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General Counsel and Chief Legal Officer
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VIA Electronic Filing

October 15, 2019

Florida Public Service Commission
Adam Teitzman, Commission Clerk
Office of the Commission Clerk
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: City of Key West, Florida, d/b/a KEYS Energy Services – Revised Tariff Sheets

Dear Mr. Teitzman:

This letter is submitted on behalf of the City of Key West, Florida, doing business as KEYS Energy Services, pursuant to Rules 25-9.05 through 25-9.071 of the *Florida Administrative Code.*

Electronically filed is the *Utility Board of the City of Key West, FL Electric Services Rate Tariffs, Volume III,* which supersedes *Volume II of KEYS'* tariffs in its entirety.

Also included is a copy of the Electric Rate Study prepared for KEYS' as of December 14, 2017, detailing KEYS' rates effective January 1, 2018, and a copy of the meeting minutes of the Key West Utility Board at which the new tariffs were approved. Please contact our office if there are any questions.

Very truly yours,
/s/
Jody Lamar Finklea
General Counsel and Chief Legal Officer

UTILITY BOARD OF THE CITY OF KEY WEST, FL
ELECTRIC SERVICES RATE TARIFFS

UTILITY BOARD OF THE CITY OF KEY WEST, FL
ELECTRIC SERVICES RATE TARIFFS

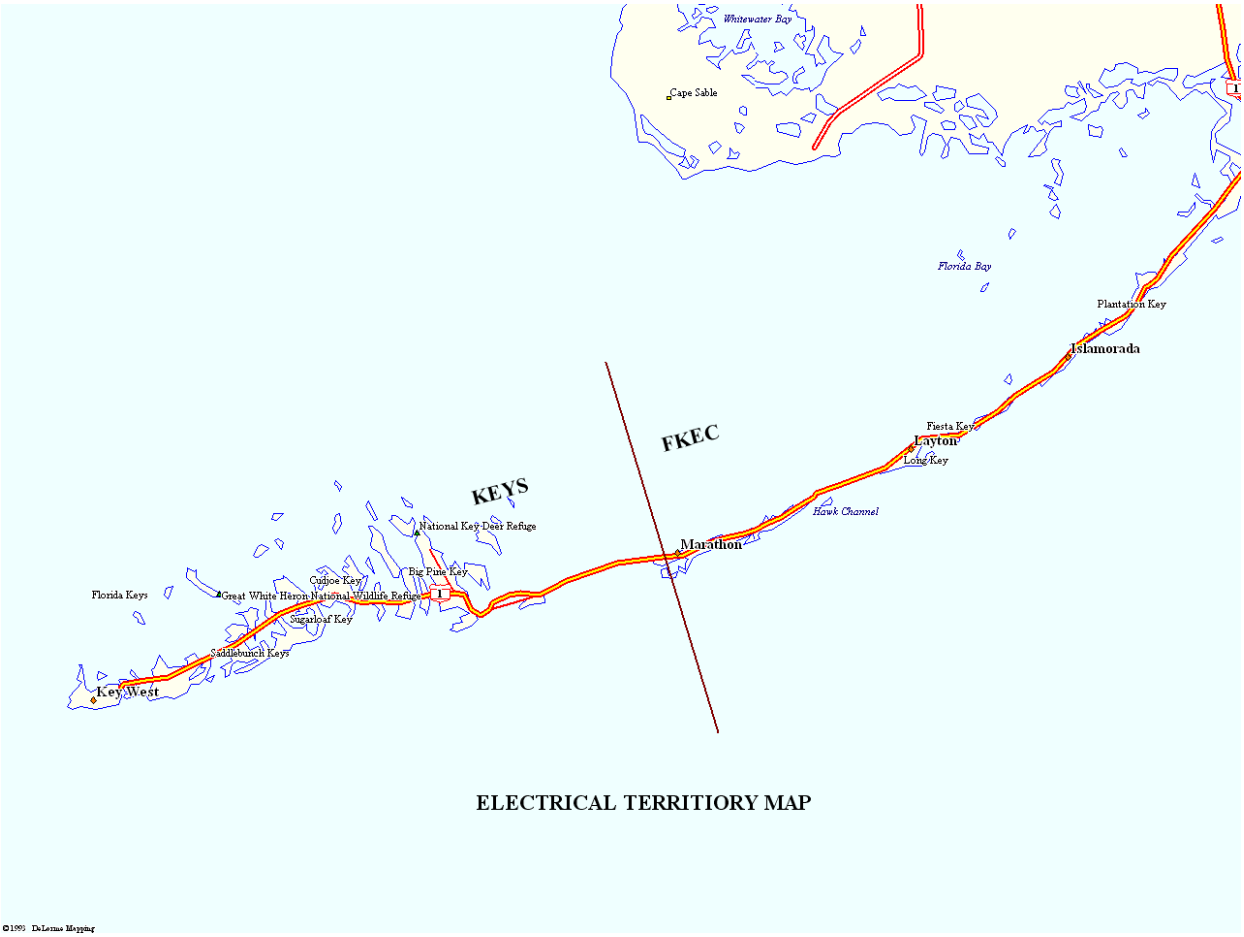
Volume III
[This Volume Supersedes Volume II in its Entirety]

As filed with
THE FLORIDA PUBLIC SERVICE COMMISSION

TABLE OF CONTENTS

GENERAL DESCRIPTION OF TERRITORY SERVED

Keys Energy Services (KEYS) is the public power utility for the Lower Florida Keys. Headquartered in Key West, Florida, KEYS provides electricity from the city of Key West, Florida to the north easternmost end of the Seven Mile Bridge.



ELECTRICAL TERRITIORY MAP

MISCELLANEOUS

GENERAL TERMS AND CONDITIONS:

All services provided under this tariff are subject to the terms and conditions as stated in the *Utility Board of the City of Key West Customer Service Policy Manual.*

TERMS OF PAYMENT:

Electric bills are due approximately thirty (30) days after the meter reading date. If the bill is not paid by the time it becomes past due, then an additional charge equal to five percent (5%) of the balance of such bill shall be added thereto.

POINT OF CONNECTION:

The point where the customer's wires or equipment connect with those of KEYS. This point is to be determined by KEYS. The physical point at which KEYS' responsibility ends.

DETERMINATION OF BILLING DEMAND:

The billing demand shall be determined by the installation of a demand meter. The billing demand for the month shall be the average kilowatt delivery of the fifteen-minute interval, in which the utilization of electric energy is greater than in any other fifteen-minute interval in that month. The billing demand is to be expressed in kilowatts to the nearest one-half kilowatt (0.5 kW).

CONTINUITY OF SERVICE:

KEYS will use reasonable diligence at all times to provide continuous service at the agreed nominal voltage, and having used reasonable diligence shall not be liable to the customer for complete or partial failure or interruption of service or for fluctuations in voltage resulting from causes beyond its control, or through the ordinary negligence of its employees, servants, or agents. KEYS shall not be liable for an act or omission caused directly or indirectly by strikes, labor troubles, accidents, litigations, shut-downs for repairs or adjustments, interference by federal, state, or municipal governments, acts of God, or other causes beyond its control, nor any damages claimed to have arisen as a result in any manner whatsoever.

The customer shall provide and maintain suitable protection devices on any and all equipment to prevent any loss, injury or damage that might result from single-phasing conditions or any other fluctuation or irregularity in the supply of energy.

INDEMNITY TO KEYS:

The Customer shall indemnify, hold harmless and defend KEYS from and against any and all liability, proceedings, suits, costs or expense for loss, damage or injury to persons or property, in any manner directly or indirectly connected with, or growing out of the transmission and use of electricity on the Customer's side of the point of connection.

Continued on Sheet 4.1

Continued from Sheet 4.0

INDEMNITY TO KEYS - GOVERNMENTAL:

Notwithstanding anything to the contrary in KEYS Electric Services Rate Tariffs, including these general provisions for electric service and rate schedules, any obligation of indemnification therein required of a customer or applicant that is a governmental entity of the State of Florida or political subdivision thereof ("governmental entity") shall be read to include the condition "to the extent permitted by applicable law."

ACCESS TO KEYS FACILITIES LOCATED ON CUSTOMER'S PROPERTY

Any authorized agent of KEYS is hereby given access, at all times, to the meter center, or other apparatus owned by KEYS, upon the premises or within the house of the property holders for the purpose of installing, reading, examining, repairing, or replacing the meter or other apparatus owned or operated by KEYS. Such performances shall not be liable for trespassing. KEYS has been and is hereby granted easements or right-of-ways to access its facilities on any private property. The property owner shall not restrict the access to KEYS equipment, and agrees to provide safe access to the equipment at all times. If access is restricted or not granted, the electrical service may be interrupted until such access is granted. A service fee may apply as set forth under the Miscellaneous Fees Tariff.

RIGHT OF WAY:

The customer shall grant, or cause to be granted to KEYS, and without cost to KEYS, all rights, easements, permits, and privileges, which, in the opinion of KEYS, are necessary for the rendering and maintenance of service to the customer. This is to include the clearing of the right-of-way by the customer for rendering of service.

INDEX OF RATE SCHEDULES

RESIDENTIAL SERVICE

SCHEDULE: R

RATE: 110

AVAILABLE:

This schedule is available throughout the entire territory served by KEYS.

APPLICATION:

This service covers energy supplied for residential purposes, including lighting, cooking, and water heating, to individually metered dwelling units. All electrical appliances to be served under this rate are subject to approval by the management of KEYS.

For commonly-owned facilities located in condominiums to qualify for the residential rate, the following criteria must be satisfied:

(1) One-hundred percent (100%) of the energy is used exclusively for all co-owners' benefit.
(2) None of the energy is used in any endeavor which sells or rents a commodity or provides a service for a fee, including, but not limited to any coin operated machines.
(3) Each point of delivery will be separately metered and billed at the customer's sole expense.
(4) A responsible legal entity is established as the customer to whom KEYS can render its bills for said service.
(5) Legal entity shall provide proof satisfactory to KEYS of all the foregoing and execute a contract to each point of delivery.

SERVICE:

Energy delivered under this schedule shall be single-phase, 60 cycle, alternating current at nominal 120, 208, 240 volts. Service shall be provided through one meter.

MONTHLY RATE:

Customer Charge: $18.00
Energy Charge: $0.1259 per kWh
Demand Charge: $0.00 per kW
Power Cost Adjustment: See Sheet 5.12
Applicable State and Local Taxes: See Sheet 5.16
Gross Receipts Tax: See Sheet 5.17

The minimum monthly fee shall be the Customer Charge ($18.00)

ADDITIONAL MONTHLY FEES & CREDITS:

Senior Citizen's/Disabled American Veteran's Discount: See Sheet 5.13
Non-Standard Meter Fee: See Sheet 5.14
Net-Metering Service For Renewable Generation System: See Sheets 5.15.1-5.15.3

SMALL COMMERCIAL SERVICE

SCHEDULE: SC

RATE: 210

AVAILABLE:

This schedule is available throughout the entire territory served by KEYS.

APPLICATION:

This schedule applies to energy used for lighting or power purposes in any commercial establishment having a maximum demand as determined by KEYS of less than 20 kilowatts (20 kW). An annual review will be conducted for accounts with a demand meter installed confirming the maximum demand in 10 of the last 12 consecutive months was less than 20 kilowatts (20 kW). KEYS will install a demand meter for accounts without a demand meter and an average monthly electrical usage greater than 5,000 kilowatts hours (5,000 kWh). This annual review will determine the applicable rate classification.

SERVICE:

Energy delivered under this schedule shall be single-phase or three-phase, 60 cycle, alternating current at 120, 208, 240 or 480 volts at the option of KEYS, depending upon the class of service available. Service shall be provided through one meter.

STANDARD MONTHLY CHARGES:

Customer Charge: $28.50
Energy Charge: $0.1311 per kWh
Demand Charge: $0.00 per kW
Power Cost Adjustment: See Sheet 5.12
Applicable State and Local Taxes: See Sheet 5.16
Gross Receipts Tax: See Sheet 5.17

The minimum monthly fee shall be the Customer Charge ($28.50)

ADDITIONAL MONTHLY FEES & CREDITS:

Non-Standard Meter Fee: See Sheet 5.14
Net-Metering Service For Renewable Generation System: See Sheets 5.15.1-5.15.3

SMALL COMMERCIAL SERVICE – GOVERNMENT

SCHEDULE: GS

RATE: G210

AVAILABLE:

This schedule is available throughout the entire territory served by KEYS.

APPLICATION:

This schedule applies to energy used for municipal, federal, state or county institution, camp, building or other service having a maximum demand as determined by KEYS of less than 20 kilowatts (20 kW). An annual review will be conducted for accounts with a demand meter installed confirming the maximum demand in 10 of the last 12 consecutive months was less than 20 kilowatts (20 kW). KEYS will install a demand meter for accounts without a demand meter and an average monthly electrical usage greater than 5,000 kilowatts hours (5,000 kWh). This annual review will determine the applicable rate classification.

This schedule may also apply to energy used for municipal, federal, state or county owned recreational lighting facilities with maximum demands greater than 20 kilowatts (20 kW) at KEYS' discretion.

SERVICE:

Energy delivered under this schedule shall be single-phase or three-phase, 60 cycle, alternating current at 120, 208, 240 or 480 volts at the option of KEYS, depending upon the class of service available. Service shall be provided through one meter.

STANDARD MONTHLY CHARGES:

Customer Charge: $28.50
Energy Charge: $0.1311 per kWh
Demand Charge: $0.00 per kW
Power Cost Adjustment: See Sheet 5.12
Gross Receipts Tax: See Sheet 5.17

The minimum monthly fee shall be the Customer Charge ($28.50)

ADDITIONAL MONTHLY FEES & CREDITS:

Non-Standard Meter Fee: See Sheet 5.14
Net-Metering Service For Renewable Generation System: See Sheets 5.15.1-5.15.3

LARGE COMMERCIAL SERVICE

SCHEDULE: L

RATE: 214

AVAILABLE:

This schedule is available throughout the entire territory served by KEYS.

APPLICATION:

This schedule applies to energy used in any commercial establishment having a maximum demand as determined by KEYS to be greater than 20 kilowatts (20 kW).

SERVICE:

Energy delivered under this schedule shall be single-phase or three-phase, 60 cycle, alternating current at 120, 208, 240, 480, 7,970 or 13,800 nominal voltages, at the option of KEYS per the class of service available. Service shall be provided through one meter.

KEYS shall not be obligated under the terms of this schedule to deliver energy to the customer at any time the power factor of the customer's load is below 90 percent (90%). When the power factor of the customer's load shall fall below 90 percent (90%), as indicated by a meter installed to measure power factor for three-phase installations or as determined by KEYS for single-phase installations, the billing demand shall be determined by taking 90 percent (90%) of the actual demand as measured by the demand meter, and dividing this amount by the actual power factor determined by measurement.

STANDARD MONTHLY CHARGES:

Customer Charge: $95.00
Energy Charge:
First 5,000 kWh: $0.1311 per kWh
All Additional kWh: $0.1077 per kWh
Demand Charge:
First 20 kW: $0.00 per kW
All Additional kW: $10.50 per kW
Power Cost Adjustment: See Sheet 5.12
Applicable State and Local Taxes: See Sheet 5.16
Gross Receipts Tax: See Sheet 5.17

The minimum monthly fee shall be the Customer Charge ($95.00)

ADDITIONAL MONTHLY FEES & CREDITS:

Non-Standard Meter Fee: See Sheet 5.14
Net-Metering Service For Renewable Generation System: See Sheets 5.15.1-5.15.3

LARGE COMMERCIAL SERVICE – GOVERNMENT

SCHEDULE: GM

RATE: G214

AVAILABLE:

This schedule is available throughout the entire territory served by KEYS.

APPLICATION:

This schedule applies to energy used for any municipal, federal, state or county institution, camp, building or other service having a maximum demand as determined by KEYS to be greater than 20 kilowatts (20 kW).

SERVICE:

Energy delivered under this schedule shall be single-phase or three-phase, 60 cycle, alternating current at 120, 208, 240, 480, 7,970 or 13,800 nominal voltages, at the option of KEYS per the class of service available. Service shall be provided through one meter.

KEYS shall not be obligated under the terms of this schedule to deliver energy to the customer at any time the power factor of the customer's load is below 90 percent (90%). When the power factor of the customer's load shall fall below 90 percent (90%), as indicated by a meter installed to measure power factor for three-phase installations or as determined by KEYS for single-phase installations, the billing demand shall be determined by taking 90 percent (90%) of the actual demand as measured by the demand meter, and dividing this amount by the actual power factor determined by measurement.

STANDARD MONTHLY CHARGES:

Customer Charge: $95.00
Energy Charge:
First 5,000 kWh: $0.1311 per kWh
All Additional kWh: $0.1077 per kWh
Demand Charge:
First 20 kW: $0.00 per kW
All Additional kW: $10.50 per kW
Power Cost Adjustment: See Sheet 5.12
Applicable State and Local Taxes: See Sheet 5.16
Gross Receipts Tax: See Sheet 5.17

The minimum monthly fee shall be the Customer Charge ($95.00)

ADDITIONAL MONTHLY FEES & CREDITS:

Non-Standard Meter Fee: See Sheet 5.14
Net-Metering Service For Renewable Generation System: See Sheets 5.15.1-5.15.3

LARGE COMMERCIAL CUSTOMER-OWNED PRIMARY SERVICE

SCHEDULE: L5

RATE: 215

AVAILABLE:

This schedule is available throughout the entire territory served by KEYS.

APPLICATION:

This schedule applies to energy used for general power purposes where customers own their transformers and primary conductors.

SERVICE:

Energy delivered under this schedule shall be single-phase or three-phase, 60 cycle, alternating current at 7,970 or 13,800 nominal voltages, at the option of KEYS per the class of service available. Service shall be provided through one meter.

