

EXECUTIVE SUMMARY
2014-2015 ELECTRIC
COST OF SERVICE
AND
RATE DESIGN REPORT

Prepared for
CITY OF INDEPENDENCE, MISSOURI
POWER & LIGHT DEPARTMENT

May 29, 2015

Revised July 22, 2015





May 29, 2015

Mr. E. Leon Daggett
Power & Light Director
City of Independence, Missouri
Power & Light Department
21500 E. Truman Road
Independence, MO 64051-0519

**RE: City of Independence, Missouri
Power & Light Department
2014-2015 Electric Cost of Service and Rate Design Report – Executive
Summary**

Dear Mr. Daggett:

We are pleased to present the Executive Summary of our report on the 2014-2015 Electric Cost of Service and Rate Design Study (Rate Study) for the City of Independence, Missouri (City). The purpose of the Rate Study is to evaluate the financial position of the City's Power & Light Department (IPL) for the five year projected period FY2015-16 through FY2019-20 and to provide the following:

- A rate plan for the projected period
- Goals and objectives for a rate design strategy
- A detailed cost of service analysis
- Proposed restructured and additional rates for implementation October 1, 2015

We appreciate the opportunity to provide consulting services to the City and IPL and look forward to discussing this report with you.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph A. Herz".

Joseph A. Herz
Vice President

FINAL
EXECUTIVE SUMMARY
2014-2015 ELECTRIC COST OF SERVICE AND RATE DESIGN REPORT
CITY OF INDEPENDENCE, MISSOURI POWER & LIGHT DEPARTMENT

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EXECUTIVE SUMMARY

INTRODUCTION

The City of Independence, Missouri (City) owns and operates, through its Power and Light Department (IPL), electric generation, transmission and distribution facilities to serve the electricity needs of its customers. Typical of similarly situated municipally owned electric systems, the City is facing the challenges of pursuing and implementing renewable energy options, transitioning to new base load resources that are more energy efficient but higher cost, and maintaining and improving an aging infrastructure, while providing low-cost, reliable electric service. These challenges also include compliance with new and changing environmental requirements and regulations affecting the future operation of IPL's resources and maintaining financial stability during a period of rising costs for fuel, equipment, and material.

The City retained Sawvel and Associates, Inc. (Sawvel) to prepare a 2014-2015 Electric Cost of Service and Rate Design Study (Rate Study) for IPL. The scope of services for this Rate Study was comprised of the following:

- Task 1 - Five Year Financial Forecast and Rate Design Strategy
 - Understanding overall financial requirements and needed base rate revenue adjustments, if any.
 - Developing a rate design strategy to meet identified goals and objectives.
- Task 2 - Customer Class Cost of Service Analysis
- Task 3 - Rate Design and Implementation of New Restructured Rates Effective October 1, 2015
 - Considering the impact of any restructured rates to IPL customers.
 - Developing new rates that address identified goals and objectives.
 - Comparing IPL's current and proposed rates to comparable rates of neighboring utilities.

The Rate Study report is comprised of the following:

- Section 1 – Introduction which provides the scope of services provided by Sawvel for this Rate Study.

- Section 2 – Rate Plan which provides the evaluation of IPL’s financial position for the five year projected period FY2015-16 through FY2019-20 and provides the goals and objectives for rate design strategy and recommendations for a rate plan.
- Section 3 – Class Cost of Service Analysis which provides the detailed class cost of service analysis.
- Section 4 – Rate Design which provides a proposed rate schedule of restructured and new rates to meet IPL’s revenue requirements and rate design strategy goals and objectives for implementation October 1, 2015.
- Section 5 – Bill Comparisons which provides a comparison of IPL’s existing rates to proposed rates and neighboring utility rates.
- Section 6 – Recommendations which provides Sawvel’s recommendations.

The remaining sections of this Executive Summary provide a summary of Sawvel’s (1) findings regarding IPL’s financial position and cost of service analysis, and (2) recommendations regarding changes to IPL’s rates to meet recommended goals and objectives.

FINDINGS ON IPL FINANCIAL POSITION

By developing a rate plan, the City is exercising control of its future to maintain financial integrity and a favorable credit rating. As part of the rate plan, IPL developed a Pro Forma spreadsheet that provides historical and projected revenues and revenue requirements of the electric utility as well as a net income statement, cash flow analysis and electric fund balances. From Sawvel’s experience, and our observations and analyses of the information provided by IPL, the IPL Pro Forma projections provide a reasonable basis for development of the electric rate plan.

Sawvel’s findings on IPL’s financial position as shown in the Pro Forma are listed below:

1. Currently, IPL’s depreciation expense (a non-cash item used to calculate net income) is more than the debt service principal payments included in IPL’s cash flow calculation which results in negative net income. Projecting negative net income is generally not viewed favorably by the financial community. Negative net income is an indicator that a utility is not re-investing in its electric system and is borrowing, rather than cash funding, capital improvements and is retiring debt at a slower pace than the utility’s plant is being depreciated.
2. IPL currently has an unrestricted cash fund balance that should be reduced by: (i) cash funding a portion of the capital improvement program that would otherwise be funded by

debt; and, (ii) reducing rates. In order to determine the amount of the unrestricted cash fund balance to use toward funding capital improvements and reducing rates, it is important for IPL to have an unrestricted cash fund balance policy with a cash balance target. Sawvel developed such a policy for IPL that results in the targeted unrestricted cash fund balance to be maintained by IPL to be approximately \$23 to \$25 million.

3. In order to achieve positive net income and positive cash flow by the end of the projected period, IPL's Pro Forma showed the funding of capital improvements with available unrestricted cash and no base rate increases until October 1, 2017. Table ES-1 shows the projected operating results from the IPL Pro Forma for the period FY2015-16 through FY2019-20. These operating results for IPL show total revenues, total revenue requirements, the ending operating fund balance, cash flow analysis, net income statement results, and total customer sales in GWh as well as future overall base rate revenue increases.

