

# UTILITY ALLOWANCE STUDY

## SECTION 8 - Lee County Electric Coop



Prepared For:

### Collier County Housing Authority

3339 Tamiami Trail, Bldg H #211  
Naples, FL 34122

Prepared By:

### Abbie J. Weist, Inc.

9230 Crystal View Ct.  
Ft. Myers, FL 33912  
[abbieweist@comcast.net](mailto:abbieweist@comcast.net)

With

KN Consultants, LLC  
P.O. Box 1212  
Safety Harbor, Florida 34695-1212  
[jkellype@tampabay.rr.com](mailto:jkellype@tampabay.rr.com)

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# 1 Basis for Utility Allowance – Section 8

This utility allowance study for the Section 8 tenant based assistance: housing choice voucher program conforms to 24CFR982.517 which follows:

982.517 Utility allowance schedule.

*(a) Maintaining schedule.* (1) The PHA must maintain a utility allowance schedule for all tenant-paid utilities (except telephone), for cost of tenant supplied refrigerators and ranges, and for other tenant-paid housing services (e.g., trash collection (disposal of waste and refuse)). (2) The PHA must give HUD a copy of the utility allowance schedule. At HUD's request, the PHA also must provide any information or procedures used in preparation of the schedule.

*(b) How allowances are determined.* (1) The utility allowance schedule 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. In developing the schedule, the PHA must use normal patterns of consumption for the community as a whole and current utility rates. (2)(i) a PHA's utility allowance schedule, and the utility allowance for an individual family, must include the utilities and services that are necessary in the locality to provide housing that complies with the housing quality standards. However, the PHA may not provide any allowance for non-essential utility costs, such as costs of cable or satellite television. (ii) In the utility allowance schedule, the PHA must classify utilities and other housing services according to the following general categories: space heating; air conditioning; cooking; water heating; water; sewer; trash collection (disposal of waste and refuse); other electric; refrigerator (cost of tenant-supplied refrigerator); range (cost of tenant-supplied range); and other specified housing services. The PHA must provide a utility allowance for tenant-paid air-conditioning costs if the majority of housing units in the market provide centrally air-conditioned units or there is appropriate wiring for tenant-installed air conditioners. (3) The cost of each utility and housing service category must be stated separately. For each of these categories, the utility allowance schedule must take into consideration unit size (by number of bedrooms), and unit types (e.g., apartment, row-house, townhouse, single-family detached, and manufactured housing) that are typical in the community. (4) The utility allowance schedule must be prepared and submitted in accordance with HUD requirements on the form prescribed by HUD.

*(c) Revisions of utility allowance schedule.* (1) a PHA must review its schedule of utility allowances each year, and must revise its allowance for a utility category if there PHAs been a change of 10 percent or more in the utility rate since the last time the utility allowance schedule was revised. The PHA must maintain information supporting its annual review of utility allowances and any revisions made in its utility allowance schedule. (2) At HUD's direction, the PHA must revise the utility allowance schedule to correct any errors, or as necessary to update the schedule.

*(d) Use of utility allowance schedule.* (1) The PHA must use the appropriate utility allowance for the size of dwelling unit actually leased by the family (rather than the family unit size as determined under the PHA subsidy standards). (2) At reexamination, the PHA must use the PHA current utility allowance schedule.

(e) *Higher utility allowance as reasonable accommodation for a person with disabilities.* On request from a family that includes a person with disabilities, the PHA must approve a utility allowance which is higher than the applicable amount on the utility allowance schedule if a higher utility allowance is needed as a reasonable accommodation in accordance with 24 CFR part 8 to make the program accessible to and usable by the family member with a disability.

## 2 Introduction

The Collier County Housing Authority provides vouchers for zero through five bedroom units in a variety of configurations including mobile homes, single family homes, garden apartments / duplexes, townhouses and multi-story, multi-family units. Each unit within each type can vary in age, size and configuration.

This Utility Allowance Study was performed for the purpose of complying with Federal Register 24 CFR Part 982. These regulations apply to allowances for all applicable types of utilities, regardless on the methodology used to calculate the allowances.

The study was performed with the assistance of the Utility Allowance Guidebook 7420.10G. This study uses the engineering-based methodology, one of two suggested methods that can be used to establish utility allowances. This method is based on engineering calculations and other technical information that is used to estimate the amount of energy or water a household should reasonable require.

The tenants are responsible for individual metered electric, bottled gas (propane), water and sanitary sewer utilities. The tenants can also be responsible for non-metered utility services, such as trash collection.

The age and configuration of unit only has a significant effect on heating and air conditioning. Typical configurations of mobile homes, single family homes, duplexes, low rise / townhouses and multi-story, multi-family are used to estimate these costs. Considerations for allowances such as cooking, lighting and water consumption are typical to the same number of bedrooms and average occupancy. These allowances were developed for each number of bedrooms, zero through five and are based on a typical unit.

