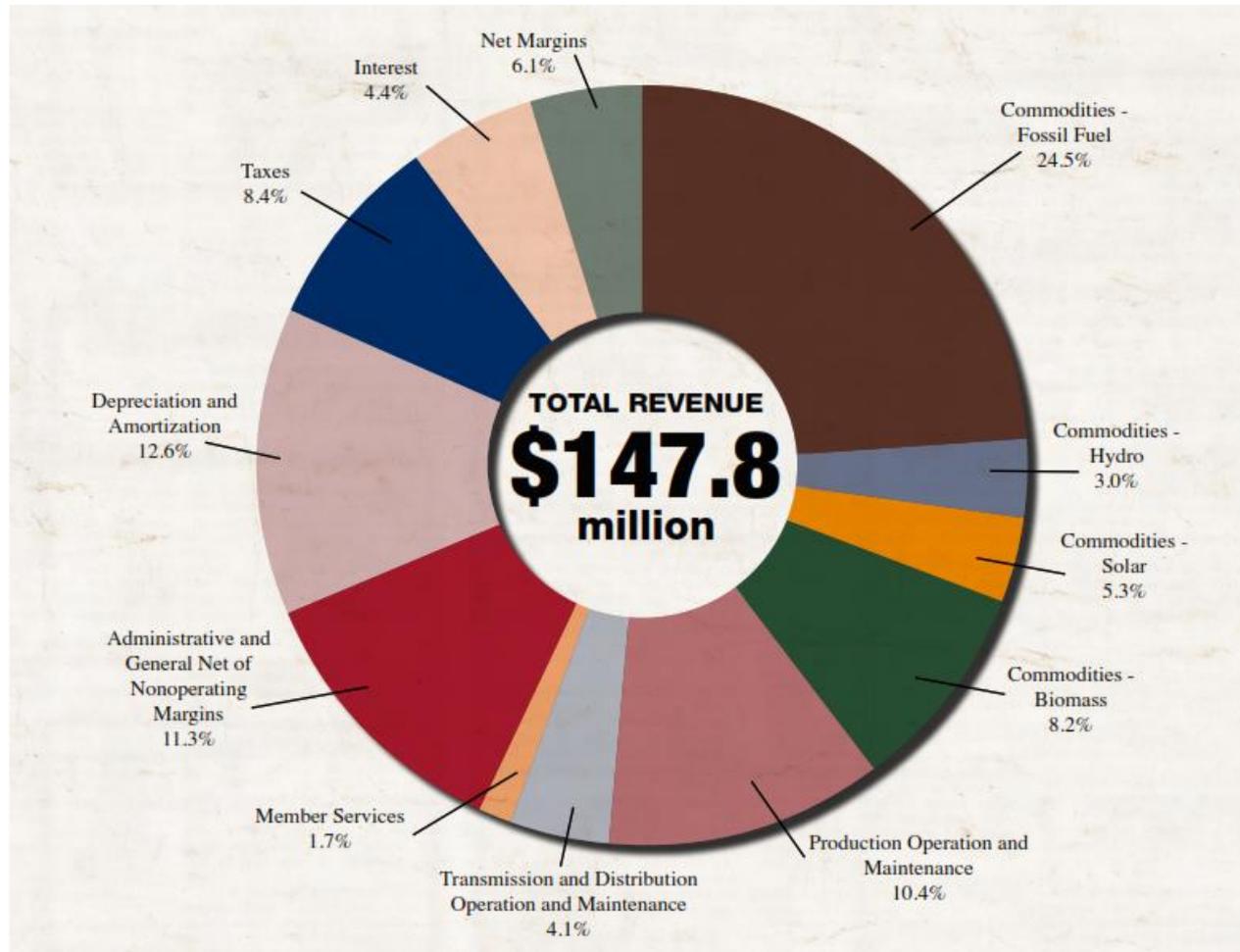
# Key Results Comparison – YTD December 2017

