



# UTILITY ALLOWANCE STUDY

MARCH 2016

## *SECTION 8 HOUSING CHOICE VOUCHER PROGRAM*

### HAWAII PUBLIC HOUSING AUTHORITY

MS. STEPHANIE L. FO  
CHIEF, SECTION 8 SUBSIDY PROGRAMS BRANCH  
HAWAII PUBLIC HOUSING AUTHORITY  
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PREPARED BY: NATIONAL FACILITY CONSULTANTS, INC.  
1225 JOHNSON FERRY ROAD, SUITE 460  
MARIETTA, GEORGIA 30068 770.977.4134





March 24, 2016

Ms. Stephanie L. Fo  
Chief, Section 8 Subsidy Programs Branch  
**Hawaii Public Housing Authority**  
1002 North School Street, Building H  
Honolulu, Hawaii 96817

Dear Ms. Fo:

Enclosed, please find the report of the Section 8 Utility Allowance Update for the Hawaii Public Housing Authority for your review and consideration. This report is provided in accordance with Purchase Order #16K01305 dated March 10, 2016.

The enclosed report includes a summary of the methodology utilized in the establishment of the consumption allowances including any assumptions that were made. The cost allowances utilize current rates and adjustments averaged over the period from January 1, 2015 through December 31, 2015, consistent with the current Public Housing allowance methodology. A Form HUD-52667 is provided for each housing type and the backup calculations are provided under the tab for each housing type.

As you are aware, the field office must be provided a copy of the allowances, along with the backup information. We will forward an electronic copy of the report for this purpose to expedite HUD's review. Once reviewed, the allowances can be implemented.

As always, we appreciate this opportunity to work with you and the Hawaii Public Housing Authority. If you should have any questions or concerns regarding the allowances or need additional information or clarification of any kind, please don't hesitate to contact me at (770) 977-4134.

Sincerely,

W. Sawyer Shirley  
*President*  
**NFC, Inc.**

WSS/mp

# SECTION 8 UTILITY ALLOWANCES

## FOR THE

# HAWAII PUBLIC HOUSING AUTHORITY

*March 24, 2016*

### INTRODUCTION

The Hawaii Public Housing Authority (HPHA) contracted with National Facility Consultants, Inc. (NFC) to update allowances for tenant-purchased utilities for units under the U. S. Department of HUD's Section 8 Housing Choice Voucher program. NFC has assisted the HPHA with the development and update of utility allowances for the Low-Income Public Housing Program and we utilized a similar approach to develop the Section 8 allowances.

The Section 8 allowances were developed in accordance with the requirements set forth at 24 CFR Part 982.517 Utility Allowance Schedule utilizing the methodology employed by the HPHA under the Public Housing Program regarding the application of rates and associated adjustments. Allowances were established for each type of housing to reflect the actual *reasonable* utility consumption for an energy conservative household.

Allowances for each type of housing are provided on Form HUD-52667 under the next tab. The backup calculations are provided under the tab for each type of housing. Note that only the allowances for the applicable tenant-paid utility and actual equipment are to be provided. The base charge for electrical service is included under the Other Electric category, which should be provided to all participants unless all utilities are paid by the owner.

### METHODOLOGY AND ASSUMPTIONS

As indicated above, the allowances were developed in accordance with the regulations set forth at 24 CFR Part 982.517, which require PHAs to establish utility allowances *must be determined based on the typical*

*cost of utilities and services paid by energy-conservative households that occupy housing of similar size and type in the same locality.* As a result, no allowance is provided for heat or air-conditioning, as these are not customary in the locality.

The allowances for each housing type are based upon the customary construction type and equipment for the locality. Since NFC developed the site-based allowances for the Public Housing program, that information was utilized to determine the expected equipment in Section 8 rental units.

Allowances were developed for the following usages:

- Allowances were developed for lighting based upon the prevalent fixtures utilized in the locality. The wattage of bulbs was multiplied by an estimate of the daily usage and then converted to a monthly usage. Since incandescent bulbs are no longer produced after January 1, 2014; any lamps that were included in the calculation (as a result of a room not having fixed fixtures) or any fixture that would have a standard base were assumed to have a 13-watt Compact Fluorescent Light (CFL) bulb.
- Miscellaneous small appliance usage was estimated based upon the regulatory standard of an energy-conservative household of modest circumstances. Allowances were provided for clocks, coffee makers, computers, computer monitors, fans, hair dryers, irons, microwave ovens, radios, smoke detectors, telephones, and televisions and were adjusted, as reasonably needed, for the size of the unit and number of occupants. The estimated watts per appliance were multiplied by the hours of daily use and converted to a total monthly usage estimate. It should be noted that the list of items is not intended to be exact; rather, it is intended to reflect an estimate of usage based upon the standard. For example, an individual household may not use a computer, but may use a gaming system instead and the allowance is intended to cover that usage. It is not intended to include the usage of excessive equipment beyond the standard.
- Usage for a refrigerator is provided as a non Energy-Star, frost-free model that utilizes a total of 600 kWh per year.
- An allowance for cooking was established for efficiency to two-bedroom units and then for three bedroom to five bedroom units to adjust for extensive changes in numbers of occupants.

- An allowance for water heating was established for each unit size based upon the maximum number of occupants in a unit in accordance with the Authority's occupancy standards as stated in the Administrative Plan. In addition, a more accurate estimate of the inlet water temperature was utilized; therefore, there was a decrease in the consumption for this category.
- An allowance for solar water heating was established for each unit size based upon the number of occupants. Staff should verify that the solar system is in good repair prior to applying that allowance.
- Allowances were also developed for the cost of various types of medical equipment in accordance with the requirements under Section 504 of the Housing and Redevelopment Act. As the Authority grants reasonable accommodation for the various allowances, they should be provided to the resident accordingly. These medical allowances are presented for each housing type under the applicable tab.
- Water and sewer allowances were developed based on the expected usage of an energy-conservative household. It was assumed that the maximum number of occupants (based on occupancy standards) is in the household to provide a "worst-case" scenario.

Rates were collected for each applicable utility for each type of property. All rate schedules were verified and any adjustments to rates were collected for the year period from January 1, 2015 through December 31, 2015. This is consistent with the approach utilized by the HPHA for the Public Housing program where adjustments that fluctuate every month are averaged over the preceding year. It should be noted that in cases where utility companies were granted an increase in their base rates by regulatory authorities, the monthly energy cost adjustments were reduced by the amount of the increase for the months prior to the effective date of the increase in order to prevent over compensation.

Where rate schedules are graduated with increased rates are in effect for higher usage, the entire first two tiers were averaged to formulate a weighted average rate for the resident. Since all of the total consumption allowances are above the total for the consumption of the first tier yet below the consumption of the first two tiers combined, this is also to the benefit of the participant.

For water and sewer rates, the "single-family" rate was utilized for all types of housing based on information provided by the Board of Water Supply. The Board representative indicated that the

multifamily rate is only used when the bill includes multiple units and that the single-family rate is used for an individual bill, regardless of the actual type of housing. Since a participant would not be provided the allowance if it were paid by the building owner, the multifamily rate was not utilized.

#### **ALLOWANCES FOR THE PURCHASE OF REFRIGERATORS AND STOVES**

In accordance with HUD regulations, the cost of purchasing a refrigerator or stove is also included in the allowance. For refrigerators, a purchase price of \$500 was assumed and that amount was amortized over a five-year period at an interest rate of 26%. For stoves, a purchase price of \$450 was assumed and that amount was also amortized over a five-year period at an interest rate of 26%. The prices are based upon the Home Depot price for a base GE appliance. The interest rates are based upon that charged on a Home Depot credit account.

# Allowances for Tenant-Furnished Utilities and Other Services

U.S. Department of Housing and Urban Development  
Office of Public and Indian Housing

OMB Approval No. 2577-0169  
(exp. 09/30/2017)

Public Reporting Statement and Instructions on back

Locality <b>Hawaii Public Housing Authority</b>	Unit Type <b>Single Family</b>	Date (mm/dd/yyyy) <b>05/01/2016</b>
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Utility or Service	Monthly Dollar Allowances					
	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Heating						
a. Natural Gas						
b. Bottle Gas						
c. Oil / Electric						
d. Coal / Other						
Cooking						
a. Natural Gas	28	28	28	32	32	32
b. Bottle Gas						
c. Oil / Electric	21	21	21	26	26	26
d. Coal / Other						
Other Electric	48	48	54	60	67	67
Air Conditioning						
Water Heating						
a. Natural Gas	22	32	51	70	89	109
b. Bottle Gas						
c. Oil / Electric	12	23	47	70	94	117
d. Coal / Other	4	8	13	21	30	38
(Solar)						
Water	18	23	36	45	58	67
Sewer	87	91	101	110	119	128
Trash Collection						
Range/Microwave	14	14	14	14	14	14
Refrigerator	15	15	15	15	15	15
Other -- specify						

<b>Actual Family Allowances</b> To be used by the family to compute allowance. Complete below for the actual unit rented.		Utility or Service	per month cost
Name of Family		Heating	\$
Address of Unit		Cooking	
Number of Bedrooms		Other Electric	
		Air Conditioning	
		Water Heating	
		Water	
		Sewer	
		Trash Collection	
		Range/Microwave	
		Refrigerator	
		Other	
		<b>Total</b>	<b>\$</b>

# Allowances for Tenant-Furnished Utilities and Other Services

U.S. Department of Housing and Urban Development  
Office of Public and Indian Housing

OMB Approval No. 2577-0169  
(exp. 09/30/2017)