### 3 Utility Allowance Recommendations

#### 3.1 Mobile Home

Monthly Utility Allowance		0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Heating	Nat. Gas	\$3	\$4	\$4	\$5	\$6	\$9
	Propane	\$8	\$10	\$11	\$14	\$17	\$24
	Electric	\$5	\$6	\$6	\$8	\$10	\$13
Cooking	Nat. Gas	\$5	\$7	\$10	\$11	\$14	\$16
	Propane	\$13	\$18	\$23	\$29	\$36	\$42
	Electric	\$5	\$7	\$9	\$11	\$14	\$19
Other Electric		\$27	\$31	\$36	\$39	\$47	\$51
Air Conditioning		\$13	\$15	\$17	\$22	\$26	\$36
Water Heating	Nat. Gas	\$28	\$33	\$38	\$43	\$51	\$56
	Propane	\$42	\$55	\$69	\$83	\$103	\$117
	Electric	\$15	\$21	\$27	\$34	\$50	\$58
Water		See Attached Schedule					
Sewer		See Attached Schedule					
Trash Collection		See Attached Schedule					
Range (Tenant Supplied)		\$4	\$4	\$4	\$4	\$4	\$4
Refrig. (Tenant Supplied)		\$4	\$4	\$4	\$4	\$4	\$4
Oxygen Concentrator		\$25	\$25	\$25	\$30	\$30	\$30

### 3.2 Single Family

Monthly Utility Allowance		0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Heating	Nat. Gas	\$5	\$5	\$5	\$6	\$7	\$11
	Propane	\$13	\$14	\$14	\$17	\$20	\$31
	Electric	\$7	\$8	\$8	\$9	\$11	\$17
Cooking	Nat. Gas	\$5	\$7	\$10	\$11	\$14	\$16
	Propane	\$13	\$18	\$23	\$29	\$36	\$42
	Electric	\$5	\$7	\$9	\$11	\$14	\$19
Other Electric		\$27	\$31	\$36	\$39	\$47	\$51
Air Conditioning		\$16	\$17	\$20	\$24	\$29	\$36
Water Heating	Nat. Gas	\$28	\$33	\$38	\$43	\$51	\$56
	Propane	\$42	\$55	\$69	\$83	\$103	\$117
	Electric	\$15	\$21	\$27	\$34	\$50	\$58
Water		See Attached Schedule					
Sewer		See Attached Schedule					
Trash Collection		See Attached Schedule					
Range (Tenant Supplied)		\$4	\$4	\$4	\$4	\$4	\$4
Refrig. (Tenant Supplied)		\$4	\$4	\$4	\$4	\$4	\$4
Oxygen Concentrator		\$25	\$25	\$25	\$30	\$30	\$30

### 3.3 Duplex

Monthly Utility Allowance		0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Heating	Nat. Gas	\$3	\$4	\$4	\$5	\$6	\$10
	Propane	\$9	\$10	\$11	\$13	\$15	\$28
	Electric	\$5	\$6	\$6	\$7	\$8	\$16
Cooking	Nat. Gas	\$5	\$7	\$10	\$11	\$14	\$16
	Propane	\$13	\$18	\$23	\$29	\$36	\$42
	Electric	\$5	\$7	\$9	\$11	\$14	\$19
Other Electric		\$27	\$31	\$36	\$39	\$47	\$51
Air Conditioning		\$14	\$15	\$19	\$22	\$25	\$34
Water Heating	Nat. Gas	\$28	\$33	\$38	\$43	\$51	\$56
	Propane	\$42	\$55	\$69	\$83	\$103	\$117
	Electric	\$15	\$21	\$27	\$34	\$50	\$58
Water		See Attached Schedule					
Sewer		See Attached Schedule					
Trash Collection		See Attached Schedule					
Range (Tenant Supplied)		\$4	\$4	\$4	\$4	\$4	\$4
Refrig. (Tenant Supplied)		\$4	\$4	\$4	\$4	\$4	\$4
Oxygen Concentrator		\$25	\$25	\$25	\$30	\$30	\$30



### 3.4 Low Rise / Townhouse

Monthly Utility Allowance		0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Heating	Nat. Gas	\$4	\$4	\$5	\$8	\$9	\$9
	Propane	\$10	\$11	\$13	\$22	\$24	\$25
	Electric	\$5	\$6	\$7	\$12	\$13	\$14
Cooking	Nat. Gas	\$5	\$7	\$10	\$11	\$14	\$16
	Propane	\$13	\$18	\$23	\$29	\$36	\$42
	Electric	\$5	\$7	\$9	\$11	\$14	\$19
Other Electric		\$27	\$31	\$36	\$39	\$47	\$51
Air Conditioning		\$14	\$17	\$20	\$27	\$31	\$33
Water Heating	Nat. Gas	\$28	\$33	\$38	\$43	\$51	\$56
	Propane	\$42	\$55	\$69	\$83	\$103	\$117
	Electric	\$15	\$21	\$27	\$34	\$50	\$58
Water		See Attached Schedule					
Sewer		See Attached Schedule					
Trash Collection		See Attached Schedule					
Range (Tenant Supplied)		\$4	\$4	\$4	\$4	\$4	\$4
Refrig. (Tenant Supplied)		\$4	\$4	\$4	\$4	\$4	\$4
Oxygen Concentrator		\$25	\$25	\$25	\$30	\$30	\$30

