

KAUA'I ISLAND UTILITY COOPERATIVE



2016 ANNUAL REPORT



## Chairman & CEO

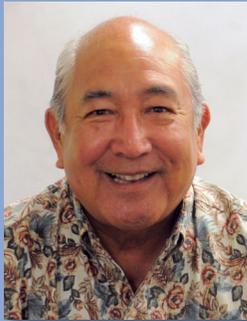
*"We are honored to be recognized as a leader in energy transformation – from being almost entirely dependent on imported oil for power generation to leading the industry in adoption of renewable energy."*

*– David Bissell  
President and Chief Executive Officer*

*"We need to continue to explore today's commercially available technology to achieve our renewable goals. In the process, we remain forward thinking, fiscally responsible, respectful of our environment and Hawaiian place."*

*– Allan Smith  
Chairman of the Board*

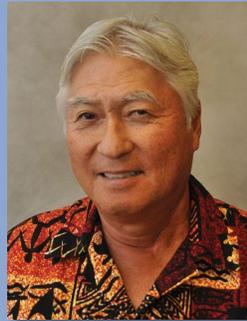
# 2017 Board of Directors



Allan Smith  
*Board Chairman*



Jan TenBruggencate  
*Board Vice Chairman*



Peter Yukimura  
*Board Treasurer*



Calvin K. Murashige  
*Board Secretary*



Dee Crowell  
*Board Member*



Pat Gegen  
*Board Member*



David Iha  
*Board Member*



Jim Mayfield  
*Board Member*



Teofilo "Phil" Tacbian  
*Board Member*

## Board Committees

### Executive

Chairman: Jan TenBruggencate  
Members: Calvin K. Murashige, Allan Smith,  
Peter Yukimura