Table ES-1
Projected Operating Results - IPL Pro Forma Summary with
Projected Base Rate Increases (\$000)
Independence Power & Light

Description	Fiscal Year Ending June 30				
	2016	2017	2018	2019	2020
Revenue from Base Rates	131,115	134,166	138,691	143,905	149,536
Revenue from PCA-1	0	1,164	2,760	3,407	3,952
Revenue from REC-1	340	1,057	1,070	1,084	394
Other	12,270	12,378	12,490	12,606	12,729
Total Revenues	143,725	148,765	155,011	161,002	166,611
Power Supply Expenses	64,476	65,710	66,142	67,578	69,498
Other O&M Expenses	43,710	48,606	51,292	54,260	57,324
Debt Service	8,924	8,983	9,163	9,972	11,695
Recurring Routine Adds & Replace	7,000	7,210	7,426	7,649	7,879
Major Cap Impr - Cash Funded	17,393	7,714	6,116	6,095	4,235
Other	13,800	14,283	14,871	15,447	15,980
Total Revenue Requirements	155,303	152,506	155,010	161,001	166,611
Balance - Net Cash Flow	(11,578)	(3,741)	1	1	0
Ending Operating Fund Balance	27,241	23,500	23,501	23,502	23,502
Major Cap Impr - Debt Funded	0	765	2,285	9,895	10,060
Net Income	(6,403)	(3,088)	(1,052)	(1,002)	218
Customer Sales GWh	1,055	1,059	1,062	1,065	1,069
Projected Base Rate Increase	0.0%	0.0%	3.3%	3.3%	3.3%

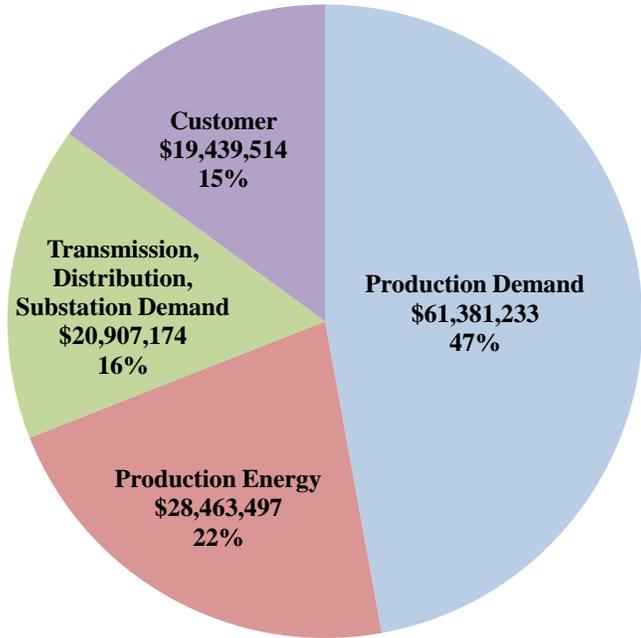
Based on the review of IPL's financial position, it was determined that the proposed restructured rates, when fully implemented, could result in a \$3 million annual reduction of revenues from the commercial and industrial customers. As described later in this report, this revenue reduction is consistent with the cost of service analysis and would position IPL's higher load factor customers to be more competitive with neighboring utility rates. It was also determined that the proposed restructured customer charges for the residential and general service customers could be phased in to mitigate the impact to low use customers of replacing the minimum charge with a customer charge. This phase in would result in a \$4.1 million reduction in residential and general service revenues in FY 2015-16 and a \$0.8 million reduction in residential and general service revenues in FY 2016-17. Table ES-1 is based on these revenue reductions and shows that IPL can maintain financial integrity with these revenue reductions.

■ FINDINGS ON COST OF SERVICE ANALYSIS

IPL provides full-requirements electric service to residential and non-residential rate class customers under a number of electric rate schedules. A class cost of service study is an analytical process of assigning a proportionate share of the cost of owning, operating and maintaining an electric utility system to the rate classes of customers it serves.

In a cost of service analysis, the cost of owning, operating and maintaining an electric utility system is called test year revenue requirements. Graph ES-1 illustrates the breakdown of IPL's test year revenue requirements by function. As shown in Graph ES-1, IPL's power supply costs (shown as Production Demand and Production Energy) represents 70% of IPL's total cost of serving its customers.

**Graph ES-1
Functionalization of Test Year
Revenue Requirements**



Since Sawvel’s 2008 rate study for IPL, the most significant change in IPL’s power supply resource mix has been its purchased power capacity. IPL was purchasing 90 MW of capacity and energy from Kansas City Power & Light (KCPL) from KCPL’s Montrose station. The Montrose purchase expired May 31, 2011. IPL planned for the expiration of the Montrose purchase by arranging for two baseload capacity and energy purchases from new coal-fired generating units - 55 MW from Omaha Public Power District (OPPD) from OPPD’s Nebraska City #2 unit and 50 MW from the Missouri Joint Municipal Electric Utility Commission (MJMEUC) from MJMEUC’s ownership share of KCPL’s Iatan #2 unit. The Nebraska City #2 unit began commercial operation May 2009 and the Iatan #2 unit began commercial operation in June 2010. In addition, IPL purchased a 12.3% ownership share (75 MW) of the Dogwood plant - a 610 MW natural gas-fired combined cycle plant. IPL is also purchasing 15 MW of renewable energy from the Smoky Hills II Wind Farm and recently executed a 20 MW purchase power agreement for the purchase of wind energy out of the Marshall Wind Farm. Each of these resources are managed and staffed by the project managers responsible for the operation of each of these generation projects. Each of these resources is participating in SPP’s integrated market and is dispatched by SPP.

Class cost of service studies are used for the following purposes:

- To allocate costs to different classes of customers based on how each customer group causes costs to be incurred.
- To provide a guide to determine how costs will be recovered from customers within each customer class.
- To calculate the costs of different types of services provided to different types of customers.
- To provide information to utility management to evaluate costs by customer class.

Table ES-2 summarizes the revenue distribution by rate class at current rates with the results of the cost of service analysis for each rate class.