KEYS shall not be obligated under the terms of this schedule to deliver energy to the customer at any time the power factor of the customer's load is below 90 percent (90%). When the power factor of the customer's load shall fall below 90 percent (90%), as indicated by a meter installed to measure power factor for three-phase installations or as determined by KEYS for single-phase installations, the billing demand shall be determined by taking 90 percent (90%) of the actual demand as measured by the demand meter, and dividing this amount by the actual power factor determined by measurement.

STANDARD MONTHLY CHARGES:

Customer Charge: $275.00
Energy Charge: $0.0980 per kWh
Demand Charge: $11.00 per kW
Power Cost Adjustment: See Sheet 5.12
Applicable State and Local Taxes: See Sheet 5.16
Gross Receipts Tax: See Sheet 5.17

The minimum monthly fee shall be the Customer Charge ($275.00)

ADDITIONAL MONTHLY FEES & CREDITS:

Non-Standard Meter Fee: See Sheet 5.14
Net-Metering Service For Renewable Generation System: See Sheets 5.15.1-5.15.3

LARGE COMMERCIAL CUSTOMER-OWNED PRIMARY SERVICE – GOVERNMENT

SCHEDULE: G5

RATE: G215

AVAILABLE:

This schedule is available throughout the entire territory served by KEYS.

APPLICATION:

This schedule applies to energy used for any municipal, federal, state or county institution, camp, building or other service where customers own their transformers and primary conductors.

SERVICE:

Energy delivered under this schedule shall be single-phase or three-phase, 60 cycle, alternating current at 7,970 or 13,800 nominal voltages, at the option of KEYS per the class of service available. Service shall be provided through one meter.

KEYS shall not be obligated under the terms of this schedule to deliver energy to the customer at any time the power factor of the customer's load is below 90 percent (90%). When the power factor of the customer's load shall fall below 90 percent (90%), as indicated by a meter installed to measure power factor for three-phase installations or as determined by KEYS for single-phase installations, the billing demand shall be determined by taking 90 percent (90%) of the actual demand as measured by the demand meter, and dividing this amount by the actual power factor determined by measurement.

STANDARD MONTHLY CHARGES:

Customer Charge: $275.00
Energy Charge: $0.0980 per kWh
Demand Charge: $11.00 per kW
Power Cost Adjustment: See Sheet 5.12
Gross Receipts Tax: See Sheet 5.17

The minimum monthly fee shall be the Customer Charge ($275.00)

ADDITIONAL MONTHLY FEES & CREDITS:

Non-Standard Meter Fee: See Sheet 5.14
Net-Metering Service For Renewable Generation System: See Sheets 5.15.1-5.15.3

LARGE POWER SERVICE FOR CHURCHES

SCHEDULE: CH

RATE: 217

AVAILABLE:

This schedule is available throughout the entire territory served by KEYS.

APPLICATION:

This schedule applies to power and energy for churches that have exempt status as determined by the Internal Revenue Service having a maximum demand as determined by KEYS greater than 20 kilowatts (20 kW). This schedule is only available to that portion of the church facilities utilized for religious worship. All other installations that are not associated with these religious services are excluded, such as school or vocational training programs that may be so operated or controlled by the church.

SERVICE:

Energy delivered under this schedule shall be single-phase or three-phase, 60 cycle, alternating current at 120, 208, 240, 480, 7,970 or 13,800 nominal voltages, at the option of KEYS per the class of service available. Service shall be provided through one meter.

STANDARD MONTHLY CHARGES:

Customer Charge: $90.00
Energy Charge: $0.1062 per kWh
Demand Charge: $3.50 per kW
Power Cost Adjustment: See Sheet 5.12
Gross Receipts Tax: See Sheet 5.17

The minimum monthly fee shall be the Customer Charge ($90.00)

ADDITIONAL MONTHLY FEES & CREDITS:

Non-Standard Meter Fee: See Sheet 5.14
Net-Metering Service For Renewable Generation System: See Sheets 5.15.1-5.15.3

MILITARY INSTALLATION – SECONDARY SERVICE

SCHEDULE: MS

RATE: MS214

AVAILABLE:

This schedule is available throughout the entire territory served by KEYS.

APPLICATION:

This schedule applies to energy used for general power purposes to military installations agreeing to establish a contract demand amount. The monthly billing demand shall not be less than the kW amount specified by contract between the customer and the Utility Board, which amount as of the effective date of this schedule is 10,500 kW.

SERVICE:

Energy delivered under this schedule shall be single-phase or three-phase, 60 cycle, alternating current at 120, 208, 240, 480, 7,970 or 13,800 nominal voltages, at the option of KEYS per the class of service available. Service shall be provided through one meter.

KEYS shall not be obligated under the terms of this schedule to deliver energy to the customer at any time the power factor of the customer's load is below 90 percent (90%). When the power factor of the customer's load shall fall below 90 percent (90%), as indicated by a meter installed to measure power factor for three-phase installations or as determined by KEYS for single-phase installations, the billing demand shall be determined by taking 90 percent (90%) of the actual demand as measured by the demand meter, and dividing this amount by the actual power factor determined by measurement.

STANDARD MONTHLY CHARGES:

Customer Charge: $95.00
Energy Charge:
First 5,000 kWh: $0.1311 per kWh
All Additional kWh: $0.1077 per kWh
Demand Charge:
First 20 kW: $0.00 per kW
All Additional kW: $10.50 per kW
Power Cost Adjustment: See Sheet 5.12
Gross Receipts Tax: See Sheet 5.17

The minimum monthly fee shall be the Customer Charge ($95.00) plus minimum contract demand.

ADDITIONAL MONTHLY FEES & CREDITS:

Non-Standard Meter Fee: See Sheet 5.14
Net-Metering Service For Renewable Generation System: See Sheets 5.15.1-5.15.3

MILITARY INSTALLATION – MILITARY-OWNED PRIMARY SERVICE

SCHEDULE: MS-LP

RATE: MS215

AVAILABLE:

This schedule is available throughout the entire territory served by KEYS.

APPLICATION:

This schedule applies to energy used for general power purposes to military installations that own their transformers and primary conductors and agree to establish a contract demand amount. The monthly billing demand shall not be less than the kW amount specified by contract between the customer and the Utility Board, which amount as of the effective date of this schedule is 10,500 kW.

SERVICE:

Energy delivered under this schedule shall be single-phase or three-phase, 60 cycle, alternating current at 7,970 or 13,800 nominal voltages, at the option of KEYS per the class of service available. Service shall be provided through one meter.

KEYS shall not be obligated under the terms of this schedule to deliver energy to the customer at any time the power factor of the customer's load is below 90 percent (90%). When the power factor of the customer's load shall fall below 90 percent (90%), as indicated by a meter installed to measure power factor for three-phase installations or as determined by KEYS for single-phase installations, the billing demand shall be determined by taking 90 percent (90%) of the actual demand as measured by the demand meter, and dividing this amount by the actual power factor determined by measurement.

STANDARD MONTHLY CHARGES:

Customer Charge: $275.00
Energy Charge: $0.0980 per kWh
Demand Charge: $11.00 per kW
Power Cost Adjustment: See Sheet 5.12
Gross Receipts Tax: See Sheet 5.17

The minimum monthly fee shall be the Customer Charge ($275.00) plus minimum contract demand.

ADDITIONAL MONTHLY FEES & CREDITS:

Non-Standard Meter Fee: See Sheet 5.14
Net-Metering Service For Renewable Generation System: See Sheets 5.15.1-5.15.3

LIGHTING

SCHEDULE: L

AVAILABLE:

This schedule is available throughout the entire territory served by KEYS.

APPLICATION:

This schedule applies to electric service used for government street lighting in Key West and the Lower Keys, including public ways and areas. Area lighting service is no longer offered to new customers. Service for current area lighting customers will be charged under Case 1.

SERVICE:

Case 1: KEYS shall own the fixture served from overhead wires, and shall provide maintenance, including lamp renewals and energy, from dusk to dawn.

Case 2: Customer owns the infrastructure [excluding the pole] and contracts KEYS to maintain the system, including lamp renewals and energy, from dusk to dawn.

Case 3: Customer owns the infrastructure [excluding the pole] and customer maintains the systems, including lamp renewals, from dusk to dawn and KEYS bills customer for energy.

Case 4: KEYS shall own the fixture served from the overhead wires, and shall provide maintenance, including lamp renewals, and KEYS provides energy based on metered energy usage.

STANDARD MONTHLY CHARGES:

Lamp Type	Case 1	Case 2	Case 3	Case 4
100W SV	$9.71	$8.04	$7.30	$8.02
100W SV-Cutoff Optic	$9.82	$8.04	$7.30	$8.13
200W SV	$15.08	$13.24	$12.50	$11.72
200W SV-Cutoff Optic	$15.14	$13.24	$12.50	$11.79
400W SV-All	$25.69	$23.38	$22.64	$19.09
175W MV	$13.77	$11.93	$11.19	$10.83
250W MV	$17.48	$15.65	$14.91	$13.36
400W MV	$26.04	$23.73	$22.99	$19.33
24W LED	$12.09	$3.80	$3.06	$11.75
24W LED-Remote Sensor	$13.16	$3.80	$3.06	$12.82
38W LED	$12.70	$4.42	$3.67	$12.17
38W LED-Remote Sensor	$13.77	$4.42	$3.67	$13.24
54W LED	$13.40	$5.11	$4.37	$12.64
54W LED-Remote Sensor	$14.47	$5.11	$4.37	$13.71

Continued on Sheet 5.11.2

Continued from Sheet 5.11.1

STANDARD MONTHLY CHARGES (continued):

Power Cost Adjustment: See Sheet 5.12
Applicable State and Local Taxes: See Sheet 5.16
Gross Receipts Tax: See Sheet 5.17

The minimum monthly charge shall be the amount shown in Standard Monthly Charges Table on Sheet 5.11.1

ADDITIONAL MONTHLY FEES & CREDITS:

Non-Standard Meter Fee: See Sheet 5.14

POWER COST ADJUSTMENT

SCHEDULE: PCA

APPLICATION:

The power cost adjustment is applicable to and becomes a part of all filed retail rate schedules and is applicable to all kWh sales thereunder.

MONTHLY CHARGES:

The monthly power cost adjustment factor ($/kWh sold) will be based on estimated power costs and estimated kWh sold for the billing period. Power cost may include the total cost of purchase and delivery of power.

There may be an adjustment to the monthly power cost adjustment calculation to correct any difference between estimated costs and actual costs. The difference will be subtracted from the estimated power costs for the billing period if there was an over collection, and added to the estimated power costs if there was an under collection. Over and under collections may be temporarily accumulated in such a manner as to minimize fluctuations in the monthly adjustment factor.

For billing purposes, the monthly power cost adjustment factor, as calculated, shall be rounded to the nearest 0.01 cent (0.1 mill) per kWh. The power cost adjustment shall be in addition to all minimum charges, and shall not be subject to discount provisions contained in any rate schedule.

In addition, the monthly power cost adjustment factor shall be subject to any applicable gross receipts, kilowatt-hour, or other form of tax imposed by any municipal, state, or federal taxing body.

SENIOR CITIZEN'S/DISABLED AMERICAN VETERAN'S DISCOUNT

SCHEDULE: RS

RATE: 111

APPLICATION:

This discount has been established for any residential customer who meets low income standards adopted by the Utility Board; is a permanent resident of the geographical service area covered by the Utility Board; and is sixty-two (62) years of age or older or a totally and permanently disabled American veteran. The customer's monthly average consumption cannot exceed 2,000 kilowatt hours based on the previous twelve month history.

MONTHLY CREDIT:

A $15.00 credit will be applied to the customer charge per billing period.

NON-STANDARD METER RIDER

SCHEDULE: NS

AVAILABLE:

This schedule is available throughout the entire territory served by KEYS.

APPLICATION:

KEYS' standard residential meter is a remotely read meter. Should a customer wish to opt out of the standard meter and convert to a non-standard meter, KEYS will comply. The non-standard meter option will remain available if non-standard meter options are reasonably available and are supported by the manufacturers.

CHARGES:

The cost to replace a standard meter to a non-standard meter will be charged to the customer through an enrollment fee. The cost to read and maintain a non-standard meter will be charged to the customer through the Monthly Meter Surcharge.

Enrollment Fee Residential: $90.00
Enrollment Fee Small Commercial: $180.00
Enrollment Fee for all classes other than Residential and Small Commercial: $300.00
Monthly Meter Surcharge: $15.00 per month

SPECIAL PROVISIONS:

If a customer decides to return to a standard meter, a charge equal to the Connect, Reconnect or Disconnect Fee as outlined in the Miscellaneous Fees tariff will be assessed and the monthly meter surcharge will be removed. If a customer relocates to new premises and requests a non-standard meter, they must pay the enrollment fee for the new premises. Customers who cancel the non-standard meter option and then later re-enroll for this service, at any location, would also be required to pay another enrollment fee.

NET-METERING SERVICE FOR RENEWABLE GENERATION SYSTEM

SCHEDULE: NM1

AVAILABLE:

This schedule is available throughout the entire territory served by KEYS. The tariff is offered to customers on a first-come, first-served basis until the time that the total rated generating capacity of interconnected Renewable Generation Systems (RGSs) equals or exceeds 2.5 percent (2.5%) of KEYS aggregate customer peak demands. KEYS may approve interconnections in excess of the limits set forth, at its sole discretion, to the extent there is no adverse impact on KEYS' system or Florida Municipal Power Agency (FMPA).

APPLICATION:

This schedule is applicable to customers who:

1. Take retail service from KEYS under an otherwise applicable rate schedule at their premises;
2. Occupy a premises with a RGS with a capacity that does not exceed two megawatts (2 MW), located on the customer's premises and that is primarily intended to offset part or all of customer's own electric requirements at the premises;
3. Are interconnected and operate in parallel with KEYS' electric distribution system; and
4. Provides KEYS with an executed Standard Interconnection Agreement for Renewable Generation System, and is in compliance with the interconnection standards therein, and an executed Tri-Party Net Metering Power Purchase Agreement among KEYS, FMPA and the RGS Owner for the purchase of the energy output from the RGS.

Rate:
All rates charged under this schedule will be in accordance with the customer's applicable rate schedule. Customers served under this schedule are responsible for all charges from its otherwise applicable rate schedule. Charges for electric kilowatt-hours (kWh) supplied by KEYS and exported to KEYS will be based on the metered usage in accordance with billing (see below).

Metering:
Energy metering under this schedule shall be accomplished by separately registering the flow of electricity from KEYS to the premises and excess energy generated by the RGS and delivered to KEYS. KEYS will furnish, install, own and maintain metering capable of measuring such flow of kilowatt-hours (kWh) of energy.

Customer shall offer KEYS and FMPA the right of first refusal to purchase any and all Renewable Energy Certificates or similarly titled credits for renewable energy generated by the customer.

Meter readings shall be taken monthly on the same cycle as required under the applicable rate schedule.

Billing:
Customer shall be billed for consumption and export of energy as follows:

Customer shall be billed for the total amount of electricity delivered to customer by KEYS in accordance with otherwise applicable rate schedules.

Continued on Sheet 5.15.2

Continued from Sheet 5.15.1

Electric energy from the RGS shall be used first to service the customer's own load and offset the customer's demand for KEYS electricity. Any kWh electric energy produced by the RGS that is not consumed by the customer's own load and is delivered to KEYS' system shall be deemed as "excess RGS generation." Excess RGS generation shall be purchased in the form of a credit on the customer's monthly energy consumption bill.

Each billing cycle, the customer shall be credited for the total amount of excess electricity generated by the RGS that is delivered to KEYS electric system during the previous billing cycle. The credit shall be:

- Tier 1 – Ten (10) kW or less:
    - Customers who begin taking service under this rate schedule after October 1, 2017, shall receive KEYS' avoided cost rate, as determined by KEYS.
    - Customers who were receiving service under this rate schedule prior to October 1, 2017, shall be grandfathered and will continue to be credited at KEYS' full retail rate until the sunset date provided below. Notwithstanding anything in this Tariff, the interconnection agreement, or Tri-Party Power Purchase Agreement to the contrary, grandfathered net metering customers currently receiving the full retail incentive rate will sunset on January 31, 2037. As of February 1, 2037, the credit for excess RGS generation for all net metering customers shall be at KEYS' avoided cost rate, as determined by KEYS. A customer may only qualify for the full retail rate for excess RGS generation at a single premise. If a grandfathered net metering customer applies for service under this rate schedule at a new premises after October 1, 2017, then the new premises will be credited at KEYS' avoided cost rate, as determined by KEYS.

- Tier 2 – Greater than 10 kW and less than or equal to 100 kW: KEYS' avoided cost rate, as determined by KEYS.

- Tier 3 – Greater than 100 kW and less than or equal to two (2) MW: KEYS' avoided cost rate, as determined by KEYS.

In the event that a given monthly credit for excess RGS generation exceeds the total billed amount for the customer's consumption in any corresponding month, the excess credit shall be applied to the customer's subsequent bill. Excess energy credits produced pursuant to the preceding sentence shall accumulate and be used to offset the customer's energy consumption bill for a period of not more than twelve (12) months. At the end of each calendar year, KEYS shall pay the customer for any unused excess energy credits.

In the event that a customer closes an account, the customer's unused excess energy credits shall be paid by KEYS to the customer.

Fees:
The following fees shall be required for application review and processing, as well as interconnection studies:

- Tier 1 - No application fee; no study fee;
- Tier 2 - $320.00 application fee; no study fee;

Continued on Sheet 5.15.3

Continued from Sheet 5.15.2

- Tier 3 - $470.00 application fee and RGS Owner will be responsible for the actual cost of the interconnection study to be paid in advance of the study being performed. (This may include the aggregate installation of RGSs on the same electrical distribution circuit.)

Fees may be adjusted annually.

