

Agenda Report

March 31, 2014

TO: City Council

FROM: City Manager

SUBJECT: Electric Rates: Cost of Service Analysis and Rate Proposals

RECOMMENDATION:

This report is for information only.

EXECUTIVE SUMMARY:

The Water and Power Department ("PWP") has completed a comprehensive cost-of-service study and rate design analysis for electric rates. Burns and McDonnell Engineering Company ("Burns & McDonnell"), an independent engineering and consulting firm, provided professional cost-of-service and rate analysis throughout the study. The report of the analysis and proposals prepared by Burns and McDonnell is presented as Attachment A to this report. Background information and biographies of key personnel involved in the PWP ECOS are described in Attachment B.

This report and presentation provide an overview of the electric rate structure, a summary of the Electric Cost of Service and Rate Design Study ("ECOS"), proposals to increase the electric base rates and make modifications to various electric rate structural components. The report will also discuss options to the proposed rate adjustments, financial impacts of the rate adjustments for PWP, sample bill impacts for selected customer groups and rate comparisons with other utilities. The discussion also includes PWP's recommendations for an education and outreach program for PWP's customers and a proposed schedule for adoption of the rate changes.

ECOS Summary and Proposals

Burns & McDonnell completed a comprehensive analysis of PWP's cost of providing service, including costs for current service levels and funding requirements for long-term maintenance programs and planned investments in generation and distribution infrastructure.

Key results of the ECOS indicate the following:

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|---|
| <p>1. Revenues from current rates are insufficient to meet projected revenue requirements and fund PWP’s ongoing initiatives and programs.</p> <p>PWP’s major initiatives and programs include many programs that target specific City Council goals, including a Renewable Portfolio Standard (“RPS”) to provide 40% of its energy from renewable resources, capital investment as approved in the Distribution System Master Plan, and construction and operation of the GT5 Repowering Project.</p> |
| <p>2. The need to restructure the electric rates to ensure full cost recovery, maintain equity and fairness within and between customer classifications and comply with the requirements of Proposition 26.</p> <p>Proposition 26 was approved by California voters in November 2010 and requires, among other actions, that fees imposed by local governments must not exceed the cost of the programs funded by the fees.</p> |
| <p>3. The need to establish new rates to address changes in the electric utility industry and PWP’s customer requirements.</p> <p>PWP recommends implementing these adjustments over a one to three-year period, placing a priority on the cost of service realignment and establishing or updating rates for those programs with the greatest impact on the City and its customers.</p> |

Burns & McDonnell included its own proposed rate adjustments in its report on the results of the ECOS. Although PWP’s rate proposals are different from the adjustments in the Burns & McDonnell report, the underlying cost of service and revenue requirements are similar and are based on the cost recovery requirements of Proposition 26.

Based on the results of the ECOS, PWP is proposing increases for each of the next three years to the Distribution and Customer charges for all customers beginning in Fiscal Year (“FY”) 2015. The proposed increases for each year are in Table 1.

Table 1

Proposed Distribution and Customer Charge Rate Increases			
Effective Date	Average System Increase	Annual Revenue Impact	Increase ¢ per kWh
July 1, 2014	2.7%	\$4.5 million	0.391¢
July 1, 2015	2.4%	\$4.4 million	0.387¢
July 1, 2016	2.2%	\$4.4 million	0.389¢

PWP is also proposing adjustments to the electric rate *structure* to address changes in the electric utility industry and PWP’s customer requirements. Table 2 lists key proposed adjustments to the rate structure that are included in the Distribution and

Customer Charge rate increases in Table 1. These rate structure changes ensure true cost recovery and compliance with the requirements of Proposition 26.

Table 2

Proposed Adjustments to the Electric Rate Structure Effective July 1, 2014	
Rate	Proposal
Distribution and Customer Charge	Create separate distribution and customer charges for single-family and multi-family residential customers;
Distribution and Customer Charge	Eliminate the \$2.00 distribution charge credit for multi-family residential customers;
Demand Ratchet	Implement a 4-month billing demand ratchet for all commercial customers with demand meters, and base the customer monthly demand charge on the highest demand in the past four months including the current month.

Increases are also needed in FY 2015 for energy and public benefits rates to cover energy and natural gas costs as well as fund programs approved by the City Council. These adjustments will be implemented based on formulas defined in the Light and Power Rate Ordinance. Discussion of the rate formulas and details on these adjustments are provided in Table 5 of this report.