Table ES-2
Comparison of Revenue Distribution (\$)
Existing Rates vs Cost of Service
Adjusted Test Year 2014
Independence Power & Light

Rate Class	Existing Rate Revenue	Cost of Service	Difference	
			(\$)	(%)
Residential	72,394,233	75,229,696	2,835,463	3.9
General Service	5,950,211	7,114,798	1,164,588	19.6
Large General Service	50,120,198	44,369,272	(5,750,926)	(11.5)
Large Power	4,726,777	3,477,653	(1,249,124)	(26.4)
Total Excluding Lighting/Signals	133,191,419	130,191,419	(3,000,000)	(2.3)

The following can be observed from Table ES-2 regarding existing rate class revenue:

1. Revenues from the Residential class are less than cost of service.
2. Revenues from the General Service class are less than cost of service.
3. Revenues from the Large General Service class are more than cost of service.
4. Revenues from the Large Power class are more than cost of service.

RECOMMENDED RATE CHANGES

IPL's serves approximately 56,510 metered customers under 21 rate schedule customer designations. In addition, IPL has rate schedules for City traffic signals, private outdoor lighting service and public street lighting service. IPL's current rate structures for its customer classes are dated and no longer consistent with that of its neighboring utilities. Several of these customer designations were developed in the past to promote various types of end use (i.e., electric water heaters, electric space heating equipment, etc.). This can result, however, in similar types of service being provided to consumers at different rates unless monitored and verified by IPL for facilities and equipment installed and used behind the meter.

Another characteristic of IPL current base rates is that the rate schedules contain numerous energy and demand blocks. The current base rates also do not have separate customer charges, but instead have various minimum bill provisions and higher initial rate block prices to represent built-in customer charges. The current trend in the electric industry is to use monthly customer charges in rate schedules and to reduce the number of rate blocks within each rate schedule.

The purpose of the customer charge rate component is to collect the customer-related costs of providing electric service. The utility incurs cost to serve customers even for those that use little to no electricity and a customer charge provides the mechanism to collect these costs from customers. A consultant recently retained by the City to conduct an evaluation of potential renewable energy options and programs recommended IPL review the current rate structure to eliminate or reduce rate subsidization issues before deploying any renewable energy programs. For example, a customer charge reduces the subsidization of solar PV customers by customers not participating in such a program because of the solar PV customers' reduced electricity usage from IPL. Customer related costs are currently recovered through electricity usage charges; under the proposed restructured rates, a customer charge will be implemented to recover IPL's customer related costs from all customers regardless of electricity usage.

Customer-related costs are those costs that vary based on the number and type of customers served by the electric system. These costs typically include the following:

1. A portion of the utility's Distribution System Operation and Maintenance Costs.
2. The cost of connecting the customer to the utility's distribution system, and the cost of installing metering equipment to measure the customer's electricity usage.
3. The cost associated with the customer meter reading, billing and accounting functions, and the administration of the rates, collection of payments, etc.

Customer-related distribution costs include a portion of the operating and maintenance cost of distributing power at primary (13 kV) and secondary (below 4 kV) voltages to customers such as poles, transformers and tree trimming. Metering costs include the installation and maintenance cost of meters and the monthly labor cost to read customer meters. Customer-related billing and accounting costs include costs associated with the monthly preparation and processing of customer bills and utility revenue accounting.

The cost of service analysis quantified IPL's customer related costs for each of the customer classes. For example, analysis indicated a cost of service customer charge for the residential rate class of \$23.96 per month. The recommended residential customer charge is \$14.50 per month, or 60% of IPL's residential customer related costs. The difference between IPL's cost of \$23.96 and the recommended rate of \$14.50 per month is essentially rolled into, and recovered from, the residential energy charge. As discussed later, it is recommended the proposed residential customer charge be phased-in to lessen the customer bill impact for lower energy use residential customers while moving towards cost of service based rates. The comparison of the recommended IPL customer charge is compared with the customer charges of neighboring utilities in tables described later in this report.

Goals and Objectives

Based on discussions between IPL and Sawvel, the following goals and objectives were established for IPL's rate design strategy:

- Move rates toward cost of service
- Reduce subsidization by high load factor customers to move toward rate competitiveness
- Eliminate the requirement for end use provisions to receive incentive rates
- Consolidate rate schedules whenever appropriate
- Make rate structure changes by replacing minimums with customer charges and reducing the number of block rates
- Develop seasonal rates for all rate classes that recognize IPL's higher cost of serving summer usage, and lower cost of serving winter usage.
- Develop and restructure rates to become more rate competitive with the neighboring utilities of Kansas City Power & Light, Kansas City Power & Light – GMO, and the Board of Public Utilities – Kansas City, Kansas.
- Develop a high load factor rate for large customers.

- Develop a partial requirements rate and related agreements for customers that may choose to install on-site generation to supply a portion of the customer’s electricity requirements
- Develop a community solar tariff
- Develop Schedule REC -1 Regulatory and Environmental Compliance Rider to recover regulatory and environmental costs not included in IPL’s base rates or Schedule PCA-1 that are difficult to predict and not in control of IPL.
- Develop Schedule PCA-1 Power Cost Adjustment incorporating the following:
 - Develop a stable, predictable forward-looking adjustment factor rather than a monthly calculation.
 - Remove recovery of purchase power demand cost and transmission charges
 - Reset the base cost to the current level of power supply fuel and energy cost and set the rider to zero
 - Provide for a review the Schedule PCA-1 calculation and make projections for the periods beginning February and August.

As of October 1, 2016, the recommended proposed restructured schedule of rates would reduce revenues by approximately \$3 million per year (2.3%) and will impact the revenue from each rate class. Table ES-3 summarizes the revenue distribution by rate class at current rates with the recommended revenue by rate class using rates effective October 1, 2016.

Table ES-3
Comparison of Revenue Distribution (\$)
Existing Rates vs Proposed Restructured Rates
Adjusted Test Year 2014
Independence Power & Light

Rate Class	Existing Rate Revenue ⁽¹⁾	Proposed Revenue	Difference	
			(\$)	(%)
Residential	73,576,524	73,974,611	398,087	0.5
General Service	6,060,329	6,399,955	339,626	5.6
Large General Service	50,849,669	47,483,258	(3,366,411)	(6.6)
Large Power	5,327,618	4,879,985	(447,633)	(8.4)
Total Excluding Lighting/Signals	135,814,140	132,737,809	(3,076,331)	(2.3)

⁽¹⁾ Adjusted to reflect March 2014 through February 2015 average FCA.