### Finance & Audit

Chairman: Peter Yukimura  
Members: Pat Gegen, Jim Mayfield

### Government Relations/ Legislative Affairs

Chairman: Teofilo "Phil" Tacbian  
Members: Dee Crowell, David Iha

### International

Chairman: David Iha  
Members: Teofilo "Phil" Tacbian,

Jan TenBruggencate

### Member Relations

Chairman: Pat Gegen  
Members: Teofilo "Phil" Tacbian,  
Jan TenBruggencate

### Policy

Chairman: Dee Crowell  
Members: Jim Mayfield, Calvin K. Murashige

### Strategic Planning

Chairman: Jim Mayfield  
Members: Dee Crowell, Calvin K. Murashige

# Introduction

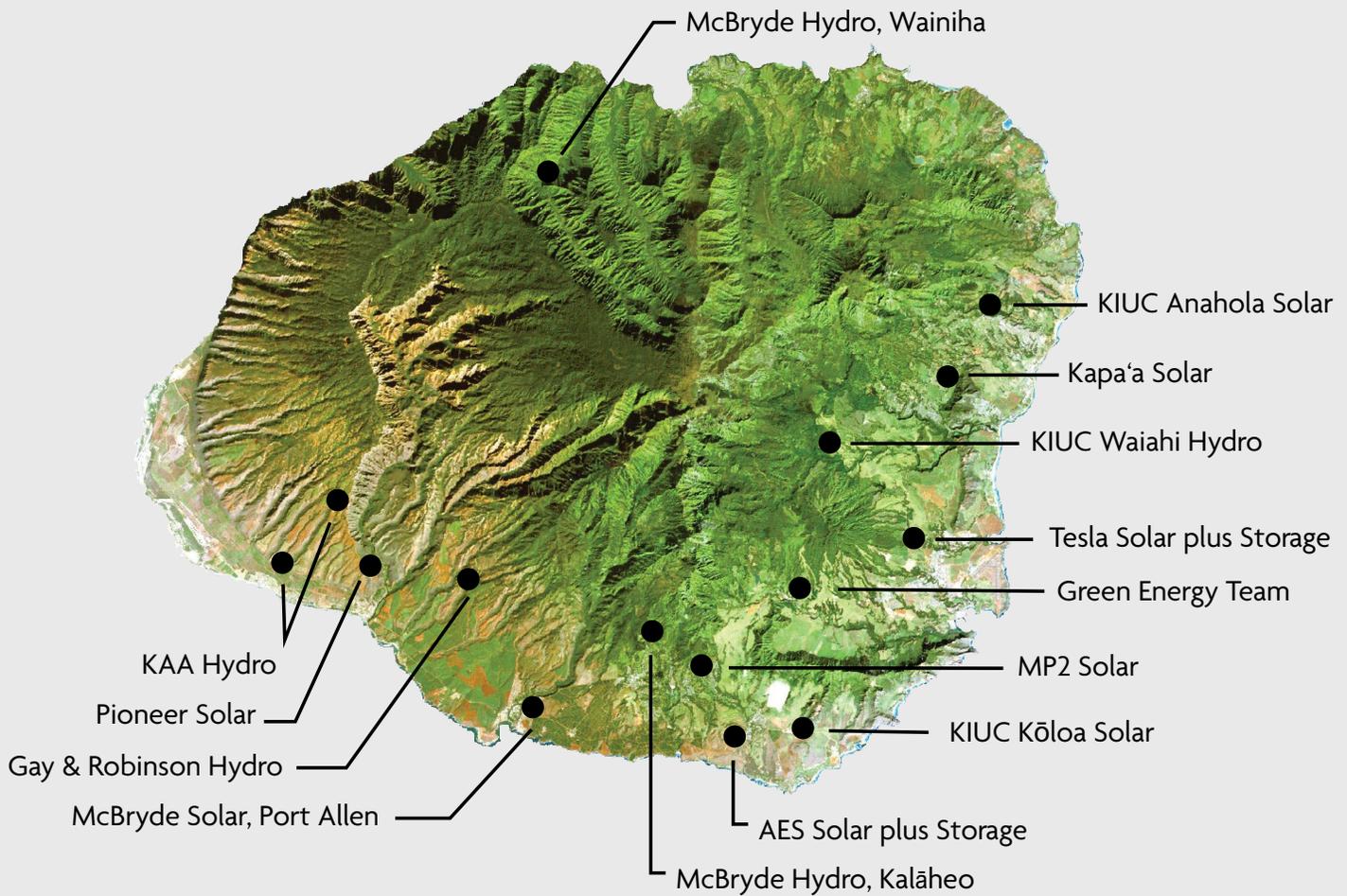


In 2008, KIUC embarked on perhaps the most ambitious shift to renewable energy sources anywhere in the American electric utility industry. Between 2007 and 2016, renewables increased from six percent of sales to 36 percent.

The KIUC Board of Directors is confident the cooperative will reach its goal of 70 percent renewable by 2030—a full decade ahead of the Hawai'i statewide goal.

It is notable that in 2016, on some individual days, KIUC derived 97 percent of its energy from renewable sources, including 77 percent from solar. On the average clear day, with solar at or close to full potential, all but one of KIUC's diesel generators can shut down.

Due to a variety of factors, KIUC is left largely with solar and small hydro to achieve its renewable goals. Even with these challenges, fifteen years after our formation as a co-op, KIUC is regarded as one of the nation's most progressive, forward-thinking electric utilities.



	Type	MW	% of Sales
<b>Active In Use</b>			
KIUC, Kōloa	Solar	12.0	5.0
KIUC, Anahola	Solar	12.0	5.0
Green Energy Team	Biomass	7.0	11.4
McBryde, Port Allen	Solar	6.0	2.7
McBryde, Wainiha	Hydro	4.0	3.6
KIUC, Waiahi	Hydro	1.5	2.0
McBryde, Kalāheo	Hydro	2.0	1.0
Gay & Robinson, Olokele	Hydro	1.3	0.9
KAA, Waimea/Kekaha	Hydro	1.5	0.9
Pioneer, Waimea	Solar	0.3	0.1
Kapa'a Solar	Solar	1.0	0.4
Tesla Solar Storage	Solar	13.0	5.0
MP2, 'Ōma'o	Solar	0.3	0.1
Customer Solar	Solar	22.0	4.5
<b>Under Construction/Permitting</b>			
Gay & Robinson, Olokele	Hydro	6.0	4.2
AES Lāwa'i Solar Storage	Solar	20.0	11.0
Customer Solar	Solar	5.0	1.0
<b>Under Consideration</b>			
Westside Pumped Hydro Storage	Hydro	25.0	14.0
Solar plus Storage	Solar	12.0	7.0