### 3.5 High Rise / Multi-Family, Multi-Story

Monthly Utility Allowance		0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Heating	Nat. Gas	\$3	\$3	\$4	\$5	\$6	\$7
	Propane	\$7	\$9	\$12	\$13	\$16	\$20
	Electric	\$4	\$5	\$7	\$7	\$9	\$11
Cooking	Nat. Gas	\$5	\$7	\$10	\$11	\$14	\$16
	Propane	\$13	\$18	\$23	\$29	\$36	\$42
	Electric	\$5	\$7	\$9	\$11	\$14	\$19
Other Electric		\$27	\$31	\$36	\$39	\$47	\$51
Air Conditioning		\$12	\$18	\$20	\$24	\$29	\$33
Water Heating	Nat. Gas	\$28	\$33	\$38	\$43	\$51	\$56
	Propane	\$42	\$55	\$69	\$83	\$103	\$117
	Electric	\$15	\$21	\$27	\$34	\$50	\$58
Water		See Attached Schedule					
Sewer		See Attached Schedule					
Trash Collection		See Attached Schedule					
Range (Tenant Supplied)		\$4	\$4	\$4	\$4	\$4	\$4
Refrig. (Tenant Supplied)		\$4	\$4	\$4	\$4	\$4	\$4
Oxygen Concentrator		\$25	\$25	\$25	\$30	\$30	\$30

### 3.6 Water, Sewer & Trash

Monthly Utility Allowance		0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Collier County	Water	\$31	\$37	\$43	\$50	\$62	\$70
	Sewer	\$48	\$55	\$62	\$69	\$79	\$86
	Trash	\$0	\$0	\$0	\$0	\$0	\$0
Immokalee	Water	\$22	\$26	\$30	\$34	\$41	\$46
	Sewer	\$44	\$52	\$60	\$68	\$79	\$87
	Trash	\$0	\$0	\$0	\$0	\$0	\$0

## 4 Utilities Cost

### 4.1 Electricity

#### Space Heating

Monthly Electric Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Mobile Home	\$4.55	\$5.65	\$6.08	\$8.06	\$9.59	\$13.41
Single Family Home	\$7.03	\$7.80	\$8.02	\$9.37	\$11.09	\$17.31
Duplex	\$5.12	\$5.60	\$6.31	\$7.46	\$8.37	\$15.79
Low Rise / Townhouse	\$5.39	\$6.40	\$7.11	\$12.25	\$13.39	\$14.27
Multi-Story Multi-Family	\$3.97	\$5.07	\$6.83	\$7.42	\$8.70	\$11.16

#### Cooking

Monthly Electric Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
<b>Total Electric</b>	<b>\$4.94</b>	<b>\$6.91</b>	<b>\$8.88</b>	<b>\$10.86</b>	<b>\$13.82</b>	<b>\$18.67</b>

#### Other Electric

Monthly Electric Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Customer Charge	\$15.38	\$15.38	\$15.38	\$15.38	\$15.38	\$15.38
Lighting & Refrigeration	\$11.22	\$15.71	\$20.19	\$23.69	\$31.41	\$35.90
<b>Total Electric</b>	<b>\$26.60</b>	<b>\$31.09</b>	<b>\$35.58</b>	<b>\$39.08</b>	<b>\$46.79</b>	<b>\$51.28</b>

#### Air Conditioning

Monthly Electric Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Mobile Home	\$13.22	\$15.44	\$16.77	\$21.98	\$26.23	\$35.82
Single Family Home	\$15.78	\$17.23	\$20.40	\$23.69	\$28.82	\$35.98
Duplex	\$13.67	\$14.80	\$18.54	\$21.58	\$25.17	\$34.48
Low Rise / Townhouse	\$14.03	\$16.92	\$20.10	\$26.68	\$30.84	\$32.99
Multi-Story Multi-Family	\$12.14	\$17.67	\$19.99	\$24.18	\$28.56	\$32.99

#### Water Heating

Monthly Electric Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
<b>Total Electric</b>	<b>\$15.26</b>	<b>\$21.36</b>	<b>\$27.46</b>	<b>\$33.56</b>	<b>\$50.48</b>	<b>\$57.69</b>

### Oxygen Concentrator

Monthly Electric Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
<b>Total Electric</b>	<b>\$25.22</b>	<b>\$25.22</b>	<b>\$25.22</b>	<b>\$29.80</b>	<b>\$29.80</b>	<b>\$29.80</b>

#### 4.1.1 Electric Rates

Lee County Electric Cooperative serves Collier County. Their web site is [www.lcec.net](http://www.lcec.net). Lee County Electric Cooperative rates are as follows:

Customer Charge: \$15.00 per month + Tax Adj. = \$15.38

Energy Charge (First 1000kWh) = \$0.08974

Energy Charge (All additional kWh) = \$0.10605

Three, Four and Five bedroom units use more than 1,000 kWh/month if all electric appliances are used. Therefore, the following allowances were calculated using the higher electric rate:

3, 4 & 5 Bedroom - Oxygen Concentrator

4 & 5 Bedroom - Water Heating

5 Bedroom - Cooking

#### 4.1.2 Monthly Energy Charge

##### Space Heating (Mobile Home)

Space Heating	0BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electric (kWh)	51	63	68	90	107	149
Energy Charge (\$/kWh)	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897
Energy Cost	\$4.55	\$5.65	\$6.08	\$8.06	\$9.59	\$13.41

##### Space Heating (Single Family)

Space Heating	0BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electric (kWh)	78	87	89	104	124	193
Energy Charge (\$/kWh)	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897
Energy Cost	\$7.03	\$7.80	\$8.02	\$9.37	\$11.09	\$17.31

##### Space Heating (Duplex)

Space Heating	0BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electric (kWh)	57	62	70	83	93	176
Energy Charge (\$/kWh)	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897
Energy Cost	\$5.12	\$5.60	\$6.31	\$7.46	\$8.37	\$15.79

**Space Heating (Low Rise / Townhouse)**

Space Heating	0BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electric (kWh)	60	71	79	136	149	159
Energy Charge (\$/kWh)	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897
Energy Cost	\$5.39	\$6.40	\$7.11	\$12.25	\$13.39	\$14.27

**Space Heating (Multi-Family, Multi-Story)**

Space Heating	0BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electric (kWh)	44	57	76	83	97	124
Energy Charge (\$/kWh)	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897
Energy Cost	\$3.97	\$5.07	\$6.83	\$7.42	\$8.70	\$11.16

**Cooking**

Cooking	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electric (kWh)	55	77	99	121	154	176
Energy Charge (\$/kWh)	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.1061
Energy Cost	\$4.94	\$6.91	\$8.88	\$10.86	\$13.82	\$18.67

**Lighting and Refrigeration**

Lighting	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electric (kWh)	125	175	225	264	350	400
Energy Charge (\$/kWh)	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897
Energy Cost	\$11.22	\$15.71	\$20.19	\$23.69	\$31.41	\$35.90

**Air Conditioning (Mobile Home)**

Domestic Hot Water	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electric (kWh)	147	172	187	245	292	399
Energy Charge (\$/kWh)	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897
Energy Cost	\$13.22	\$15.44	\$16.77	\$21.98	\$26.23	\$35.82

**Air Conditioning (Single Family)**

Domestic Hot Water	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electric (kWh)	176	192	227	264	321	401
Energy Charge (\$/kWh)	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897
Energy Cost	\$15.78	\$17.23	\$20.40	\$23.69	\$28.82	\$35.98

**Air Conditioning (Duplex)**

Domestic Hot Water	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electric (kWh)	152	165	207	241	280	384
Energy Charge (\$/kWh)	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897
Energy Cost	\$13.67	\$14.80	\$18.54	\$21.58	\$25.17	\$34.48

**Air Conditioning (Low Rise / Townhouse)**

Domestic Hot Water	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electric (kWh)	156	189	224	297	344	368
Energy Charge (\$/kWh)	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897
Energy Cost	\$14.03	\$16.92	\$20.10	\$26.68	\$30.84	\$32.99

**Air Conditioning (Multi-Family, Multi-Story)**

Domestic Hot Water	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electric (kWh)	135	197	223	269	318	368
Energy Charge (\$/kWh)	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.0897
Energy Cost	\$12.14	\$17.67	\$19.99	\$24.18	\$28.56	\$32.99

**Domestic Hot Water**

Domestic Hot Water	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electric (kWh)	170	238	306	374	476	544
Energy Charge (\$/kWh)	\$0.0897	\$0.0897	\$0.0897	\$0.0897	\$0.1061	\$0.1061
Energy Cost	\$15.26	\$21.36	\$27.46	\$33.56	\$50.48	\$57.69

**Oxygen Concentrator**

Domestic Hot Water	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electric (kWh)	281	281	281	281	281	281
Energy Charge (\$/kWh)	\$0.0897	\$0.0897	\$0.0897	\$0.1061	\$0.1061	\$0.1061
Energy Cost	\$25.22	\$25.22	\$25.22	\$29.80	\$29.80	\$29.80

## 4.2 Bottled Gas (Propane)

### Space Heating

Monthly Propane Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Mobile Home	\$8.12	\$10.08	\$10.86	\$14.37	\$17.12	\$23.93
Single Family Home	\$12.55	\$13.92	\$14.31	\$16.72	\$19.78	\$30.90
Duplex	\$9.14	\$9.99	\$11.26	\$13.31	\$14.94	\$28.18
Low Rise / Townhouse	\$9.62	\$11.41	\$12.70	\$21.86	\$23.89	\$25.46
Multi-Story Multi-Family	\$7.08	\$9.05	\$12.18	\$13.25	\$15.53	\$19.92

### Cooking

Monthly Propane Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
<b>Total Natural Gas</b>	<b>\$13.00</b>	<b>\$18.20</b>	<b>\$23.40</b>	<b>\$28.60</b>	<b>\$36.40</b>	<b>\$41.60</b>

### Water Heating

Monthly Propane Cost	0 BR	1 BR	2 BR	3 BR		5 BR
Customer Charge	\$7.49	\$7.49	\$7.49	\$7.49	\$7.49	\$7.49
Commodity Cost	\$34.13	\$47.78	\$61.43	\$75.08	\$95.55	\$109.20
<b>Total Natural Gas</b>	<b>\$41.62</b>	<b>\$55.27</b>	<b>\$68.92</b>	<b>\$82.57</b>	<b>\$103.04</b>	<b>\$116.69</b>

#### 4.2.1 Propane Rates

Propane rates are based on Ferrellgas. Ferrellgas can be reached at (239) 774-5454.