Sawvel developed a recommended proposed restructured schedule of rates to be effective October 1, 2015 that includes a phase in of the customer charge to residential and general service customers through October 1, 2016. If implemented, the recommended proposed restructured schedule of rates would reduce retail revenues by approximately \$7.9 million (\$4.9 million for the phase-in of customer charges plus the \$3 million as described in Table ES-3) for the 12 months from October 1, 2015 through September 30, 2016. Table ES-4 provides the Revenue Reduction for Phase-In of Residential and General Service Customer Charges.

Table ES-4
Revenue Reduction for Phase In of Residential and General Service Customer Charges (\$)
Independence Power & Light

Description	FY 2015 - 2016			FY 2016 - 2017	Total
	October 1, 2015 - April 30, 2016	May 1, 2016 - June 30, 2016	Subtotal	July 1, 2016 - September 30, 2016	
Residential Revenue Reduction	3,414,243	513,420	3,927,663	770,130	4,697,793
General Service Revenue Reduction	135,786	19,398	155,184	29,097	184,281
Total Revenue Reduction	3,550,029	532,818	4,082,847	799,227	4,882,074

The following paragraphs provide a description of the proposed restructured Schedule of Rates:

Residential

IPL’s current residential rate tariffs consist of five different rate applications depending on the customer’s electrical equipment:

- Standard Residential (RS-3) for those customers that have no qualifying electrical space heating or electrical water heating equipment.
- Residential with Water Heating (RSWH) for those customers that have qualifying electrical water heating.
- Residential with Space Heating (RSSH) for those customers that have qualifying electrical space heating equipment.
- Residential with Water Heating and Space Heating (RSSHW) for those customers that have both qualifying electrical water heating and space heating.
- All Electric Residential (RS-4) for those customers that have all electrical equipment for all needs and have no natural gas service to their facility.

The proposed Residential rate schedule consolidates these five existing residential rate codes (RS-3, RSWH, RSSH, RSSHW, RS-4) into two new rates: RS-1 (General Use) and RSSH-1 (grandfathered space heating). Those existing customers that have qualifying electric space

heating equipment currently being billed under the RSSH, RSSHW or RS-4 rate codes will receive a discounted rate to minimize the rate impact of the new proposed rates. The space heating rate is not available to new customers or new service locations. The proposed RS-1 rate schedule was developed so as to recognize IPL's higher cost of serving summer usage versus the cost of serving winter usage. The energy rate blocks were simplified from ten (3 on-peak, 7 off-peak) to four (1 on-peak, 3 off-peak).

In addition, a customer charge of \$14.50 per month is recommended to replace the existing minimum bill provision. As previously discussed, customer charges are needed for recovery of IPL's fixed costs to serve customers and to prevent customer subsidization issues, especially with customers that have installed behind the meter generation. To lessen the impact of full implementation of the \$14.50 monthly customer charge, especially on low usage residential customers, it is recommended that the monthly customer charge be phased in as follows:

October 1, 2015	\$5.00
May 1, 2016	\$9.50
October 1, 2016	\$14.50

General Service

IPL's current general service rate tariffs consist of:

- General Service (GS-1)
- Churches and Hospitals (CH-1)
- Churches and Hospitals – All Electric (CH-AL)

The proposed new rate tariff consolidates these three rate codes under one rate tariff, General Service (GS-1). To recognize that churches are normally weekend, off-peak users and to continue prior practice, the energy rate for all kWh for churches and hospitals was discounted. The energy rate blocks were simplified from five (non-seasonal) to three (1 on-peak, 2 off-peak) blocks with implementation of seasonal rates.

In addition, a customer charge of \$16.00 per month is recommended to replace the existing minimum bill provision. To lessen the impact of full implementation of the \$16.00 monthly customer charge, especially on low usage general service customers, it is recommended that the monthly customer charge be phased in as follows:

October 1, 2015	\$10.00
May 1, 2016	\$13.00
October 1, 2016	\$16.00

Large General Service

IPL's current large general service rate classes consist of:

- Large General Service (LGS-1)
- Large General Service – Primary Voltage (LGSPV)
- Total Electric General Service (TEGS)
- Schools (EDU-1)
- All Electric Schools (EDU-AL)
- Sewer Pumping (SP-1)

The proposed Large General Service rate schedule is a consolidation of these existing rate codes. The proposed LGS-1 rate schedule also includes a customer charge of \$50.00 per month and the three demand blocks were simplified into one on-peak and one off-peak. The existing customers currently being billed under TEGS and EDU-1 and EDU-AL will be grandfathered on the new LGS-1 rate schedule with a discount to minimize rate impact on these customers.

Large Power

The proposed Large Power rate schedule (LP-1) is a consolidation of the existing LP-2 (Large Power) and SCIS-1 (Special Contract Large Industrial) rate schedules. This schedule includes a customer charge of \$500.00 per month and consolidates eight energy blocks and three demand blocks into one energy block and one demand block. One of the rate design goals is to incentivize high load factor loads. To accomplish that goal, this schedule was designed with a low energy charge and high demand charge in an effort to favor high load factor customers and attract new large power high load factor customers.

General Service Space Heating (Frozen GSSH-1)

The existing GSSH-1 (General Service Space Heating) rate schedule requires customers to have a separate meter to measure the heating load in their facility. In consideration that these customers made an initial investment in electrical design and wiring to have this separate meter, this rate schedule is proposed to be frozen. This schedule will not be available to new customers or new service locations. If an existing GSSH-1 service location changes customers, the new customer would be served under the appropriate GS-1 or LGS-1 rate schedule.

Large Power (Frozen LP-2)

The existing LP-2 (Large Power) rate schedule was frozen to allow existing LP-2 customers (currently there are 3 customers are on the LP-2 rate) the option of remaining on the LP-2 rates

to take advantage of the current Economic Development Rider (Schedule EDR-5). The existing LP-2 energy rates were increased to reflect the amount of power supply costs that were rolled into proposed base rates under the new Power Cost Adjustment Rider described below. This schedule will not be available to new customers or new service locations and customers that move to the proposed LP-1 rate will not be able to return to the LP-2 rate.