**Total Renewable Energy in Service 2017**  
**83.9 MW/42.6%**

**Potential Renewable Energy in Service 2025**  
**151.9 MW/79.8%**

# Strategic Goals and Actions



In 2016, the KIUC Board of Directors undertook the task of updating its Strategic Plan 2013-2025. After a series of public meetings in the fall, the following strategic goals and actions were drafted for inclusion in the updated plan:

- ❖ Generate at least 70 percent of electricity by using cost effective renewable resources by 2030. This achievement level will place KIUC ten years ahead of state mandates as we progress toward 100 percent renewable electric production by 2045.
- ❖ Manage technology and price risk by adding new renewable generation sources at no more than 20 percent of Kaua'i's electric usage in any single year.
- ❖ Hold controllable cost increases at or below the actual level of inflation, and maintain system reliability at 99.96 percent or better availability.
- ❖ Establish a rate structure that is fair between classes of members, encourages usage during lowest cost periods, and increases financial stability through greater recovery of cost through fixed charges rather than reliance on volume of electricity consumed.
- ❖ Maintain a safe, diverse, well trained, competitively compensated and motivated work force, aligned with organizational strategies and able to respond quickly to business opportunities and threats.
- ❖ Maintain a prudent financial structure and access to capital.



- ❖ Consider and potentially seek increased exemption from regulation by the PUC through changes in state law or PUC order. Current state law, enacted in 2013, states “the public utilities commission and the consumer advocate shall at all times consider the ownership structure and interests of an electric cooperative in determining the scope and need for any regulatory oversight or requirements over such electric cooperative.”
- ❖ Continue to address the strategic implications of climate change, including 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 incidental federal and state permits that set requirements for conservation of endangered bird species. The permitting process places limits on the number of birds that can be injured or killed in collisions with power lines or other electricity-related incidents. These incidents are called “takes.” We will seek government grants, where available, to help mitigate some of the expenses associated with the application process.
- ❖ Obtain fixed pricing, three years in advance, for at least 25 percent of our fossil fuel requirements. Recent renewable projects have also used fixed pricing to help stabilize electric rates.
- ❖ Continue investing in technology to cost-effectively maintain or improve our member service offerings and utility operations, including our smart-grid, in order to continue our transformation towards a 100 percent renewable future and lower operating costs.

# 2016 Accomplishments



## Renewable Energy

- ❖ Green Energy Biomass plant, the nation's first closed-loop "bio-mass to electricity" plant in Kōloa, begins operation in January 2016, producing enough energy to power 8,500 homes daily
- ❖ The Hawai'i Public Utilities Commission approves two new renewable energy projects:
  - ◆ 13MW, Tesla solar-plus-battery storage project
  - ◆ 6MW Gay & Robinson hydroelectric project
- ❖ Cumulative residential rooftop solar installations total 3,390; nearly 13 percent of KIUC customers
- ❖ Tesla's 13MW solar-plus-battery storage project nears the end of construction: the first of its size and scale in the world
- ❖ A power purchase agreement is signed with AES Distributed Energy to develop a 20 MW solar-plus-battery storage facility, slated to be operational by the end of 2018
- ❖ KIUC Board drafts Strategic Plan update with new renewable target of 70 percent by 2030
- ❖ 2016 ends with 36 percent renewable energy