Public Reporting Statement and Instructions on back

Locality <b>Hawaii Public Housing Authority</b>	Unit Type <b>Duplex</b>	Date (mm/dd/yyyy) <b>05/01/2016</b>
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Utility or Service	Monthly Dollar Allowances					
	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Heating	a. Natural Gas					
	b. Bottle Gas					
	c. Oil / Electric					
	d. Coal / Other					
Cooking	a. Natural Gas	28	28	28	32	32
	b. Bottle Gas					
	c. Oil / Electric	21	21	21	26	26
	d. Coal / Other					
Other Electric	48	48	54	60	67	67
Air Conditioning						
Water Heating	a. Natural Gas	22	32	51	70	89
	b. Bottle Gas					
	c. Oil / Electric	12	23	47	70	94
	(Solar) d. Coal / Other	4	8	13	21	30
Water	18	23	36	45	58	67
Sewer	86	91	100	108	117	126
Trash Collection						
Range/Microwave	14	14	14	14	14	14
Refrigerator	15	15	15	15	15	15
Other – specify						

<b>Actual Family Allowances</b> To be used by the family to compute allowance. Complete below for the actual unit rented.		Utility or Service	per month cost
Name of Family _____  Address of Unit _____  Number of Bedrooms _____		Heating	\$ _____
		Cooking	_____
		Other Electric	_____
		Air Conditioning	_____
		Water Heating	_____
		Water	_____
		Sewer	_____
		Trash Collection	_____
		Range/Microwave	_____
		Refrigerator	_____
		Other	_____
		<b>Total</b>	<b>\$ _____</b>

# Allowances for Tenant-Furnished Utilities and Other Services

U.S. Department of Housing and Urban Development  
Office of Public and Indian Housing

OMB Approval No. 2577-0169  
(exp. 09/30/2017)

Public Reporting Statement and Instructions on back

Locality <b>Hawaii Public Housing Authority</b>	Unit Type <b>Townhouse</b>	Date (mm/dd/yyyy) <b>05/01/2016</b>
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Utility or Service	Monthly Dollar Allowances					
	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Heating	a. Natural Gas					
	b. Bottle Gas					
	c. Oil / Electric					
	d. Coal / Other					
Cooking	a. Natural Gas	28	28	28	32	32
	b. Bottle Gas					
	c. Oil / Electric	21	21	21	26	26
	d. Coal / Other					
Other Electric	48	48	55	61	67	68
Air Conditioning						
Water Heating (Solar)	a. Natural Gas	22	32	51	70	89
	b. Bottle Gas					
	c. Oil / Electric	12	23	47	70	94
	d. Coal / Other	4	8	13	21	30
Water	18	23	36	45	58	67
Sewer	86	91	100	108	117	126
Trash Collection						
Range/Microwave	14	14	14	14	14	14
Refrigerator	15	15	15	15	15	15
Other -- specify						

<b>Actual Family Allowances</b> To be used by the family to compute allowance. Complete below for the actual unit rented.		Utility or Service	per month cost
Name of Family  Address of Unit  Number of Bedrooms		Heating	\$
		Cooking	
		Other Electric	
		Air Conditioning	
		Water Heating	
		Water	
		Sewer	
		Trash Collection	
		Range/Microwave	
		Refrigerator	
		Other	
		<b>Total</b>	<b>\$</b>

# Allowances for Tenant-Furnished Utilities and Other Services

U.S. Department of Housing and Urban Development  
Office of Public and Indian Housing

OMB Approval No. 2577-0169  
(exp. 09/30/2017)

Public Reporting Statement and Instructions on back

Locality <b>Hawaii Public Housing Authority</b>	Unit Type <b>Lowrise</b>	Date (mm/dd/yyyy) <b>05/01/2016</b>
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Utility or Service	Monthly Dollar Allowances					
	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Heating	a. Natural Gas					
	b. Bottle Gas					
	c. Oil / Electric					
	d. Coal / Other					
Cooking	a. Natural Gas	28	28	28	32	32
	b. Bottle Gas					
	c. Oil / Electric	21	21	21	26	26
	d. Coal / Other					
Other Electric	47	48	54	60	66	67
Air Conditioning						
Water Heating (Solar)	a. Natural Gas	22	32	51	70	89
	b. Bottle Gas					
	c. Oil / Electric	12	23	47	70	94
	d. Coal / Other	4	8	13	21	30
Water	18	23	36	45	58	67
Sewer	86	91	100	108	117	126
Trash Collection						
Range/Microwave	14	14	14	14	14	14
Refrigerator	15	15	15	15	15	15
Other -- specify						

<b>Actual Family Allowances</b> To be used by the family to compute allowance. Complete below for the actual unit rented.	Utility or Service	per month cost
	Name of Family	Heating
Address of Unit	Cooking	
	Other Electric	
	Air Conditioning	
	Water Heating	
	Water	
	Sewer	
	Trash Collection	
	Range/Microwave	
	Refrigerator	
	Other	
Number of Bedrooms	<b>Total</b>	\$

# Allowances for Tenant-Furnished Utilities and Other Services

U.S. Department of Housing and Urban Development  
Office of Public and Indian Housing

OMB Approval No. 2577-0169  
(exp. 09/30/2017)

Public Reporting Statement and Instructions on back

Locality <b>Hawaii Public Housing Authority</b>	Unit Type <b>Highrise</b>	Date (mm/dd/yyyy) <b>05/01/2016</b>
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Utility or Service	Monthly Dollar Allowances					
	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Heating	a. Natural Gas					
	b. Bottle Gas					
	c. Oil / Electric					
	d. Coal / Other					
Cooking	a. Natural Gas	28	28	28	32	32
	b. Bottle Gas					
	c. Oil / Electric	21	21	21	26	26
	d. Coal / Other					
Other Electric	47	47	54	60	66	67
Air Conditioning						
Water Heating (Solar)	a. Natural Gas	22	32	51	70	89
	b. Bottle Gas					
	c. Oil / Electric	12	23	47	70	94
	d. Coal / Other	4	8	13	21	30
Water	18	23	36	45	58	67
Sewer	86	91	100	108	117	126
Trash Collection						
Range/Microwave	14	14	14	14	14	14
Refrigerator	15	15	15	15	15	15
Other – specify						

<b>Actual Family Allowances</b> To be used by the family to compute allowance. Complete below for the actual unit rented.	Utility or Service	per month cost
	Heating	\$
Name of Family	Cooking	
	Other Electric	
	Air Conditioning	
	Water Heating	
	Water	
	Sewer	
	Trash Collection	
	Range/Microwave	
	Refrigerator	
	Other	
Address of Unit	<b>Total</b>	\$
Number of Bedrooms		

# 2016 Rate Calculation Form

**Hawaii Public Housing Authority**

**Property Description:** Single Family  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Average Residential DSM Adjustments (per kWh)**

Month	Amount	Month	Amount
January-15	\$0.001423	July-15	\$0.000348
February-15	\$0.001423	August-15	\$0.000348
March-15	\$0.001423	September-15	\$0.000348
April-15	\$0.000348	October-15	\$0.000348
May-15	\$0.000348	November-15	\$0.000348
June-15	\$0.000348	December-15	\$0.000348
<b>Average Adjustment</b>			<b>\$0.000617</b>

**Average Energy Cost Adjustment Factors (per kWh)**

Month	Amount	Month	Amount
January-15	\$0.01065	July-15	-\$0.00997
February-15	-\$0.00755	August-15	-\$0.01673
March-15	-\$0.01863	September-15	-\$0.01343
April-15	-\$0.01151	October-15	-\$0.02793
May-15	-\$0.01931	November-15	-\$0.03179
June-15	-\$0.01624	December-15	-\$0.03353
<b>Average Adjustment</b>			<b>-\$0.01633</b>

**IRP Cost Recovery Provision**

Month	Amount	Month	Amount
January-15	0.000%	July-15	0.000%
February-15	0.000%	August-15	0.000%
March-15	0.000%	September-15	0.000%
April-15	0.000%	October-15	0.000%
May-15	0.000%	November-15	0.000%
June-15	0.000%	December-15	0.000%
<b>Average Adjustment</b>			<b>0.000%</b>

# 2016 Rate Calculation Form

**Hawaii Public Housing Authority**

**Property Description:** Single Family  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Rate Adjustment**

Month	Amount	Month	Amount
January-15	0.000%	July-15	0.000%
February-15	0.000%	August-15	0.000%
March-15	0.000%	September-15	0.000%
April-15	0.000%	October-15	0.000%
May-15	0.000%	November-15	0.000%
June-15	0.000%	December-15	0.000%
<b>Average Adjustment</b>			<b>0.000%</b>

**Summary of Rate Schedule – Schedule "R"**

Monthly Customer Base Charge*:	\$10.42
Non-Fuel Energy Charge**:	\$0.089205
Base Fuel/Energy Charge:	\$0.136062
IRP Cost Recovery Provision (Applies to Above 3 Charges):	0.000%
Rate Adjustment (Applies to Above 3 Charges):	0.000%
Average Residential DSM Adjustments:	\$0.000617
Average Energy Cost Adjustment Factors:	-\$0.01633
Public Benefits Surcharge/Avg Purch Power Adj/RBA Rate Adj/RE Surcharge:	\$0.060655

\* Includes Green Infrastructure Fee Surcharge

# 2016 Utility Allowances

**Hawaii Public Housing Authority**

**Property Description:**     Single Family  
**Utility Type:**                Electric  
**Utility Provider:**           HECO

**Consumption Allowances (kWh per Month)**

Bedroom Size	Lights	Misc.	Refrig.	Total Basic	Electric Cooking	Electric Water Heating	Solar Water Heating*	Total
0	32	56	50	138	78	43	16	274
1	34	56	50	139	78	87	31	335
2	36	76	50	162	78	174	47	460
3	43	92	50	185	95	261	78	619
4	45	113	50	208	95	348	110	760
5	47	114	50	211	95	434	141	882

\* Distribution by bedroom size based on number of occupants

**Cost Allowances (\$ per Month)**

Bedroom Size	Lights	Misc.	Refrig.	Total Basic**	Electric Cooking	Electric Water Heating	Solar Water Heating	Total
0	\$8.70	\$15.00	\$13.51	\$48	\$21	\$12	\$4	\$85
1	\$9.12	\$15.00	\$13.51	\$48	\$21	\$23	\$8	\$101
2	\$9.76	\$20.52	\$13.51	\$54	\$21	\$47	\$13	\$135
3	\$11.58	\$24.88	\$13.51	\$60	\$26	\$70	\$21	\$178
4	\$12.22	\$30.40	\$13.51	\$67	\$26	\$94	\$30	\$216
5	\$12.76	\$30.79	\$13.51	\$67	\$26	\$117	\$38	\$249

\*\*Total Basic Includes Monthly Customer Base Charge. This is the amount for Other Electric.