Special Contract Large Interruptible Industrial (Frozen SCIS-1)

The existing SCIS-1 (Special Contract Large Interruptible Industrial) rate schedule was frozen to allow existing SCIS-1 customers (currently there are 2 customers on the SCIS-1 rate) the option of remaining on the SCIS-1 rates and to take advantage of the Economic Development Rider. The existing SCIS-1 energy rates were increased to reflect the amount of power supply costs that were rolled into proposed base rates. This schedule will not be available to new customers or new service locations and customers that move to the proposed LP-1 rate will not be able to return to the SCIS-1 rate.

Power Cost Adjustment Schedule PCA-1

The purpose of IPL's existing Schedule FA-1 Power Supply Fuel-Energy Cost Adjustment is to pass through to customers the difference between IPL's actual power supply costs and the power supply costs included in, or built into, the base rates. This calculation is done on a monthly basis. Now that a restructuring of IPL's base rates is being studied, it is appropriate to design any such restructured base rates to recover the current level of power supply costs and set the cost adjustment mechanism to zero.

The proposed Power Cost Adjustment Schedule PCA-1 is designed to be a stable, predictable forward-looking adjustment factor rather than a monthly calculation. The proposed Schedule PCA-1 recovers only fuel and energy costs going forward above or below the level of fuel and energy costs included in the proposed base rates. Based on IPL's power supply cost projection, the cost base for fuel and energy costs included in the proposed base rates is \$0.0236/kWh.

IPL shall review the proposed Schedule PCA-1 calculation and shall make projections for the periods beginning February and August. Following such proposed Schedule PCA-1 review and calculation, the Power & Light Director shall direct the proposed Schedule PCA-1 to be applied, as deemed necessary to accomplish recovery of IPL's fuel and energy related costs in a timely manner.

Regulatory and Environmental Compliance Rider Schedule REC-1

As an owner of electric generation, transmission and distribution facilities, the City may be subject to future government mandates or environmental compliance costs that are not recovered through its existing rates or riders. The proposed Regulatory and Environmental Compliance

Rider Schedule REC-1 provides for the recovery of such unfunded mandated governmental and environmental compliance costs.

The calculation of Schedule REC-1 shall be determined prior to the beginning of the fiscal year and applied to customer bills beginning July 1 each year. Actual costs incurred will be used for reconciliation of any over or under recovery of governmental mandates or environmental compliance costs not included in base rates. The Schedule REC-1 monthly charge is estimated to initially be \$0.66 per month.

Community Solar

A Community Solar Program provides customers the opportunity to purchase energy from solar without impacting the structure of their houses and without the utility financing the development of a potentially costly project. This program allows the projects to be financed through a power purchase agreement (PPA) with the developer and passes the cost directly to the customers participating in the program.

As of the date of this report, IPL staff was still finalizing a PPA and other technical aspects for potential project development and had not made a recommendation to the City Manager and City Council for their ultimate approval to move forward with a solar farm. Nevertheless, Sawvel has developed a Community Solar Rider that could be used as a model if the City moves forward with the solar farm.

Sawvel reviewed several community solar programs of other utilities and recommends a rider similar to the City of Springfield, Missouri. The proposed Community Solar Rider provides the option for customers to purchase from a utility scale solar farm in 1 kW blocks and receive solar Renewable Energy Credits applicable to their share of the output of the solar farm. The customer would pay an additional charge per kWh of allocated solar farm output in addition to the charges for service under the applicable IPL electric rate schedule. The charge for solar farm output is reflective of the difference in cost of the solar farm output and the IPL total system power supply costs included in proposed base rates. The charge will adjust coincident with the Power Cost Adjustment Rider. As IPL's total system power supply costs increase, the solar charge would decrease and vice versa. This prevents other customers who choose not to buy solar from subsidizing the customers that do. The customers who buy from the solar farm benefit from the economies of scale of a utility scale solar farm.

Partial Requirements Rate

Sawvel developed a Partial Requirements Rate, and related Partial Requirements Electric Service Agreement and Interconnection Agreement, for customers that install generation behind the meter on their site. Customers with on-site generation will look to the City to provide that

portion of their electric service requirements that is not provided by the customer's on-site generation (i.e., partial requirements service rather than full requirements service). The purpose of the Partial Requirements Rate is to recover IPL's cost of serving such customers so other customers don't subsidize the Partial Requirements customers.

BILL COMPARISONS

Bill comparisons were prepared for each rate class to compare bills using proposed rates to the proposed or estimated rates of neighboring utilities. The neighboring utilities included Kansas City Power and Light (KCPL), Kansas City Power and Light - Greater Missouri Operations (GMO or Old Aquila), and Kansas City, Kansas Board of Public Utilities (BPU). Tables ES-5 through ES-14 show the bill comparisons by season, if applicable, for each Sawvel proposed restructured rate schedule. All neighboring utility rates in the following tables are based on rates proposed or estimated. Kansas City Power and Light has filed for a rate increase of 15.9% that, if approved, could go into effect as soon as September 30, 2015. A financial rating agency has reported BPU's rates are estimated to increase 5% in 2015 and 2016. GMO – Old Aquila is expected to make a rate filing in early 2016. KCPL's proposed 15.9% increase was used for purposes of estimating GMO – Old Aquila's rates.

Residential

Table ES-5 shows the results of comparing the phased in proposed restructured rates for IPL to IPL's existing rates for a typical use residential customer using 1,100 kWh per month during the on-peak (summer) season and 700 kWh per month during the off peak season (winter). Table ES-6 shows the results of comparing the phased in proposed restructured rates for IPL to IPL existing rates for a low use residential customer using 400 kWh per month during the on-peak (summer) season and 400 kWh per month during the off peak season (winter).

Tables ES-7 and ES-8 show the results of comparing the completely phased in proposed restructured rates for IPL to the proposed or estimated future rates for IPL's neighboring utilities for both the typical use residential customer and the low use residential customer.

General Service

Table ES-9 shows the results of comparing the phased in proposed restructured rates for IPL to IPL's existing rates for a typical use general service customer using 800 kWh per month during the on-peak (summer) season and 800 kWh per month during the off peak season (winter).

Table ES-10 shows the results of comparing the completely phased in proposed restructured rates for IPL to the proposed or estimated future rates for IPL's neighboring utilities for the typical use general service customer.