Additional proposed adjustments are provided in Attachment C to be presented to the City Council for approval and implementation for FY 2015 and 2016. These proposed changes to the rate structure may not generate new revenue but will address changes in the electric utility industry and PWP's customer requirements.

BACKGROUND

In April 2012, PWP retained the services of Burns and McDonnell Engineering Company, Inc., an engineering consulting company headquartered in Kansas City, Missouri, to perform a comprehensive ECOS including the development of a highly functioning model that would be used for future updates. Completion of the ECOS would ensure that PWP's rates recovers the cost of providing electric service and that PWP's electric rate structure reflects the ongoing changes taking place in the electric industry and its customers' requirements. Burns & McDonnell completed the comprehensive study in June 2013 which resulted in proposed changes to the current structure and the implementation of new rate components.

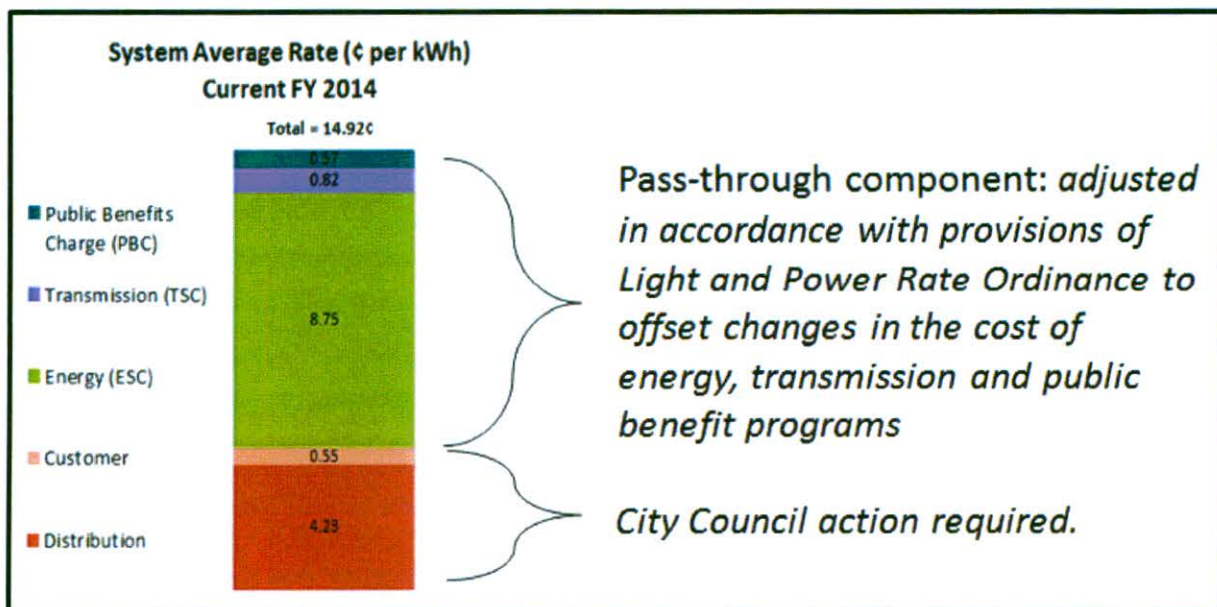
After the ECOS report from Burns & McDonnell was completed, staff completed an update of the ECOS model using the FY 2014 adopted budget and revised energy cost projections. The results of the ECOS and proposed rate adjustments were presented to the Municipal Services Committee ("MSC") at a Special Meeting on November 19, 2013, and additional information was presented at a Regular Meeting on January 28, 2014.