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:**      Single Family  
**Utility Type:**                Electric  
**Utility Provider:**            HECO

**Number of Bedrooms:**            0

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	2	104	38
Bedroom	1	26	3	78	28
Lamps	0	0	4	0	0
Hall/Stairs	1	13	3	39	14
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:**            1

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	1	26	3	78	28
Lamps	0	0	4	0	0
Hall/Stairs	1	13	3	39	14
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:**      Single Family  
**Utility Type:**                Electric  
**Utility Provider:**            HECO

**Number of Bedrooms:**                2

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	2	26	3	156	57
Lamps	0	0	4	0	0
Hall/Stairs	1	13	3	39	14
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:**                3

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	4	208	76
Bedroom	3	26	3	234	85
Lamps	0	0	4	0	0
Hall/Stairs	2	13	3	78	28
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:**      Single Family  
**Utility Type:**                Electric  
**Utility Provider:**            HECO

**Number of Bedrooms:**                4

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	4	208	76
Bedroom	4	26	3	312	114
Lamps	0	0	4	0	0
Hall/Stairs	2	13	3	78	28
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:**                5

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	5	26	3	390	142
Lamps	0	0	4	0	0
Hall/Stairs	3	13	3	117	43
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

# Miscellaneous Small Appliance Usage Tables

Hawaii Public Housing Authority

Property Description: Single Family  
 Utility Type: Electric  
 Utility Provider: HECO

Number of Bedrooms: 0

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	1	2	24.0	1.4	17
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	1	60	4.0	7.2	86
Hair Dryer	1	1200	0.1	3.0	36
Iron	1	1100	0.1	4.7	57
Microwave Oven	1	800	0.2	4.1	49
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

Number of Bedrooms: 1

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	1	2	24.0	1.4	17
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	1	60	4.0	7.2	86
Hair Dryer	1	1200	0.1	3.0	36
Iron	1	1100	0.1	4.7	57
Microwave Oven	1	800	0.2	4.1	49
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

## *Miscellaneous Small Appliance Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:**      Single Family  
**Utility Type:**                Electric  
**Utility Provider:**            HECO

**Number of Bedrooms:**                2

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	2	2	24.0	2.9	35
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	2	60	4.0	14.4	173
Hair Dryer	2	1200	0.1	6.0	72
Iron	1	1100	0.3	9.4	113
Microwave Oven	1	800	0.3	8.2	98
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

**Number of Bedrooms:**                3

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	3	2	24.0	4.3	52
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	2	60	4.0	14.4	173
Hair Dryer	2	1200	0.1	6.0	72
Iron	1	1100	0.3	9.4	113
Microwave Oven	1	800	0.3	8.2	98
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

# *Miscellaneous Small Appliance Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:**      Single Family  
**Utility Type:**                Electric  
**Utility Provider:**            HECO

**Number of Bedrooms:**            4

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	4	2	24.0	5.8	69
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	3	60	4.0	21.6	259
Hair Dryer	3	1200	0.1	9.0	108
Iron	1	1100	0.4	14.2	170
Microwave Oven	1	800	0.5	12.2	147
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

**Number of Bedrooms:**            5

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	5	2	24.0	7.2	86
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	3	60	4.0	21.6	259
Hair Dryer	3	1200	0.1	9.0	108
Iron	1	1100	0.4	14.2	170
Microwave Oven	1	800	0.5	12.2	147
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

## *2016 Allowances for Medical Equipment*

**Hawaii Public Housing Authority**

**Property Description:**  
**Utility Type:**  
**Utility Provider:**

**Single Family**  
**Electric**  
**HECO**

<b>Description</b>	<b>Frequency</b>	<b>kWh/Year</b>	<b>kWh/Month</b>	<b>Monthly Dollar Allowance</b>
Air Conditioner, window type, 10,000 BtuH unit	Continuously As Needed	2,750	229	\$61.92
Oxygen Concentrator, 400W	18 Hrs/Day	2,628	219	\$59.18
Nebulizer, 75W	2 Hrs/Day	60	5	\$1.35
Electric Hospital Bed, 200W	.2 Hrs/Day	12	1	\$0.27
Alternating Pressure Pad, 70W	24 Hrs/Day	612	51	\$13.78
Low Air-Loss Mattress, 120W	24 Hrs/Day	1,056	88	\$23.78
Power Wheelchair/ Scooter, 550W, Full-Time Use	4 Hrs/Day Charge Time	803	67	\$18.08
Feeding Tube, 120W	12 Hrs/Day	526	44	\$11.84
CPAP Machine, 30W	10 Hrs/Day	110	9	\$2.47
Leg Pump, 14W	6 Hrs/Day	31	3	\$0.69

# Water and Sewer Allowance Calculation

**Hawaii Public Housing Authority**

**Property Description:** Single Family  
**Utility Type:** Water/Sewer  
**Utility Provider:** City/County of Honolulu

Standards Used in Calculating Water Usage				
Fixture/Use	Gallons	Times	Frequency	Description
Toilet	3.5	X	5	Flushes per Person per Day
Shower	15	X	1	Showers per Person per Day
Dishwasher	3	X	0.5	Dishloads per Person per Day
Laundry	8	X	0.2	Loads per Person per Day
Cooking	0.1	X	3	Meals per Person per Day
Handwashing	0.1	X	10	Handwashings per Person per Day
Other	5	X	1	Allowance per Person per Day

Calculation of Monthly Water Usage						
Bedroom Size >>>	0	1	2	3	4	5
# Occupants >>>	1	2	4	6	8	10
Toilet	17.5	35	70	105	140	175
Shower	15	30	60	90	120	150
Diswasher	1.5	3	6	9	12	15
Clothes	1.6	3.2	6.4	9.6	12.8	16
Cooking	0.3	0.6	1.2	1.8	2.4	3
Handwashing	1	2	4	6	8	10
Other	5	10	20	30	40	50
<b>Gallons per Day</b>	41.9	83.8	167.6	251.4	335.2	419
<b>Gallons per Month</b>	1274	2549	5098	7647	10196	12745
<b>Water Billing Gallons</b>	2000	3000	6000	8000	11000	13000
<b>Sewer Billing Gallons*</b>	2000	3000	5000	7000	9000	11000

Water Rate Schedule	
Base Charge	\$9.26
Charge per 1000 Gals	\$4.42

Sewer Rate Schedule	
Base Charge	77.55
Charge per 1000 Gals	4.63

Monthly Cost Allowances						
Bedroom Size >>>	0	1	2	3	4	5
Water Allowance	\$18	\$23	\$36	\$45	\$58	\$67
Sewer Allowance	\$87	\$91	\$101	\$110	\$119	\$128

\* Actual consumption reduced by 20% for water irrigation factor

# 2016 Rate Calculation Form

Hawaii Public Housing Authority

Utility Type: LP -- Utility  
Property Description: Single Family

## Fuel Adjustment Cost (FAC) (per Therm)

Month	Amount	Month	Amount
January-15	-\$0.1406	July-15	\$0.6153
February-15	-\$0.3309	August-15	\$0.5426
March-15	\$0.1178	September-15	\$0.1512
April-15	\$0.3805	October-15	-\$0.0387
May-15	\$0.2007	November-15	-\$0.0100
June-15	\$0.8148	December-15	-\$0.3387
Average Adjustment			\$0.1637

## Summary of Rate Schedule -- Schedule 20 - Residential

Monthly Customer Base Charge: \$8.50  
Commodity Charge -- All Therms \$3.8871  
Average Fuel Adjustment Cost: \$0.1637  
Applicable Tax Rate 4.712%

# 2016 Utility Allowances

Hawaii Public Housing Authority

Utility Type: LP -- Utility  
Property Description: Single Family

## Consumption Allowances (Therms per Month)

Bedroom Size	Cooking	Individual Water Heating	Total
0	4.50	5.25	9.75
1	4.50	7.50	12.00
2	4.50	12.00	16.50
3	5.50	16.58	22.08
4	5.50	21.08	26.58
5	5.50	25.67	31.17

## Cost Allowances (\$ per Month)

Bedroom Size	Cooking*	Individual Water Heating	Total
0	\$28	\$22	\$50
1	\$28	\$32	\$60
2	\$28	\$51	\$79
3	\$32	\$70	\$103
4	\$32	\$89	\$122
5	\$32	\$109	\$141

\*Total Basic Includes Monthly Customer Base Charge

# 2016 Rate Calculation Form

Hawaii Public Housing Authority

Property Description: Duplex  
 Utility Type: Electric  
 Utility Provider: HECO

**Average Residential DSM Adjustments (per kWh)**

Month	Amount	Month	Amount
January-15	\$0.001423	July-15	\$0.000348
February-15	\$0.001423	August-15	\$0.000348
March-15	\$0.001423	September-15	\$0.000348
April-15	\$0.000348	October-15	\$0.000348
May-15	\$0.000348	November-15	\$0.000348
June-15	\$0.000348	December-15	\$0.000348
<b>Average Adjustment</b>			<b>\$0.000617</b>

**Average Energy Cost Adjustment Factors (per kWh)**

Month	Amount	Month	Amount
January-15	\$0.01065	July-15	-\$0.00997
February-15	-\$0.00755	August-15	-\$0.01673
March-15	-\$0.01863	September-15	-\$0.01343
April-15	-\$0.01151	October-15	-\$0.02793
May-15	-\$0.01931	November-15	-\$0.03179
June-15	-\$0.01624	December-15	-\$0.03353
<b>Average Adjustment</b>			<b>-\$0.01633</b>