STATE AND LOCAL TAXES

SCHEDULE: T

APPLICATION:

KEYS' services are subject to state and local taxes for services provided to customers without tax exempt status. Customers shall be liable for taxes whether or not taxes were collected by KEYS at the instance of sale and will be subject to sales and use taxes, interest, and penalties by the Florida Department of Revenue, and that when any person shall fraudulently, for the purpose of evading tax, issue to a vendor or to any agent of the state a certificate or statement in writing in which such person claims exemption from sales tax, such person, in addition to being liable for payment of the tax plus a mandatory penalty of 200 percent of the tax, shall be liable for fine and punishment, as provided by law, for conviction of a misdemeanor of the second degree, as provided in s. 775.082, s. 775.083 or s. 775.085, F.S.

CHARGES:

KEYS shall apply the current local option tax to all services and charges including gross receipts tax and excluding state sales tax as legally imposed under applicable local tax laws. Current state sales tax shall apply to all services and charges including gross receipts tax and local option tax as legally imposed under Florida Statues.

GROSS RECEIPTS TAX

SCHEDULE: GRT

APPLICATION:

The tax adjustment is applicable to and becomes a part of all filed retail rate schedules and is applicable to all sales thereunder. Pursuant to Section 201.3 of the Florida Statutes, a 2.50% gross receipts tax is applicable to all retail electric charges, including any adjustments or surcharges. The tax is imposed on the total amount of gross receipts derived from utility business done within the State of Florida or between points within the state. All consumers, regardless of tax-exempt status, are subject to the recovery of this tax on the utility.

In addition, the rates including any adjustments or surcharges, shall be adjusted for any other applicable gross receipts, kilowatt-hour, or other form of tax imposed by any municipal, state or federal taxing body.

CHARGES:

The gross receipts tax recovery factor will be calculated as follows:

$$\frac{Gross\ Reciepts\ Tax}{1 - Gross\ Receipts\ Tax} = \frac{0.0250}{0.9750} = 2.5641\%$$

IMPACT FEES

SCHEDULE: IF

APPLICATION:

This schedule is for customers requesting initial permanent service at a new service location or upgrade of commercial service at current service location. Impact fees do not include costs of line extension or initial meter installation and connection which may also be assessed to new service locations or upgrades to services (See Sheet 5.19.1).

FEES:

Residential: $705 per new residential service. Impact Fee does not apply for upgraded service.

Commercial: New service requests shall pay the full amount shown in the Commercial Impact Fees table for the service panel size requested. Requests for upgraded services shall pay the difference in impact fees shown for current service size to upgraded service size.

Commercial Impact Fees

Service Panel Size (amps)	208V Single-Phase	240V Single-Phase	208V Three-Phase	240V Three-Phase	480V Three-Phase
100	$1,205	$1,391	$2,088	$2,409	$4,817
125	$1,507	$1,738	$2,609	$3,011	$6,022
150	$1,808	$2,086	$3,131	$3,613	$7,226
175	$2,109	$2,434	$3,653	$4,215	$8,430
200	$2,410	$2,781	$4,175	$4,817	$9,635
300	$3,616	$4,172	$6,263	$7,226	$14,452
400	$4,821	$5,563	$8,350	$9,635	$19,269
500	$6,026	$6,953	$10,438	$12,043	$24,087
600	$7,231	$8,344	$12,525	$14,452	$28,904
700	$8,437	$9,735	$14,613	$16,861	$33,722
800	$9,642	$11,125	$16,700	$19,269	$38,539
900	$10,847	$12,516	$18,788	$21,678	$43,356
1,000	$12,052	$13,907	$20,875	$24,087	$48,174
1,100	NA	NA	$22,963	$26,496	$52,991
1,200	NA	NA	$25,050	$28,904	$57,808
1,300	NA	NA	$27,138	$31,313	$62,626
1,400	NA	NA	$29,225	$33,722	$67,443
1,500	NA	NA	$31,313	$36,130	$72,261
1,600	NA	NA	$33,400	$38,539	$77,078
1,700	NA	NA	$35,488	$40,948	$81,895
1,800	NA	NA	$37,575	$43,356	$86,713
1,900	NA	NA	$39,663	$45,765	$91,530

Continued on Sheet 5.18.2

Continued from Sheet 5.18.1

Commercial Impact Fees

Service Panel Size (amps)	208V Single-Phase	240V Single-Phase	208V Three-Phase	240V Three-Phase	480V Three-Phase
2,000	NA	NA	$41,751	$48,174	$96,347
2,100	NA	NA	$43,838	$50,582	$101,165
2,200	NA	NA	$45,926	$52,991	$105,982
2,300	NA	NA	$48,013	$55,400	$110,799
2,400	NA	NA	$50,101	$57,808	$115,617
2,500	NA	NA	$52,188	$60,217	$120,434
2,600	NA	NA	$54,276	$62,626	$125,252
2,700	NA	NA	$56,363	$65,034	$130,069
2,800	NA	NA	$58,451	$67,443	$134,886
2,900	NA	NA	$60,538	$69,852	$139,704
3,000	NA	NA	$62,626	$72,261	$144,521

SPECIAL PROVISIONS:

KEYS will provide a 50 percent discount to the impact fee for new services associated with Affordable Housing to the extent such Affordable Housing status is verified with the City of Key West and/or Monroe County. This discount is only applicable to new services that will be served under Schedule R (Residential Service) and does not apply to any part of a mixed-use development that will have any portion of its electric service provided under any other schedule.

MISCELLANEOUS FEES

Service Fee: Connect, reconnect or disconnect– applied on a per account basis.	$40 @ meter normal hours $160 @ top of pole normal hours $130 @ meter after hours $260 @ top of pole after hours
Non-Payment/Tampering Fee: Reconnect or disconnect – applied on a per account basis.	$70 @ meter normal hours $165 @ top of pole normal hours $155 @ meter after hours $265 @ top of pole after hours
Returned Payment Charge: 5% of the face amount of the check or $25, whichever is greater.	$25 minimum
Penalty Charge: Applicable to all amounts due when balance is not paid when due.	5%
Meter Tampering Charge: When evidence is found that someone other than a Keys Energy Services representative has tampered with wiring, equipment or instrumentation between the meter and the distribution system.	$490
Meter Test Charge: One free meter test is provided within a 12-month period. Additional tests, where results are within the allowable limits, will result in a charge.	$80
Line Extension Charge: Applies to overhead and underground line extensions.	Calculated per Extension
Initial Permanent Service Charge (IPSC): In addition to the service fee and impact fee, a customer requesting initial permanent service at a new location will pay the following charge for installation of the meter and accessory equipment: • Single-Phase – self-contained meter • Single-Phase – residential network • Single-Phase – commercial • Three-Phase – self-contained meter • Secondary – instrument meter • Primary	 $415 $480 $635 $860 $2,930 Actual Cost
In addition to the service fee and impact fee, a customer requesting a reconnection of service at a location where the meter has been removed for a period greater than one year will pay the following charge for reinstallation of the meter and accessory equipment: • Single-Phase – self-contained meter • Single-Phase – residential network • Single-Phase – commercial • Three-Phase – self-contained meter • Secondary – instrument meter • Primary	 $260 $260 $295 $425 $1,510 Actual Cost
Residential Deposits:	$125
Commercial Deposits: The greater of the monthly average of the previous (projected) 12 months' billings times 2 or $150.	$150 minimum

Continued on Sheet 5.19.2

Continued from Sheet 5.19.1

Renewable Energy Net Metering: One initial field visit is provided at no cost. If additional visits are necessary KEYS will require a per visit payment to defray the cost.	$50 normal hours $65 after hours A prorated amount [to the nearest 30 minutes], using actual costs, when the field crew exceeds 30 minutes will be charged.

AGENDA

UTILITY BOARD OF THE CITY OF KEY WEST, FL
REGULAR MEETING 5:00 P.M. - WEDNESDAY, OCTOBER 25, 2017
1001 JAMES STREET – KEYS ENERGY SERVICES BOARD ROOM

1. Pledge of Allegiance
2. Invocation
3. Mission and Vision
4. Roll Call
5. Set Agenda
6. Recognition and Presentation:
   a) Retirement 26 Years of Service – Stan Rzad
   b) Retirement 29 Years of Service – Dennis Stone
   c) Retirement 30 Years of Service – Stefan Washington
7. Informational Items:
   a) Department Staff Report
   b) Quarterly Safety Report
   c) Hurricane Irma Update
8. Consent Agenda*
   a) Approve Minutes - Regular Utility Board Meeting - October 11, 2017
   b) Approve Minutes - Cost of Service Utility Board Workshop - August 2, 2017
   c) Approve Minutes - Investment Committee Meeting - August 23, 2017; August 29, 2017 and September 26, 2017
   d) Approve Disbursement Report
   e) Award Contract for Installation of a Perimeter Fence at the Key West Diesel Substation, Bid #16-17
   f) Declare Transformers as Surplus
9. Action Items
   a) Approve Electric Services Rate Tariffs Effective January 1, 2018
   b) Approve Revisions to the Customer Service Policy Manual
   c) Approve Changes to KEYS' Community Sponsorship & In-Kind Service Policy
   d) Approve Resolution #806 – Revising General Manager Disbursement Thresholds
   e) Approve "Memorandum of Understanding" with the International Brotherhood of Electrical Workers (IBEW), Local 1990
   f) Approve Resolution #807 – Amending the Retirement Plan Section 2.04 (Career Average Compensation); Section 2.06 (Compensation); Section 2.10 (Final Average Compensation); and Section 4.03 (b) (Disability Retirement Benefit)
   g) Approve Hiring Replacements for Pending Retirements Policy
   h) Approve Master Service Agreements for Comprehensive Inspection Services Contracts, RFQ #17-17
   i) Approve Additional Holidays for KEYS Employees
10. Public Input / Other Business
11. Adjournment

* Item is considered to be routine and enacted by one motion with no separate discussion, unless requested by a Utility Board Member or citizen, in which event the item will be considered independently.

Peter Batty, Chair • Mona Clark, Vice Chair
Charlie Bradford, Member • Timothy Root, Member • Steven Wells, Member

Agenda Item Summary Sheet

Meeting Date: **September 27,2017**
Proposer: **Lynne E. Tejeda, General Manager & CEO**
Department: **Finance - Accounting**
Agenda Item #: **9a**

AGENDA ITEM WORDING: Approve the Fiscal Year 2018 Budget and Five-Year Financial Plan [2018 to 2022] and FY18 Utility Board Travel

REQUESTED ACTION: Motion to Approve the Fiscal Year 2018 Budget and Five-Year Financial Plan [2018 to 2022] and FY18 Utility Board Travel

DISCUSSION: The current Five-Year Financial Plan has been updated. Fiscal Year 2018 reflects the proposed budget. Fiscal Years 2019 through 2022 are based on the proposed 2018 Budget, with modifications for specifically identified expenditures and inflationary increases for all others.

KEYS engaged the services of NewGen Strategies & Solutions to conduct a full Cost of Service [COS] Study. The COS Study was discussed with the Utility Board at a workshop on August 2, 2017. The Board provided direction to Staff and NewGen at the workshop. Additionally, a budget workshop was held on August 23, 2017. The attached Draft Budget for FY18 and Five-Year Financial Plan include all changes the Board recommended.

The COS Study recommended rate changes to all customer classes as well as establishing Impact Fees, which were discontinued effective FY13. All tariff changes will be effective January 1, 2018, thus providing customers additional time to budget and prepare for the proposed rate increases. Staff will request the Utility Board approve tariff changes and any other board resolutions, as appropriate, at a future Utility Board meeting.

The attachments consist of the following:

- Financial Plan – summaries of revenues, O&M expenses, capital expenditures and fund transfers
- Capital – schedule of proposed capital projects
- Schedule of Utility Board Travel

SUPPORTS STRATEGIC PLAN: Goal #2 - Provide the lowest reasonable rates to our customers in a challenging environment; 2.1.1 Develop a Five-Year Financial Plan; 2.1.2 Explore Allowable Uses of Excess Revenue Fund and 2.2.1. Identify possible cost reductions in the line item budget.

Report | December 2017

ELECTRIC RATE STUDY

Keys Energy Services

PREPARED BY:

NewGen Strategies & Solutions

ECONOMICS STRATEGY STAKEHOLDERS SUSTAINABILITY www.newgenstrategies.net

Table of Contents

List of Tables

List of Figures

Section 1
PROJECT SUMMARY

Introduction

Keys Energy Services (KEYS) was established in 1943 and is an Electric Utility System (System) owned, operated, and governed by the Utility Board of Key West (Utility Board). In 1945, the Florida State Legislature established the Utility Board as a separate governmental entity authorized to manage the Electric System. The current Utility Board was created in 1969 by the Florida State Legislature, which gives the Utility Board ownership, operational, and maintenance authority of the System.

In February 2017, KEYS retained NewGen Strategies and Solutions, LLC (NewGen) to develop a cost of service (COS), and proposed Rate Design Study (Study) for KEYS. This Study also included ancillary analyses including pole attachment fees, review of the miscellaneous charges, development of a process and model for customer billable work, and review of the overhead rate calculation and application. As a general policy, KEYS performs a rate study and reviews rates every five years.

The Study determined the total cost of providing electric services, the allocation of costs to the various customer classes, and the design of rates to safeguard the financial integrity of the utility. The total cost of providing services predominately includes operations and maintenance (O&M) expenses, debt service, and cash capital outlays required to operate and maintain the System with high reliability. This Electric Rate Study Report (Report) discusses the process, analyses, and recommendations related to the Study.

KEYS fiscal year (FY) is from October 1st to September 30th. Unless otherwise stated in this Report, all data presented herein is shown in FYs. The Study included an analysis of estimated revenue requirements, an unbundled COS analysis based on the average of the forecasted period FY 2018 – FY 2022 (Test Year), a rate analysis, and the development of proposed new electric rates for each customer class. Various policy issues were also identified and discussed. KEYS provided the majority of the System-specific data utilized for the Study. In certain cases, where information was not available, NewGen developed estimates based on our experience and publicly available information. Analyses were performed in accordance with generally accepted industry practices for municipal electric utilities.

Our report contains five sections as follows:

- Section 1 – Provides an overview of Study and KEYS
- Section 2 – Discusses the development of the revenue requirement
- Section 3 – Provides the COS result
- Section 4 – Presents the proposed electric rates for full requirements service
- Section 5 – Presents proposed Impact Fees
- Section 6 – Presents proposed changes to miscellaneous fees
- Section 7 – Summarizes conclusions and recommendations

Electric Utility Description

During the Test Year, KEYS is projected to serve on average approximately 31,100 retail electric customers with average annual sales of 744,140,000 kilowatt-hours (kWh) of electricity per year. The Electrical System serves all customers within the City of Key West (City), as well as customers outside the City limits along the Keys up to Marathon.

KEYS is connected to the mainland electric grid via a transmission line, referred to as the "TIELINE." The TIELINE, jointly owned with Florida Keys Electric Cooperative (FKEC), is a 61-mile long 138 kilovolt (kV) line, which runs along US Highway 1 and connects with the Florida Power & Light (FPL) system on the edge of Monroe County. The portion of the TIELINE wholly owned by KEYS extends from Marathon Key to Stock Island. KEYS owns and operates a 138 kV to 69 kV transmission station and its 69 kV system operates as a loop around Key West.

The KEYS distribution system consists of approximately 209 miles of three-phase equivalent overhead lines and 31 miles of underground facilities operating at 13.8 kV. The 13.8 kV primary system is fed from 9 distribution substations of varying capacities.

KEYS is member of the Florida Municipal Power Agency's (FMPA) All Requirements Project and currently receives nearly all of its power requirements from the project and transmission of power to the TIELINE.

Projected Energy Requirements

KEYS' electric consumption used in the Study is shown in Table 1-1. Total consumption reflects sales to KEYS' retail customers plus System losses of approximately 5.6%. Study energy production and sales to customers were based on KEYS projected energy sales during the study period.

Table 1-1
Estimated Annual Energy Requirements

Test Year	Retail Sales (kWh)	System Losses	Total Net Energy for Load (kWh)
Test Year	744,140,000	44,477,447	788,617,447

Usage Characteristics by Class

The COS analysis examines detailed customer usage characteristics by customer class. Table 1-2 summarizes these characteristics for the existing customer classes, including estimated revenue generated during Test Year by each class and the number of customers in each class, according to KEYS' electric utility statistics.

Table 1-2
Test Year Summary of Electric Utility Characteristics by Customer Class

Class / Service	Retail kWh Sales	No. of Customers	Revenue at Current Rates	Avg. Annual kWh Sales per Customer	Avg. Annual Revenue per Customer
Residential	368,579,645	25,553	$51,031,058	14,424	$1,997
Small Commercial	75,510,122	3,632	10,788,645	20,788	2,970
Large Commercial Secondary	231,031,984	685	30,271,966	337,109	44,171
Large Commercial Primary	13,116,042	3	1,649,599	4,372,014	549,866
Large Power for Churches	570,167	12	87,796	47,514	7,316
Military	51,962,992	1	6,632,522	51,962,992	6,632,522
Lighting[1]	3,369,047	4,310	660,006	782	153
Total	744,140,000	34,183	$101,121,593	21,769	$2,958

(1) Project Bulb Count

Cost of Service and Rate Design Process Overview

Typically, the COS and rate design process includes five steps as follows:

1. *Determination of the Revenue Requirement* – This first step examines the utility's financial needs and determines the amount of revenue that must be generated from rates. For municipal utilities, the revenue requirement is determined on a "cash basis." A "cash basis" analyses examines the cash obligations of the utility such as O&M expenses, debt service, cash funded capital projects, transfers, and payments to the City. Rates are set such that the utility can pay its bills on an annual going-forward basis.

   In preparing our analysis of the electric rates and the development of the revenue requirement, NewGen relied upon KEYS' financial planning model; records of operation; customer billing data; and other detailed information and data compiled and provided by the City's and KEYS' management and staff.