Tank Rental (\$/Month) \$7.49

Commodity Charge: \$/Gallon = \$2.99

#### 4.2.2 Monthly Energy Charge

##### Space Heating (Mobile Home)

Space Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Propane (Gallons)	2.72	3.37	3.63	4.81	5.72	8.00
Commodity Charge (\$/Gallon)	\$2.9900	\$2.9900	\$2.9900	\$2.9900	\$2.9900	\$2.9900
Commodity Cost	\$8.12	\$10.08	\$10.86	\$14.37	\$17.12	\$23.93



**Space Heating (Single Family Home)**

Space Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Propane (Gallons)	4.20	4.65	4.79	5.59	6.62	10.33
Commodity Charge (\$/Gallon)	\$2.9900	\$2.9900	\$2.9900	\$2.9900	\$2.9900	\$2.9900
Commodity Cost	\$12.55	\$13.92	\$14.31	\$16.72	\$19.78	\$30.90

**Space Heating (Duplex)**

Space Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Propane (Gallons)	3.06	3.34	3.77	4.45	5.00	9.42
Commodity Charge (\$/Gallon)	\$2.9900	\$2.9900	\$2.9900	\$2.9900	\$2.9900	\$2.9900
Commodity Cost	\$9.14	\$9.99	\$11.26	\$13.31	\$14.94	\$28.18

**Space Heating (Low Rise/Townhouse)**

Space Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Propane (Gallons)	3.22	3.82	4.25	7.31	7.99	8.52
Commodity Charge (\$/Gallon)	\$2.9900	\$2.9900	\$2.9900	\$2.9900	\$2.9900	\$2.9900
Commodity Cost	\$9.62	\$11.41	\$12.70	\$21.86	\$23.89	\$25.46

**Space Heating (Multi-Family Multi-Story)**

Space Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Propane (Gallons)	2.37	3.03	4.07	4.43	5.19	6.66
Commodity Charge (\$/Gallon)	\$2.9900	\$2.9900	\$2.9900	\$2.9900	\$2.9900	\$2.9900
Commodity Cost	\$7.08	\$9.05	\$12.18	\$13.25	\$15.53	\$19.92

**Domestic Hot Water**

Domestic Hot Water	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Propane (Gallons)	11.41	15.98	20.54	25.11	31.96	36.52
Commodity Charge (\$/Gallon)	\$2.9900	\$2.9900	\$2.9900	\$2.9900	\$2.9900	\$2.9900
Commodity Cost	\$34.13	\$47.78	\$61.43	\$75.08	\$95.55	\$109.20

**Cooking**

Cooking	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Propane (Gallons)	4.35	6.09	7.83	9.57	12.17	13.91
Commodity Charge (\$/Gallon)	\$2.9900	\$2.9900	\$2.9900	\$2.9900	\$2.9900	\$2.9900
Commodity Cost	\$13.00	\$18.20	\$23.40	\$28.60	\$36.40	\$41.60

### 4.3 Natural Gas

#### Space Heating

Monthly Natural Gas Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Mobile Home	\$3.00	\$3.72	\$4.01	\$5.30	\$6.31	\$8.83
Single Family Home	\$4.63	\$5.13	\$5.28	\$6.17	\$7.30	\$11.40
Duplex	\$3.37	\$3.69	\$4.15	\$4.91	\$5.51	\$10.40
Low Rise / Townhouse	\$3.55	\$4.21	\$4.68	\$8.06	\$8.81	\$9.39
Multi-Story Multi-Family	\$2.61	\$3.34	\$4.49	\$4.89	\$5.73	\$7.35

#### Cooking

Monthly Natural Gas Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
<b>Total Natural Gas</b>	<b>\$4.85</b>	<b>\$6.79</b>	<b>\$9.82</b>	<b>\$10.67</b>	<b>\$13.58</b>	<b>\$15.52</b>

#### Water Heating

Monthly Natural Gas Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Customer Charge	\$15.38	\$15.38	\$15.38	\$15.38	\$15.38	\$15.38
Commodity Cost	\$12.73	\$17.82	\$22.91	\$28.00	\$35.64	\$40.73
<b>Total Natural Gas</b>	<b>\$28.11</b>	<b>\$33.20</b>	<b>\$38.29</b>	<b>\$43.38</b>	<b>\$51.02</b>	<b>\$56.11</b>

#### 4.3.1 Natural Gas Rates

TECO Peoples Gas serves natural gas in Collier County. TECO Peoples Gas rates can be found at [www.peoplesgas.com](http://www.peoplesgas.com). Natural gas utility rates for TECO Peoples Gas are as follows:

Customer Charge: \$15.38

Commodity Charge: \$/Therms = \$1.2122

#### 4.3.2 Monthly Commodity Charge

##### Space Heating (Mobile Home)

Space Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Natural Gas (Therms)	2.47	3.07	3.30	4.37	5.21	7.28
Commodity Charge (\$/Therm)	\$1.2122	\$1.2122	\$1.2122	\$1.2122	\$1.2122	\$1.2122
Commodity Cost	\$3.00	\$3.72	\$4.01	\$5.30	\$6.31	\$8.83

**Space Heating (Single Family Home)**

Space Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Natural Gas (Therms)	3.82	4.24	4.36	5.09	6.02	9.40
Commodity Charge (\$/Therm)	\$1.2122	\$1.2122	\$1.2122	\$1.2122	\$1.2122	\$1.2122
Commodity Cost	\$4.63	\$5.13	\$5.28	\$6.17	\$7.30	\$11.40

**Space Heating (Duplex)**

Space Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Natural Gas (Therms)	2.78	3.04	3.43	4.05	4.55	8.58
Commodity Charge (\$/Therm)	\$1.2122	\$1.2122	\$1.2122	\$1.2122	\$1.2122	\$1.2122
Commodity Cost	\$3.37	\$3.69	\$4.15	\$4.91	\$5.51	\$10.40

**Space Heating (Low Rise/Townhouse)**

Space Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Natural Gas (Therms)	2.93	3.47	3.86	6.65	7.27	7.75
Commodity Charge (\$/Therm)	\$1.2122	\$1.2122	\$1.2122	\$1.2122	\$1.2122	\$1.2122
Commodity Cost	\$3.55	\$4.21	\$4.68	\$8.06	\$8.81	\$9.39

**Space Heating (Multi-Family Multi-Story)**

Space Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Natural Gas (Therms)	2.16	2.75	3.71	4.03	4.73	6.06
Commodity Charge (\$/Therm)	\$1.2122	\$1.2122	\$1.2122	\$1.2122	\$1.2122	\$1.2122
Commodity Cost	\$2.61	\$3.34	\$4.49	\$4.89	\$5.73	\$7.35

**Domestic Hot Water**

Domestic Hot Water	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Natural Gas (Therms)	10.50	14.70	18.90	23.10	29.40	33.60
Commodity Charge (\$/Therm)	\$1.2122	\$1.2122	\$1.2122	\$1.2122	\$1.2122	\$1.2122
Commodity Cost	\$12.73	\$17.82	\$22.91	\$28.00	\$35.64	\$40.73

## Cooking

Cooking	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Natural Gas (Therms)	4.00	5.60	8.10	8.80	11.20	12.80
Commodity Charge (\$/Therm)	\$1.2122	\$1.2122	\$1.2122	\$1.2122	\$1.2122	\$1.2122
Commodity Cost	\$4.85	\$6.79	\$9.82	\$10.67	\$13.58	\$15.52

## 4.4 Water

### 4.4.1 Collier County

#### Monthly Water Cost

Monthly Water Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Customer Charge	\$20.18	\$20.18	\$20.18	\$20.18	\$20.18	\$20.18
Water Charge	\$11.08	\$16.35	\$23.02	\$29.70	\$41.35	\$50.21
<b>Total Water</b>	<b>\$31.26</b>	<b>\$36.53</b>	<b>\$43.20</b>	<b>\$49.88</b>	<b>\$61.53</b>	<b>\$70.39</b>

#### 4.4.1.1 Water Rates

Collier County serves water needs in Collier County. Collier County Utilities can be reached at 239-252-2380. Their rates are as follows:

Base Rate: \$20.18

Water Charge, 0 gal to 5,000 gal (\$/1000 gal): \$2.77

Water Charge, 5,001 gal to 10,000 gal (\$/1000 gal): \$4.17

Water Charge, 10,001 gal to 20,000 gal (\$/1000 gal): \$5.54

#### 4.4.1.2 Monthly Water Charge

Water	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Water Consumption (gal)	4,000	5,600	7,200	8,800	11,200	12,800
Water Charge (0 to 5,000 gal)	\$11.08	\$13.85	\$13.85	\$13.85	\$13.85	\$13.85
Water Charge (5,001 to 10,000 gal)	\$0.00	\$2.50	\$9.17	\$15.85	\$20.85	\$20.85
Water Charge (10,001 to 20,000 gal)	\$0.00	\$0.00	\$0.00	\$0.00	\$6.65	\$15.51
<b>Total Water Charge</b>	<b>\$11.08</b>	<b>\$16.35</b>	<b>\$23.02</b>	<b>\$29.70</b>	<b>\$41.35</b>	<b>\$50.21</b>

## 4.4.2 Immokalee Water and Sewer District

### Monthly Water Cost

Monthly Water Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Customer Charge	\$12.41	\$12.41	\$12.41	\$12.41	\$12.41	\$12.41
Water Charge	\$9.64	\$13.50	\$17.35	\$21.21	\$28.18	\$33.62
<b>Total Water</b>	<b>\$22.05</b>	<b>\$25.91</b>	<b>\$29.76</b>	<b>\$33.62</b>	<b>\$40.59</b>	<b>\$46.03</b>