Electric Rate Structure

The Light and Power Rate Ordinance (“Ordinance”) codifies rates and charges for electric services. The current electric rate structure is based on cost-of-service and is designed to eliminate subsidies between customer groups. In addition, the current rate structure is unbundled and is comprised of the following components which are also shown in Figure 1:

- **Distribution Charge** - recovers costs of operations, maintenance and a portion of the capital requirements of the electric distribution system
- **Customer Charge** – recovers costs of providing customer services, including the call center, billing, meter reading and credit/collection functions
- **Energy Services Charge (“ESC”)** – recovers costs of procuring and producing energy, including renewable energy, long and short term energy contracts, cap and trade programs, fuel purchased for local power generation and fixed costs for power supply assets
- **Transmission Services Charge (“TSC”)** – recovers costs of operations, maintenance and a portion of the capital requirements of electric transmission systems (both local assets and those operated by the California Independent System Operator)
- **Public Benefits Charge (“PBC”)** – provides funding for incentive and rebate programs for energy efficiency, local solar programs and low income assistance

Figure 1
Current Electric Rate Structure



City Council action is needed to approve changes in the distribution and customer rates. Adjustments to the ESC, TSC and PBC rates are implemented only as needed using the formula-based rate adjustment mechanisms provided for in the Ordinance.

Key programs by rate component

<u>Distribution and Customer Charges</u>	
The most significant cost drivers for the distribution and customer programs are:	
Type of Cost	Rate Component
Call center, billing, meter reading, customer service	Customer Charge
Distribution system operations and maintenance	Distribution Charge
Depreciation expense (for distribution and customer assets)	Distribution Charge
Debt Service (on bonds allocated to distribution and customer assets)	Distribution Charge
PAYGO for capital investment	Distribution Charge

<u>Energy Services Charge</u>	
Increased costs for ESC for FY 2015 are based on actions previously approved by the City Council, including entering into long term contracts for renewable energy and the issuance of revenue bonds to fund capital investments.	
The most significant cost drivers for ESC programs are:	
Type of Cost	Major Programs
Renewable energy premium	Long and short-term contracts, market purchases
Depreciation expense (for power supply assets)	2013A Series Electric Revenue Bonds
Debt Service (for power supply assets)	2013A Series Electric Revenue Bonds
Cap and trade program	Participation in emission allowance auctions
Market gas and energy	Purchases required to meet system load

<u>Transmission Services Charge</u>	
The most significant cost drivers for TSC programs are:	
Type of Cost	Major Programs
Transmission Access Charge	Grid operations and services, Congestion Revenue Rights
Grid Management Charge	Congestion and grid administration
Purchased Power Transmission	Long and short term transmission contracts, scheduling and coordinating services

<u>Public Benefits Charge:</u>	
The PBC is set to generate sufficient revenues to support City Council approved programs and goals for energy efficiency, rebates, solar installations and other programs.	
The most significant cost drivers for the Public Benefits programs are:	
Type of Cost	Major Programs
Rebate programs	Energy efficiency and solar incentive programs
Assistance programs	Project APPLE, EUAP
Direct Install programs	Commercial WeDIP, Residential Energy Reports

Cost of Service and Rate Design Study

Key Inputs and Assumptions

At the beginning of the ECOS, PWP staff provided significant data to Burns & McDonnell for the most recent three to five years from various sources. This information provided the basis for determining the amount of revenue that is needed from rates to support the programs and initiatives for PWP. Table 3 lists the major sources of data provided by PWP to Burns & McDonnell for their analysis:

Table 3

Annual reports, CAFRs*, FERC** reports	City street light reports
Value of electric system assets	18-month energy load forecast
Outstanding bonds and debt service schedules	Weather history
Capital and operating budgets	Preschedule and real-time schedules
Official Statements (OS)	Transmission and distribution losses
City Charter and Electric Rate Ordinance	Energy resources cost information
Billing Information – consumption and revenue	

*CAFR – Comprehensive Annual Financial Report

**FERC – Federal Energy Regulatory Commission

Table 4 lists the most significant inputs and assumptions provided by PWP to Burns & McDonnell that were included in the cost of service analysis and development of the rate design.