2. *Functionalization and Sub-functionalization of Costs* – The revenue requirement is then assigned to the particular function or sub-function of the utility. Distribution utilities like KEYS typically have power supply, transmission, distribution, and customer services functions. Distribution sub-functions may include distribution infrastructure by voltage, metering, billing, collection, etc. Customer sub-functions include billing and collections, customer service, meter reading, etc.

3. *Classification of Costs* – Once costs are functionalized, costs are then classified based on the underlying nature of the costs. Of particular importance is the determination of fixed versus variable costs. Fixed costs remain a financial obligation of the utility regardless of the amount of energy produced whereas variable costs fluctuate based on System energy requirements. Further, fixed and variable costs are associated with utility requirements to meet customer demand, energy, and customer service needs.

4. *Allocation of Costs* – Once costs are classified, costs are then allocated to the various customer classes. Allocation factors align with cost classification. So, demand-related costs are allocated on measures of class demand such as class contribution to the System coincident peak (CP).

Energy allocation factors are based on energy consumed by customers. Customer allocation factors are based on the number of customers.

These first four steps in the COS process are depicted in the figure below.

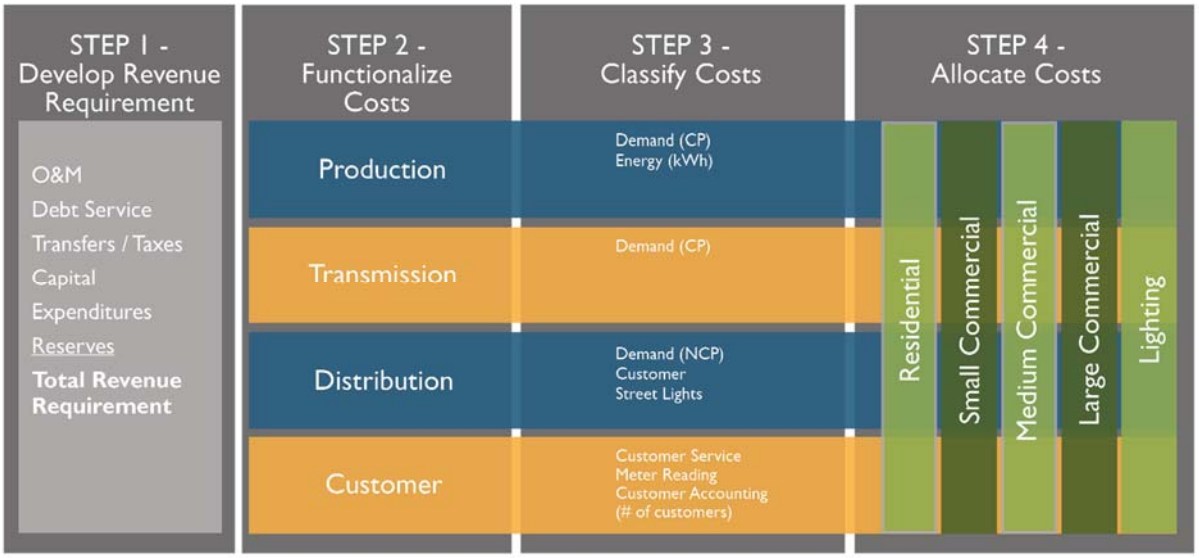


Figure 1-1. Typical Cost of Service Process

The fifth, and final, step is rate design, which translates COS results into rates for each customer class.

Cost of Service Results

Section 3 of the Report describes the COS process. The results of the COS analysis provide a detailed assessment of the costs required to serve each of the customer classes. These customer class costs are unbundled into utility functions, and classified into demand, energy, and customer components, as well as purchased power costs subject to the Power Cost Adjustment (PCA). Customer class costs are compared to the projected revenues under current rates to determine if current rates are sufficient to meet costs. Once completed, the COS analysis is the basis for rate design. A comparison of the revenue requirement by class and revenues collected under current tariffs is shown in Table 1-3.

Table 1-3
Comparison of Current Rate Revenues with Cost of Service Results

Class / Service	Revenue Requirement ($)	Projected Revenues Under Current Rates ($)	Projected Over / Under Recovery ($)	Difference (%)
Residential	$57,033,853	$51,031,058	($6,002,795)	11.8%
Small Commercial	11,127,286	10,788,645	(338,640)	3.1%
Large Commercial Secondary	26,853,472	30,271,966	3,418,494	-11.3%
Large Commercial Primary	1,387,421	1,649,599	262,178	-15.9%
Large Power for Churches	103,076	87,796	(15,280)	17.4%
Military	5,681,032	6,632,522	951,490	-14.3%
Lighting	644,919	660,006	15,087	-2.3%
Total	$102,831,059	$101,121,593	($1,709,466)	1.7%

The COS indicates that overall System rate revenues do not meet costs. Current rate revenues must be increased by 1.7%. At the class level, current residential class, small commercial, and large power for churches revenues are below the cost to serve. All other rate classes are above the cost to serve.

Rate Design

Rate design is the culmination of a COS study as the rates and charges for each customer class are designed to equitably and fully recover the System-wide COS and customer class revenue requirements. Section 4 of the Report describes proposed rate design for each customer class. KEYS' rates include the two main components:

- Base rate (KEYS customer charge, energy-charge, demand-charge)
- PCA (Pass through costs associated with true-up of FMPA generation demand and energy costs)

Base rates and PCA rates are applied to the appropriate monthly billing determinants (e.g. number of customer months, kWh consumption, etc.) to project the new rate revenues by customer class. These projected revenues from the proposed rates are compared to the revenue requirements to ensure that rates generate sufficient revenue to recover the COS. This process is known as the "revenue adequacy" test.

Based on a review of the existing rate structure, it was determined that the cost recovery of the different components (e.g. customer, energy, and/or demand charges) of the current rates were not in alignment with the COS results. Proposed rates in the Study were designed to move each customer class closer to its COS while evaluating the impact of rate changes on customers' monthly bills. NewGen performed a detailed analysis of monthly bill impacts associated with proposed rates on the majority of KEYS' customers. In consideration of customer bill impacts, proposed rates, although moving closer to the COS, do not precisely match the COS results. Rates are estimated to fully recover KEYS' costs as shown in Table 1-3.

Based on our analysis of rate impacts and conversation with KEYS' staff, it was determined that the transition from small commercial to large commercial resulted in a significant change in power costs to a

customer transitioning from small commercial to large commercial service. In order to mitigate the impact of this transition, a change to the large commercial rate structure is recommended so that costs for customers near the 20 kW threshold are similar under both the small commercial rate tariff and the large commercial rate tariff. Additional information and analysis for KEYS' proposed rates is included in Section 4 of the Report.

Section 2
REVENUE REQUIREMENT

As part of the Study, NewGen developed a Test Year revenue requirement inclusive of all KEYS operating and capital expenses. The Test Year revenue requirement is based on projected Test Year operating and financial results. Development of the Test Year revenue requirement represents a rigorous process whereby utility revenues and expenses are thoroughly reviewed, adjusted, and normalized so that rates developed to meet the revenue requirement are sufficient for the next five years, barring any unforeseen events. As part of the process of developing the future Test Year, NewGen compared the Test Year expenses with the most recently completed audited expenses from FY 2016 to ensure that Test Year costs were reasonable and any significant changes were explainable. The Test Year revenue requirement development process is detailed in this section.

Test Year Revenue Requirement

To remain financially sound, KEYS' electric rates must produce sufficient revenues to recover the total costs of providing electric service to their customers. These costs imposed on the System by customers are commonly referred to as the utility's "revenue requirement" and consist of normal operating expenses, debt service, capital improvements and additions, transfers to the City, non-operating expenses, and reserve requirements. These total revenue requirements are then compared to utility revenues to evaluate the need for rate changes. The revenue requirement acts as the foundation of a COS study.

The following is a discussion of the core components of the Test Year revenue requirement and significant differences from FY 2016.

Power Supply Expenses

The production expenses are primarily associated with KEYS' FMPA purchased power expense. The Test Year production expense is $62,456,291. Power Supply costs from FMPA are expected to increase by approximately 34% or $15,711,438 from FY 2016 to the Test Year period.

Transmission Expenses

The Test Year transmission expenses are $7,603,962. This amount is composed of $3,888,066 of expenses associated with FMPA transmission and $3,715,896 associated with KEYS' owned transmission facilities. FMPA transmission costs are anticipated to increase approximately 12% or $403,674 from FY 2016 to the Test Year period. Additionally, KEYS' will have new line crew dedicated to maintenance of its transmission System during the Test Year period, which increased Test Year costs by $569,966.

Distribution Expenses

The Test Year distribution expenses are $8,801,709. There were no major changes to the distribution costs.

Customer Expenses

The Test Year customer expenses are $2,330,009. There were no major changes to the customer costs.

Administrative & General Expenses

The Test Year Administrative & General (A&G) expenses are $12,165,257. There were no major changes to A&G expenses.

Debt Service

The Test Year Debt Service expense is $5,139,134. KEYS has a significant decrease in debt expense from current debt issuances resulting in a decrease of $6,968,375 in debt service. Additionally, KEYS financial forecast has issuances of debt for certain capital projects and the use of line of credit amounts for balancing costs in some years. This new debt results in an increase to debt service of $954,622.

Capital Expenditures funded from Current Earnings

NewGen worked with KEYS staff to fully identify and quantify the five-year CIP plan and normal capital needs. Capital paid from current earnings for the Test Year is $7,015,115.

Other Revenues/Expenses

Other revenues include non-rate related revenues such as pole attachment rentals; interest earnings on operating reserve funds; revenue from miscellaneous fees; and revenue from impact fees. Other Expenses include payments to the City, refunding of the Utility's Rate Stabilization Fund, and leave payouts. The impact fee revenue is most significant change in other revenues as this is new fee to be charged by KEYS. Impact fee revenues are projected to be $252,078 per year during the study period. The Impact Fee is discussed in greater detail in section 5 of this Report. The total of other revenues/expenses is a net revenue of $2,680,418.

Test Year Revenue Requirement

Table 2-1 provides a summary of the comparison to the 2016 Audit and the Test Year values utilized to generate the revenue requirement for the System.

Table 2-1
FY 2016 and Test Year Revenue Requirements

Item	FY 2016	Test Year	Change
Production	$46,744,853	$62,456,291	$15,711,438
Transmission	6,429,487	7,603,962	1,174,475
Distribution	7,559,002	8,801,709	1,242,707
Customer	1,951,903	2,330,009	378,106
Administrative & General	11,269,542	12,165,257	895,715
Debt Service	11,152,888	5,139,134	(6,013,753)
Capital Funded by Cash	3,226,459	7,015,115	3,788,656
Other Expense/(Revenue)	(2,464,352)	(2,680,418)	(216,066)
Total Revenue Requirement	$85,869,780	$102,831,059	$16,961,279

Section 3
COST OF SERVICE

After determining the System revenue requirement, a COS for each customer class is developed to determine the specific costs to serve each class. Customer class revenues are compared to class revenue requirements to evaluate the current rate's abilities to fully recover costs. NewGen analyzed the cost to serve each customer class based on the revenue requirement developed in Section 2.

Once completed, the COS results indicate the degree to which existing rates recover the costs to serve customers. The COS results are then used to design new electric rates.

The COS analyses relied on the following key supporting data and analysis:

- Test Year reported revenue requirements and revenues based on current rates;
- Total System and customer class demand and energy requirements;
- Actual and assumed customer service characteristics; and
- Information obtained from customer accounts and records.

Electric Rate Functions

KEYS' electric rates were unbundled into four functions: power supply, transmission, distribution, and customer service. The assignment of costs by function falls into two general categories: 1) direct assignments and 2) derived allocations. Direct assignments are costs that are readily associated with a specific utility function and are directly assigned to that function. For example, the FMPA energy expense is clearly an expense solely related to the power supply, so it is directly assigned to that function.

Derived allocators are allocation factors that are based on the sum, average, or weighted effect of different underlying factors. Derived allocators can be complex and should reflect the logical answer to the following question – what underlying activities drive the cost of this item? For example, administrative and general expenses are associated with the O&M of all utility functions. Thus, administrative and general expenses are allocated to each utility function using a derived allocator. Each of the four utility functions is described below.

Power Supply Function

The power supply function consists of costs associated with the cost of purchased power and procuring and administering power supply contracts. For KEYS, this cost is primarily associated with its FMPA all requirements power supply costs.

Transmission Function

The transmission function consists of costs associated with operating and maintaining the transmission portion of the electric grid and making capital investments, as necessary. The transmission facilities transmit electricity at high voltage from the generation stations to the distribution system.

Distribution Function

The distribution function consists of costs associated with operating and maintaining the distribution portion of the electric grid and making capital investments, as necessary. The distribution facilities deliver power to the retail customers after it has been transmitted. This includes low voltage distribution lines, distribution poles, underground lines, customer service connections, meters, and lighting-related assets.

Customer Service Function

The customer service function consists of costs associated with operating and maintaining the customer-related facilities to meet customer support needs. This includes, but is not limited to, customer service, billing and collection, and meter reading.

Unbundling of Revenue Requirement

The revenue requirement determined for the Test Year was "unbundled" into the four functional areas of the System – power supply, transmission, distribution, and customer. The results of the functional unbundling are summarized in Table 3-1.

Table 3-1
Functionalized Test Year Revenue Requirement

Function	Revenue Requirement	$/kWh (1)	% of Total
Power Supply	$62,092,487	$0.08344	60%
Transmission	17,043,966	0.02290	17%
Distribution	20,407,162	0.02742	20%
Customer	3,287,444	0.00442	3%
Total	$102,831,059	$0.13819	100%

(1) Based on Test Year energy sales of 744,140,000 kWh.

The power supply function represents 60% of the Test Year revenue requirement. The distribution function is the second largest cost center representing 20% of the Test Year revenue requirement. The transmission function represents 17% of the Test Year revenue requirement. The remaining 3% of the revenue requirement is associated with the customer function.

Classification of Costs

System costs can be classified into four generally accepted rate-making cost classifications: (i) demand or fixed costs; (ii) energy or variable costs; (iii) customer-related costs; and (iv) directly assignable costs. In

order to provide a reasonable basis for the assignment of total revenue requirements (costs) to each customer class, costs for each function in the Electric System have been analyzed and classified into four categories as described below.

- **Demand Costs** – Capacity (fixed- or demand-related) costs are those costs incurred to maintain a utility system in a state of readiness to serve, enabling it to meet the total combined demands of its customers. Capacity costs include the portion of O&M expenses, debt service, capital expenditures, and other costs that are generally fixed and do not vary materially with the quantity of usage or that cannot be designated specifically as a customer or variable cost.
- **Energy Costs** – Energy, or variable costs, are costs that vary directly with energy usage, including such items as fuel, energy-related purchased power, and a portion of O&M expenses.
- **Customer Costs** – Customer costs are those costs directly related to the number and type of customers, such as customer accounting, billing, and meter related expenses.
- **Direct Assignment Costs** – Direct assignment costs are those costs that are readily identifiable and applicable to a particular customer or customer class (e.g. Lighting).

Once the costs within each function are assigned to each service category, the demand, energy, customer, and direct assignment component of each service is calculated. As seen in Table 3-2, three major cost categories (demand, energy, and customer) cover the majority of all functional costs. This breakdown of demand, energy, customer, and direct assignment costs is later applied to each customer class to facilitate rate design, as provided in Section 4.

Table 3-2
Classified Test Year Revenue Requirement

Classification	Revenue Requirement	$/kWh (1)	% of Total
Production			
Demand	$33,301,260	0.04475	32.38%
Energy	28,791,228	0.03869	28.00%
Subtotal	*$62,092,487*	*0.08344*	*60.38%*
Transmission			
Demand	$17,043,966	0.02290	16.57%
Subtotal	*$17,043,966*	*0.02290*	*16.57%*
Distribution			
Demand	$15,952,153	0.02144	15.51%
Customer	4,254,669	0.00572	4.14%
Direct Assignment – Lighting	200,340	0.00027	0.19%
Subtotal	*$20,407,162*	*0.02742*	*19.85%*
Customer			
Customer	$3,287,444	0.00442	3.20%
Subtotal	*$3,287,444*	*0.00442*	*3.20%*
Total Costs	$102,831,059	$0.13819	100.00%

(1) Based on Test Year energy sales of 744,140,000 kWh.

In total, 28% of KEYS' total revenue requirement is energy-related or variable costs. The remaining 72% of the revenue requirement is fixed in nature and classified as demand, customer, or directly assigned to particular customer classes.

Allocation of Costs

Once costs are functionalized and classified, they are then allocated to the various customer classes. Customer classes represent aggregations of customers that have similar customer usage characteristics and use the System in a similar manner. These groups of customers have similar COS results, which justify similar rates.

Class Allocation Factors

Based upon actual and assumed customer service characteristics, NewGen developed various factors for use in allocating the adjusted revenue requirements to individual customer classes. These allocation factors reflect accepted ratemaking principles and were based upon fully distributed embedded cost allocation procedures.

We have developed demand-related, energy-related, customer-related, and direct assignment allocation factors as described below.

Demand Allocations

Demand allocators are derived based on the demand requirements of individual customers and classes of customers. Costs are allocated to classes based on the class contribution to the System peak, or coincident peak allocators. This is a measure of each classes cost responsibility associated with the infrastructure required to meet the System peak demand. As you move from the generator to the meter, the measure of peak demand responsibility changes from a System perspective (coincident peak), to a class perspective (non-coincident peak), to a customer perspective (demand at meter). Demand contributions at these various points in the System are determined based on load research and billing data available to KEYS and NewGen.

For customer class allocation purposes, the four-month coincident peak (4CP), 12-month coincident peak (12CP), four-month non-coincident peak (4NCP), and sum of max demands (SMD) methods were used to allocate demand-related production, transmission, and distribution related costs.