**Table ES-5
Residential Rate Monthly Bill Comparison - IPL Existing vs IPL Proposed Restructured - Typical Use Customer**

	Winter 700 kWh	Summer 1,100 kWh						
	IPL Existing (1) Energy Charge	\$102.39	\$167.58					
	700 kWh Winter effective Oct 1 2015	1,100 kWh Summer effective May 1 2016	700 kWh Winter effective Oct 1 2016	1,100 kWh Summer effective May 1 2017	Difference from IPL Existing			
					Winter effective Oct 1 2015	Summer effective May 1 2016	Winter effective Oct 1 2016	Summer effective May 1 2017
IPL Proposed Restructured								
Customer Charge	\$5.00	\$9.50	\$14.50	\$14.50				
Energy Charge	\$86.80	\$154.00	\$86.80	\$154.00	-15.2%	-8.1%	-15.2%	-8.1%
Schedule REC	\$0.66	\$0.66	\$0.66	\$0.66				
Total	\$92.46	\$164.16	\$101.96	\$169.16	-9.7%	-2.0%	-0.4%	0.9%
Difference IPL Proposed Restructured less Existing	(\$9.93)	(\$3.42)	(\$0.43)	\$1.58				

(1) IPL currently has a minimum charge with no usage of \$4.14.

**Table ES-6
Residential Rate Monthly Bill Comparison - IPL Existing vs IPL Proposed Restructured - Low Use Customer**

	Winter 400 kWh	Summer 400 kWh						
IPL Existing (1) Energy Charge	\$61.60	\$62.75						
IPL Proposed Restructured	400 kWh Winter effective Oct 1 2015	400 kWh Summer effective May 1 2016	400 kWh Winter effective Oct 1 2016	400 kWh Summer effective May 1 2017	Difference from IPL Existing			
					Winter effective Oct 1 2015	Summer effective May 1 2016	Winter effective Oct 1 2016	Summer effective May 1 2017
Customer Charge	\$5.00	\$9.50	\$14.50	\$14.50				
Energy Charge	\$53.20	\$56.00	\$53.20	\$56.00	-13.6%	-10.8%	-13.6%	-10.8%
Schedule REC	\$0.66	\$0.66	\$0.66	\$0.66				
Total	\$58.86	\$66.16	\$68.36	\$71.16	-4.4%	5.4%	11.0%	13.4%
Difference IPL Proposed Restructured less Existing	(\$2.74)	\$3.41	\$6.76	\$8.41				

(1) IPL currently has a minimum charge with no usage of \$4.14.

Table ES-7
Residential Rate Comparison - IPL Proposed Restructured vs Neighboring
Utilities Estimated Future (Customer Charge \$14.50/month effective
October 1, 2016) - Typical Use Customer

	Summer 1,100 kWh	Winter 700 kWh	Difference from IPL Proposed Restructured	
			Summer	Winter
IPL Proposed Restructured				
Customer Charge	\$14.50	\$14.50		
Energy Charge	\$154.00	\$86.80		
Schedule REC	\$0.66	\$0.66		
Total	\$169.16	\$101.96		
KCPL Proposed (1)				
Customer Charge	\$25.00	\$25.00	72.4%	72.4%
Energy Charge	160.55	84.78	4.3%	-2.3%
Environmental Charges				
Total	\$185.55	\$109.78	9.7%	7.7%
Difference IPL Proposed Restructured less KCPL	(\$16.39)	(\$7.82)		
Old Aquila Estimated (2)				
Customer Charge	\$12.09	\$12.09	-16.6%	-16.6%
Energy Charge	170.31	102.54	10.6%	18.1%
Environmental Charges				
Total	\$182.40	\$114.63	7.8%	12.4%
Difference IPL Proposed Restructured less Old Aquila	(\$13.24)	(\$12.67)		
KCK BPU Estimated (3)				
Customer Charge	\$17.60	\$17.60	21.4%	21.4%
Energy Charge	125.37	80.71	-18.6%	-7.0%
Environmental Charges	\$3.34	\$2.13	406.7%	222.4%
Total	\$146.31	\$100.43	-13.5%	-1.5%
Difference IPL Proposed Restructured less KCK BPU	\$22.85	\$1.53		

- (1) KCPL proposed rate increase of 15.9% pending before Missouri Public Service Commission.
(2) Old Aquila expected to file for rate increase in early 2016. Assumed 15.9% increase to match KCPL increase.
(3) Rating agency reports KCK BPU estimated to increase rates 5% in 2015 and 2016.

**Table ES-8
Residential Rate Comparison - IPL Proposed Restructured vs Neighboring Utilities
Estimated Future (Customer Charge \$14.50/month effective
October 1, 2016) - Low Use Customer**

	Summer 400 kWh	Winter 400 kWh	Difference from IPL Proposed	
			Summer	Winter
IPL Proposed Restructured				
Customer Charge	\$14.50	\$14.50		
Energy Charge	\$56.00	\$53.20		
Schedule REC	\$0.66	\$0.66		
Total	\$71.16	\$68.36		
KCPL Proposed (1)				
Customer Charge	\$25.00	\$25.00	72.4%	72.4%
Energy Charge	59.97	46.88	7.1%	-11.9%
Environmental Charges				
Total	\$84.97	\$71.88	19.4%	5.2%
Difference IPL Proposed Restructured less KCPL	(\$13.81)	(\$3.52)		
Old Aquila Estimated (2)				
Customer Charge	\$12.09	\$12.09	-16.6%	-16.6%
Energy Charge	61.67	61.67	10.1%	15.9%
Environmental Charges				
Total	\$73.76	\$73.76	3.7%	7.9%
Difference IPL Proposed Restructured less Old Aquila	(\$2.60)	(\$5.40)		
KCK BPU Estimated (3)				
Customer Charge	\$17.60	\$17.60	21.4%	21.4%
Energy Charge	\$55.09	47.04	-1.6%	-11.6%
Environmental Charges	\$1.22	\$1.22	84.2%	84.2%
Total	\$73.91	\$65.86	3.9%	-3.7%
Difference IPL Proposed Restructured less KCK BPU	(\$2.75)	\$2.50		

- (1) KCPL proposed rate increase of 15.9% pending before Missouri Public Service Commission.
(2) Old Aquila expected to file for rate increase in early 2016. Assumed 15.9% increase to match KCPL increase.
(3) Rating agency reports KCK BPU estimated to increase rates 5% in 2015 and 2016.