**IRP Cost Recovery Provision**

Month	Amount	Month	Amount
January-15	0.000%	July-15	0.000%
February-15	0.000%	August-15	0.000%
March-15	0.000%	September-15	0.000%
April-15	0.000%	October-15	0.000%
May-15	0.000%	November-15	0.000%
June-15	0.000%	December-15	0.000%
<b>Average Adjustment</b>			<b>0.000%</b>

# 2016 Rate Calculation Form

Hawaii Public Housing Authority

Property Description: Duplex  
 Utility Type: Electric  
 Utility Provider: HECO

**Rate Adjustment**

Month	Amount	Month	Amount
January-15	0.000%	July-15	0.000%
February-15	0.000%	August-15	0.000%
March-15	0.000%	September-15	0.000%
April-15	0.000%	October-15	0.000%
May-15	0.000%	November-15	0.000%
June-15	0.000%	December-15	0.000%
<b>Average Adjustment</b>			<b>0.000%</b>

**Summary of Rate Schedule – Schedule "R"**

Monthly Customer Base Charge*:	\$10.42
Non-Fuel Energy Charge**:	\$0.089205
Base Fuel/Energy Charge:	\$0.136062
IRP Cost Recovery Provision (Applies to Above 3 Charges):	0.000%
Rate Adjustment (Applies to Above 3 Charges):	0.000%
Average Residential DSM Adjustments:	\$0.000617
Average Energy Cost Adjustment Factors:	-\$0.01633
Public Benefits Surcharge/Avg Purch Power Adj/RBA Rate Adj/RE Surcharge:	\$0.060655

\* Includes Green Infrastructure Fee Surcharge

# 2016 Utility Allowances

Hawaii Public Housing Authority

Property Description: Duplex  
 Utility Type: Electric  
 Utility Provider: HECO

## Consumption Allowances (kWh per Month)

Bedroom Size	Lights	Misc.	Refrig.	Total Basic	Electric Cooking	Electric Water Heating	Solar Water Heating*	Total
0	32	56	50	138	78	43	16	274
1	34	56	50	139	78	87	31	335
2	36	76	50	162	78	174	47	460
3	43	92	50	185	95	261	78	619
4	45	113	50	208	95	348	110	760
5	47	114	50	211	95	434	141	882

\* Distribution by bedroom size based on number of occupants

## Cost Allowances (\$ per Month)

Bedroom Size	Lights	Misc.	Refrig.	Total Basic**	Electric Cooking	Electric Water Heating	Solar Water Heating	Total
0	\$8.70	\$15.00	\$13.51	\$48	\$21	\$12	\$4	\$85
1	\$9.12	\$15.00	\$13.51	\$48	\$21	\$23	\$8	\$101
2	\$9.76	\$20.52	\$13.51	\$54	\$21	\$47	\$13	\$135
3	\$11.58	\$24.88	\$13.51	\$60	\$26	\$70	\$21	\$178
4	\$12.22	\$30.40	\$13.51	\$67	\$26	\$94	\$30	\$216
5	\$12.76	\$30.79	\$13.51	\$67	\$26	\$117	\$38	\$249

\*\*Total Basic Includes Monthly Customer Base Charge. This is the amount for Other Electric.

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Duplex  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:**           **0**

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	2	104	38
Bedroom	1	26	3	78	28
Lamps	0	0	4	0	0
Hall/Stairs	1	13	3	39	14
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:**           **1**

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	1	26	3	78	28
Lamps	0	0	4	0	0
Hall/Stairs	1	13	3	39	14
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Duplex  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:**                    **2**

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	2	26	3	156	57
Lamps	0	0	4	0	0
Hall/Stairs	1	13	3	39	14
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:**                    **3**

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	4	208	76
Bedroom	3	26	3	234	85
Lamps	0	0	4	0	0
Hall/Stairs	2	13	3	78	28
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Duplex  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:** 4

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	4	208	76
Bedroom	4	26	3	312	114
Lamps	0	0	4	0	0
Hall/Stairs	2	13	3	78	28
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:** 5

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	5	26	3	390	142
Lamps	0	0	4	0	0
Hall/Stairs	3	13	3	117	43
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

# *Miscellaneous Small Appliance Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Duplex  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:**           **0**

<b>Area Description</b>	<b>Number of Appliances</b>	<b>Watts per Appliance</b>	<b>Hours per Day</b>	<b>kWh per Month</b>	<b>kWh per Year</b>
Clocks	1	2	24.0	1.4	17
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	1	60	4.0	7.2	86
Hair Dryer	1	1200	0.1	3.0	36
Iron	1	1100	0.1	4.7	57
Microwave Oven	1	800	0.2	4.1	49
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

**Number of Bedrooms:**           **1**

<b>Area Description</b>	<b>Number of Appliances</b>	<b>Watts per Appliance</b>	<b>Hours per Day</b>	<b>kWh per Month</b>	<b>kWh per Year</b>
Clocks	1	2	24.0	1.4	17
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	1	60	4.0	7.2	86
Hair Dryer	1	1200	0.1	3.0	36
Iron	1	1100	0.1	4.7	57
Microwave Oven	1	800	0.2	4.1	49
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

# *Miscellaneous Small Appliance Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Duplex  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:**                    2

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	2	2	24.0	2.9	35
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	2	60	4.0	14.4	173
Hair Dryer	2	1200	0.1	6.0	72
Iron	1	1100	0.3	9.4	113
Microwave Oven	1	800	0.3	8.2	98
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

**Number of Bedrooms:**                    3

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	3	2	24.0	4.3	52
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	2	60	4.0	14.4	173
Hair Dryer	2	1200	0.1	6.0	72
Iron	1	1100	0.3	9.4	113
Microwave Oven	1	800	0.3	8.2	98
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

# *Miscellaneous Small Appliance Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Duplex  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:** 4

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	4	2	24.0	5.8	69
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	3	60	4.0	21.6	259
Hair Dryer	3	1200	0.1	9.0	108
Iron	1	1100	0.4	14.2	170
Microwave Oven	1	800	0.5	12.2	147
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

**Number of Bedrooms:** 5

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	5	2	24.0	7.2	86
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	3	60	4.0	21.6	259
Hair Dryer	3	1200	0.1	9.0	108
Iron	1	1100	0.4	14.2	170
Microwave Oven	1	800	0.5	12.2	147
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

## *2016 Allowances for Medical Equipment*

**Hawaii Public Housing Authority**

**Property Description:** Duplex  
**Utility Type:** Electric  
**Utility Provider:** HECO

Description	Frequency	kWh/Year	kWh/Month	Monthly Dollar Allowance
Air Conditioner, window type, 10,000 BtuH unit	Continuously As Needed	2,750	229	\$61.92
Oxygen Concentrator, 400W	18 Hrs/Day	2,628	219	\$59.18
Nebulizer, 75W	2 Hrs/Day	60	5	\$1.35
Electric Hospital Bed, 200W	.2 Hrs/Day	12	1	\$0.27
Alternating Pressure Pad, 70W	24 Hrs/Day	612	51	\$13.78
Low Air-Loss Mattress, 120W	24 Hrs/Day	1,056	88	\$23.78
Power Wheelchair/ Scooter, 550W, Full-Time Use	4 Hrs/Day Charge Time	803	67	\$18.08
Feeding Tube, 120W	12 Hrs/Day	526	44	\$11.84
CPAP Machine, 30W	10 Hrs/Day	110	9	\$2.47
Leg Pump, 14W	6 Hrs/Day	31	3	\$0.69

# Water and Sewer Allowance Calculation

Hawaii Public Housing Authority

Property Description: Duplex  
 Utility Type: Water/Sewer  
 Utility Provider: City/County of Honolulu

Standards Used in Calculating Water Usage				
Fixture/Use	Gallons	Times	Frequency	Description
Toilet	3.5	X	5	Flushes per Person per Day
Shower	15	X	1	Showers per Person per Day
Dishwasher	3	X	0.5	Dishloads per Person per Day
Laundry	8	X	0.2	Loads per Person per Day
Cooking	0.1	X	3	Meals per Person per Day
Handwashing	0.1	X	10	Handwashings per Person per Day
Other	5	X	1	Allowance per Person per Day

Calculation of Monthly Water Usage						
Bedroom Size >>>	0	1	2	3	4	5
# Occupants >>>	1	2	4	6	8	10
Toilet	17.5	35	70	105	140	175
Shower	15	30	60	90	120	150
Diswasher	1.5	3	6	9	12	15
Clothes	1.6	3.2	6.4	9.6	12.8	16
Cooking	0.3	0.6	1.2	1.8	2.4	3
Handwashing	1	2	4	6	8	10
Other	5	10	20	30	40	50
<b>Gallons per Day</b>	41.9	83.8	167.6	251.4	335.2	419
<b>Gallons per Month</b>	1274	2549	5098	7647	10196	12745
<b>Water Billing Gallons</b>	2000	3000	6000	8000	11000	13000
<b>Sewer Billing Gallons*</b>	2000	3000	5000	7000	9000	11000

Water Rate Schedule	
Base Charge	\$9.26
Charge per 1000 Gals	\$4.42

Sewer Rate Schedule	
Base Charge	77.55
Charge per 1000 Gals	4.42

Monthly Cost Allowances						
Bedroom Size >>>	0	1	2	3	4	5
Water Allowance	\$18	\$23	\$36	\$45	\$58	\$67
Sewer Allowance	\$86	\$91	\$100	\$108	\$117	\$126

\*Actual consumption reduced by 20% for water irrigation factor

# 2016 Rate Calculation Form

Hawaii Public Housing Authority

Utility Type: LP -- Utility  
Property Description: Duplex

## Fuel Adjustment Cost (FAC) (per Therm)

Month	Amount	Month	Amount
January-15	-\$0.1406	July-15	\$0.6153
February-15	-\$0.3309	August-15	\$0.5426
March-15	\$0.1178	September-15	\$0.1512
April-15	\$0.3805	October-15	-\$0.0387
May-15	\$0.2007	November-15	-\$0.0100
June-15	\$0.8148	December-15	-\$0.3387
Average Adjustment			\$0.1637