The 12CP allocator was used to allocate costs of FMPA-related generation and transmission demand, which is consistent with the method used by FMPA to bill KEYS for these costs. Because KEYS is billed for its contribution to the FMPA coincident peak as opposed to KEYS' own coincident peak, NewGen developed 12CP allocation factors that were based on regional systems with load characteristics similar to the average FMPA load profile.

Transmission costs for KEYS' owned System were allocated using the 4CP method, which recognizes that the transmission system is constructed to deliver power at the time of the maximum System peak. Similarly, distribution costs are designed to meet the maximum demands of the localized System or customers, so 4NCP and SMD allocation factors are used. Distribution demand-related costs were allocated to customer classes based on either 4NCP or the SMD. An NCP allocator is typically used to allocate distribution costs, as these facilities are sized to meet localized peak demands rather than the System peak demand. The 4NCP method was used to allocate the distribution System demand-related costs associated with substations, poles, and conductors. The SMD, excluding the transmission and

primary voltage customer classes, was used to allocate demand costs related to distribution transformers. The SMD is reflective of the localized demands customers place on the System at the meter. For customer classes that are billed for demand, the SMD represents annual billed demand prior to any adjustments (such as minimum billed demand).

Table 3-3 compares the various demand allocators utilized in the Study.

Table 3-3
Demand Allocations

Customer Class	12CP (%)	4CP (kW)	4NCP (kW)	SMD (kW)
Residential	56.04%	56.02%	55.19%	67.51%
Small Commercial	10.40%	11.06%	11.01%	9.65%
Large Commercial Secondary	26.22%	26.08%	25.98%	18.34%
Large Commercial Primary	1.40%	1.23%	1.62%	0.88%
Large Power for Churches	0.10%	0.10%	0.10%	0.14%
Military	5.84%	5.51%	5.56%	3.19%
Lighting	0.00%	0.00%	0.53%	0.29%
Total	100.00%	100.00%	100.00%	100.00%

Energy Allocations

Energy allocation factors are the basis for allocating costs or expenses classified as variable or energy-related and are assumed to vary directly with kWh sales. Energy-related costs classified as variable were energy costs from FMPA. Typically, net energy for load (NEFL), or the energy necessary to supply each customer class, is used to allocate these types of costs to individual customer classes. NEFL is also sometimes called adjusted metered load or energy at generation, as it takes into consideration energy losses that occur on the transmission and distribution systems between the power supplier delivery point and the customer's meter. Table 3-4 lists the energy allocation factor utilized in the Study.

Table 3-4
Energy Allocator

Customer Class	Net Energy for Load
Residential	49.58%
Small Commercial	10.16%
Large Commercial Secondary	31.08%
Large Commercial Primary	1.74%
Large Power for Churches	0.08%
Military	6.92%
Lighting	0.45%
Total	100.0%

Customer Allocations

Customer costs are defined as those costs related to the number of customers and the type of service required. Included in the customer-related costs are the costs associated with meter reading, customer service, sales, billing, collection, and other customer-related activities. The customer allocation factors were largely based on the number of customers in each class.

In allocating certain customer-related costs to the various customer classifications, weighted customer allocation factors were utilized. Weighting reflects that servicing certain types of customers requires more effort and expenses than other types of customers. Weighting factors were developed based on discussions with KEYS staff, as well as applying industry knowledge and practices. Weighting factors derive relationships between the customer classes and the pieces of equipment or services needed to serve the class and the relative costs of those items.

Cost of Service Results

The unbundled COS results by customer class is shown in Table 3-5.

Table 3-5
Unbundled Cost of Service Results by Class

Classification	Residential	Small Commercial Service	Large Commercial Service - Secondary	Large Commercial Service - Primary	Military	Large Power for Churches	Lighting	Total
Power Supply								
Demand	$18,866,591	$3,501,515	$8,825,781	$470,820	$33,720	$1,966,637	$0	$33,665,063
Energy	14,274,544	2,924,395	8,947,527	500,195	22,082	1,992,007	130,478	28,791,228
Keys Expense (Revenue)	(203,883)	(37,839)	(95,376)	(5,088)	(364)	(21,253)	0	(363,804)
Subtotal Power Supply	*$32,937,252*	*$6,388,071*	*$17,677,931*	*$965,927*	*$55,437*	*$3,937,391*	*$130,478*	*$62,092,487*
Transmission								
Purchased	$2,156,565	$400,244	$1,008,840	$53,818	$3,854	$224,798	$0	$3,848,119
Owned	$7,392,346	$1,459,785	$3,440,859	$161,991	$13,804	$727,062	$0	$13,195,846
Subtotal Transmission	*$9,548,911*	*$1,860,029*	*$4,449,699*	*$215,808*	*$17,658*	*$951,860*	*$0*	*$17,043,966*
Distribution								
Substations	$2,761,509	$551,006	$1,300,161	$81,134	$5,125	$278,362	$26,278	$5,003,574
Lines - Primary	3,907,897	779,745	1,839,899	114,815	7,253	393,919	37,186	7,080,715
Lines - Secondary	1,641,849	327,599	773,008	0	3,047	60,222	15,623	2,821,348
Transformers - Capacity	727,654	104,031	197,640	0	1,510	12,518	3,163	1,046,516
Transformers - Customer	1,048,844	149,098	28,131	0	493	246	176,911	1,403,723
Services & Installs	163,279	23,265	20,751	0	184	1,173	16,551	225,203
Meters	1,940,163	413,706	260,182	2,050	2,733	6,909	0	2,625,743
Direct-Street Lighting	0	0	0	0	0	0	200339.7743	200,340
Subtotal Distribution	*$12,191,194*	*$2,348,451*	*$4,419,771*	*$197,999*	*$20,345*	*$753,351*	*$476,051*	*$20,407,162*
Customer								
Customer Records and Collections	$2,180,507	$514,415	$301,355	$7,678	$9,597	$38,389	$38,389	$3,090,332
Meter Reading	69,122	9,826	1,854	8.115291424	32.4611657	35.16626284	0	80,878
Customer Deposit Interest	12,222	1,737	328	1.434920097	5.739680387	6.217987086	0	14,301
Uncollectible Accounts	94644.69612	4755.902276	2533.483849	0	0	0	0	101,934
Subtotal Customer	*$2,356,496*	*$530,735*	*$306,071*	*$7,687*	*$9,636*	*$38,431*	*$38,389*	*$3,287,444*
Total Costs	$57,033,853	$11,127,286	$26,853,472	$1,387,421	$103,076	$5,681,032	$644,919	$102,831,059
Summarized Total								
Demand	$37,250,527	$7,086,086	$17,290,812	$877,489	$67,949	$3,642,266	$82,250	$66,297,379
Energy	14,274,544	2,924,395	8,947,527	500,195	22,082	1,992,007	130,478	28,791,228
Customer	5,508,782	1,116,804	615,133	9,737	13,046	46,760	432,191	7,742,453
Total	$57,033,853	$11,127,286	$26,853,472	$1,387,421	$103,076	$5,681,032	$644,919	$102,831,059

Cost of Service Results Compared to Current Revenue

To evaluate the ability of current rates to adequately recover the COS, NewGen estimated revenues based on Test Year billing data and current rates, then compared resulting revenues to the COS for each customer class. The results of the comparison are shown in Table 3-6.

With the exception of Residential, Small Commercial, and Large Power for Churches, the current rates and revenues adequately collect the full COS during the Test Year period.

Table 3-6
Comparison of Current Rate Revenues with Cost of Service Results

Class / Service	Revenue Requirement	Estimated Revenues Under Current Rates	Projected Over/(Under) Recovery	Difference
Residential	$57,033,853	$51,031,058	($6,002,795)	11.8%
Small Commercial	11,127,286	10,788,645	(338,640)	3.1%
Large Commercial Secondary	26,853,472	30,271,966	3,418,494	-11.3%
Large Commercial Primary	1,387,421	1,649,599	262,178	-15.9%
Large Power for Churches	103,076	87,796	(15,280)	17.4%
Military	5,681,032	6,632,522	951,490	-14.3%
Lighting	644,919	660,006	15,087	-2.3%
Total	$102,831,059	$101,121,593	($1,709,466)	1.7%

Also shown in Table 3-6 is the approximate percentage increase/(decrease) in each customer class's revenues necessary to fully recover the identified COS. The percentage increase or decrease shown in the table above provides guidance for future rate design without subsidization and full rate revenue recovery. Recommendations for new rate designs are presented in Section 4.

Section 4
RATE DESIGN

Rate design is the culmination of a COS study where the rates and charges for each customer classification are established in such a manner that the total revenue requirement of the utility will be recovered in the most equitable manner and consistent, to the extent reasonable and practical, in accordance with Utility Board policy. Consideration was given to the recovery of fixed costs in the customer and demand charges as well as phasing in the proposed rates over time.

Rate Design Objectives

In general, proposed rate structures that are developed and submitted for adoption should meet the following objectives and best practices:

- Rates should be equitable among customer classes and individuals within classes, taking into consideration the costs incurred to serve each customer class.
- Rates should be designed to encourage the most efficient use of the utility's system.
- Rates may take into consideration other important factors, such as competitive concerns, conservation, Utility Board policies, etc.
- Rates should be simple and understandable.

It is common that the foundation of rate design is COS results tempered with policy considerations important to the community. Specific rate design goals for KEYS include:

- Based on COS results, improve fixed cost recovery
- Based on COS results, decrease inter and intra class subsidization
- Recalibrate PCA so that the PCA pass through charge is near zero
- Move rates toward COS, yet to the extent possible, minimize customer and class adverse impacts to proposed rates.

Electric Rate Structure

The proposed electric rates include a customer charge, energy charge, PCA factor, and demand charge (where applicable). The customer charge should be designed to recover customer-related costs, and the energy charge and PCA should be designed to recover all fuel and applicable power production costs. The demand charge should be designed to recover demand-related costs. The customer, energy, and demand charges are commonly referred to as "base rates," while the PCA is referred to as a pass-through adjustment.

Customer and demand charges always collect revenues that cover KEYS fixed costs. However, energy and PCA charges may collect revenues to recover both fixed and variable costs. For customer classes that do not have demand charges, a large portion of fixed costs are collected through the energy charge.

COS results indicate that customer and demand charges for KEYS are too low and should be raised. This is a common result for many utilities throughout the industry.

Power Cost Adjustment Factor

The rate structure includes a PCA, which passes onto customers the true-up of changes in the cost of FMPA generation demand and energy costs. Pass-through charges, like the PCA, are designed to fully recover costs that are not directly controlled by the utility.

The projected FMPA generation demand and energy costs are collected in the base rates. Previously, KEYS' base rates included $0.0800 per kWh sold associated with these costs in each customer classes' base rates ($0.03805 per kWh sold for lighting classes). Based on projected FMPA costs, the amount of cost included in base rates has increase to $0.08393 per kWh sold. Additionally, we recommend that KEYS change the way in which FMPA power supply costs are allocated to customer classes to reflect a methodology that is consistent with COS principles. This change would allocate the demand portion of FMPA generation costs to customers based on their contribution to KEYS' System demand at the time of the FMPA peak. The energy portion of FMPA generation costs would be allocated based on amount of energy purchased from FMPA to serve each class. The result of this adjustment in allocation methodology to match COS is show in table 4-1 below.

Table 4-1
Eligible Power Supply Costs

Item	Current Method to be Collected in Rates ($/kWh)	Current Method to be Collected in Rates ($)	COS Indicated Rate ($/kWh)	COS Indicated Cost ($)	Indicated Change (%)
Residential	$0.08413	$31,010,290	$0.08992	$33,141,135	6.9%
Small Commercial	0.08413	6,353,012	0.08510	6,425,910	1.1%
Large Commercial Secondary	0.08413	19,437,776	0.07693	17,773,308	-8.6%
Large Commercial Primary	0.08413	1,103,513	0.07403	971,015	-12.0%
Large Power for Churches	0.08413	47,971	0.09787	55,801	16.3%
Military	0.08413	4,371,884	0.07618	3,958,643	-9.5%
Lighting	0.03913	131,846	0.03873	130,478	-1.0%
Total FMPA Power Costs	$0.08393	$62,456,291	$0.08393	$62,456,291	0.0%

Rate Design Results

The proposed rates and average bill impacts are summarized for each customer class below. A graph including a histogram of customer monthly billing impacts and effective rates by load factor or consumption is included to illustrate and compare current rates, proposed rates and COS results. Rate comparisons to current rates assume PCA at projected power supply costs for the study period ($0.00413/kWh for non-lighting classes). Histograms of bill impacts are based on customer usage patterns from January 2016 to December 2016.

Residential Service

The Residential class is composed of residential customers served on a retail basis. Table 4-2 compares the current rates, the COS rates and the proposed rates.

Table 4-2
Residential Service
Current, Cost of Service, and Proposed Rates

Item	Unit	Current	Proposed	Cost of Service
Customer	$/Month	15.03	18.00	18.41
Senior/Veteran Discount	$/Month	(9.53)	(15.00)	NA
Energy (1)	$/kWh	0.1220	0.01259	0.14110
PCA	$/kWh	0.00413	0.00000	0.00000

(1) The fixed demand-related costs are shown in the energy COS because this class does not have a demand charge.

The COS analysis indicates that the current customer charge and energy charge should be increased. Table 4-2 shows that the COS per customer is $18.41. The proposed customer charge increases by $2.97 per year, which is a significant step towards improved fixed cost recovery via the customer charge.

Figure 4-1 shows the relationship between customer usage and average COS. Low energy users have a higher average COS than high energy users. This relationship exists because each customer has a similar fixed cost associated with infrastructure required to connect the customer to the System and meet their peak demand requirements. High users are able to spread these fixed costs over more energy resulting in a lower rate. Increasing residential class customer charges improves cost recovery of the rate and reduce subsidy between customers in the residential class. Under the current rate structure, high energy users subsidize low energy users.

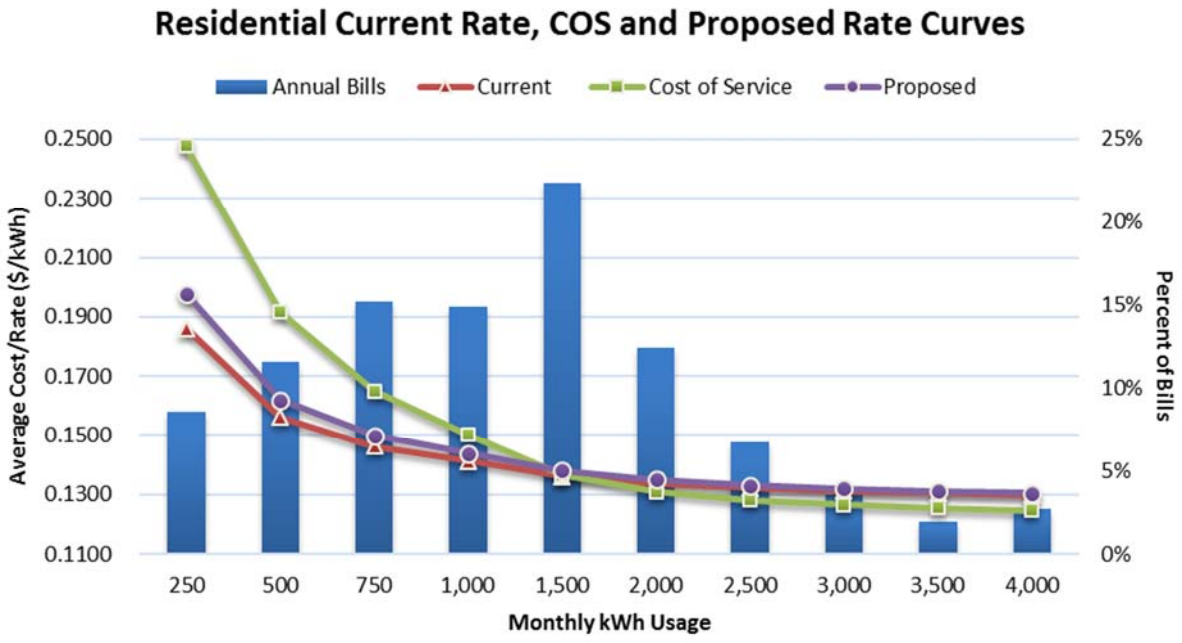


Figure 4-1. Residential Rate Comparison

Billing Impacts

The average monthly energy consumption in the Residential customer class is 1,202 kWh per month. The average monthly bill for a residential customer is projected to increase by $2.56 or 1.5%, assuming the Test Year PCA costs. Customer bill impacts for customer not receiving the Senior Citizen's/Disabled American Veteran's Discount are shown below.