Table 4

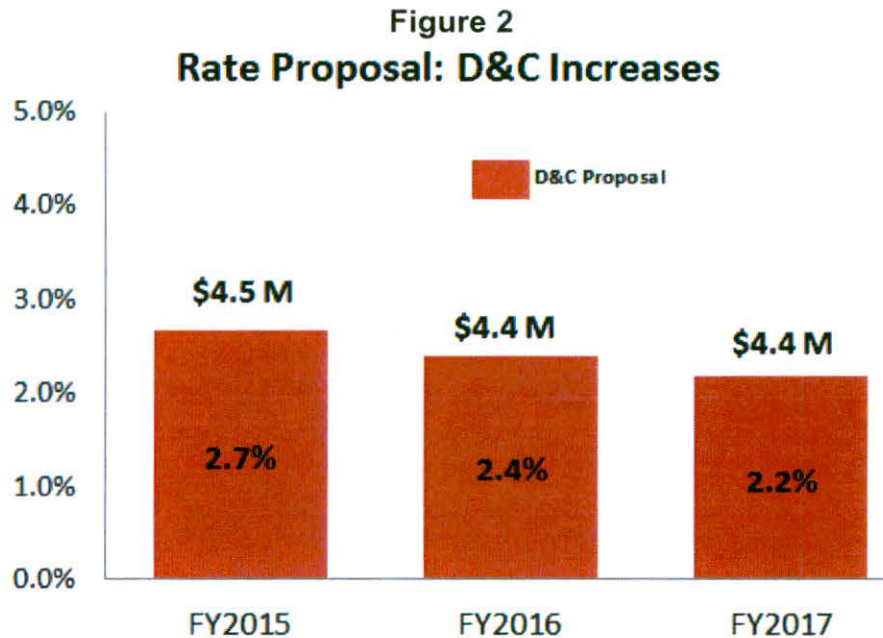
ECOS Key Inputs	
1	Test year: Based on Adopted FY 2013 Operating Budget, updated by PWP using FY 2014 adopted budget
2	Sales Growth: Energy sales are forecast as unchanged (flat) during seven-year financial forecast
3	Customer Growth: Modest projected growth in numbers of <1% for each class; historical average relationship between energy sales and number of customers expected to continue in the future
4	System Load: Based on projected annual energy sales customer growth with distribution loss of about 5% (typical industry average for utilities with similar energy resources)
5	Load Shape and Peak Demand: Forecast of customer classification-specific energy sales and peak demand are based on 3-years historical data for FY 2009 - 2012 and budget year projections for FY 2014
6	Annual Revenue Requirements: Based on forecasted cost escalations and known changes in annual costs, i.e. new contracts for renewable resources, increase in debt service, increase in Transmission Access Charge rates, etc.
7	Capital Improvements: Based on Adopted FY 2014 Capital Budget; capital expenditures forecast incorporated into the financial model to determine forecasted annual plant in service and depreciation expense, updated by PWP using FY 2014 budget
8	Debt Service: Based on principal and interest payments on currently outstanding revenue bonds and projections of debt service obligations (including new revenue bonds) from FY 2013 through FY 2016

9	General Fund Transfer: Annual transfer of 9% of gross operating revenues, limited by annual net income
10	Rate Base Return Requirement: A rate base return calculated by adding the net utility plant in service and construction work in progress to a working capital allowance of 60 cash days of operations and maintenance expenses, and subtracting capital contributions from developers and private parties

Proposed Changes to Electric Rates

In addition to proposed adjustments to the Distribution and Customer Charges, there is a need to increase the ESC and PBC rates by formula as provided for in the Ordinance. Collectively, the proposed increases to electric rates will ensure that PWP continues to meet the projected revenue requirements essential to meet PWP’s debt service obligations, support ongoing operations, and generate an appropriate rate of return to meet future obligations, including necessary capital investments to maintain the reliability of the generation and distribution systems and fund the transfer to the General Fund.

The proposed three year Distribution and Customer charge adjustments and additional revenue for each year is illustrated in Figure 2.



Formula-Based ESC, TSC and PBC

Adjustments to ESC, TSC and PBC rates will be passed through to customers as needed as provided for in the Ordinance. Based on approved contracts for renewable energy, current forward market prices for power and natural gas and existing debt service obligations, it is anticipated that the Energy Services Charge will be increased by 4.9% to generate an additional \$8.2 million beginning in FY2015. It is also

anticipated that the Public Benefits Charge will be increased by 0.7% to generate an additional \$1.2 million per year beginning in FY2015 as shown in Table 5 below.