## Summary of Rate Schedule -- Schedule 20 - Residential

Monthly Customer Base Charge: \$8.50  
Commodity Charge -- All Therms \$3.8871  
Average Fuel Adjustment Cost: \$0.1637  
Applicable Tax Rate 4.712%

# 2016 Utility Allowances

Hawaii Public Housing Authority

Utility Type: LP -- Utility  
Property Description: Duplex

## Consumption Allowances (Therms per Month)

Bedroom Size	Cooking	Individual Water Heating	Total
0	4.50	5.25	9.75
1	4.50	7.50	12.00
2	4.50	12.00	16.50
3	5.50	16.58	22.08
4	5.50	21.08	26.58
5	5.50	25.67	31.17

## Cost Allowances (\$ per Month)

Bedroom Size	Cooking*	Individual Water Heating	Total
0	\$28	\$22	\$50
1	\$28	\$32	\$60
2	\$28	\$51	\$79
3	\$32	\$70	\$103
4	\$32	\$89	\$122
5	\$32	\$109	\$141

\*Total Basic Includes Monthly Customer Base Charge

# 2016 Rate Calculation Form

Hawaii Public Housing Authority

Property Description:      Townhouse  
 Utility Type:                  Electric  
 Utility Provider:              HECO

**Average Residential DSM Adjustments (per kWh)**

Month	Amount	Month	Amount
January-15	\$0.001423	July-15	\$0.000348
February-15	\$0.001423	August-15	\$0.000348
March-15	\$0.001423	September-15	\$0.000348
April-15	\$0.000348	October-15	\$0.000348
May-15	\$0.000348	November-15	\$0.000348
June-15	\$0.000348	December-15	\$0.000348
<b>Average Adjustment</b>			<b>\$0.000617</b>

**Average Energy Cost Adjustment Factors (per kWh)**

Month	Amount	Month	Amount
January-15	\$0.01065	July-15	-\$0.00997
February-15	-\$0.00755	August-15	-\$0.01673
March-15	-\$0.01863	September-15	-\$0.01343
April-15	-\$0.01151	October-15	-\$0.02793
May-15	-\$0.01931	November-15	-\$0.03179
June-15	-\$0.01624	December-15	-\$0.03353
<b>Average Adjustment</b>			<b>-\$0.01633</b>

**IRP Cost Recovery Provision**

Month	Amount	Month	Amount
January-15	0.000%	July-15	0.000%
February-15	0.000%	August-15	0.000%
March-15	0.000%	September-15	0.000%
April-15	0.000%	October-15	0.000%
May-15	0.000%	November-15	0.000%
June-15	0.000%	December-15	0.000%
<b>Average Adjustment</b>			<b>0.000%</b>

# 2016 Rate Calculation Form

**Hawaii Public Housing Authority**

**Property Description:** Townhouse  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Rate Adjustment**

Month	Amount	Month	Amount
January-15	0.000%	July-15	0.000%
February-15	0.000%	August-15	0.000%
March-15	0.000%	September-15	0.000%
April-15	0.000%	October-15	0.000%
May-15	0.000%	November-15	0.000%
June-15	0.000%	December-15	0.000%
<b>Average Adjustment</b>			<b>0.000%</b>

**Summary of Rate Schedule – Schedule "R"**

Monthly Customer Base Charge*:	\$10.42
Non-Fuel Energy Charge**:	\$0.089205
Base Fuel/Energy Charge:	\$0.136062
IRP Cost Recovery Provision (Applies to Above 3 Charges):	0.000%
Rate Adjustment (Applies to Above 3 Charges):	0.000%
Average Residential DSM Adjustments:	\$0.000617
Average Energy Cost Adjustment Factors:	-\$0.01633
Public Benefits Surcharge/Avg Purch Power Adj/RBA Rate Adj/RE Surcharge:	\$0.060655

\* Includes Green Infrastructure Fee Surcharge

# 2016 Utility Allowances

**Hawaii Public Housing Authority**

Property Description:      Townhouse  
 Utility Type:                  Electric  
 Utility Provider:              HECO

**Consumption Allowances (kWh per Month)**

Bedroom Size	Lights	Misc.	Refrig.	Total Basic	Electric Cooking	Electric Water Heating	Solar Water Heating*	Total
0	33	56	50	139	78	43	16	275
1	35	56	50	140	78	87	31	336
2	37	76	50	163	78	174	47	462
3	44	92	50	186	95	261	78	620
4	46	113	50	209	95	348	110	761
5	48	114	50	212	95	434	141	883

\* Distribution by bedroom size based on number of occupants

**Cost Allowances (\$ per Month)**

Bedroom Size	Lights	Misc.	Refrig.	Total Basic**	Electric Cooking	Electric Water Heating	Solar Water Heating	Total
0	\$9.02	\$15.00	\$13.51	\$48	\$21	\$12	\$4	\$85
1	\$9.44	\$15.00	\$13.51	\$48	\$21	\$23	\$8	\$101
2	\$10.08	\$20.52	\$13.51	\$55	\$21	\$47	\$13	\$135
3	\$11.90	\$24.88	\$13.51	\$61	\$26	\$70	\$21	\$178
4	\$12.54	\$30.40	\$13.51	\$67	\$26	\$94	\$30	\$216
5	\$13.08	\$30.79	\$13.51	\$68	\$26	\$117	\$38	\$249

\*\*Total Basic Includes Monthly Customer Base Charge. This is the amount for Other Electric.

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:**           Townhouse  
**Utility Type:**                    Electric  
**Utility Provider:**               HECO

**Number of Bedrooms:**            **0**

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	2	104	38
Bedroom	1	26	3	78	28
Lamps	0	0	4	0	0
Hall/Stairs	2	13	3	78	28
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:**            **1**

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	1	26	3	78	28
Lamps	0	0	4	0	0
Hall/Stairs	2	13	3	78	28
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:**           Townhouse  
**Utility Type:**                    Electric  
**Utility Provider:**               HECO

**Number of Bedrooms:**            **2**

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	2	26	3	156	57
Lamps	0	0	4	0	0
Hall/Stairs	2	13	3	78	28
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:**            **3**

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	4	208	76
Bedroom	3	26	3	234	85
Lamps	0	0	4	0	0
Hall/Stairs	3	13	3	117	43
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:**           Townhouse  
**Utility Type:**                    Electric  
**Utility Provider:**               HECO

**Number of Bedrooms:**           4

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	4	208	76
Bedroom	4	26	3	312	114
Lamps	0	0	4	0	0
Hall/Stairs	3	13	3	117	43
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:**           5

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	2	13	3	78	28
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	5	26	3	390	142
Lamps	0	0	4	0	0
Hall/Stairs	4	13	3	156	57
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

# *Miscellaneous Small Appliance Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Townhouse  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:**           **0**

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	1	2	24.0	1.4	17
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	1	60	4.0	7.2	86
Hair Dryer	1	1200	0.1	3.0	36
Iron	1	1100	0.1	4.7	57
Microwave Oven	1	800	0.2	4.1	49
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

**Number of Bedrooms:**           **1**

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	1	2	24.0	1.4	17
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	1	60	4.0	7.2	86
Hair Dryer	1	1200	0.1	3.0	36
Iron	1	1100	0.1	4.7	57
Microwave Oven	1	800	0.2	4.1	49
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

## *Miscellaneous Small Appliance Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Townhouse  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:**                 **2**

<b>Area Description</b>	<b>Number of Appliances</b>	<b>Watts per Appliance</b>	<b>Hours per Day</b>	<b>kWh per Month</b>	<b>kWh per Year</b>
Clocks	2	2	24.0	2.9	35
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	2	60	4.0	14.4	173
Hair Dryer	2	1200	0.1	6.0	72
Iron	1	1100	0.3	9.4	113
Microwave Oven	1	800	0.3	8.2	98
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

**Number of Bedrooms:**                 **3**

<b>Area Description</b>	<b>Number of Appliances</b>	<b>Watts per Appliance</b>	<b>Hours per Day</b>	<b>kWh per Month</b>	<b>kWh per Year</b>
Clocks	3	2	24.0	4.3	52
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	2	60	4.0	14.4	173
Hair Dryer	2	1200	0.1	6.0	72
Iron	1	1100	0.3	9.4	113
Microwave Oven	1	800	0.3	8.2	98
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

# *Miscellaneous Small Appliance Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:**           Townhouse  
**Utility Type:**                    Electric  
**Utility Provider:**               HECO

**Number of Bedrooms:**            **4**

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	4	2	24.0	5.8	69
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	3	60	4.0	21.6	259
Hair Dryer	3	1200	0.1	9.0	108
Iron	1	1100	0.4	14.2	170
Microwave Oven	1	800	0.5	12.2	147
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

**Number of Bedrooms:**            **5**

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	5	2	24.0	7.2	86
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	3	60	4.0	21.6	259
Hair Dryer	3	1200	0.1	9.0	108
Iron	1	1100	0.4	14.2	170
Microwave Oven	1	800	0.5	12.2	147
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

## *2016 Allowances for Medical Equipment*

**Hawaii Public Housing Authority**

**Property Description:**  
**Utility Type:**  
**Utility Provider:**

**Townhouse**  
**Electric**  
**HECO**

Description	Frequency	kWh/Year	kWh/Month	Monthly Dollar Allowance
Air Conditioner, window type, 10,000 BtuH unit	Continuously As Needed	2,750	229	\$61.92
Oxygen Concentrator, 400W	18 Hrs/Day	2,628	219	\$59.18
Nebulizer, 75W	2 Hrs/Day	60	5	\$1.35
Electric Hospital Bed, 200W	.2 Hrs/Day	12	1	\$0.27
Alternating Pressure Pad, 70W	24 Hrs/Day	612	51	\$13.78
Low Air-Loss Mattress, 120W	24 Hrs/Day	1,056	88	\$23.78
Power Wheelchair/ Scooter, 550W, Full-Time Use	4 Hrs/Day Charge Time	803	67	\$18.08
Feeding Tube, 120W	12 Hrs/Day	526	44	\$11.84
CPAP Machine, 30W	10 Hrs/Day	110	9	\$2.47
Leg Pump, 14W	6 Hrs/Day	31	3	\$0.69