## KIUC Consolidated

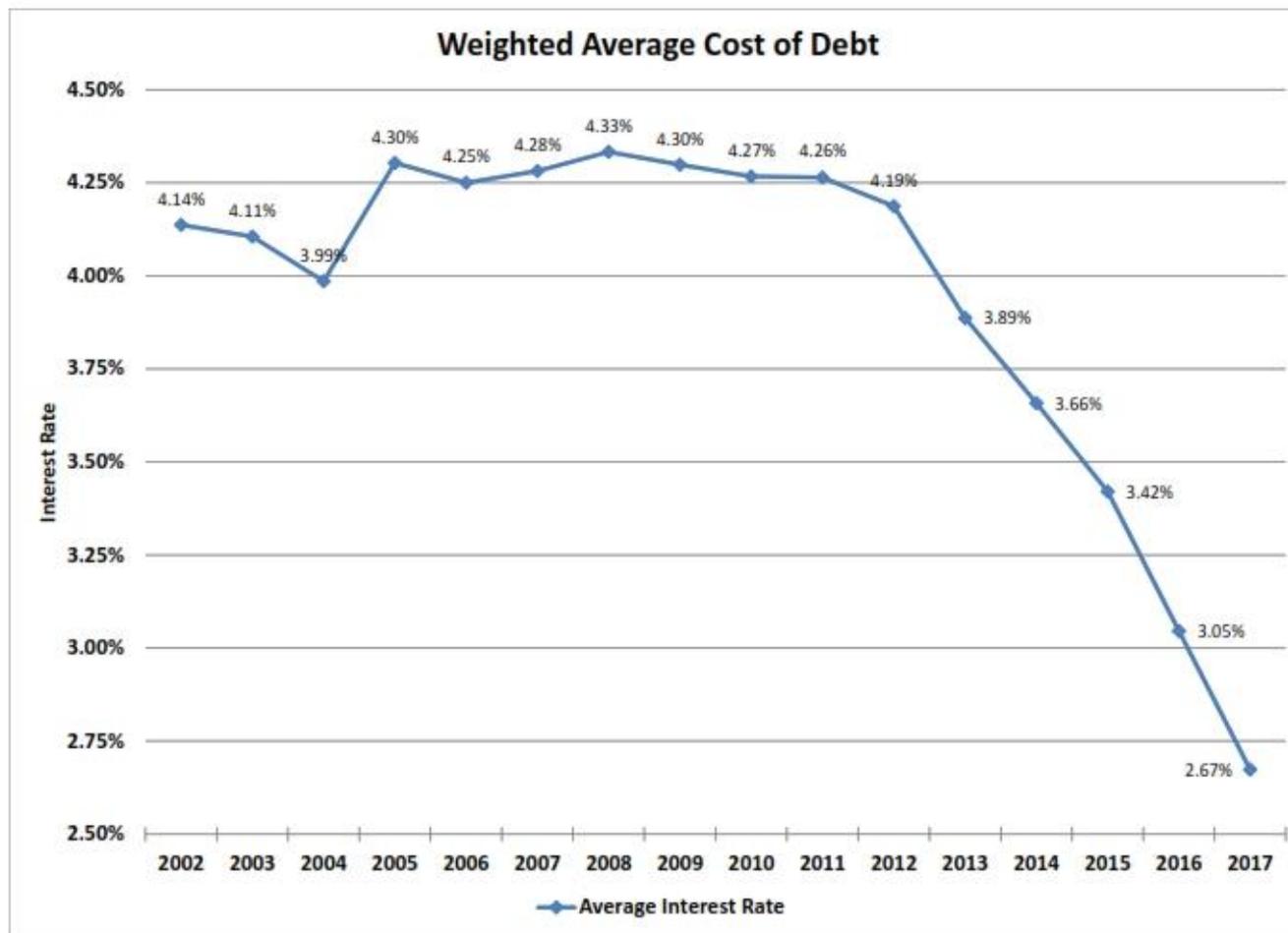


# Percentage of Total Revenue – YTD December 2017

## KIUC Consolidated



# Debt Service



# *Mañalo!*