Table ES-9

General Service Rate Monthly Bill Comparison - IPL Existing vs IPL Proposed Restructured - Typical Use Customer

IPL Existing (1) Energy Charge	Winter 800 kWh	Summer 800 kWh							
	\$141.81	\$141.81							
IPL Proposed Restructured Customer Charge Energy Charge Schedule REC Total Restructured less Existing	800 kWh Winter effective Oct 1 2015	800 kWh Summer effective May 1 2016	800 kWh Winter effective Oct 1 2016	800 kWh Summer effective May 1 2017	Difference from IPL Existing				
					Winter effective Oct 1 2015	Summer effective May 1 2016	Winter effective Oct 1 2016	Summer effective May 1 2017	
		\$10.00	\$13.00	\$16.00	\$16.00				
		\$122.80	\$136.00	\$122.80	\$136.00	-13.4%	-4.1%	-13.4%	-4.1%
		\$0.66	\$0.66	\$0.66	\$0.66				
	\$133.46	\$149.66	\$139.46	\$152.66	-5.9%	5.5%	-1.7%	7.7%	
	(\$8.35)	\$7.85	(\$2.35)	\$10.85					

(1) IPL currently has a minimum charge with no usage of \$4.08 for single phase and \$17.58 for three phase or \$11.95 per kW for customers with demand of 10kW or more.

Table ES-10

General Service Rate Monthly Bill Comparison - IPL Proposed Restructured vs Neighboring Utilities Estimated Future (Customer Charge \$16.00/month effective October 1, 2016) - Typical Use Customer

	Summer 800 kWh	Winter 800 kWh	Difference from IPL Proposed Restructured	
			Summer	Winter
IPL Proposed Restructured				
Customer Charge	\$16.00	\$16.00		
Energy Charge	\$136.00	\$122.80		
Schedule REC	\$0.66	\$0.66		
Total	\$152.66	\$139.46		
KCPL Proposed (1)				
Customer Charge	\$19.06	\$19.06	19.1%	19.1%
Energy Charge	\$151.59	\$118.19	11.5%	-3.8%
Environmental Charges				
Total	\$170.65	\$137.25	11.8%	-1.6%
Difference IPL Proposed Restructured less KCPL	(\$17.99)	\$2.21		
Old Aquila Estimated (2)				
Customer Charge	\$19.92	\$19.92	24.5%	24.5%
Energy Charge	\$141.39	\$106.34	4.0%	-13.4%
Environmental Charges				
Total	\$161.31	\$126.26	5.7%	-9.5%
Difference IPL Proposed Restructured less Old Aquila	(\$8.65)	\$13.20		
KCK BPU Estimated (3)				
Customer Charge	\$33.00	\$33.00	106.3%	106.3%
Energy Charge	\$133.04	\$122.29	-2.2%	-0.4%
Environmental Charges	\$2.43	\$2.43	268.5%	268.5%
Total	\$168.47	\$157.72	10.4%	13.1%
Difference IPL Proposed Restructured less KCK BPU	(\$15.81)	(\$18.26)		

(1) KCPL proposed rate increase of 15.9% pending before Missouri Public Service Commission.

(2) Old Aquila expected to file for rate increase in early 2016. Assumed 15.9% increase to match KCPL increase.

(3) Rating agency reports KCK BPU estimated to increase rates 5% in 2015 and 2016.

Large General Service

Table ES-11 shows the results of comparing the proposed restructured rates for IPL to IPL's existing rates for a representative large general service customer using 16,425 kWh and 50 kW per month during the on-peak (summer) season and 16,425 kWh and 50 kW per month during the off peak season (winter). Table ES-12 shows the results of comparing the proposed restructured rates for IPL to the proposed or estimated future rates for IPL's neighboring utilities for the representative large general service customer.

Large Power

Table ES-13 shows the results of comparing the proposed restructured rates for IPL to IPL's existing rates for a representative large power customer using 912,500 kWh and 2,500 kW per month during the on-peak (summer) season and 912,500 kWh and 2,500 kW per month during the off peak season (winter). Table ES-14 shows the results of comparing the proposed restructured rates for IPL to the proposed or estimated future rates for IPL's neighboring utilities for a representative large power customer.

Table ES-11
Large General Service Rate Monthly Bill Comparison - IPL Existing vs IPL Proposed
Restructured (Customer Charge \$50.00/month effective October 1, 2015) -
Representative Customer

	Summer 16,425 kWh 50 kW	Winter 16,425 kWh 50 kW	Difference from IPL Existing	
			Summer	Winter
IPL Existing (1)				
Energy Charge	\$1,845.30	\$1,845.30		
Demand Charge	\$392.00	\$392.00		
Total	\$2,237.30	\$2,237.30		
IPL Proposed Restructured				
Customer Charge	\$50.00	\$50.00		
Energy Charge	\$1,846.13	\$1,599.75	0.0%	-13.3%
Demand Charge	\$350.00	\$250.00	-10.7%	-36.2%
Schedule REC	\$0.66	\$0.66		
Total	\$2,246.79	\$1,900.41	0.4%	-15.1%
Difference Proposed IPL Restructuring less Existing	\$9.48	(\$336.89)		

(1) IPL currently has a minimum charge with no usage of \$6.31 per kW of highest demand during last 12 months.