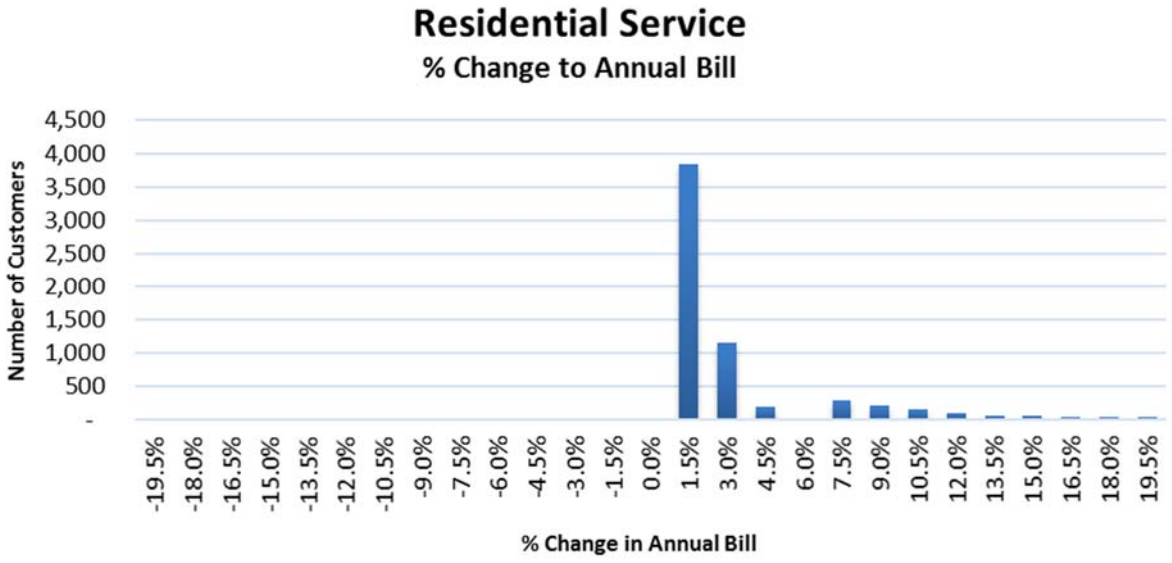


Figure 4-2. Residential Billing Impacts: Percent Change in Bills

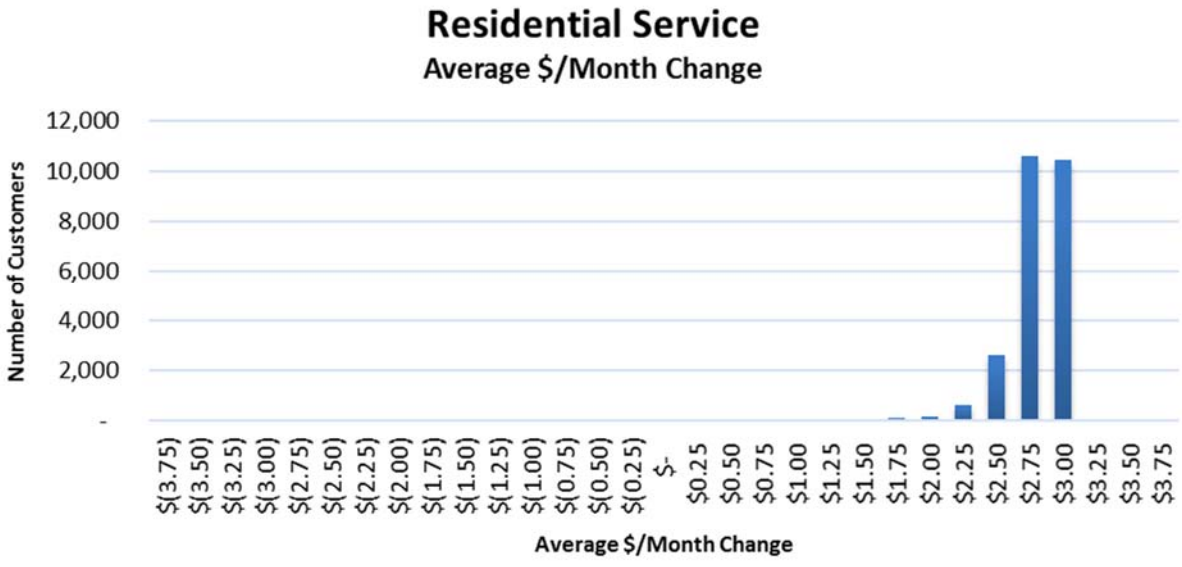


Figure 4-3. Residential Billing Impacts: Dollar Change in Bills

Senior Citizen's/Disabled American Veteran's Discount

The Senior Citizen's/Disabled American Veteran's Discount for residential users is a monthly credit applied to the customer charge. After discussion with the Utility Board, it was decided to change the magnitude of this discount and refine the eligibility requirements. The credit applied to monthly bills will be increased from $9.53 to $15.00 (applied to the customer charge per billing period). Eligibility criteria has been changed to include that usage may not exceed an average of 2,000 kWh per month during a 12-month period. Current age restrictions or disable veteran status and income restrictions still apply. These changes are intended to provide additional assistance to users with the highest levels of need in the community.

Small General Service

The Small General Service rate class is composed of commercial users served at secondary voltages with maximum demands that do not exceed 20 kW in 10 out the last 12 consecutive months. This schedule may also apply to energy used for municipal, federal, state, or county owned recreational lighting facilities with maximum demands greater than 20 kW at KEYS' discretion.

Table 4-3
Small General Service
Current, Cost of Service, and Proposed Rates

Item	Unit	Current	Proposed	Cost of Service
Customer	$/Month	28.31	28.50	26.20
Energy (1)	$/kWh	0.1220	0.01259	0.14110
PCA	$/kWh	0.00413	0.00000	0.00000

(1) The fixed demand-related costs are shown in the energy COS because this class does not have a demand charge.

An important rate design objective is to improve fixed cost recovery. Because the Small General Service rate design does not include a demand charge, the majority of fixed costs are being recovered through the energy charge. The result of this rate structure is that very low energy usage customers are being subsidized by high energy usage customers. There is a fixed cost to KEYS for each customer that is connected to the KEYS System. The COS indicated customer charge is slightly lower than the current customer charge; however, given that this class does not have a demand charge in its rate structure and does not properly collect all fixed cost as discussed above, we recommend a minor increase in the customer charge in improve fixed cost recovery related to other fixed costs shown in the energy charge.

Figure 4-8 compares the unit costs ($/kWh) for the current and proposed rates, as well as the COS for a series of monthly energy usage amounts.

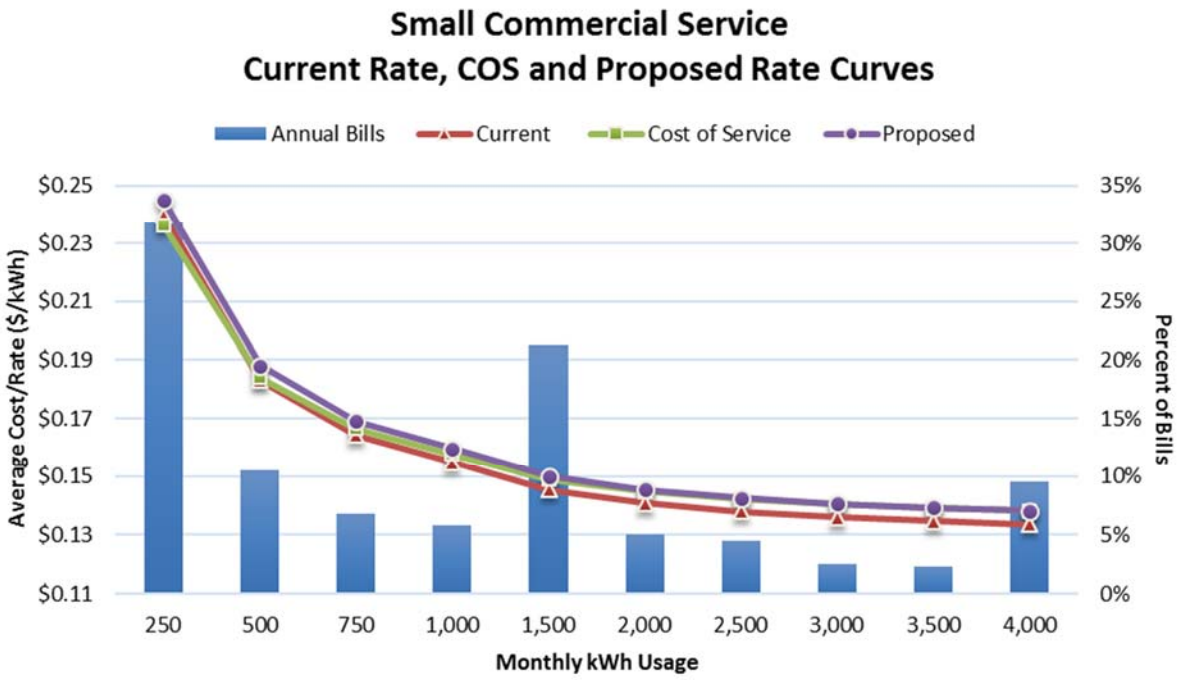


Figure 4-4. Proposed Small Commercial Service Rate Compared to Current Rates and Cost of Service

Billing Impacts

The customers in the General Service class use an average of 1,732 kWh per month. The monthly bill for an average customer is projected to increase by $8.10 (or 3.3%) under the proposed rates, assuming Test Year PCA costs. Customer bill impacts are shown below.

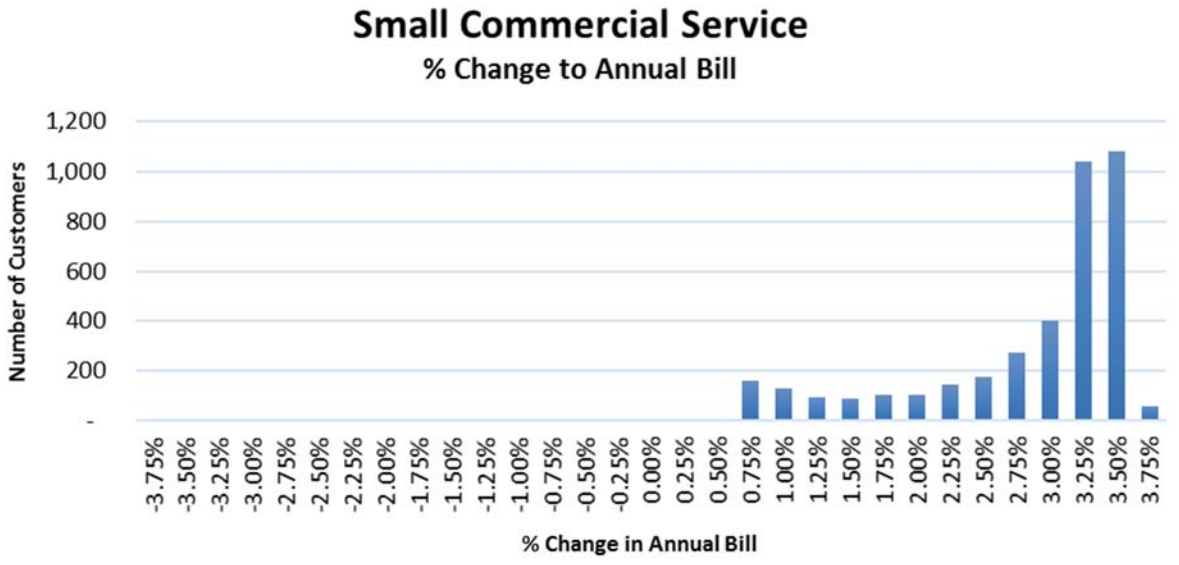


Figure 4-5. Small Commercial Service Billing Impacts: Percent Change in Bills

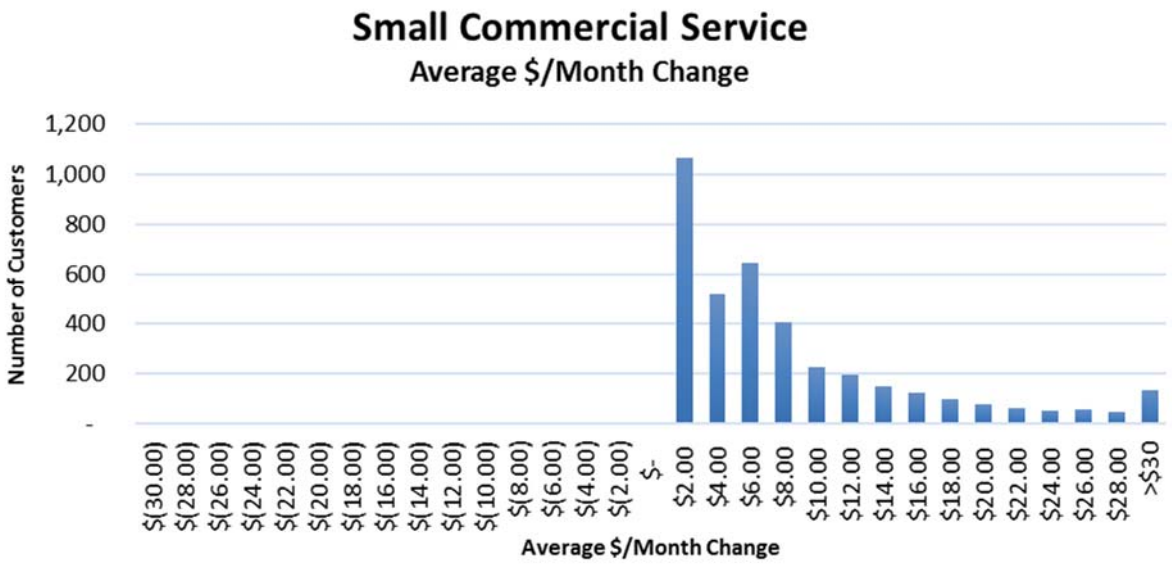


Figure 4-6. Small Commercial Service Billing Impacts: Dollar Change in Bills

Large Commercial Service - Secondary

The Large Commercial Service - Secondary rate class is composed of commercial users served at secondary voltages with demand that exceeds 20 kW.

Under current rates, users that are near the 20 kW threshold and were transitioned to this rate from the Small Commercial Service rate experienced a significant rate increase even though their energy usage only changed marginally. In order to decrease the impact of transitioning between the Small Commercial Service rate and the Large Commercial Service rate, a tiered structure was added to the rate such that rates paid for the first 20 kW of demand and 5,000 kWh of energy is in line with the rate on the Small Commercial Service rate tariff. Any demand over 20 kW and energy usage over 5,000 kWh is then charged a different rate.

Table 4-4
Large Commercial Service - Secondary
Current, Cost of Service, and Proposed Rates

Item	Unit	Current	Proposed	Cost of Service
Customer	$/Month	94.27	95.00	76.43
Energy (<=5,000 kWh)	$/kWh	0.1022	0.1311	0.03873
Energy (>5,000 kWh)	$/kWh	0.1022	0.1077	0.03873
Demand (<=20 kW)	$/kW	8.45	0.00	29.59
Demand (>20 kW)	$/kW	8.45	10.50	29.59
PCA	$/kWh	0.00413	0.00000	0.00000

Figure 4-15 compares the unit costs ($/kWh) for the current and proposed rates, as well as the COS for a series of customer load factors. As shown in the figure, the high load factor customers are paying more than their COS and the low load factor customers are paying less than their COS.

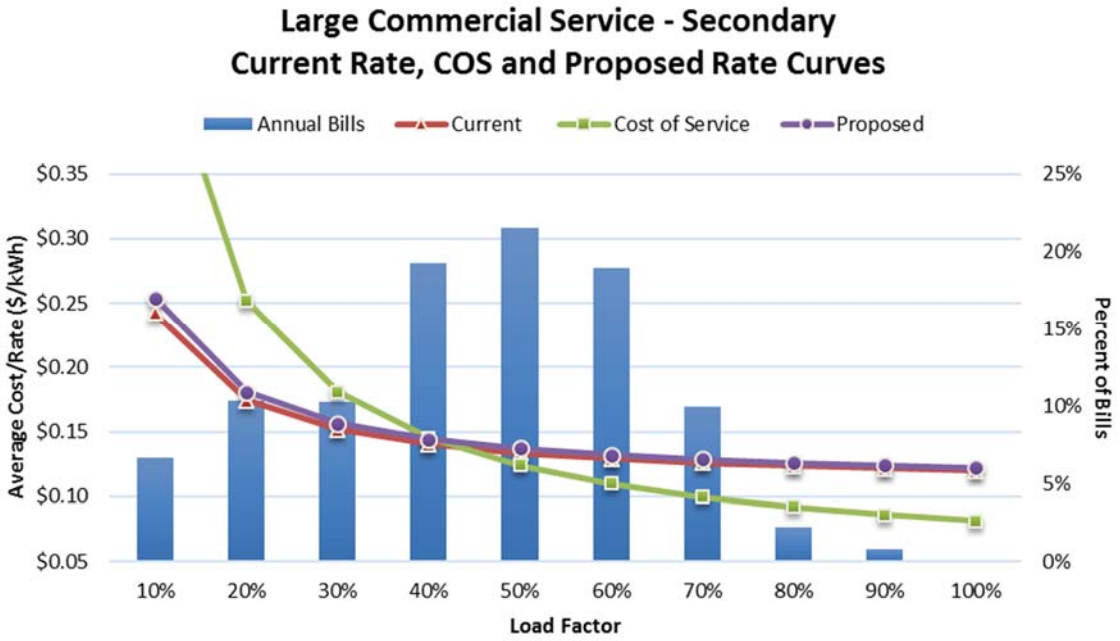


Figure 4-7. Proposed Large Commercial Service - Secondary Rate Compared to Current Rates and Cost of Service

Billing Impacts: Large Commercial Service - Secondary

The monthly bill for an average customer is projected to increase by $91.31 (or 2.5%) under the proposed rates, assuming Test Year PCA costs. Customer bill impacts are shown below.