## Going Green

- ❖ KIUC cuts amount of carbon dioxide (CO<sub>2</sub>) released by power plants to 225,000 tons, well below the 247,000 tons released in 1990
- ❖ Diesel use is reduced by one-third, or 10 million gallons, from 2008 to 2016
- ❖ In a partnership with the County of Kaua'i, KIUC undertook installation of LED streetlights on all 3,500 fixtures throughout Kaua'i
- ❖ Renewable penetration for Kaua'i reaches 97 percent on most sunny days beginning mid-2016

## Focus on Member Benefits

- ❖ Installed a new customer information system, "SmartHub," allowing members to view their energy use online, giving those who register the option to pay their bills online
- ❖ Began a rate design "Time of Use" rate study
- ❖ Collaborated with the County of Kaua'i on Home Efficiency Program providing energy and water efficiency items free of charge to 66 eligible homes
- ❖ The average price per kilowatt hour for KIUC members was down 18 percent in 2016 when compared to 2008

## Increased Financial Stability

- ❖ Refinanced \$130 million of original acquisition debt, reducing interest expense by \$1.2 million a year and more than \$10 million over the life of the loan
- ❖ Long term power purchase agreements with Tesla and AES, at 13.9 cents and 11 cents per kWh respectively, come in below the current cost of diesel and provide downward pressure on rates

## Environmental Stewardship

- ❖ Continued work on seabird mitigation efforts with expenditures of \$2.5 million yearly; tested lasers as part of seabird protection efforts

## Award Winning

- ❖ Smart Electric Power Alliance (SEPA) ranked KIUC No. 7 on list of U.S. electric utilities that added the most new solar power onto their systems on a watts-per-customer basis in 2015
- ❖ Awarded the energy technology award at the 8th Annual Hawai'i Clean Energy Day Conference on August 16
- ❖ KIUC Power Supply Manager Brad Rockwell was recognized with an Energy Storage North America 2016 Utility Champion Award for his innovation and leadership in energy storage and positive impact on the energy storage industry
- ❖ Received Contractors Association of Kaua'i 2016 Robert H. Rask Community Service Award





## Summary of Operations

*For the period 01/01/2016 through 12/31/2016*

The KIUC results of operations for the year ended December 31, 2016 remained strong. Revenues were the same as the prior year despite a 1.6% increase in electricity usage on the island. The offset was due to a 4% decrease in fuel and purchased power costs. In 2016, KIUC's members spent \$2.5 million less in fuel and purchased power costs than in the prior year. This was primarily due to KIUC shifting approximately 58,900 MWh of generation from fossil fuel to renewable energy as compared to the prior year. The cooperative is working hard to reduce costs, operate efficiently and effectively, and preserve a strong financial position, while maintaining safety and reliability. Revenues, expenses, and net margins totaled \$143.5 million, \$136.9 million, and \$6.6 million, respectively, for the twelve-month period ending December 31, 2016.

As is the case for all electric utilities, the cost of power generation is the largest expense, totaling \$74.0 million or 51.6% of revenues. Commodities, which are fuel and purchased power costs, are the largest component of power generation totaling \$57.3 million or 39.9% of revenues. Currently, fossil fuel is the largest component of commodities totaling \$34.5 million or 24.1% of revenues. Other commodities include hydro power totaling \$4.6 million or 3.2% of revenues, solar power totaling \$5.4 million or 3.7% of revenues, and biomass power totaling \$12.8 million or 8.9% of revenues. The remaining \$16.7 million or 11.7% of revenues represents the cost of operating and maintaining the generating units.

The cost of operating and maintaining the electric lines totaled \$5.9 million or 4.1% of total revenues. The cost of servicing our members totaled \$2.0 million or 1.4% of revenues. Administrative and general costs, which include legislative and regulatory expenses, engineering, executive, human resources, communications, safety and facilities, information services, financial and corporate services, and board of director expenses, totaled \$16.9 million or 11.8% of revenues.

Being very capital intensive, depreciation and amortization of the utility plant costs \$18.5 million or 12.9% of revenues. Although not subject to federal income taxes, state and local taxes amounted to \$12.1 million or 8.4% of revenues. Interest on long-term debt, at a very favorable sub-5% interest rate, totals \$7.7 million or 5.3% of revenues. Non-operating net margins added \$0.2 million to overall net margins. Revenues less total expenses equal margins of \$6.6 million or 4.6% of total revenue. Margins are allocated to consumer members and paid when appropriate.