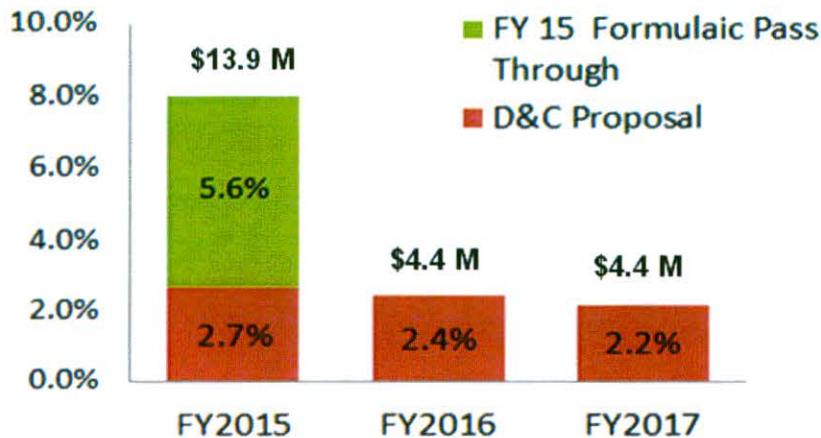
Table 5

Projected Energy & PBC Charge Rate Increases Effective July 1, 2014			
Charge Type	Average System Increase	Annual Revenue Impact	¢ per kWh
Energy Charge	4.9%	\$8.2 million	0.726¢
Public Benefits Charge	0.7%	\$1.2 million	0.105¢

As illustrated in Figure 3, the total projected system average rate adjustment for FY 2015 is 8.3% which includes the increase to the Distribution and Customer charges of 2.7% and the combined increases for the ESC and PBC of 5.6%. Changes to ESC, TSC and PBC beyond FY 2015 are uncertain and depend on energy market prices, renewable energy goals, results of the upcoming update of the Integrated Resource Plan and other key initiatives and programs for PWP approved by the City Council.

Figure 3

Rate Projection: D&C Proposal and FY15 Formulaic Components



Customer Bill Impact

Customer classifications may not be impacted equally with this rate proposal. The proposed rate impacts reflect the true cost to serve each customer classification as determined by the ECOS. In general, it is important to emphasize that the ECOS resulted in small changes to rates between customer groups. As shown in Table 6, PWP’s existing rate structure is quite effective since the proposed Distribution and

Customer charge increases for each customer class is relatively close to the system average annual increases of 2.7%, 2.4%, 2.2%.

Table 6
D&C Rate Increases by Customer Class

	<u>FY2015</u>	<u>FY2016</u>	<u>FY2017</u>
Residential	3.2%	2.7%	2.6%
Small Com.	2.9%	2.6%	2.5%
Med. Com. - Secondary	2.7%	2.6%	2.4%
Med. Com. - Primary	2.7%	2.6%	2.4%
Large Com. - Secondary	2.4%	2.2%	2.1%
Large Com. - Primary	2.4%	2.2%	2.1%
Street Lighting & Traffic	1.4%	1.6%	1.5%
System Average	2.7%	2.4%	2.3%

Attachment D shows sample bill impacts of the total proposed rate changes for FY 2015 on customers at selected usage levels.

The proposed changes also address fairness and equity within customer classes, including a reallocation of distribution charges to all customers. The new rate design ensures that residential customers will now pay a higher distribution charge that includes a proportionate share of cost for each customer's actual demand on the electric system.

For commercial customers, the demand charge will also be adjusted so that peak demand charges are recovered over a rolling four-month period in place of the current twelve-month period. This rolling peak demand charge is referred to as the "Demand Ratchet." The ECOS determined that a reallocation of the demand charges is needed to ensure that all electric customers pay an equitable share of distribution costs based on their maximum demand on the system. Attachment E illustrates the comparability of customer bills under this proposed rate plan with similar bills for neighboring utilities under their current published rates. Current and proposed rate schedules for PWP are contained in Attachment F.

Rate Mitigation Strategies

PWP has identified opportunities to use one time revenues, ongoing cost reductions and improved operating efficiencies to offset some of the increased revenue requirements. The Energy cost mitigation opportunities have already been incorporated into the proposed ESC rates in this report; the Transmission cost mitigation opportunity will be incorporated into the actual TSC rates when the funds are received from the City of Los Angeles for settlement of transmission overcharges. The recommended rate mitigation opportunities are:

Energy	<ul style="list-style-type: none"> • \$9 million from 2011 FERC settlement <ul style="list-style-type: none"> ○ Provides equity funding for GT5 repowering project • Increased efficiency of GT5 repowering project <ul style="list-style-type: none"> ○ Efficiencies effective beginning FY 2016
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Transmission	<ul style="list-style-type: none"> • Apply any settlement funds from Los Angeles for overcharges <ul style="list-style-type: none"> ○ Approved by City Council in October 2013
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Rate Adjustment Options

PWP staff has implemented significant cost saving and efficiency measures over the most recent five years to offset increasing costs and mitigate rate impacts. These actions include careful management of vacant positions, extending the useful life of utility service trucks and vehicles to the maximum allowable within safety and efficiency considerations, limiting training and travel opportunities and reducing debt service costs by actively seeking opportunities to refinance outstanding bonds at lower interest rates.