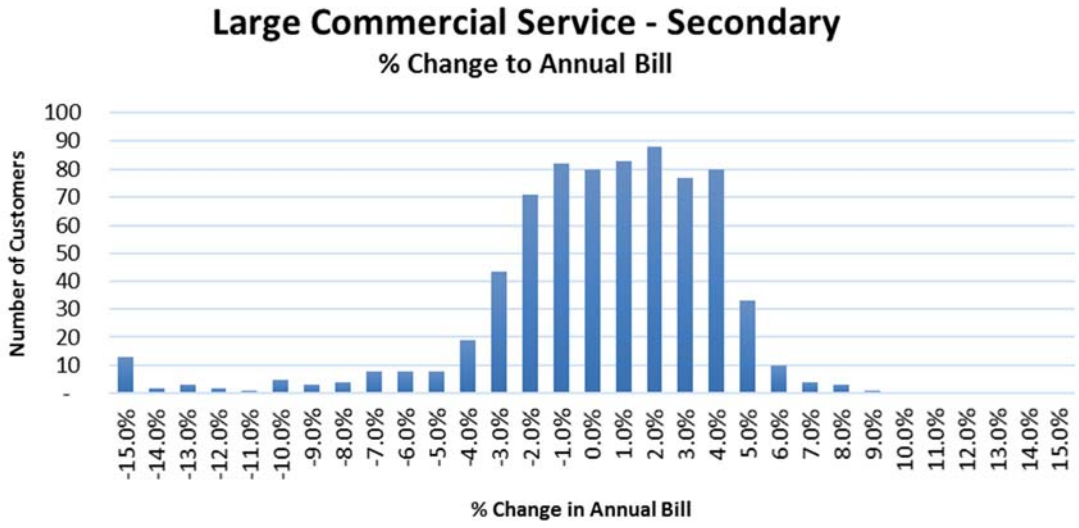


Figure 4-8. Large Commercial Service - Secondary Billing Impacts: Percent Change in Bills

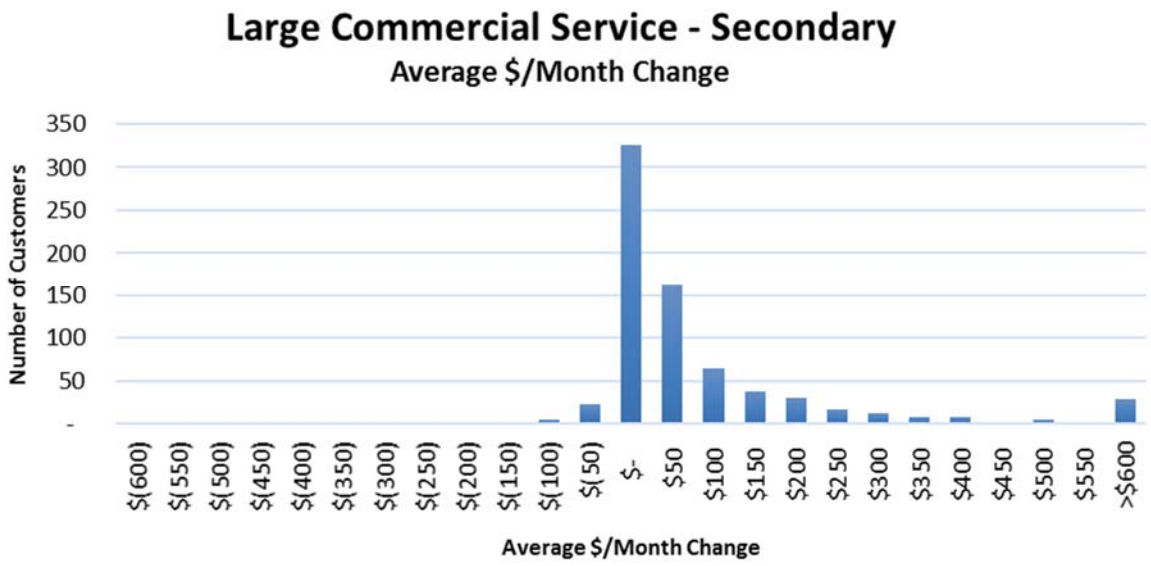


Figure 4-9. Large Commercial Service - Secondary Billing Impacts: Dollar Change in Bills

Large Commercial Service – Primary

The Large Commercial Service – Primary rate class is composed of commercial users served at primary voltages where customers own their transformers and primary conductors.

Table 4-5
Large Commercial Service - Primary
Current, Cost of Service, and Proposed Rates

Item	Unit	Current	Proposed	Cost of Service
Customer	$/Month	175.74	275.00	277.62
Energy	$/kWh	0.1041	0.0980	0.03814
Demand	$/kW	8.03	11.00	31.44
PCA	$/kWh	0.00413	0.00000	0.00000

Figure 4-15 compares the unit costs ($/kWh) for the current and proposed rates, as well as the COS for a series of customer load factors. As shown in the figure, the high load factor customers are paying more than their COS and the low load factor customers are paying less than their COS.

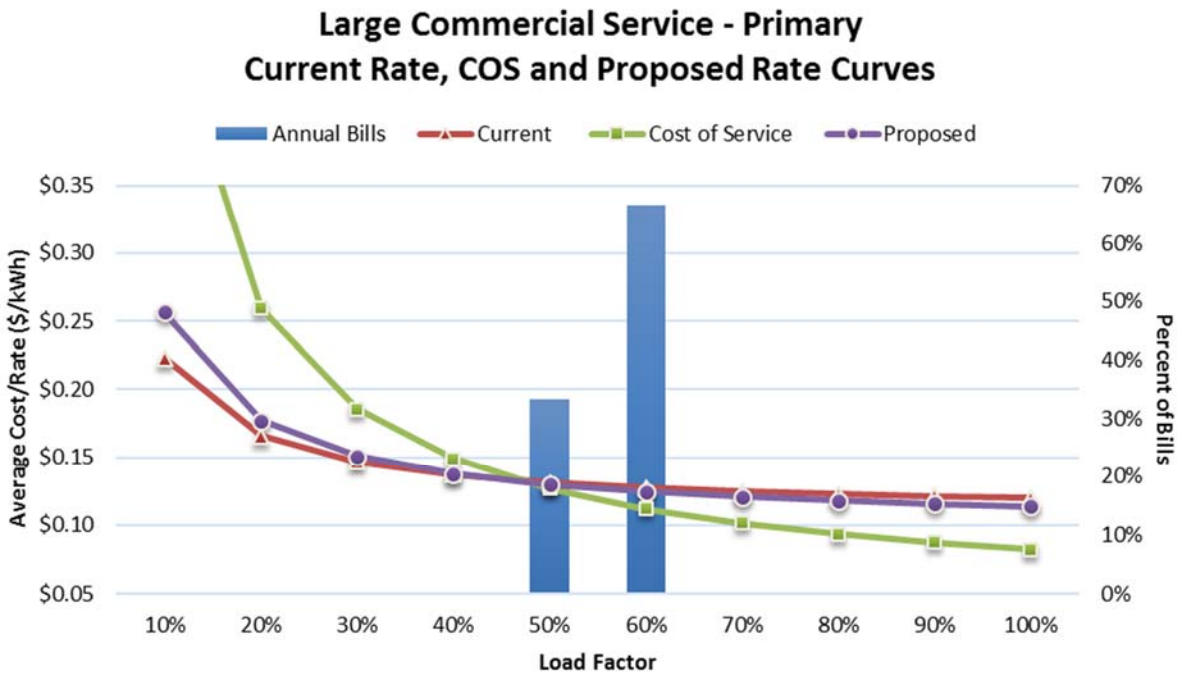


Figure 4-10. Proposed Large Commercial Service - Primary Rate Compared to Current Rates and Cost of Service

Billing Impacts: Large Commercial Service - Primary

The monthly bill for an average customer is projected to decrease by $1,332 (or 2.9%) under the proposed rates, assuming Test Year PCA costs. Customer bill impacts are shown below.

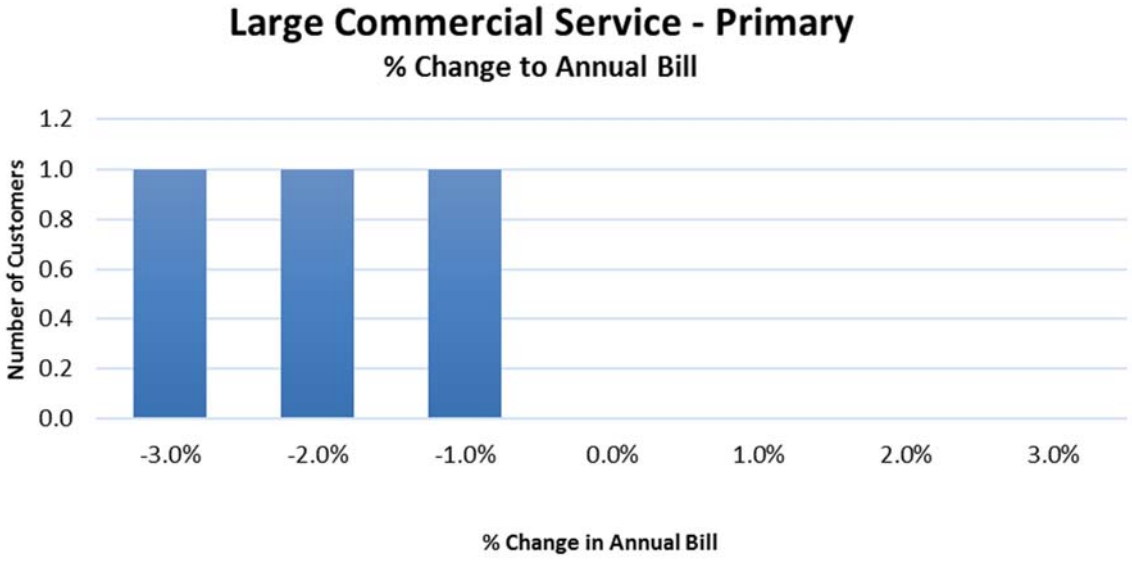


Figure 4-11. Large Commercial Service – Primary Billing Impacts: Percent Change in Bills

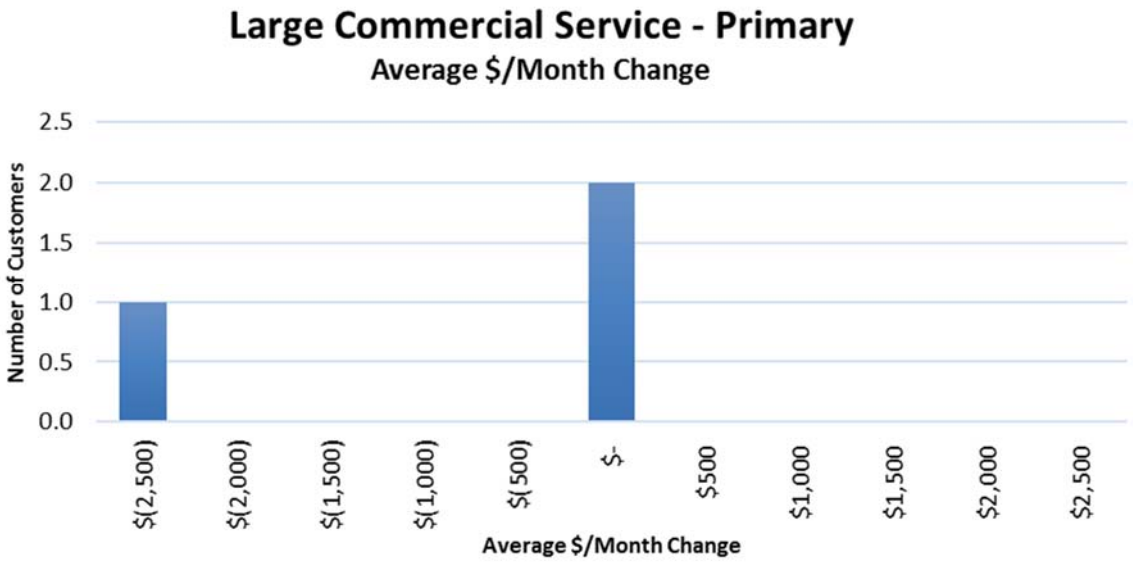


Figure 4-12. Large Commercial Service – Primary Billing Impacts: Dollar Change in Bills

Large Power Service for Churches

The Large Power Service for Churches rate class is for the portion of church facilities utilized for religious worship having a maximum demand greater than 20 kW.

Table 4-6
Large Power Service for Churches
Current, Cost of Service, and Proposed Rates

Item	Unit	Current	Proposed	Cost of Service
Customer	$/Month	77.46	90.00	92.96
Energy	$/kWh	0.1116	0.1062	0.03873
Demand	$/kW	2.39	3.50	15.22
PCA	$/kWh	0.00413	0.00000	0.00000

Figure 4-15 compares the unit costs ($/kWh) for the current and proposed rates, as well as the COS for a series of customer load factors. As shown in the figure, the high load factor customers are paying more than their COS and the low load factor customers are paying less than their COS.

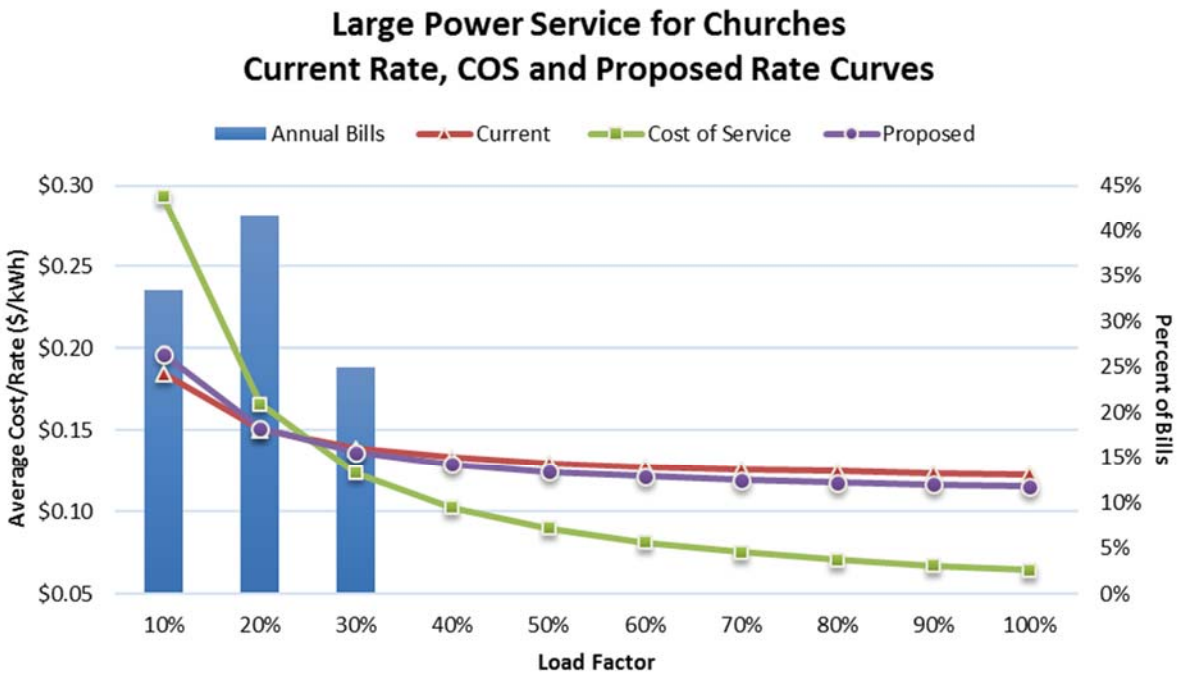


Figure 4-13. Proposed Large Power Service for Churches Rate Compared to Current Rates and Cost of Service

Billing Impacts: Large Power for Churches

The monthly bill for an average customer is projected to increase by $91.31 (or 2.5%) under the proposed rates, assuming Test Year PCA costs. Customer bill impacts are shown below.

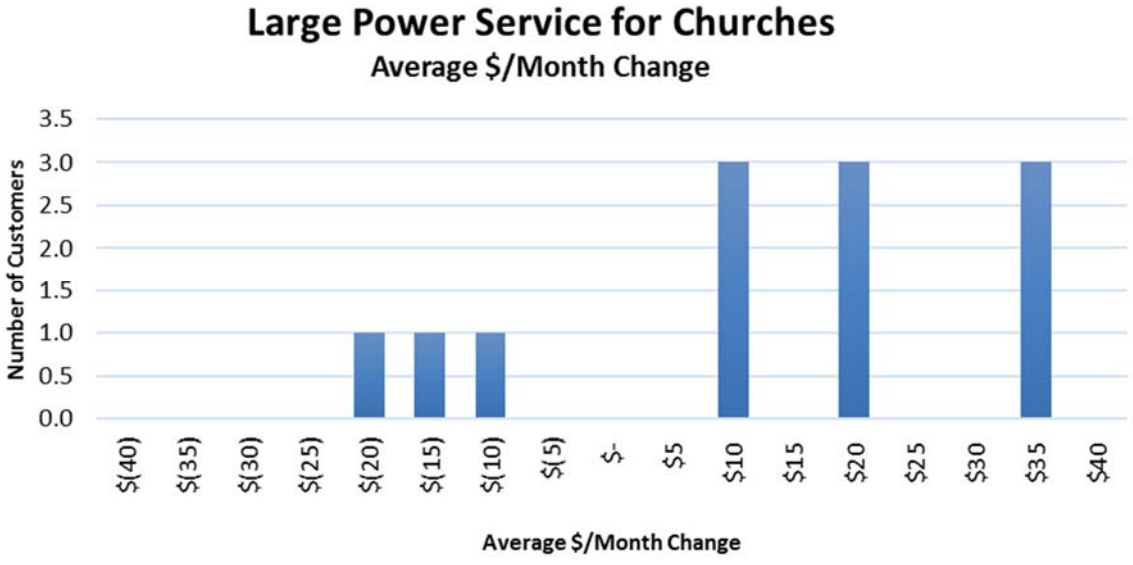


Figure 4-14. Large Power Service for Churches Billing Impacts: Percent Change in Bills

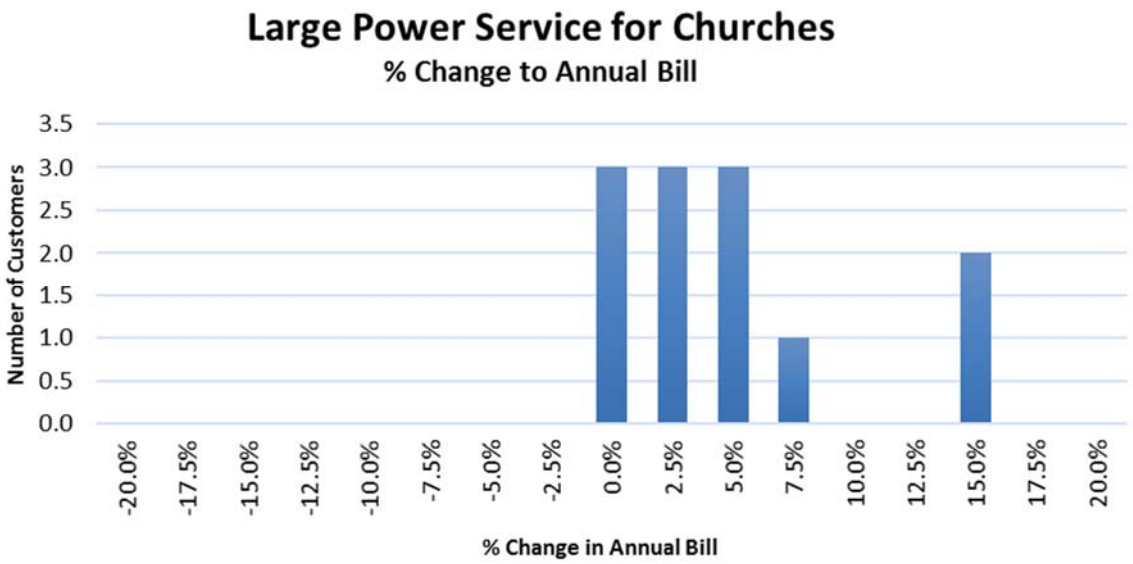


Figure 4-15. Large Power Service for Churches Billing Impacts: Dollar Change in Bills

Lighting

KEYS provides lighting service to for government street lighting in Key West and the Lower Keys. This service is provided under four use cases:

- Case 1 - KEYS owns the fixture served from overhead wires, and provides maintenance, including lamp renewals and energy, from dusk to dawn;
- Case 2 - The customer owns the infrastructure (excluding the pole) and contracts KEYS to maintain the System, including lamp renewals and energy, from dusk to dawn;
- Case 3 - The customer owns the infrastructure (excluding the pole) and the customer maintains the System, including lamp renewals, from dusk to dawn, and KEYS bills customer for energy; and
- Case 4 - KEYS owns the fixture served from the overhead wires, and provides maintenance, including lamp renewals, and KEYS provides energy based on metered energy usage. Case 4 is a new rate for customers with lighting behind a meter serving other loads. This rate is necessary to charge customers for the costs of maintaining the light while ensuring that energy usage is not double counted.