The financial benefit (direct and indirect) to KIUC members is significant. Since 2002, KIUC has returned \$33.9 million to members in the form of Patronage Capital Retirements and billing credits. Also, KIUC contributed \$71,452 to local nonprofits and community organizations in 2016.

In addition, the indirect financial benefits (i.e., ownership) include patronage capital that is held by KIUC on behalf of its members to potentially be distributed at future dates as determined by the KIUC Board of Directors. This amounts to \$102.6 million in indirect financial benefits to KIUC members as of December 31, 2016.

# Balance Sheet

December 31, 2016 and 2015

	December 31,	
	2016	2015
<b>Assets</b>		
<b>UTILITY PLANT AT COST</b>		
Electric Plant in Service	\$ 531,571,236	\$ 546,374,192
Electric Plant Acquisition Cost	54,852,453	54,852,453
Accumulated Depreciation and Amortization	(277,043,994)	(265,316,187)
Net Electric Plant in Service	309,379,695	335,910,458
Construction Work in Progress	10,497,169	8,311,847
Net Utility Plant	319,876,864	344,222,305
<b>OTHER INVESTMENTS</b>		
Investments in Associated Organizations	1,035,816	889,780
Rural Economic Development Loans	1,162,866	873,750
Total Other Investments	2,198,682	1,763,530
<b>CURRENT ASSETS</b>		
Cash & Cash Equivalents	11,059,315	19,447,410
Restricted Cash & Cash Equivalents	2,267,151	2,126,117
Accounts and Notes Receivable (Less allowance for doubtful accounts of \$225,000 in 2016 and \$688,103 in 2015)	10,066,400	9,423,591
Accrued Unbilled Revenue	7,560,590	6,599,036
Inventories	13,796,978	14,538,474
Other Current Assets	1,340,101	1,431,463
Total Current Assets	46,090,535	53,566,091
<b>POST-RETIREMENT BENEFIT ASSET</b>		
	864,300	1,252,400
<b>DEFERRED DEBITS</b>		
	11,436,894	10,509,802
Total Assets	\$ 380,467,275	\$ 411,314,128
<b>Equities and Liabilities</b>		
<b>EQUITIES</b>		
Memberships	\$ 499	\$ 483
Patronage Capital	102,596,914	96,389,604
Other Equity	577,525	397,441
Post-retirement Benefit Obligation Gain (Loss)	(194,000)	(259,000)
Controlling Equity Interest	102,980,938	96,528,528
Capital Account - A&B KRS II LLC	21,517,825	22,702,967
Non-Controlling Equity Interest	21,517,825	22,702,967
Total Equities	124,498,763	119,231,495
<b>LONG -TERM DEBT, Less Current Maturities</b>		
	208,649,723	187,819,625
<b>ASSET RETIREMENT OBLIGATIONS</b>		
	2,362,254	2,278,249
<b>CURRENT LIABILITIES</b>		
Current Maturities of Long-Term Debt	14,802,318	13,952,739
Line of Credit	5,308,600	59,500,000
Accounts Payable	5,276,775	5,617,070
Energy Rate Adjustment Clause	355,924	1,259,609
Consumer Deposits	1,674,548	1,593,707
Accrued Employee Compensation	1,839,328	2,047,106
Accrued Taxes	6,185,140	6,218,963
Other Current and Accrued Liabilities	611,585	729,181
Total Current Liabilities	36,054,218	90,918,375
<b>DEFERRED CREDITS</b>		
	8,902,317	11,066,384
Total Liabilities and Equities	\$ 380,467,275	\$ 411,314,128