# Water and Sewer Allowance Calculation

**Hawaii Public Housing Authority**

**Property Description:** Townhouse  
**Utility Type:** Water/Sewer  
**Utility Provider:** City/County of Honolulu

Standards Used in Calculating Water Usage				
Fixture/Use	Gallons	Times	Frequency	Description
Toilet	3.5	X	5	Flushes per Person per Day
Shower	15	X	1	Showers per Person per Day
Dishwasher	3	X	0.5	Dishloads per Person per Day
Laundry	8	X	0.2	Loads per Person per Day
Cooking	0.1	X	3	Meals per Person per Day
Handwashing	0.1	X	10	Handwashings per Person per Day
Other	5	X	1	Allowance per Person per Day

Calculation of Monthly Water Usage						
Bedroom Size >>>	0	1	2	3	4	5
# Occupants >>>	1	2	4	6	8	10
Toilet	17.5	35	70	105	140	175
Shower	15	30	60	90	120	150
Diswasher	1.5	3	6	9	12	15
Clothes	1.6	3.2	6.4	9.6	12.8	16
Cooking	0.3	0.6	1.2	1.8	2.4	3
Handwashing	1	2	4	6	8	10
Other	5	10	20	30	40	50
<b>Gallons per Day</b>	41.9	83.8	167.6	251.4	335.2	419
<b>Gallons per Month</b>	1274	2549	5098	7647	10196	12745
<b>Water Billing Gallons</b>	2000	3000	6000	8000	11000	13000
<b>Sewer Billing Gallons*</b>	2000	3000	5000	7000	9000	11000

Water Rate Schedule	
Base Charge	\$9.26
Charge per 1000 Gals	\$4.42

Sewer Rate Schedule	
Base Charge	77.55
Charge per 1000 Gals	4.42

Monthly Cost Allowances						
Bedroom Size >>>	0	1	2	3	4	5
Water Allowance	\$18	\$23	\$36	\$45	\$58	\$67
Sewer Allowance	\$86	\$91	\$100	\$108	\$117	\$126

\*Actual consumption reduced by 20% for water irrigation factor

# 2016 Rate Calculation Form

Hawaii Public Housing Authority

Utility Type: LP -- Utility  
Property Description: Townhouse

## Fuel Adjustment Cost (FAC) (per Therm)

Month	Amount	Month	Amount
January-15	-\$0.1406	July-15	\$0.6153
February-15	-\$0.3309	August-15	\$0.5426
March-15	\$0.1178	September-15	\$0.1512
April-15	\$0.3805	October-15	-\$0.0387
May-15	\$0.2007	November-15	-\$0.0100
June-15	\$0.8148	December-15	-\$0.3387
Average Adjustment			\$0.1637

## Summary of Rate Schedule -- Schedule 20 - Residential

Monthly Customer Base Charge: \$8.50

Commodity Charge -- All Therms \$3.8871

Average Fuel Adjustment Cost: \$0.1637

Applicable Tax Rate 4.712%

# 2016 Utility Allowances

Hawaii Public Housing Authority

Utility Type: LP -- Utility  
Property Description: Townhouse

## Consumption Allowances (Therms per Month)

Bedroom Size	Cooking	Individual Water Heating	Total
0	4.50	5.25	9.75
1	4.50	7.50	12.00
2	4.50	12.00	16.50
3	5.50	16.58	22.08
4	5.50	21.08	26.58
5	5.50	25.67	31.17

## Cost Allowances (\$ per Month)

Bedroom Size	Cooking*	Individual Water Heating	Total
0	\$28	\$22	\$50
1	\$28	\$32	\$60
2	\$28	\$51	\$79
3	\$32	\$70	\$103
4	\$32	\$89	\$122
5	\$32	\$109	\$141

\*Total Basic Includes Monthly Customer Base Charge

# 2016 Rate Calculation Form

Hawaii Public Housing Authority

Property Description: Lowrise  
 Utility Type: Electric  
 Utility Provider: HECO

**Average Residential DSM Adjustments (per kWh)**

Month	Amount	Month	Amount
January-15	\$0.001423	July-15	\$0.000348
February-15	\$0.001423	August-15	\$0.000348
March-15	\$0.001423	September-15	\$0.000348
April-15	\$0.000348	October-15	\$0.000348
May-15	\$0.000348	November-15	\$0.000348
June-15	\$0.000348	December-15	\$0.000348
<b>Average Adjustment</b>			<b>\$0.000617</b>

**Average Energy Cost Adjustment Factors (per kWh)**

Month	Amount	Month	Amount
January-15	\$0.01065	July-15	-\$0.00997
February-15	-\$0.00755	August-15	-\$0.01673
March-15	-\$0.01863	September-15	-\$0.01343
April-15	-\$0.01151	October-15	-\$0.02793
May-15	-\$0.01931	November-15	-\$0.03179
June-15	-\$0.01624	December-15	-\$0.03353
<b>Average Adjustment</b>			<b>-\$0.01633</b>

**IRP Cost Recovery Provision**

Month	Amount	Month	Amount
January-15	0.000%	July-15	0.000%
February-15	0.000%	August-15	0.000%
March-15	0.000%	September-15	0.000%
April-15	0.000%	October-15	0.000%
May-15	0.000%	November-15	0.000%
June-15	0.000%	December-15	0.000%
<b>Average Adjustment</b>			<b>0.000%</b>

# 2016 Rate Calculation Form

**Hawaii Public Housing Authority**

**Property Description:** Lowrise  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Rate Adjustment**

Month	Amount	Month	Amount
January-15	0.000%	July-15	0.000%
February-15	0.000%	August-15	0.000%
March-15	0.000%	September-15	0.000%
April-15	0.000%	October-15	0.000%
May-15	0.000%	November-15	0.000%
June-15	0.000%	December-15	0.000%
<b>Average Adjustment</b>			<b>0.000%</b>

**Summary of Rate Schedule – Schedule "R"**

Monthly Customer Base Charge*:	\$10.42
Non-Fuel Energy Charge**:	\$0.089205
Base Fuel/Energy Charge:	\$0.136062
IRP Cost Recovery Provision (Applies to Above 3 Charges):	0.000%
Rate Adjustment (Applies to Above 3 Charges):	0.000%
Average Residential DSM Adjustments:	\$0.000617
Average Energy Cost Adjustment Factors:	-\$0.01633
Public Benefits Surcharge/Avg Purch Power Adj/RBA Rate Adj/RE Surcharge:	\$0.060655

\* Includes Green Infrastructure Fee Surcharge

# 2016 Utility Allowances

**Hawaii Public Housing Authority**

Property Description: Lowrise  
 Utility Type: Electric  
 Utility Provider: HECO

**Consumption Allowances (kWh per Month)**

Bedroom Size	Lights	Misc.	Refrig.	Total Basic	Electric Cooking	Electric Water Heating	Solar Water Heating*	Total
0	31	56	50	137	78	43	16	273
1	33	56	50	138	78	87	31	334
2	35	76	50	161	78	174	47	459
3	42	92	50	184	95	261	78	618
4	44	113	50	207	95	348	110	759
5	46	114	50	210	95	434	141	881

\* Distribution by bedroom size based on number of occupants

**Cost Allowances (\$ per Month)**

Bedroom Size	Lights	Misc.	Refrig.	Total Basic**	Electric Cooking	Electric Water Heating	Solar Water Heating	Total
0	\$8.37	\$15.00	\$13.51	\$47	\$21	\$12	\$4	\$84
1	\$8.80	\$15.00	\$13.51	\$48	\$21	\$23	\$8	\$101
2	\$9.44	\$20.52	\$13.51	\$54	\$21	\$47	\$13	\$135
3	\$11.26	\$24.88	\$13.51	\$60	\$26	\$70	\$21	\$177
4	\$11.90	\$30.40	\$13.51	\$66	\$26	\$94	\$30	\$215
5	\$12.44	\$30.79	\$13.51	\$67	\$26	\$117	\$38	\$248

\*\*Total Basic Includes Monthly Customer Base Charge. This is the amount for Other Electric.

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Lowrise  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:**            0

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	1	13	3	39	14
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	2	104	38
Bedroom	1	26	3	78	28
Lamps	0	0	4	0	0
Hall/Stairs	1	13	3	39	14
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:**            1

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	1	13	3	39	14
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	1	26	3	78	28
Lamps	0	0	4	0	0
Hall/Stairs	1	13	3	39	14
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Lowrise  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:**                    2

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	1	13	3	39	14
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	2	26	3	156	57
Lamps	0	0	4	0	0
Hall/Stairs	1	13	3	39	14
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:**                    3

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	1	13	3	39	14
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	4	208	76
Bedroom	3	26	3	234	85
Lamps	0	0	4	0	0
Hall/Stairs	2	13	3	78	28
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:**           Lowrise  
**Utility Type:**                    Electric  
**Utility Provider:**               HECO

**Number of Bedrooms:**            **4**

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	1	13	3	39	14
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	4	208	76
Bedroom	4	26	3	312	114
Lamps	0	0	4	0	0
Hall/Stairs	2	13	3	78	28
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:**            **5**

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	1	13	3	39	14
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	5	26	3	390	142
Lamps	0	0	4	0	0
Hall/Stairs	3	13	3	117	43
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

## *Miscellaneous Small Appliance Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Lowrise  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:**           **0**

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	1	2	24.0	1.4	17
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	1	60	4.0	7.2	86
Hair Dryer	1	1200	0.1	3.0	36
Iron	1	1100	0.1	4.7	57
Microwave Oven	1	800	0.2	4.1	49
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

**Number of Bedrooms:**           **1**

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	1	2	24.0	1.4	17
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	1	60	4.0	7.2	86
Hair Dryer	1	1200	0.1	3.0	36
Iron	1	1100	0.1	4.7	57
Microwave Oven	1	800	0.2	4.1	49
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