### 4.4.2.1 Water Rates

Immokalee Water and Sewer District serves residents near Immokalee. Immokalee Water and Sewer District can be reached at [www.iw-sdcom](http://www.iw-sdcom). Their rates are as follows:

Customer Charge: \$12.41

Water Charge, 0 gal to 10,000 gal (\$/1000 gal): \$2.41

Water Charge, 10,001 gal to 15,000 gal (\$/1000 gal): \$3.40

### 4.4.2.2 Monthly Water Charge

Water	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Water Consumption (gal)	4,000	5,600	7,200	8,800	11,200	12,800
Water Charge (0 to 10,000 gal)	\$9.64	\$13.50	\$17.35	\$21.21	\$24.10	\$24.10
Water Charge (10,001 to 15,000 gal)	\$0.00	\$0.00	\$0.00	\$0.00	\$4.08	\$9.52
<b>Total Water Charge</b>	<b>\$9.64</b>	<b>\$13.50</b>	<b>\$17.35</b>	<b>\$21.21</b>	<b>\$28.18</b>	<b>\$33.62</b>

## 4.5 Sewer & Stormwater

### 4.5.1 Collier County

#### Monthly Sewer Cost

Monthly Sewer Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Customer Charge	\$30.83	\$30.83	\$30.83	\$30.83	\$30.83	\$30.83
Sewer Charge	\$17.36	\$24.30	\$31.25	\$38.19	\$48.61	\$55.55
<b>Total Sewer</b>	<b>\$48.19</b>	<b>\$55.13</b>	<b>\$62.08</b>	<b>\$69.02</b>	<b>\$79.44</b>	<b>\$86.38</b>

### 4.5.1.1 Sewer & Stormwater Rates

Collier County serves water needs in Collier County. Collier County Utilities can be reached at 239-252-2380. Their rates are as follows:

Base Rate: \$30.83

Sewer Charge, 0 gal to 15,000 gal (\$/1000 gal): \$4.34

### 4.5.1.2 Monthly Sewer Charge

Sewer	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Water Consumption (gal)	4,000	5,600	7,200	8,800	11,200	12,800
Sewer Charge (0 to 15,000 gal)	\$17.36	\$24.30	\$31.25	\$38.19	\$48.61	\$55.55
Total Water Charge	\$17.36	\$24.30	\$31.25	\$38.19	\$48.61	\$55.55

### 4.5.2 Immokalee Water and Sewer District

#### Monthly Sewer Cost

Monthly Sewer Cost	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Customer Charge	\$24.65	\$24.65	\$24.65	\$24.65	\$24.65	\$24.65
Sewer Charge	\$19.56	\$27.38	\$35.21	\$43.03	\$54.77	\$62.59
<b>Total Sewer</b>	<b>\$44.21</b>	<b>\$52.03</b>	<b>\$59.86</b>	<b>\$67.68</b>	<b>\$79.42</b>	<b>\$87.24</b>

### 4.5.2.1 Sewer & Stormwater Rates

Immokalee Water and Sewer District serves residents near Immokalee. Immokalee Water and Sewer District can be reached at [www.iw-sdcom](http://www.iw-sdcom). Their rates are as follows:

Customer Charge: \$24.65

Sewer Charge, 0 gal to 15,000 gal (\$/1000 gal): \$4.89

### 4.5.2.2 Monthly Sewer Charge

Sewer	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Water Consumption (gal)	4,000	5,600	7,200	8,800	11,200	12,800
Sewer Charge (0 to 15,000 gal)	\$19.56	\$27.38	\$35.21	\$43.03	\$54.77	\$62.59
Total Water Charge	\$19.56	\$27.38	\$35.21	\$43.03	\$54.77	\$62.59

## 4.6 Trash Collection

### 4.6.1 Collier County including Immokalee

Monthly Trash	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Total Trash Collection	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Trash collection is collected on the property tax bills in Collier County including Immokalee. Because tenants do not pay this bill directly, no utility allowance for trash collection can be provided.

## 4.7 Appliance Depreciation Allowance

Should the tenant provide their own range or refrigerator, the Housing Authority is required to reimburse the tenant for the cost of the appliance(s) over the life of the appliance. The following schedule provides the monthly allowance for providing their personal range and/or stove.

### Appliance Allowance

Appliance	Estimated Cost	Expectant Life (Yrs)	Monthly Allowance
Range	\$450	10	\$4
Refrigerator	\$500	10	\$4

## 5 Consumption Studies

### 5.1 Space Heating Consumption

The following monthly energy consumption is based on the methodology recommended in the Utility Allowance Guidebook.