# Statement of Income and Patronage Capital

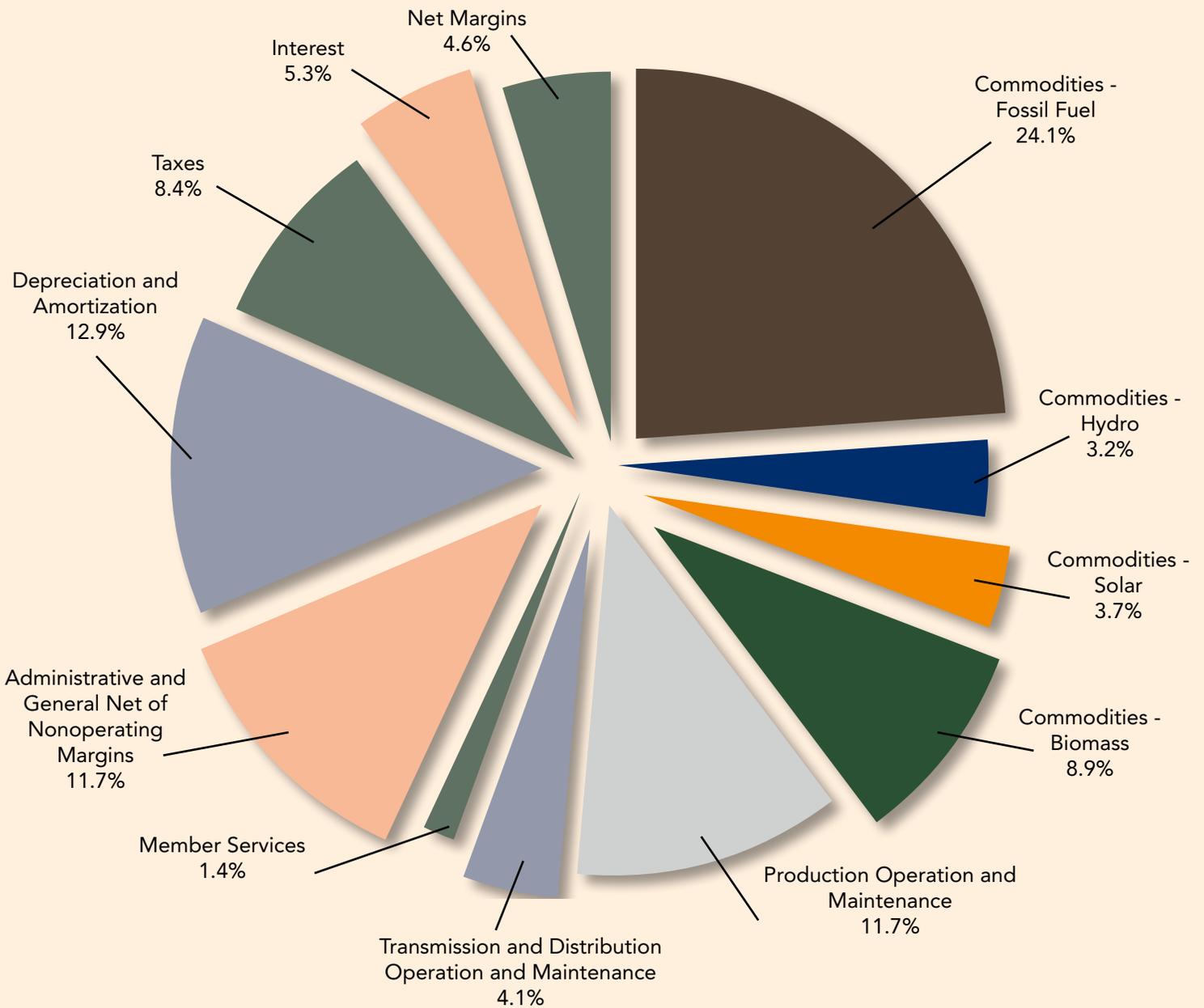
For the years ended December 31, 2016 and 2015