# Miscellaneous Small Appliance Usage Tables

Hawaii Public Housing Authority

Property Description: Lowrise  
 Utility Type: Electric  
 Utility Provider: HECO

Number of Bedrooms: 2

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	2	2	24.0	2.9	35
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	2	60	4.0	14.4	173
Hair Dryer	2	1200	0.1	6.0	72
Iron	1	1100	0.3	9.4	113
Microwave Oven	1	800	0.3	8.2	98
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

Number of Bedrooms: 3

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	3	2	24.0	4.3	52
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	2	60	4.0	14.4	173
Hair Dryer	2	1200	0.1	6.0	72
Iron	1	1100	0.3	9.4	113
Microwave Oven	1	800	0.3	8.2	98
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

## *Miscellaneous Small Appliance Usage Tables*

Hawaii Public Housing Authority

Property Description: Lowrise  
 Utility Type: Electric  
 Utility Provider: HECO

Number of Bedrooms: 4

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	4	2	24.0	5.8	69
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	3	60	4.0	21.6	259
Hair Dryer	3	1200	0.1	9.0	108
Iron	1	1100	0.4	14.2	170
Microwave Oven	1	800	0.5	12.2	147
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

Number of Bedrooms: 5

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	5	2	24.0	7.2	86
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	3	60	4.0	21.6	259
Hair Dryer	3	1200	0.1	9.0	108
Iron	1	1100	0.4	14.2	170
Microwave Oven	1	800	0.5	12.2	147
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

## *2016 Allowances for Medical Equipment*

**Hawaii Public Housing Authority**

**Property Description:** Lowrise  
**Utility Type:** Electric  
**Utility Provider:** HECO

Description	Frequency	kWh/Year	kWh/Month	Monthly Dollar Allowance
Air Conditioner, window type, 10,000 BtuH unit	Continuously As Needed	2,750	229	\$61.92
Oxygen Concentrator, 400W	18 Hrs/Day	2,628	219	\$59.18
Nebulizer, 75W	2 Hrs/Day	60	5	\$1.35
Electric Hospital Bed, 200W	.2 Hrs/Day	12	1	\$0.27
Alternating Pressure Pad, 70W	24 Hrs/Day	612	51	\$13.78
Low Air-Loss Mattress, 120W	24 Hrs/Day	1,056	88	\$23.78
Power Wheelchair/ Scooter, 550W, Full-Time Use	4 Hrs/Day Charge Time	803	67	\$18.08
Feeding Tube, 120W	12 Hrs/Day	526	44	\$11.84
CPAP Machine, 30W	10 Hrs/Day	110	9	\$2.47
Leg Pump, 14W	6 Hrs/Day	31	3	\$0.69

# Water and Sewer Allowance Calculation

**Hawaii Public Housing Authority**

Property Description:      Lowrise  
 Utility Type:                  Water/Sewer  
 Utility Provider: City/County of Honolulu

Standards Used in Calculating Water Usage				
Fixture/Use	Gallons	Times	Frequency	Description
Toilet	3.5	X	5	Flushes per Person per Day
Shower	15	X	1	Showers per Person per Day
Dishwasher	3	X	0.5	Dishloads per Person per Day
Laundry	8	X	0.2	Loads per Person per Day
Cooking	0.1	X	3	Meals per Person per Day
Handwashing	0.1	X	10	Handwashings per Person per Day
Other	5	X	1	Allowance per Person per Day

Calculation of Monthly Water Usage						
Bedroom Size >>>	0	1	2	3	4	5
# Occupants >>>	1	2	4	6	8	10
Toilet	17.5	35	70	105	140	175
Shower	15	30	60	90	120	150
Diswasher	1.5	3	6	9	12	15
Clothes	1.6	3.2	6.4	9.6	12.8	16
Cooking	0.3	0.6	1.2	1.8	2.4	3
Handwashing	1	2	4	6	8	10
Other	5	10	20	30	40	50
<b>Gallons per Day</b>	41.9	83.8	167.6	251.4	335.2	419
<b>Gallons per Month</b>	1274	2549	5098	7647	10196	12745
<b>Water Billing Gallons</b>	2000	3000	6000	8000	11000	13000
<b>Sewer Billing Gallons*</b>	2000	3000	5000	7000	9000	11000

Water Rate Schedule	
Base Charge	\$9.26
Charge per 1000 Gals	\$4.42

Sewer Rate Schedule	
Base Charge	77.55
Charge per 1000 Gals	4.42

Monthly Cost Allowances						
Bedroom Size >>>	0	1	2	3	4	5
Water Allowance	\$18	\$23	\$36	\$45	\$58	\$67
Sewer Allowance	\$86	\$91	\$100	\$108	\$117	\$126

\*Actual consumption reduced by 20% for water irrigation factor

# 2016 Rate Calculation Form

Hawaii Public Housing Authority

Utility Type: LP -- Utility  
Property Description: Lowrise

## Fuel Adjustment Cost (FAC) (per Therm)

Month	Amount	Month	Amount
January-15	-\$0.1406	July-15	\$0.6153
February-15	-\$0.3309	August-15	\$0.5426
March-15	\$0.1178	September-15	\$0.1512
April-15	\$0.3805	October-15	-\$0.0387
May-15	\$0.2007	November-15	-\$0.0100
June-15	\$0.8148	December-15	-\$0.3387
<b>Average Adjustment</b>			<b>\$0.1637</b>

## Summary of Rate Schedule -- Schedule 20 - Residential

Monthly Customer Base Charge: \$8.50  
Commodity Charge -- All Therms \$3.8871  
Average Fuel Adjustment Cost: \$0.1637  
Applicable Tax Rate 4.712%

# 2016 Utility Allowances

Hawaii Public Housing Authority

Utility Type: LP -- Utility  
Property Description: Lowrise

## Consumption Allowances (Therms per Month)

Bedroom Size	Cooking	Individual Water Heating	Total
0	4.50	5.25	9.75
1	4.50	7.50	12.00
2	4.50	12.00	16.50
3	5.50	16.58	22.08
4	5.50	21.08	26.58
5	5.50	25.67	31.17

## Cost Allowances (\$ per Month)

Bedroom Size	Cooking*	Individual Water Heating	Total
0	\$28	\$22	\$50
1	\$28	\$32	\$60
2	\$28	\$51	\$79
3	\$32	\$70	\$103
4	\$32	\$89	\$122
5	\$32	\$109	\$141

\*Total Basic Includes Monthly Customer Base Charge

# 2016 Rate Calculation Form

**Hawaii Public Housing Authority**

**Property Description:** Highrise  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Average Residential DSM Adjustments (per kWh)**

Month	Amount	Month	Amount
January-15	\$0.001423	July-15	\$0.000348
February-15	\$0.001423	August-15	\$0.000348
March-15	\$0.001423	September-15	\$0.000348
April-15	\$0.000348	October-15	\$0.000348
May-15	\$0.000348	November-15	\$0.000348
June-15	\$0.000348	December-15	\$0.000348
<b>Average Adjustment</b>			<b>\$0.000617</b>

**Average Energy Cost Adjustment Factors (per kWh)**

Month	Amount	Month	Amount
January-15	\$0.01065	July-15	-\$0.00997
February-15	-\$0.00755	August-15	-\$0.01673
March-15	-\$0.01863	September-15	-\$0.01343
April-15	-\$0.01151	October-15	-\$0.02793
May-15	-\$0.01931	November-15	-\$0.03179
June-15	-\$0.01624	December-15	-\$0.03353
<b>Average Adjustment</b>			<b>-\$0.01633</b>

**IRP Cost Recovery Provision**

Month	Amount	Month	Amount
January-15	0.000%	July-15	0.000%
February-15	0.000%	August-15	0.000%
March-15	0.000%	September-15	0.000%
April-15	0.000%	October-15	0.000%
May-15	0.000%	November-15	0.000%
June-15	0.000%	December-15	0.000%
<b>Average Adjustment</b>			<b>0.000%</b>

# 2016 Rate Calculation Form

**Hawaii Public Housing Authority**

**Property Description:** Highrise  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Rate Adjustment**

Month	Amount	Month	Amount
January-15	0.000%	July-15	0.000%
February-15	0.000%	August-15	0.000%
March-15	0.000%	September-15	0.000%
April-15	0.000%	October-15	0.000%
May-15	0.000%	November-15	0.000%
June-15	0.000%	December-15	0.000%
<b>Average Adjustment</b>			<b>0.000%</b>

**Summary of Rate Schedule – Schedule "R"**

Monthly Customer Base Charge*:	\$10.42
Non-Fuel Energy Charge**:	\$0.089205
Base Fuel/Energy Charge:	\$0.136062
IRP Cost Recovery Provision (Applies to Above 3 Charges):	0.000%
Rate Adjustment (Applies to Above 3 Charges):	0.000%
Average Residential DSM Adjustments:	\$0.000617
Average Energy Cost Adjustment Factors:	-\$0.01633
Public Benefits Surcharge/Avg Purch Power Adj/RBA Rate Adj/RE Surcharge:	\$0.060655

\* Includes Green Infrastructure Fee Surcharge

# 2016 Utility Allowances

Hawaii Public Housing Authority

Property Description: Highrise  
 Utility Type: Electric  
 Utility Provider: HECO

## Consumption Allowances (kWh per Month)

Bedroom Size	Lights	Misc.	Refrig.	Total Basic	Electric Cooking	Electric Water Heating	Solar Water Heating*	Total
0	30	56	50	135	78	43	16	272
1	31	56	50	137	78	87	31	332
2	34	76	50	160	78	174	47	458
3	40	92	50	183	95	261	78	616
4	43	113	50	205	95	348	110	758
5	45	114	50	209	95	434	141	879

\* Distribution by bedroom size based on number of occupants

## Cost Allowances (\$ per Month)

Bedroom Size	Lights	Misc.	Refrig.	Total Basic**	Electric Cooking	Electric Water Heating	Solar Water Heating	Total
0	\$8.05	\$15.00	\$13.51	\$47	\$21	\$12	\$4	\$84
1	\$8.48	\$15.00	\$13.51	\$47	\$21	\$23	\$8	\$100
2	\$9.12	\$20.52	\$13.51	\$54	\$21	\$47	\$13	\$134
3	\$10.94	\$24.88	\$13.51	\$60	\$26	\$70	\$21	\$177
4	\$11.58	\$30.40	\$13.51	\$66	\$26	\$94	\$30	\$215
5	\$12.11	\$30.79	\$13.51	\$67	\$26	\$117	\$38	\$248

\*\*Total Basic Includes Monthly Customer Base Charge. This is the amount for Other Electric.