Table ES-12

**Large General Service Rate Monthly Bill Comparison - IPL Proposed Restructured vs
Neighboring Utilities Estimated Future (Customer Charge \$50.00/month effective
October 1, 2015) - Representative Customer**

	Summer 16,425 kWh 50 kW	Winter 16,425 kWh 50 kW	Difference from IPL Proposed Restructured	
			Summer	Winter
IPL Proposed Restructured				
Customer Charge	\$50.00	\$50.00		
Energy Charge	\$1,846.13	\$1,599.75		
Demand Charge	\$350.00	\$250.00		
Schedule REC	\$0.66	\$0.66		
Total	\$2,246.79	\$1,900.41		
KCPL Proposed (1)				
Customer Charge	\$55.35	\$55.35	10.7%	10.7%
Energy Charge	\$1,793.35	\$1,485.17	-2.9%	-7.2%
Demand Charge	\$400.14	\$296.79	14.3%	18.7%
Environmental Charges				
Total	\$2,248.84	\$1,837.31	0.1%	-3.3%
Difference IPL Proposed Restructured less KCPL	(\$2.06)	\$63.10		
Old Aquila Estimated (2)				
Customer Charge	\$20.00	\$20.00	-60.0%	-60.0%
Energy Charge	\$2,051.08	\$1,734.29	11.1%	8.4%
Demand Charge	\$294.97	\$186.89	-15.7%	-25.2%
Environmental Charges				
Total	\$2,366.05	\$1,941.18	5.3%	2.1%
Difference IPL Proposed Restructured less Old Aquila	(\$119.26)	(\$40.77)		
KCK BPU Estimated (3)				
Customer Charge	\$33.00	\$33.00	-34.0%	-34.0%
Energy Charge	\$1,694.41	\$1,467.68	-8.2%	-8.3%
Demand Charge	\$655.50	\$655.50	87.3%	162.2%
Environmental Charges	\$50.93	\$50.93		
Total	\$2,433.84	\$2,207.11	8.3%	16.1%
Difference IPL Proposed Restructured less KCK BPU	(\$187.06)	(\$306.70)		

(1) KCPL proposed rate increase of 15.9% pending before Missouri Public Service Commission.

(2) Old Aquila expected to file for rate increase in early 2016. Assumed 15.9% increase to match KCPL increase.

(3) Rating agency reports KCK BPU estimated to increase rates 5% in 2015 and 2016.

Table ES-13

Large Power Rate Monthly Bill Comparison - IPL Existing vs IPL Proposed Restructured (Customer Charge \$500.00/month effective October 1, 2015) - Representative Customer

	Summer 912,500 kWh 2,500 kW	Winter 912,500 kWh 2,500 kW	Difference from IPL Existing	
			Summer	Winter
IPL Existing (1)				
Energy Charge	\$90,289.48	\$90,289.48		
Demand Charge	\$10,110.00	\$10,110.00		
Total	\$100,399.48	\$100,399.48		
IPL Proposed Restructured				
Customer Charge	\$500.00	\$500.00		
Energy Charge	\$35,131.25	\$35,131.25	-61.1%	-61.1%
Demand Charge	\$46,250.00	\$46,250.00	357.5%	357.5%
Schedule REC	\$0.66	\$0.66		
Total	\$81,881.91	\$81,881.91	-18.4%	-18.4%
Difference Proposed IPL Restructuring less Existing	(\$18,517.57)	(\$18,517.57)		

(1) IPL currently has a minimum charge with no usage of \$4.83/kW of the highest demand in the prior 12 months.

Table ES-14

**Large Power Rate Comparison - IPL Proposed Restructured vs Neighboring Utilities Estimated Future
(Customer Charge \$500.00/month effective October 1, 2015) - Representative Customer**

	Summer 912,500 kWh 2,500 kW	Winter 912,500 kWh 2,500 kW	Difference from IPL Proposed Restructured	
			Summer	Winter
IPL Proposed Restructured				
Customer Charge	\$500.00	\$500.00		
Energy Charge	\$35,131.25	\$35,131.25		
Demand Charge	\$46,250.00	\$46,250.00		
Schedule REC	\$0.66	\$0.66		
Total	\$81,881.91	\$81,881.91		
KCPL Proposed (1)				
Customer Charge	\$1,001.15	\$1,001.15	100.2%	100.2%
Energy Charge	\$87,196.56	\$74,588.00	148.2%	112.3%
Demand Charge	\$23,320.00	\$15,760.00	-49.6%	-65.9%
Environmental Charges				
Total	\$111,517.71	\$91,349.15	36.2%	11.6%
Difference IPL Proposed Restructured less KCPL	(\$29,635.80)	(\$9,467.24)		
Old Aquila Estimated (2)				
Customer Charge	\$207.47	\$207.47	-58.5%	-58.5%
Energy Charge	\$82,553.80	\$60,335.77	135.0%	71.7%
Demand Charge	\$23,614.63	\$9,850.05	-48.9%	-78.7%
Environmental Charges				
Total	\$106,375.90	\$70,393.30	29.9%	-14.0%
Difference IPL Proposed Restructured less Old Aquila	(\$24,493.99)	\$11,488.61		
KCK BPU Estimated (3)				
Customer Charge	\$154.00	\$154.00	-84.6%	-84.6%
Energy Charge	\$80,381.73	\$71,126.34	128.8%	102.5%
Demand Charge	\$30,387.50	\$30,387.50	-34.3%	-34.3%
Environmental Charges	\$2,774.00	\$2,774.00		
Total	\$113,697.23	\$104,441.84	38.9%	27.6%
Difference IPL Proposed Restructured less KCK BPU	(\$31,815.32)	(\$22,559.93)		

(1) KCPL proposed rate increase of 15.9% pending before Missouri Public Service Commission.

(2) Old Aquila expected to file for rate increase in early 2016. Assumed 15.9% increase to match KCPL increase.

(3) Rating agency reports KCK BPU estimated to increase rates 5% in 2015 and 2016.

RECOMMENDATIONS

Based on the IPL Pro Forma and the rate design goals and objectives, Sawvel makes the following recommendations:

1. Restructure rates in the manner described above to be effective October 1, 2015 that results in a reduction of \$7.9 million in revenues for the 12 month period from October 1, 2015 through September 30, 2016 and \$3 million annual reduction in revenues thereafter.
2. Implement the proposed Power Cost Adjustment Schedule PCA-1 and Regulatory and Environmental Compliance Schedule REC-1.
3. Implement the Unrestricted Cash Fund Balance Policy.
4. Defer implementation of additional base rate revenue increases at this time pending the completion of the following:
 - a. Final FERC determination of net SPP Transmission revenues and expenses to be realized by IPL
 - b. Review of IPL's depreciation rates and implementation of any changes to these depreciation rates and IPL's depreciation expense
 - c. Finalize major capital improvements including transmission and substation projects based on projected load growth

After completion of the above, IPL should update its Pro Forma and revise the rate plan as needed to ensure the unrestricted cash fund policy is being met in the future and to generate positive net income.