	Year Ended December 31,	
	2016	2015
<b>OPERATING REVENUES</b>		
Residential	\$ 55,787,616	\$ 55,512,573
Irrigation	16,264	59,629
Commercial and Industrial	85,934,227	86,013,501
Public Street and Highway Lighting	1,268,893	1,362,924
Other Operating Revenues	491,563	508,142
Total Operating Revenues	<u>143,498,563</u>	<u>143,456,769</u>
<b>OPERATING EXPENSES</b>		
Power Cost	74,024,340	75,873,417
Transmission - Operation	383,830	408,792
Transmission - Maintenance	776,727	576,009
Distribution - Operation	1,380,267	1,264,327
Distribution - Maintenance	3,389,191	3,058,602
Customer Accounts	1,555,263	2,278,950
Customer Service and Information	442,917	597,264
Administrative and General	16,927,136	16,717,504
Depreciation and Amortization	18,472,511	17,018,391
Taxes	12,060,249	12,100,554
Accretion Expense	84,005	41,053
Other Interest Expense	533,276	1,371,908
Total Operating Expenses	<u>130,029,712</u>	<u>131,306,771</u>
OPERATING MARGINS - Before Interest	13,468,851	12,149,998
INTEREST ON LONG-TERM DEBT	7,657,491	7,529,211
OPERATING MARGINS	5,811,360	4,620,787
<b>NONOPERATING MARGINS</b>		
Interest Income	683,733	613,607
Allowance for Funds Used During Construction	-	1,098,704
Capital Credits	143,430	97,309
Other Nonoperating Income (Expense)	36,996	(534,698)
Total Nonoperating Margins	<u>864,159</u>	<u>1,274,922</u>
NET MARGINS	<u>6,675,519</u>	<u>5,895,709</u>
Net Loss (Margins) Attributable to Non-controlling Interest	(78,602)	55,172
NET MARGINS - COOPERATIVE	<u>\$ 6,596,917</u>	<u>\$ 5,950,881</u>
PATRONAGE CAPITAL - BEGINNING OF YEAR	\$ 96,389,604	\$ 92,527,762
Allocation of Net Margins	6,596,917	5,950,881
Patronage Capital Retired	<u>(389,607)</u>	<u>(2,089,039)</u>
PATRONAGE CAPITAL - END OF YEAR	<u>\$ 102,596,914</u>	<u>\$ 96,389,604</u>

# Statement of Cash Flows

For the years ended December 31, 2016 and 2015

	December 31,	
	2016	2015
<b>OPERATING ACTIVITIES</b>		
Net Margins	\$ 6,596,917	\$ 5,950,881
Adjustments to Reconcile Net Margins to Net Cash from Operating Activities		
Depreciation and Amortization	19,004,772	17,510,336
Accretion of Asset Retirement Obligation	84,005	41,053
Interest Earned on Cushion of Credit	(666,463)	(634,155)
Capital Credit Allocations	(143,430)	(97,309)
Net Margins Attributable to Non-controlling Equity Interest	78,602	(55,172)
Change in Assets and Liabilities:		
Accounts Receivable and Unbilled Revenue	(1,604,363)	2,197,639
Energy Rate Adjustment Clause	(903,685)	149,839
Inventories and Other Current Assets	832,858	(354,980)
Deferred Debits	(927,092)	(2,979,055)
Post Retirement Benefit Obligation	453,100	(492,700)
Payables and Accrued Expenses	(1,114,250)	(3,457,170)
Deferred Credits	(2,164,067)	(544,895)
Net Cash from Operating Activities	<u>19,526,904</u>	<u>17,234,312</u>
<b>INVESTING ACTIVITIES</b>		
Additions to Utility Plant, net	(12,855,132)	(33,371,749)
Grant Funds and Tax Credit Applied to Utility Plant	18,691,400	-
Rural Economic Development Loans	(289,116)	199,563
Other Investments	(2,606)	(676)
Net Cash used for Investing Activities	<u>5,544,546</u>	<u>(33,172,862)</u>
<b>FINANCING ACTIVITIES</b>		
Borrowings from Long-Term Debt	166,082,640	10,961,000
Principal Payments on Long-Term Debt	(143,736,500)	(12,626,467)
Net Activity on Line of Credit	(54,191,400)	20,500,000
Distribution to Non-controlling Equity Interest	(1,263,744)	(1,170,852)
Memberships	16	16
Other Equities	180,084	1,108
Retirement of Patronage Capital	(389,607)	(2,089,039)
Net Cash from Financing Activities	<u>(33,318,511)</u>	<u>15,575,766</u>
<b>CHANGE IN CASH AND CASH EQUIVALENTS</b>	<b>(8,247,061)</b>	<b>(362,784)</b>
<b>CASH AND CASH EQUIVALENTS - BEGINNING OF YEAR</b>	<b><u>21,573,527</u></b>	<b><u>21,936,311</u></b>
<b>CASH AND CASH EQUIVALENTS - END OF YEAR</b>	<b>\$ <u>13,326,466</u></b>	<b>\$ <u>21,573,527</u></b>
<b>SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION</b>		
Cash Paid During the Year for:		
Interest	<u>8,190,767</u>	<u>8,902,286</u>
Income Taxes	<u>25,500</u>	<u>31,508</u>
Noncash Investing Activities:		
Liabilities Incurred for Asset Retirement Obligations	<u>-</u>	<u>1,097,446</u>
Liabilities Incurred for Utility Plant Additions	<u>495,599</u>	<u>-</u>