As a result, rate increases have been very moderate since 2005. The history of recent rate actions is summarized in Attachment G. Additional reductions in programs will impact the ability of PWP to achieve the goals of renewable energy, reliable service and financial stability, including adequate reserves and debt service coverage ratios. In addition to the efficiency measures already implemented by PWP, there are other considerations that could reduce the impact of the proposed rates. These options would impact some of the City Council goals for PWP as defined in the Power Integrated Resource Plan and the Distribution System Master Plan. The considerations are in Table 7.

Table 7

Description		FY15	FY16	FY17	FY18
Reduce the Renewable Portfolio Standard from 40% to 33% (\$ in million)	40% RPS	27%	30%	32%	35%
	33% RPS	27%	28%	31%	32%
	Change in ¢ per kWh	n/a	(0.035¢)	(0.027¢)	(0.053¢)
Reduce Energy Efficiency and Solar Goals to keep programs at current levels	Proposed	.7%	.1%	.1%	n/a
	Alternative	.1%	.1%	.1%	n/a
	Change in ¢ per kWh	(.0897¢)	0	0	n/a
4 year phase in of Distribution & Customer rates* *Impact of extended phase-in period will result in higher rates and revenues due to cumulative effect	Proposed % Option	2.7%	2.4%	2.2%	n/a
		2.2%	2.2%	2.2%	2.2%
	Proposed \$ Option	\$4.5 Million	\$4.4 Million	\$4.4 Million	\$0
		\$3.7 Million	\$3.4 Million	\$3.2 Million	\$4.0 Million
\$ Impact	(\$800K)	(\$1.0 Million)	(\$1.2 Million)	\$4.0 Million	
¢ per kWh	(0.070¢)	(0.088¢)	(0.106¢)	0.357¢	
Reduce capital investments for distribution and automation projects		To be determined - Limited pay-go capability would increase reliance on debt or drawdown of reserves			
Implement Distribution and Customer charge adjustments on October 1 instead of July 1		(\$1.1 Million)	(\$1.0 Million)	(\$1.0 Million)	n/a

Customer Outreach and Education

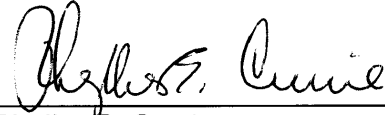
Following presentation of this report and under direction from the City Council, staff will begin a program of customer outreach and education, and will conduct various public meetings to educate residential and commercial customers about the proposed changes to the electric rate structure, including impacts on their bills. Input and feedback from customers will be included in the information ultimately prepared and presented to the City Council for approval of the rate recommendations. The proposed approval process is shown in the timeline below.

Date	Action Item
November 19, 2013 (Special Meeting)	MSC info item – ECOS update
January 28, 2014	MSC info item – rate proposals
March 31, 2014	City Council – workshop discussion
April-May 2014	Customer education and feedback, City Council field reps, district meetings, Chamber of Commerce, large customer groups, social media postings, media updates
April 2014	MSC Action Item – rate proposal and recommendation to set public hearing
April 2014	City Council Action Item – set public hearing date
May - June 2014	City Council Action Item – consider rate recommendations

FISCAL IMPACT:

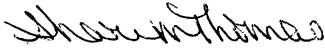
There is no fiscal impact associated with this workshop.

Respectfully submitted,



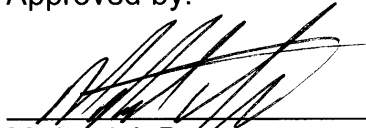
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Approved by:



Michael J. Beck
City Manager

Attachments Key:

- A Burns & McDonnell Electric Cost-of-Service and Rate Design Study Report
- B Burns & McDonnell Firm Biography
- C Electric Rate Structure Changes
- D Sample Customer Bill Impacts
- E Customer Bill Comparison to Neighboring Utilities
- F Proposed Rate Schedules
- G Rate Adjustment History