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Highrise  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:**           **0**

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	0	0	3	0	0
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	2	104	38
Bedroom	1	26	3	78	28
Lamps	0	0	4	0	0
Hall/Stairs	1	13	3	39	14
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:**           **1**

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	0	0	3	0	0
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	1	26	3	78	28
Lamps	0	0	4	0	0
Hall/Stairs	1	13	3	39	14
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Highrise  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:**                    2

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	0	0	3	0	0
Living Room	1	39	5	195	71
Dining Room	0	0	2	0	0
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	2	26	3	156	57
Lamps	0	0	4	0	0
Hall/Stairs	1	13	3	39	14
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:**                    3

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	0	0	3	0	0
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	4	208	76
Bedroom	3	26	3	234	85
Lamps	0	0	4	0	0
Hall/Stairs	2	13	3	78	28
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

# *Lighting Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Highrise  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:** 4

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	0	0	3	0	0
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	4	208	76
Bedroom	4	26	3	312	114
Lamps	0	0	4	0	0
Hall/Stairs	2	13	3	78	28
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

**Number of Bedrooms:** 5

Area Description	Number of Fixtures	Watts per Fixture	Hours per Day	Watts per Day	kWh per Year
Porches	0	0	3	0	0
Living Room	1	39	5	195	71
Dining Room	1	26	2	52	19
Kitchen	1	128	4	512	187
Pantry	1	13	2	26	9
Bathroom	1	52	3	156	57
Bedroom	5	26	3	390	142
Lamps	0	0	4	0	0
Hall/Stairs	3	13	3	117	43
Closet	1	13	1	13	5
Utility	0	0	1	0	0
Storage	1	13	1	13	5

# *Miscellaneous Small Appliance Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Highrise  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:**            0

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	1	2	24.0	1.4	17
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	1	60	4.0	7.2	86
Hair Dryer	1	1200	0.1	3.0	36
Iron	1	1100	0.1	4.7	57
Microwave Oven	1	800	0.2	4.1	49
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

**Number of Bedrooms:**            1

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	1	2	24.0	1.4	17
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	1	60	4.0	7.2	86
Hair Dryer	1	1200	0.1	3.0	36
Iron	1	1100	0.1	4.7	57
Microwave Oven	1	800	0.2	4.1	49
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

# *Miscellaneous Small Appliance Usage Tables*

**Hawaii Public Housing Authority**

Property Description: Highrise  
 Utility Type: Electric  
 Utility Provider: HECO

**Number of Bedrooms: 2**

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	2	2	24.0	2.9	35
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	2	60	4.0	14.4	173
Hair Dryer	2	1200	0.1	6.0	72
Iron	1	1100	0.3	9.4	113
Microwave Oven	1	800	0.3	8.2	98
Radio	1	15	6.0	2.7	32
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	1	100	4.0	12.0	144

**Number of Bedrooms: 3**

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	3	2	24.0	4.3	52
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	2	60	4.0	14.4	173
Hair Dryer	2	1200	0.1	6.0	72
Iron	1	1100	0.3	9.4	113
Microwave Oven	1	800	0.3	8.2	98
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

# *Miscellaneous Small Appliance Usage Tables*

**Hawaii Public Housing Authority**

**Property Description:** Highrise  
**Utility Type:** Electric  
**Utility Provider:** HECO

**Number of Bedrooms:**                    4

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	4	2	24.0	5.8	69
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	3	60	4.0	21.6	259
Hair Dryer	3	1200	0.1	9.0	108
Iron	1	1100	0.4	14.2	170
Microwave Oven	1	800	0.5	12.2	147
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

**Number of Bedrooms:**                    5

Area Description	Number of Appliances	Watts per Appliance	Hours per Day	kWh per Month	kWh per Year
Clocks	5	2	24.0	7.2	86
Coffee Maker	1	1000	0.2	5.1	61
Computer, Desktop	1	65	2.0	3.9	47
Computer Monitor, 15"	1	35	4.0	4.2	50
Fan	3	60	4.0	21.6	259
Hair Dryer	3	1200	0.1	9.0	108
Iron	1	1100	0.4	14.2	170
Microwave Oven	1	800	0.5	12.2	147
Radio	2	15	6.0	5.4	65
Smoke Detector	2	2	24.0	2.9	35
Telephone	1	6	24.0	4.3	52
Television	2	100	4.0	24.0	288

## *2016 Allowances for Medical Equipment*

**Hawaii Public Housing Authority**

**Property Description:  
Utility Type:  
Utility Provider:**

**Highrise  
Electric  
HECO**

Description	Frequency	kWh/Year	kWh/Month	Monthly Dollar Allowance
Air Conditioner, window type, 10,000 BtuH unit	Continuously As Needed	2,750	229	\$61.92
Oxygen Concentrator, 400W	18 Hrs/Day	2,628	219	\$59.18
Nebulizer, 75W	2 Hrs/Day	60	5	\$1.35
Electric Hospital Bed, 200W	.2 Hrs/Day	12	1	\$0.27
Alternating Pressure Pad, 70W	24 Hrs/Day	612	51	\$13.78
Low Air-Loss Mattress, 120W	24 Hrs/Day	1,056	88	\$23.78
Power Wheelchair/ Scooter, 550W, Full-Time Use	4 Hrs/Day Charge Time	803	67	\$18.08
Feeding Tube, 120W	12 Hrs/Day	526	44	\$11.84
CPAP Machine, 30W	10 Hrs/Day	110	9	\$2.47
Leg Pump, 14W	6 Hrs/Day	31	3	\$0.69

# Water and Sewer Allowance Calculation

**Hawaii Public Housing Authority**

**Property Description:** Highrise  
**Utility Type:** Water/Sewer  
**Utility Provider:** City/County of Honolulu

Standards Used in Calculating Water Usage				
Fixture/Use	Gallons	Times	Frequency	Description
Toilet	3.5	X	5	Flushes per Person per Day
Shower	15	X	1	Showers per Person per Day
Dishwasher	3	X	0.5	Dishloads per Person per Day
Laundry	8	X	0.2	Loads per Person per Day
Cooking	0.1	X	3	Meals per Person per Day
Handwashing	0.1	X	10	Handwashings per Person per Day
Other	5	X	1	Allowance per Person per Day

Calculation of Monthly Water Usage						
Bedroom Size >>>	0	1	2	3	4	5
# Occupants >>>	1	2	4	6	8	10
Toilet	17.5	35	70	105	140	175
Shower	15	30	60	90	120	150
Diswasher	1.5	3	6	9	12	15
Clothes	1.6	3.2	6.4	9.6	12.8	16
Cooking	0.3	0.6	1.2	1.8	2.4	3
Handwashing	1	2	4	6	8	10
Other	5	10	20	30	40	50
<b>Gallons per Day</b>	41.9	83.8	167.6	251.4	335.2	419
<b>Gallons per Month</b>	1274	2549	5098	7647	10196	12745
<b>Water Billing Gallons</b>	2000	3000	6000	8000	11000	13000
<b>Sewer Billing Gallons*</b>	2000	3000	5000	7000	9000	11000

Water Rate Schedule	
Base Charge	\$9.26
Charge per 1000 Gals	\$4.42

Sewer Rate Schedule	
Base Charge	77.55
Charge per 1000 Gals	4.42

Monthly Cost Allowances						
Bedroom Size >>>	0	1	2	3	4	5
Water Allowance	\$18	\$23	\$36	\$45	\$58	\$67
Sewer Allowance	\$86	\$91	\$100	\$108	\$117	\$126

\*Actual consumption reduced by 20% for water irrigation factor

# 2016 Rate Calculation Form

Hawaii Public Housing Authority

Utility Type: LP -- Utility  
Property Description: Highrise

## Fuel Adjustment Cost (FAC) (per Therm)

Month	Amount	Month	Amount
January-15	-\$0.1406	July-15	\$0.6153
February-15	-\$0.3309	August-15	\$0.5426
March-15	\$0.1178	September-15	\$0.1512
April-15	\$0.3805	October-15	-\$0.0387
May-15	\$0.2007	November-15	-\$0.0100
June-15	\$0.8148	December-15	-\$0.3387
Average Adjustment			\$0.1637

## Summary of Rate Schedule – Schedule 20 - Residential

Monthly Customer Base Charge: \$8.50

Commodity Charge -- All Therms \$3.8871

Average Fuel Adjustment Cost: \$0.1637

Applicable Tax Rate 4.712%

# 2016 Utility Allowances

Hawaii Public Housing Authority

Utility Type: LP -- Utility  
Property Description: Highrise

## Consumption Allowances (Therms per Month)

Bedroom Size	Cooking	Individual Water Heating	Total
0	4.50	5.25	9.75
1	4.50	7.50	12.00
2	4.50	12.00	16.50
3	5.50	16.58	22.08
4	5.50	21.08	26.58
5	5.50	25.67	31.17

## Cost Allowances (\$ per Month)

Bedroom Size	Cooking*	Individual Water Heating	Total
0	\$28	\$22	\$50
1	\$28	\$32	\$60
2	\$28	\$51	\$79
3	\$32	\$70	\$103
4	\$32	\$89	\$122
5	\$32	\$109	\$141

\*Total Basic Includes Monthly Customer Base Charge