Commodities - Fossil Fuel . . . . .	34,559,063
Commodities - Hydro . . . . .	4,615,887
Commodities - Solar . . . . .	5,371,486
Commodities - Biomass . . . . .	12,763,157
Production Operation & Maintenance . . . . .	16,714,746
Transmission & Distribution Operation & Maintenance . . . . .	5,930,015
Member Services . . . . .	1,998,180
Administrative & General Net of Non-Operating Margins . . . . .	16,758,860
Depreciation & Amortization . . . . .	18,472,511
Taxes . . . . .	12,060,249
Interest . . . . .	7,657,491
Net Margins . . . . .	6,596,917

Governor David Ige:

*"Kaua'i is really leading the way in showing how a mix of resources – solar, hydro, biomass – can be integrated reliably onto the grid and help move us toward our mandate of being 100 percent renewable by 2045."*

Senate President Ron Kouchi:

*"Through sound and visionary leadership, KIUC continuously sets, achieves, and exceeds its goals for energy independence through renewable energy sources and has become the benchmark for our state's utility companies. Our Kaua'i Legislative delegation is proud to call KIUC our community partner."*

Mayor Bernard P. Carvalho, Jr.:

*"The KIUC Board is to be commended for setting an aggressive target and leading the state in progress on renewables over the past eight years. As member-owners of our cooperative we can all be proud that we are stepping up to the plate and being a leader not only in Hawai'i, but in the world."*



# Vision, Mission and Culture

**Vision** — Improve the quality of life for KIUC's members and on Kaua'i

**Mission** — Be an energy solutions leader by:

- ❖ Safely providing reliable power that is fairly and competitively priced
- ❖ Encourage conservation and efficient use of energy resources
- ❖ Increasing sustainable power supply and environmental stewardship

**Culture** — The culture is shaped by several elements, all critical to KIUC's success. KIUC embraces the seven cooperative principles and a Hawaiian-based values system, derived from an employee-adopted set of shared values called Ho'oka'ana Waiwai.

## 7 Cooperative Principles

### Voluntary and Open Membership

Cooperatives are voluntary organizations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political, or religious discrimination.

### Democratic Member Control

Cooperatives are democratic organizations controlled by their members, who actively participate in setting policies and making decisions. The elected representatives are accountable to the membership.

### Members' Economic Participation

Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership.

Members allocate surpluses for any or all of the following purposes: developing the cooperative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.

### Autonomy and Independence

Cooperatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.

### Education, Training and Information

Cooperatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their cooperatives. They inform the general public, particularly young people and opinion leaders, about the nature and benefits of cooperation.

### Cooperation Among Cooperatives

Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional, and international structures.

### Concern for Community

While focusing on member needs, cooperatives work for the sustainable development of their communities through policies accepted by their members.



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