Area Lighting service, which previously had been offered under a separate tariff, will no longer be offered to new customers and current Area Lighting service will be charge the same rates as Case 1. Tables 4-7 through 4-10 show current and proposed rates. Proposed rates are all equal to COS.

Table 4-7
Lighting Service Case 1
Current and Proposed Rates (COS)

Lamp Type	Unit	Current	Proposed (COS)
100 W SV	$/Month	10.47	9.71
100 W SV-Cutoff Optic	$/Month	10.57	9.82
200 W SV	$/Month	13.89	15.08
200 W SV-Cutoff Optic	$/Month	13.95	15.14
400 W SV-All	$/Month	20.69	25.69
175 W MV	$/Month	13.07	13.77
250 W MV	$/Month	15.4	17.48
400 W MV	$/Month	20.91	26.04
24 W LED	$/Month	13.5	12.09
24 W LED-Remote Sensor	$/Month	14.57	13.16
38 W LED	$/Month	13.89	12.70
38 W LED-Remote Sensor	$/Month	14.96	13.77
54 W LED	$/Month	14.33	13.40
54 W LED-Remote Sensor	$/Month	15.4	14.47

Table 4-8
Lighting Service Case 2
Current and Proposed Rates (COS)

Lamp Type	Unit	Current	Proposed (COS)
100 W SV	$/Month	9.17	8.04
100 W SV-Cutoff Optic	$/Month	9.17	8.04
200 W SV	$/Month	12.33	13.24
200 W SV-Cutoff Optic	$/Month	12.33	13.24
400 W SV-All	$/Month	18.50	23.38
175 W MV	$/Month	11.54	11.93
250 W MV	$/Month	13.79	15.65
400 W MV	$/Month	18.71	23.73
24 W LED	$/Month	6.59	3.80
24 W LED-Remote Sensor	$/Month	6.59	3.80
38 W LED	$/Month	6.97	4.42
38 W LED-Remote Sensor	$/Month	6.97	4.42
54 W LED	$/Month	7.39	5.11
54 W LED-Remote Sensor	$/Month	7.39	5.11

Table 4-9
Lighting Service Case 3
Current and Proposed Rates (COS)

Lamp Type	Unit	Current	Proposed (COS)
100 W SV	$/Month	5.18	7.30
100 W SV-Cutoff Optic	$/Month	5.18	7.30
200 W SV	$/Month	8.35	12.50
200 W SV-Cutoff Optic	$/Month	8.35	12.50
400 W SV-All	$/Month	14.51	22.64
175 W MV	$/Month	7.55	11.19
250 W MV	$/Month	9.81	14.91
400 W MV	$/Month	14.72	22.99
24 W LED	$/Month	2.61	3.06
24 W LED-Remote Sensor	$/Month	2.61	3.06
38 W LED	$/Month	2.98	3.67
38 W LED-Remote Sensor	$/Month	2.98	3.67
54 W LED	$/Month	3.40	4.37
54 W LED-Remote Sensor	$/Month	3.40	4.37

Table 4-10
Lighting Service Case 4
Current and Proposed Rates (COS)

Lamp Type	Unit	Current	Proposed (COS)
100 W SV	$/Month	NA	8.02
100 W SV-Cutoff Optic	$/Month	NA	8.13
200 W SV	$/Month	NA	11.72
200 W SV-Cutoff Optic	$/Month	NA	11.79
400 W SV-All	$/Month	NA	19.09
175 W MV	$/Month	NA	10.83
250 W MV	$/Month	NA	13.36
400 W MV	$/Month	NA	19.33
24 W LED	$/Month	NA	11.75
24 W LED-Remote Sensor	$/Month	NA	12.82
38 W LED	$/Month	NA	12.17
38 W LED-Remote Sensor	$/Month	NA	13.24
54 W LED	$/Month	NA	12.64
54 W LED-Remote Sensor	$/Month	NA	13.71

Table 4-11
Area Lighting (Discontinued)
Current and Proposed Rates (Street Lighting Case 1)

Lamp Type	Unit	Current	Proposed (Street Lighting Case 1)
100 W SV	$/Month	10.65	9.71
100 W SV-Cutoff Optic	$/Month	10.65	9.82
200 W SV	$/Month	13.94	15.08
200 W SV-Cutoff Optic	$/Month	13.94	15.14
400 W SV-All	$/Month	20.32	25.69
175 W MV	$/Month	13.12	13.77
24 W LED	$/Month	15.91	12.09
24 W LED-Remote Sensor	$/Month	16.98	13.16
38 W LED	$/Month	16.29	12.70
38 W LED-Remote Sensor	$/Month	17.37	13.77
54 W LED	$/Month	16.73	13.40
54 W LED-Remote Sensor	$/Month	17.81	14.47

Other Rates

KEYS' provides service to governmental facilities and military installations under separate tariffs that include provisions for separate tax treatment and contract demands, as applicable. There are no changes to these separate provisions as part of this rate study. Other rates for service for governmental facilities and military installations the same as their otherwise eligible rate class. Proposed changes to those services are the same as detailed for each applicable rate class in this section.

Revenue Adequacy of Proposed Electric Rates

The rates presented in this section have been designed to recover revenues equal to the Test Year revenue requirement. Rates were designed based on forecasted billing information provided by KEYS. To the extent actual billing determinants vary from projections provided by KEYS, actual revenues may vary from the expected revenues as presented herein.

Table 4-17 shows the COS, as well as the projected revenue under current and proposed rates for each customer class.

Table 4-12
Change in Rate Revenue from Proposed Rates

Customer Class	Current Revenue	Revenue at Proposed Rates	Change ($)	Change (%)
Residential	$51,031,058	$51,816,132	$785,074	1.5%
Small Commercial	10,788,645	11,141,664	353,019	3.3%
Large Commercial Secondary	30,271,966	31,022,909	750,943	2.5%
Large Commercial Primary	1,649,599	1,601,660	(47,939)	-2.9%
Large Power for Churches	87,796	89,114	1,318	1.5%
Military[1]	6,632,522	6,559,254	(73,268)	-1.1%
Lighting	660,006	650,042	(9,964)	-1.5%
Total System	$101,121,592	$102,880,775	$1,759,183	1.7%
Revenue Requirement	$102,831,059	$102,831,059		
Difference	($1,709,467)	$49,716		

1) Military receives services under the Large Commercial – Secondary and Large Commercial – Primary Service classes. Changes in proposed rate revenue reflect total impact to Military is due to changes in those classes.

Per policy direction from KEYS, the proposed rate changes reflect limits in rate increase for the Residential Service and Large Power Service for Churches of 1.5%. This is consistent with gradualism principals often employed in rate making to reduce the occurrence of "rate shock." The rate adjustments for these classes are below the COS and Test Year revenue requirement.

Section 5
IMPACT FEES

An impact fee is a fee that utility service providers may impose on new or upgraded services to pay for a portion of the capital costs required to provide service to the customer. KEYS are required to make capital improvements to provide capacity to new and/or upgraded customers. These improvements are made prior to the customer being connected to the System and becoming a rate payer. Impact fees are a way to reimburse KEYS, and current KEYS customers, for the costs of the investments made to provide the new/upgraded service. Based on data provided by KEYS staff, NewGen calculated an impact fees designed to recover a portion of costs related to capacity expansions at System transformers, conductors, and substations.

Under proposed impact fees, residential users will pay a flat impact fee of $705 per home for new residential services. Residential users will not be charged additional impact fees for upgrading services.

Due to the significant differences power requirements for commercial customers, NewGen developed a table of impact fees for commercial customers based on the service size (amps) and voltage requested (See Table 5-1 below). Upgraded services will be required to pay the difference in the impact fee for their current service size to the impact fee of the newly requested service size.

Table 5-1
Commercial Impact Fees

Service Panel Size (amps)	208 V Single-Phase	240 V Single-Phase	208 V Three-Phase	240 V Three-Phase	480 V Three-Phase
100	$1,205	$1,391	$2,088	$2,409	$4,817
125	$1,507	$1,738	$2,609	$3,011	$6,022
150	$1,808	$2,086	$3,131	$3,613	$7,226
175	$2,109	$2,434	$3,653	$4,215	$8,430
200	$2,410	$2,781	$4,175	$4,817	$9,635
300	$3,616	$4,172	$6,263	$7,226	$14,452
400	$4,821	$5,563	$8,350	$9,635	$19,269
500	$6,026	$6,953	$10,438	$12,043	$24,087
600	$7,231	$8,344	$12,525	$14,452	$28,904
700	$8,437	$9,735	$14,613	$16,861	$33,722
800	$9,642	$11,125	$16,700	$19,269	$38,539
900	$10,847	$12,516	$18,788	$21,678	$43,356
1,000	$12,052	$13,907	$20,875	$24,087	$48,174
1,100	NA	NA	$22,963	$26,496	$52,991
1,200	NA	NA	$25,050	$28,904	$57,808
1,300	NA	NA	$27,138	$31,313	$62,626
1,400	NA	NA	$29,225	$33,722	$67,443
1,500	NA	NA	$31,313	$36,130	$72,261

Table 5-1
Commercial Impact Fees

Service Panel Size (amps)	208 V Single-Phase	240 V Single-Phase	208 V Three-Phase	240 V Three-Phase	480 V Three-Phase
1,600	NA	NA	$33,400	$38,539	$77,078
1,700	NA	NA	$35,488	$40,948	$81,895
1,800	NA	NA	$37,575	$43,356	$86,713
1,900	NA	NA	$39,663	$45,765	$91,530
1,600	NA	NA	$33,400	$38,539	$77,078
2,000	NA	NA	$41,751	$48,174	$96,347
2,100	NA	NA	$43,838	$50,582	$101,165
2,200	NA	NA	$45,926	$52,991	$105,982
2,300	NA	NA	$48,013	$55,400	$110,799
2,400	NA	NA	$50,101	$57,808	$115,617
2,500	NA	NA	$52,188	$60,217	$120,434
2,600	NA	NA	$54,276	$62,626	$125,252
2,700	NA	NA	$56,363	$65,034	$130,069
2,800	NA	NA	$58,451	$67,443	$134,886
2,900	NA	NA	$60,538	$69,852	$139,704
3,000	NA	NA	$62,626	$72,261	$144,521

Section 6
Miscellaneous Fees

KEYS charges several miscellaneous fees for services provided that are not covered in general rate tariffs. As part of the rate study, NewGen reviewed and updated miscellaneous fees where appropriate.

Service Fee

The Service Fee is charged to an account as part of its initial connection and to disconnect or reconnect services in cases when a customer requires services to be discontinued for a period of time. To calculate this fee, we considered the cost and time of the customer service associate, meter technician, line crew, dispatch, and transportation. Table 6-1 below shows the current and proposed Service Fee charges.

Table 6-1
Service Fee
Current and Proposed Rates

Item	Current	Proposed	Change ($)
Service Fee at Meter	$35.00	$40.00	$5.00
Service Fee at Meter After Hours	$115.00	$130.00	$15.00
Service Fee Top of Pole	$105.00	$160.00	$55.00
Service Fee Top of Pole After Hours	$190.00	$260.00	$70.00

Non-Payment/Tampering Fee

The Non-Payment/Tampering Fee is a Service Fee charged to an account in cases when disconnect or reconnect of service is necessary due to non-payment or tampering. Similar to the standard Service fee, we considered the cost and time of the customer service associate, meter technician, line crew, dispatch, and transportation in the calculation of this fee. Additionally, collections representative time and additional time to provide customer notice was included. Table 6-2 below shows the current and proposed Non-Payment/Tampering Fee charges.

Table 6-2
Non-Payment/Tampering Fee
Current and Proposed Rates

Item	Current	Proposed	Change ($)
Fee at Meter	$70.00	$70.00	$0.00
Fee at Meter After Hours	$155.00	$155.00	$0.00
Fee Top of Pole	$200.00	$165.00	($35.00)
Fee Top of Pole After Hours	$240.00	$265.00	$25.00

Meter Tampering Charge

The Meter Tampering Charge is applied to accounts in cases when evidence is found that someone other than a KEYS' representative has tampered with wiring or metering equipment. To calculate this fee, the labor costs of KEYS' personnel involved with the process of addressing meter tampering was considered. The proposed Meter Tampering Charge is $490, a $40 increase from the current Meter Tampering Charge of $450.

Initial Permanent Service Connection Charge

The Initial Permanent Service Connection (IPSC) Charge is a fee applied to new accounts to cover the cost of metering equipment at the new service. To calculate this fee, NewGen worked with KEYS staff to calculate meter equipment costs and labor costs of KEYS team members involved with setting up initial connections. Current and proposed IPSC charges are shown in Table 6-3 below.

Table 6-3
Initial Permanent Service Connection Charge
Current and Proposed Rates

Item	Current	Proposed	Change ($)
Single Phase – self-contained meter	$300.00	$415.00	$115.00
Single Phase – residential network	$350.00	$480.00	$130.00
Single Phase – commercial	$450.00	$635.00	$185.00
Three Phase – self-contained meter	$975.00	$860.00	($115.00)
Secondary – instrument meter	$2,250.00	$2,930.00	$680.00
Primary	Actual Cost	Actual Cost	NA

In addition to updating current IPSC charges, a new fee was calculated at staff's request for cases in which a meter has been removed from a location for a period greater than one year. This fee is the equivalent of the IPSC charge except that meter equipment costs are not included to avoid double charging customers for metering equipment. Proposed IPSC charges for meters that have been removed for a period of time greater than one year are shown in Table 6-4 below.

Table 6-4
Initial Permanent Service Connection Charge
In Cases When Meter Has Been Removed for a Period
Greater than 1 Year

Items	Proposed
Single Phase – self-contained meter	$415.00
Single Phase – residential network	$480.00
Single Phase – commercial	$635.00
Three Phase – self-contained meter	$860.00
Secondary – instrument meter	$2,930.00
Primary	Actual Cost

Section 7
CONCLUSIONS AND RECOMMENDATIONS

In reliance upon the data received by KEYS, and the analyses described herein, we conclude and recommend the following.

Conclusions

- Revenue Requirement
  - Based on our development of the Test Year revenue requirement, current rates are not generating sufficient revenues to meet current and projected costs. On a System-wide basis, current rate revenues require a 1.7% increase.
- Cost of Service
  - The Residential, Small Commercial and Large Power for Churches classes are below COS. All other rate classes are above COS.
- Existing rate components (customer, demand, energy) are not properly aligned with the COS results. This results in intra-class subsidization for many customer classes.
- Rate Design
  - KEYS base rates require modification to better align with the COS results.
  - Modification of the Large Commercial Secondary rate is necessary to mitigate impacts to customers transitioning from Small Commercial to Large Commercial Secondary

Recommendations

Based on our conclusions, and supporting analyses, NewGen recommends the following:

- KEYS should minimize the subsidization within each customer class. KEYS' rate structure should be modified to improve fixed cost recovery. Customer and demand charges should move toward the COS results.
- KEYS should adjust the Large Commercial Secondary rate structure to mitigate differences in power costs for customers near 20 kW that may transition from Small Commercial to Large Commercial Secondary
- KEYS should adopt the rate plan as proposed in this Report.
- KEYS should continue to perform a comprehensive COS study every five-years, or when aligned with a major change in operations such as a new purchased power contract, a new large industrial customer, or significant change in System operations.