Design Outdoor Air Temperature (F):	44
Design Indoor Air Temperature (F):	72
Heating Degree Days:	302
Heat of Electricity (BTU/kWh)	3,412
Furnace Efficiency:	70%
Heat of Propane (BTU/gal)	91,000
Heat of Natural Gas (BTU/Therm)	100,000

#### Monthly Energy Consumption Requirements for Heating (Mobile Home)

Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Design Load (BTU/hr)	8,021	9,955	10,722	14,197	16,904	23,630
Energy (BTU's)	173,024	214,744	231,289	306,250	364,643	509,733
Electricity (kWh)	51	63	68	90	107	149
Propane (gal)	2.72	3.37	3.63	4.81	5.72	8.00
Natural Gas (Therms)	2.47	3.07	3.30	4.37	5.21	7.28

#### Monthly Energy Consumption Requirements for Heating (Single Family)

Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Design Load (BTU/hr)	12,391	13,744	14,134	16,510	19,539	30,513
Energy (BTU's)	267,292	296,478	304,891	356,144	421,484	658,209
Electricity (kWh)	78	87	89	104	124	193
Propane (gal)	4.20	4.65	4.79	5.59	6.62	10.33
Natural Gas (Therms)	3.82	4.24	4.36	5.09	6.02	9.40

#### Monthly Energy Consumption Requirements for Heating (Duplex)

Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Design Load (BTU/hr)	9,028	9,867	11,120	13,147	14,756	27,830
Energy (BTU's)	194,747	212,845	239,874	283,600	318,308	600,333
Electricity (kWh)	57	62	70	83	93	176
Propane (gal)	3.06	3.34	3.77	4.45	5.00	9.42
Natural Gas (Therms)	2.78	3.04	3.43	4.05	4.55	8.58



**Monthly Energy Consumption Requirements for Heating (Low Rise)**

Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Design Load (BTU/hr)	9,502	11,273	12,539	21,589	23,597	25,147
Energy (BTU's)	204,972	243,175	270,484	465,706	509,021	542,457
Electricity (kWh)	60	71	79	136	149	159
Propane (gal)	3.22	3.82	4.25	7.31	7.99	8.52
Natural Gas (Therms)	2.93	3.47	3.86	6.65	7.27	7.75

**Monthly Energy Consumption Requirements for Heating (Multi Story)**

Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Design Load (BTU/hr)	6,995	8,938	12,032	13,085	15,333	19,672
Energy (BTU's)	150,892	192,805	259,547	282,262	330,755	424,353
Electricity (kWh)	44	57	76	83	97	124
Propane (gal)	2.37	3.03	4.07	4.43	5.19	6.66
Natural Gas (Therms)	2.16	2.75	3.71	4.03	4.73	6.06

**5.2 Cooking Consumption**

The following is the monthly energy consumption requirements for cooking as recommended in the Utility Allowance Guidebook:

**Monthly Energy Consumption Requirements for Cooking**

Cooking	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electricity (kWh)	55	77	99	121	154	176
Propane (gal)	4.35	6.09	7.83	9.57	12.17	13.91
Natural Gas (Therms)	4	5.6	8.1	8.8	11.2	12.8

**5.3 Lighting and Refrigeration Consumption**

The following is the monthly energy consumption requirements for lighting and refrigeration as recommended in the Utility Allowance Guidebook:

**Monthly Energy Consumption Requirements for Lighting and Refrigeration**

Refrigeration	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electricity (kWh)	125	175	225	264	350	400

## 5.4 Air Conditioning Consumption

The following monthly energy consumption requirements for air conditioning consumption are based on calculations in HUD's Life Cycle Cost Analysis Handbook 7418.1 CHG-1. The calculations assume the following:

Unit Efficiency (BTU/Watt)	9.7
Equivalent Full Load Hours	1730

### Monthly Energy Consumption Requirements for Air Conditioning (Mobile Home)

Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Design Load (BTU/hr)	9,909	11,575	12,572	16,479	19,668	26,857
Electricity (kWh)	147	172	187	245	292	399

### Monthly Energy Consumption Requirements for Air Conditioning (Single Family Home)

Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Design Load (BTU/hr)	11,831	12,921	15,297	17,763	21,605	26,972
Electricity (kWh)	176	192	227	264	321	401

### Monthly Energy Consumption Requirements for Air Conditioning (Duplex)

Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Design Load (BTU/hr)	10,249	11,099	13,899	16,182	18,870	25,851
Electricity (kWh)	152	165	207	241	280	384

### Monthly Energy Consumption Requirements for Air Conditioning (Low Rise)

Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Design Load (BTU/hr)	10,518	12,685	15,066	20,002	23,121	24,730
Electricity (kWh)	156	189	224	297	344	368

### Monthly Energy Consumption Requirements for Air Conditioning (Multi-Family Multi-Story)

Heating	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Design Load (BTU/hr)	9,099	13,248	14,986	18,127	21,413	24,730
Electricity (kWh)	135	197	223	269	318	368

### **5.5 Domestic Hot Water Consumption**

The following is the monthly energy consumption requirements for water heating as recommended in the Utility Allowance Guidebook:

#### **Monthly Energy Consumption Requirements for Domestic Hot Water**

Domestic Hot Water	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Electricity (kWh)	170	238	306	374	476	544
Propane (gal)	11.41	15.98	20.54	25.11	31.96	36.52
Natural Gas (Therms)	10.50	14.70	18.90	23.10	29.40	33.60

### **5.6 Water Consumption**

The following is the monthly energy consumption requirements for water consumption as recommended in the Utility Allowance Guidebook:

#### **Monthly Water Consumption**

Monthly Water Consumption	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Water (Gal)	4,000	5,600	7,200	8,800	11,200	12,800